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The preliminary effect of a parenting program for Korean American mothers: A randomized controlled experimental study

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Abstract

Background—Traditional Korean American discipline is characterized by a lack of expression of affection and use of harsh discipline.

Objective—The purpose of this study was to pilot-test the effect of the Incredible Years Parenting Program among Korean American mothers.

Methods—A randomized controlled experimental study design was used. 29 first-generation Korean American mothers of young children (3-8 years old) were randomly assigned to intervention (n = 20) and control (n = 9) groups. Intervention group mothers received a 12-week parenting program. Control group mothers did not receive the intervention. Mothers reported on discipline styles (positive, appropriate, and harsh), level of acculturation, and their child's outcomes (behavioral problems and social competence) at pre-, post-, and 1-year follow-up intervals.

Results—After completing the program, intervention group mothers significantly increased use of positive discipline as compared to control group mothers. Among intervention group mothers, high-acculturated mothers significantly increased appropriate discipline whereas low-acculturated mothers significantly decreased harsh discipline. In the 1-year follow-up, intervention group mothers maintained the significant effect for positive discipline.

Conclusions—Providing this program appears to be a promising way of promoting positive discipline among Korean American mothers.

Keywords

Korean American; parenting program; randomized controlled experimental study

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What is already known about the topic?

- Traditional Korean American discipline is characterized by a lack of expression of affection and use of harsh discipline.
- For American families, the Incredible Years Parenting Program was proven to increase parental positive discipline, self-efficacy, competency, and consistency as well as decrease parental criticism. The program decreased behavioral problems and increased social competence in American children.

What this paper adds

- Providing a parenting program is a useful intervention for Korean American mothers in promoting positive discipline.
- The effect of program may differ based on mothers' levels of acculturation.

1. Introduction

In the late 1970s, approximately 60% of first generation Korean Americans in the Midwest perceived a need to modify their parenting practices because these practices delayed cultural adaptation into American society (Hurh, Kim, & Kim, 1979). No intervention study has been conducted to address this issue. Recently, Kim and Hong (2007) reported that Korean American parents in the Pacific Northwest try to balance two cultures and are eager to learn and adopt alternative parenting strategies. These needs are derived from the awareness that Korean parenting practices (e.g., withholding affection and harsh discipline) do not fit well with the social context of America (e.g., promoting positive and appropriate discipline). This realization makes parents feel incompetent in parenting (Nah, 1993). Not only does Korean American parenting differ from American parenting but also Korean American children experience more depressive symptoms than European American children (Nahm, 2006). Offering a parenting program that promotes positive and appropriate discipline and decreases harsh discipline would provide parents additional skills that better fit with American social context. The goal of this pilot study was to determine the preliminary efficacy of the Incredible Years Parenting Program on the disciplinary practices of Korean American mothers and their children's developmental outcomes.

Parents use discipline to teach children the values and normative behaviors of the society in which they will have to function when they become adults (Cherlin, 1996). In the United States, discipline includes strategies for rewarding desired behaviors (i.e., positive discipline such as hugging and praising), for reducing undesired behaviors (i.e., appropriate discipline such as ignoring and timeouts and harsh discipline such as yelling and spanking), and for promoting positive parent-child relationships (AAP, 1998; Kim & Hong, 2007; Webster-Stratton, 2007a). Studies, including longitudinal studies, indicate that positive discipline is related to children's self-esteem, prosocial skills, academic performance, and peer relationships (Patterson, Reid, & Dishion, 1992). In contrast, harsh discipline is related to psychological and behavioral maladjustment (Stormshak, Bierman, McMahon, & Lengua, 2000; Wissow, 2002). Therefore, the American Academy of Pediatrics (AAP, 1998) recommends using positive and appropriate discipline rather than harsh discipline.

Although AAP (1998) recommends the use of positive and appropriate discipline, many parents, especially immigrant parents, are not familiar with these strategies and therefore cannot utilize them. For example, Korean American mothers are usually described as warm, sensitive, insightful, occupied by their children's lives, and ready to meet their children's needs (Choi, 1995; Kim & Hong, 2007). However, being brought up in Confucian cultural background these mothers are not accustomed to expressing their warmth to their children

through positive physical and verbal expressions (Kim & Hong). They also tend to use harsh discipline to manage children's misbehavior based on the Korean value system. One ancient Korean proverb states, "when you hate your children, give them a rice cake, when you love them, give them a spanking with a wooden rod." These parents identified harsh discipline as 'Korean style' and appropriate discipline as 'American style.' Some parents articulated that they had heard about timeouts, but they could not use them because they neither understood how to use them nor recognized how effective they were (Kim & Hong) (Kim & Hong, 2007).

Comparing parent-child interactions, Nahm (2006) found that Korean American parents were more intrusively involved, expressed less positive affection, and provided less emotional coaching of their children than European American parents. At the same time, children of these Korean American parents expressed more tension and rated themselves as feeling more depressive symptoms than European American children (Nahm). Parenting practices developed to fit Korean society do not fit well within the social context of the United States, resulting in negative psychological outcomes in their children. Korean Americans have been aware of this and expressed their need to adopt parenting practices that would better help their children become socially competent and well-mannered (Kim & Hong, 2007, Hurh et al., 1979).

One effective way of promoting positive and appropriate discipline is to provide a well-established parenting program. In a review of 82 intervention studies published during the last three decades, the Incredible Years Parenting Program was highlighted as an intervention that met rigorous criteria for well-established interventions (Brestan & Eyberg, 1998). To date, the program has been implemented successfully with Caucasian, African, Hispanic, and Asian American mothers of young children in the Pacific Northwest (Reid, Webster-Stratton, & Beauchaine, 2001) and mostly African and Hispanic mothers in inner city Chicago (Gross, Fogg, & Tucker, 1995; Tucker, Gross, Fogg, Delaney, & Lapporte, 1998). Intervention group mothers in Chicago significantly increased self-efficacy, decreased stress, and improved the quality of mother-child interactions as compared to control group mothers at post intervention and at 1-year follow-up (Gross et al.; Tucker et al.). Caucasian, African, and Hispanic mothers in the Pacific Northwest became more positive, more consistent, more competent, and less critical in their parenting (Reid et al.). Asian American mothers also improved in the areas of critical and harsh discipline, however, did not improve on positive parenting variables. Asian mothers reported that the positive parenting technique was less useful than other groups of parents reported. Overall, there was a 30% or more reduction in both maternal criticism and child problem behaviors in the post-intervention assessment (Reid et al.). This program, however, has not been evaluated with Korean American parents.

This pilot study tested the preliminary efficacy of the Incredible Years Parenting Program in broadening Korean American mothers' parenting skills and improving their children's developmental outcomes. It was hypothesized that immediately after completion of the parenting program, intervention group mothers, as compared to control group mothers, would (1) increase positive discipline, (2) increase appropriate discipline, and (3) decrease harsh discipline. In addition, compared to control group children, intervention group children would (4) decrease problem behaviors and (5) increase social competence. These hypotheses were tested as between group comparison. In order to further understand the treatment effect, we also described within group changes in outcome variables. Sustainability of the treatment effect at a 1-year follow-up assessment also was examined. Further, the role of maternal acculturation in the immediate treatment effect was explored by dividing the intervention group mothers into two subgroups (high-acculturation and low-acculturation groups) and testing whether or not outcome improvement differed between the two subgroups. We had no a priori hypothesis

about which acculturation subgroup would benefit more from the intervention. In addition, we explored the intervention group mothers' satisfaction with the program.

2. Methods

2.1. Subjects

Twenty-nine first generation Korean American mothers participated in the study. Criteria for inclusion were that (1) the child was between 3 and 8 years of age; (2) the child lived with two parents; (3) the mother was a first generation Korean American who was born in Korea; (4) the mother was willing to complete pre-, post-, and 1-year follow-up assessments and participate in a 12-week intervention or control group as randomly assigned. Mothers of children 8 years of age and under were chosen because results of previous studies indicated that interventions for children with behavior problems should target changing parenting practices of children up to age 8 (Bullis & Walker, 1994; Webster-Stratton & Hancock, 1998). Interracially married first-generation Korean American mothers (intervention $n = 2$, control $n = 2$) were included because interracial marriage is becoming more common. It was expected that these first generation Korean American mothers in interracially mixed marriages would share traditional Korean discipline strategies with mothers in families in which both parents were Korean Americans.

As shown in Table 1, there were no significant differences in the demographic variables between mothers, fathers, and children in the intervention and control groups using oneway ANOVA. Overall, parents were in their mid-30s with a mean education level of 14 (intervention group) to 15 years (control group). Every mother was born in Korea; mean length of stay in America was 9 years for intervention group mothers and 11 years for control group mothers. Their children's mean age was 6 years for both intervention and control groups.

2.2. Intervention: Incredible Years Parenting Program

2.2.1. Theoretical framework for the intervention—The Incredible Years Parenting Program is based on the Coercive Family Process Model (Patterson, 1982; Patterson, Reid, & Dishion, 1992). The model explains how mothers unintentionally reinforce children's misbehavior by either giving in to the behavior (i.e., give the child what he wants) or paying negative attention to coerce the child to stop the behavior (i.e., scolding, criticizing, nagging, and spanking). In contrast, if the mother ignores (i.e., appropriate discipline) the misbehavior while praising (i.e., positive discipline) appropriate behavior, the child will decrease misbehavior and increase the desired behavior (Webster-Stratton, 2002).

2.2.2. Intervention content—The program teaches parents specific discipline strategies that can effectively prevent or stop the coercive family process (Webster-Stratton, 2001) and that are congruent with AAP (1998) guidelines. The content includes how to: (1) play with the child; (2) praise effectively; (3) reward effectively (sticker charts, extra privileges); (4) set limits effectively; (5) manage misbehaviors (ignoring, timeouts); and (6) teach children to problem solve.

2.2.3. Rationale for using the intervention with Korean Americans—The Program content has potential for addressing Korean American parents' parenting practices. Kim and Hong (2007) found that Korean American parents use more negative attention (e.g., harsh discipline such as yelling, threatening, spanking) than positive attention (e.g., expression of affection, praising). Learning effective limit setting and misbehavior management skills will help parents to decrease the use of harsh discipline, resulting in prevention of coercive family processes and reduction of children's misbehavior. Lessons on how to play with children as

well as how to use effective praise and reward will facilitate positive parental attention to children, resulting in an increase of children's desired behaviors.

2.2.4. Intervention integrity—The principal investigator delivered the program in two separate small groups (Friday and Saturday groups) with a co-leader selected from the target community for each group. One co-leader had a bachelor's degree in science and worked as a counselor for the Korean American community. The other co-leader had a bachelor's degree in nursing and worked as a Korean translator. To assure integrity and consistency of each intervention group, the three leaders participated in a group-leader training provided by Dr. Webster-Stratton's research team. A leader's protocol developed by Webster-Stratton (2001) was strictly followed without any modification. The protocol includes a list of vignettes (i.e., videotaped scenes of parent-child interaction) to be covered, questions to be asked, key concepts to be discussed, role plays to be completed, home assignments, and attendance records for every session. After each vignette was shown in English on a television, leaders translated the vignette into Korean. All other components of the program were delivered in the Korean language. The leaders filled out weekly checklists to evaluate their adherence to the leader's protocol and met weekly to plan and evaluate each session. The principal investigator joined Dr. Webster-Stratton's research team's weekly supervisory meeting to discuss the groups' progress and any difficulties encountered in maintaining the protocol. The leaders also were videotaped and evaluated by Dr. Webster-Stratton for the quality of their leadership skills.

2.2.5. Intervention dosage—Intervention group mothers attended the 12-week classes. Each weekly class lasted 2 to 3 hours. Mothers attended the parenting program an average of 8.21 classes (68%, range 3-12 classes) and completed 84% of the assigned weekly homework. Control group mothers received no intervention.

2.3. Measures

2.3.1. Discipline—Discipline strategies were measured using the Parent Practices Interview (Webster-Stratton, 2007a). This questionnaire was adapted from the Oregon Social Learning Center's Discipline Questionnaire to include discipline style and techniques which the intervention program attempted to increase or decrease (Webster-Stratton, 1998). It is a 73-item, 7-point Likert-type scale instrument with seven subscales that measure positive discipline, appropriate discipline, harsh discipline, inconsistent discipline, clear expectations, monitoring, and harshness for age. Based on the findings of Kim and Hong's (2007) study on first generation Korean American parents' perceptions of discipline, this study focused on three subscales: positive discipline (e.g., praise, hug/kiss/pat, tangible rewards, sticker charts); appropriate discipline (e.g., correction, timeouts, take away privileges, reasoning); and harsh discipline (e.g., yelling, threatening, spanking, hitting, hostility). Higher scores mean higher tendency of using each discipline technique. Webster-Stratton and colleagues established predictive validity of the instrument by finding the instrument to be sensitive to the intervention (Webster-Stratton, 1998; Webster-Stratton, Reid, & Hammond, 2001). Cronbach's alpha for an American parents sample was .72 for positive discipline, .82 for appropriate discipline, and .75 for harsh discipline (Webster-Stratton, 1998). Cronbach's alpha for the current Korean American sample was .75 for positive discipline, .70 for appropriate discipline, .90 for harsh discipline, and .75 for the total scale.

2.3.2. Maternal acculturation—Maternal acculturation was measured using the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II), a 12-item, 5-point Likert-type scale instrument that measures orientation to Mexican culture and American culture (Cuellar, Arnold, & Maldonado, 1995). This questionnaire asks about language, ethnic behaviors, and ethnic interaction. The word "Mexican" in this measure was changed to "Korean" by the first author to use the instrument with Korean American mothers. The

modified subscales include Korean Orientation (I speak Korean) and American Orientation (I speak English). Scores range from 1 to 5. High scores indicate that mothers have a higher cultural orientation for either Korean or American culture. The maternal acculturation score was calculated by subtracting the Korean Orientation score from the American Orientation score. Then, the median score for maternal acculturation was used to divide intervention group mothers into two subgroups: low-acculturation ($n = 9$) and high-acculturation ($n = 10$). Cuellar et al. (1995) established concurrent validity of the measure. Cronbach's alpha for the Mexican sample was .88 for Mexican Orientation and .93 for American Orientation. Cronbach's alpha for the current study sample was .91 for Korean Orientation and .69 for American Orientation.

2.3.3. Child problem behaviors—Children's problem behaviors were measured using the Eyberg Child Behavior Inventory (Robinson, Eyberg, & Ross, 1980), a 36-item, 7-point Likert-type scale instrument that assesses problem behaviors common for children 2 to 16 years of age, such as dawdling, whining, and lying. Two scores can be obtained and were used in this study: an Intensity score, which indicates the frequency with which the problem behaviors occur, and a Problem score, which indicates the total number of behaviors parents view as problems. Scores range from 36 to 252 for the Intensity scale and 1 to 36 for the Problem scale. Cut-off scores of 131 for the Intensity scale and 15 for the Problem scale have been used for screening children at risk for conduct problems (Eyberg & Pincus, 1999). Scores on the instrument have been significantly correlated with other established measures of child behavior problems and independent observations of children's behavior (Boggs, Eyberg, & Reynolds, 1990). Cronbach's alpha for the American parents sample ranged from .86 (test-retest) to .98 (internal consistency) (Webster-Stratton et al., 2001). Cronbach's alpha for the current Korean American sample was .89 for Intensity scale and .95 for the Problem scale.

2.3.4. Child social competence—A child's social competence was measured using the Social Competence Scale (Webster-Stratton, 2007b), developed by the Conduct Problem Prevention Research Group (Fast Track). It is a 14-item, 5-point Likert-type scale instrument, which assesses the child's positive social behaviors including frustration tolerance and communication skills. Sample items are, "My child is helpful to others," and "My child thinks before acting." Scores range from 14 to 70. Higher scores indicate higher child social competence. Webster-Stratton (1998) established predictive validity of the instrument by finding the instrument to be sensitive to the intervention. Cronbach's alpha was .87 for an American sample (Webster-Stratton) and .80 for the current Korean American study sample.

2.3.5. Intervention group mothers' satisfaction with the program—Participants' satisfaction with the parenting program was measured using the Parent Satisfaction Questionnaire (Webster-Stratton, 2007c). This is a 39-item 7-point Likert-type scale instrument that consists of five subscales to measure mothers' general satisfaction, program delivery method usefulness, techniques' ease of use, techniques' usefulness, and satisfaction with the leader. Cronbach's alphas ranged from .83 to .91 for the current Korean American study sample.

2.3.6. Translation of the instruments—The instruments were translated using Brislin's (1970) method as follows: (1) a bilingual person translated the English version of the instruments into Korean; (2) a second translator then back translated the instruments into English; (3) research team compared two versions and discrepant items were retranslated into Korean; (4) the second translator back translated the instruments into English; (5) the step 3 and 4 were repeated two more times so that two versions matched; (6) the translated instruments were pilot tested to evaluate their semantic and content equivalence with seven Korean immigrant parents (Willgerodt, Yahiro, Kim, & Ceria, 2005).

2.4. Procedures

The researchers first obtained approval from the University Institutional Review Board and then obtained informed consent from all study participants. Participants were recruited from a Korean language school and its surrounding community in the Pacific Northwest from September 2003 to January 2004. The school offered Korean classes on Friday nights and Saturday mornings; recruitment occurred on both days, when 33 mothers volunteered (Friday $n = 15$, Saturday $n = 18$). Once all mothers completed the pre-intervention assessment, the families were randomly assigned to the intervention group (Friday $n = 10$, Saturday $n = 11$) or control group (Friday $n = 5$, Saturday $n = 7$), using a computer-generated randomization list drawn by a statistician.

Assignment was done 2:1 in order to have a minimal control group while giving parenting program access to as many participants as possible (Friedman, Furberg, & DeMets, 1998). By using a 2:1 allocation, the study may slightly lose sensitivity but may gain more information about participant responses to the intervention. If the intervention turns out to be beneficial, more study participants would benefit than under an equal allocation scheme (Friedman et al.).

Intervention was offered only to intervention group mothers for 12 weeks of classes from February to June 2004. Among the 11 mothers in the Saturday intervention group, one mother withdrew after three sessions due to a family problem and the necessity of a 2-hour commute between home and the school. In addition, three mothers in the control group withdrew prior to the post-intervention assessment (reasons: disappointment with being in the control group, did not have time to fill out the questionnaires, did not want to fill out the questionnaires). After the intervention was completed, all remaining mothers filled out a post-intervention assessment at home and mailed the questionnaires to the research team in a stamped, self-addressed envelope. The data, therefore, represents responses from 29 mothers (intervention $n = 20$, control $n = 9$) for the pre- and post-assessment comparison.

In June 2005, mothers filled out the 1-year follow-up assessment. At this time, 5 more mothers (intervention $n = 3$, control $n = 2$) dropped out (reasons: 2 families moved and could not be contacted and 3 families did not want to fill out the questionnaires). Thus, for the pre- and 1-year follow-up assessment comparison, the data represent responses from 24 mothers (intervention $n = 17$, control $n = 7$). Using ANOVA, no significant differences on the demographic variables were found between mothers who dropped out ($n = 9$) and those who were retained ($n = 24$). Each mother received \$10 upon completion of each pre-, post-, and 1-year follow-up assessment. Intervention group mothers received \$100 upon completion of the parenting program. For each missed class \$7.50 was deducted from the \$100.

2.5. Data Analysis

The data were analyzed using SPSS 13 (Norusis, 2006). First, we examined the distribution all of the study variables; they were approximately normally distributed. Differences in demographic characteristics and study variables between the two groups were compared using oneway ANOVA. The primary hypotheses were that the intervention group would improve more than the control group on five outcome variables (e.g., mothers' positive, appropriate, and harsh discipline, children's problem behaviors and social competence). These five hypotheses were tested using two-group analysis of covariance (ANCOVA) in which pre-intervention scores served as covariates to control for baseline functioning. Effect size was calculated using Cohen's $d = (M_a - M_b) / sd$ (Cohen, 1988). Cohen proposed calling effect sizes as "small," $d = .2$; "medium," $d = .5$; and "large" $d = .8$. In order to further describe the treatment effect, pre-post paired t-tests of the five outcomes were conducted separately within the intervention and control groups. All of these analyses were done separately for outcomes immediately post-intervention and at the 1-year follow-up. Due to the withdrawal of 5 mothers

at the 1-year follow-up assessment, these separate analyses were conducted rather than combining the two outcome time points into a single repeated measure ANOVA. This maximizes the sample size for the immediate post intervention analysis.

ANCOVA and paired t-tests also were used to explore the role of maternal acculturation in the immediate treatment effect within intervention group mothers by dividing them into two subgroups using the median maternal acculturation score as a cut point (e.g., high acculturated mothers vs. low acculturated mothers). Recent evidence indicates that the level of maternal acculturation using a median score moderates the relation between Korean American maternal parenting and their youth's psychological adjustment and social competence (Kim, Cain, & McCubbin, 2006; Kim, Han, & McCubbin, 2007). Similarly, the treatment effect on this study's variables might differ according to mothers' acculturation level. Because of the small sample sizes, all analyses were repeated using non-parametric analysis methods: Wilcoxon test for the paired analyses and ANCOVA based on ranked data for the across-group comparisons.

3. Results

3.1. Pre-intervention Group Equivalence and Descriptive Data

Descriptive statistics for all study variables by group and pre-, post-, and 1-year follow-up time points are reported in Table 2. Of particular importance to the research methodology was the confirmation of randomization. Oneway ANOVA indicated no significant differences on any of the study variables between intervention and control groups at baseline.

3.2. Pre- and Post- Between-Group Hypotheses Testing Using ANCOVA

As shown in Table 2, intervention group mothers increased positive discipline as compared with control group mothers (hypothesis 1). The remaining hypotheses were not supported, as there were no group differences on either appropriate discipline (hypothesis 2) or harsh discipline (hypothesis 3). In addition, no treatment effect was found for mothers' perceived child problem behaviors (hypothesis 4) or social competence (hypothesis 5). Because of small sample size the observed confidence intervals on estimated effect sizes were very wide.

3.3. Pre-Post Within-Group Comparison Using Paired t-test

Table 2 shows pre-post comparisons within intervention and control groups, using paired t-tests results. After the parenting program, intervention group mothers showed a significant increase in positive discipline as well as a significant decrease in harsh discipline. They also reported significantly fewer child problem behaviors in terms of both intensity and number of problems. The intervention group mothers did not increase appropriate discipline and their children did not increase social competence. Control group mothers reported no changes in either their discipline or perceptions of the intensity of child problem behaviors; however, they reported a significant decrease in numbers of child problem behaviors.

3.4. Maintenance of the Treatment Effects after 1-Year post Intervention

As shown in Table 2, at the 1-year follow-up assessment, intervention group mothers maintained the significant treatment effect for positive discipline compared to control group. Within the intervention group, these mothers reported the maintenance of the significant program effects in positive discipline and the decrease in children's problem behaviors for both intensity and number of problems. Intervention group mothers also reported significantly higher use of appropriate discipline and higher children's social competence. No changes in maternal discipline styles or mothers' perceived children's problem behaviors and social competence were noted by control group mothers. Control group mothers' report of decreased

number of children's problem behaviors at post-assessment was not significant at the 1-year follow up.

3.5. The Role of Maternal Acculturation in the Immediate Treatment Effect

The role of maternal acculturation in the immediate treatment effect within the intervention group was explored by dividing these mothers into high and low sub-acculturation groups. As shown in Table 3, no significant group differences were found in the study variables at pre-intervention using oneway ANOVA. At post intervention, high acculturation group mothers used significantly more appropriate discipline than low acculturation group mothers. In contrast, low acculturation group mothers significantly decreased harsh discipline compared to high acculturation group mothers. Paired t-tests showed that after intervention high acculturation group mothers used significantly more positive discipline, and these mothers reported a significant decrease in the number of child problem behaviors. Low-acculturation group mothers used significantly more positive discipline and less harsh discipline after intervention. They also reported their children as having lesser intensity and numbers of problem behaviors. Non-parametric analyses gave results very similar to those presented in Table 3. Thus, it was concluded that non-normality was not a problem for these analyses.

3.5. Intervention Group Mothers' Satisfaction with the Program

Overall feelings about the program were positive or very positive for 85% of mothers. Mean score of the mother's general satisfaction was 6.03 out of 7 ($SD = .71$) indicating that mothers overall felt that the program was helpful. Table 4 summarized mothers' reports on easiness and usefulness of individual program content. Mothers reported that rewards and praise were easy to use and useful. Timeouts and consequences were difficult to use, although they were useful.

4. Discussion

The major finding of this pilot study was that the Incredible Years Parenting Program was effective in expanding Korean American mothers' scope of discipline strategies in this study sample. Compared to the control group mothers, intervention group mothers used significantly more positive discipline both immediately after completing the program and 1 year after intervention. These results of both immediate and long term effects are consistent with previous research where this intervention was used with ethnically diverse families (Reid, Walter, & O'Leary, 1999; Reid et al., 2001; Tucker et al., 1998). Contrast to Asian group in Reid et al.'s study, the current study found that Korean American mothers increased positive discipline. This may be related to the fact that the current study used a self-report measurement, whereas Reid et al.'s (2001) study used home observation data. This may also be because the current study was delivered by Korean American leaders who understood that lack of positive discipline was based on Korean culture and knew how to address this issue in the class.

There were no group differences in other study variables (i.e., appropriate discipline, harsh discipline, children's behavioral problems, and social competence). However, the confidence intervals on estimated effect sizes were very wide so that strong conclusions should not be reached concerning lack of treatment effect. For example, for appropriate discipline the data were consistent with the true effect size being anywhere from negative and moderate ($-.67$) to positive and large ($.83$). Within each group, intervention group mothers significantly decreased their use of harsh discipline while control group mothers did not change. Korean American parents previously identified spanking as a Korean style discipline strategy; as they adopted American culture, they tried to discontinue this strategy (Kim & Hong, 2007). This finding indicates that providing a parenting program may help Korean American mothers reduce their harsh parenting practices, but this needs to be reexamined with larger sample.

Neither intervention group mothers nor control group mothers increased their use of appropriate discipline immediately after the intervention. Speculatively, this may be related to the fact that appropriate discipline strategies were new to most intervention group mothers. In a previous study, Korean American mothers identified ignoring, timeout, and removing privileges as an American style discipline and did not have them in their repertoire of parenting techniques (Kim & Hong, 2007). In the current study, right after the intervention, most of the mothers thought that positive discipline techniques were easy to use (e.g., 85% for praise and 95% for rewards) and useful (e.g., 100% for praise and 80% for reward). However, only 44% of mothers perceived appropriate discipline were easy to use (e.g., timeouts and consequences), although over 70% of mothers perceived them as useful. The intervention group mothers might have needed more time and practice of these unfamiliar strategies to incorporate them into their parenting practices. This speculation is supported as intervention group mothers used significantly more appropriate discipline one year after the intervention, whereas no changes occurred in control group mothers.

It is not clear why not only intervention group mothers but also control group mothers rated their children as having fewer problem behaviors immediately after the intervention. This may be related to the Hawthorn effect that the control group mothers changed their view on what they saw as problem behaviors due to the attention they received from researchers during participation. This finding needs to be reexamined in a study with a larger sample. However, it is important to note that only intervention group mothers perceived less intensity of children's problem behaviors immediately after intervention and one year later. Intervention group mothers also perceived their children to be more socially competent one year after the intervention. These findings are consistent with previous findings (Gross, Sambrook, & Fogg, 1999; Webster-Stratton, 1998; Webster-Stratton et al., 2001). It also supports the theoretical framework that parental use of effective discipline can prevent coercive family processes, resulting in fewer child problem behaviors (Patterson et al., 1992). When mothers use positive and appropriate discipline, children are less likely to misbehave. As seen here and in Webster-Stratton's (1998) study, strengthened parenting skills over time also promoted children's social competence in the intervention group.

The unique contribution of this study is the preliminary findings on the role of maternal acculturation in the immediate treatment effect. All intervention group mothers benefited from learning positive discipline; however, low-acculturated mothers were more receptive to decreasing harsh discipline, while high-acculturated mothers were more open to adopting discipline strategies considered appropriate in the United States. This finding may indicate that when mothers were not familiar with American culture, it was easier for them to stop using discipline strategies they were accustomed to but learned to be ineffective. However, learning appropriate discipline techniques itself might have not increased use of low-acculturated mothers because it requires not only understanding of discipline techniques but also cultural background behind that specific strategy. For example, timeouts is a technique that allows children to self-regulate their emotion, which is based on the view of a child as an independent human being, who is responsible for their own behaviors. However, Korean American mothers view their child as a dependent human being and parents feel responsible for regulating their child's behaviors. Therefore, learning timeouts may be more difficult for low-acculturated mothers as they do not understand the American culture underpinning timeouts. This speculation is supported by the fact that mothers who were familiar with American culture more readily adopted a new strategy.

The study results suggest that providing a parenting program is a potentially useful intervention for Korean American mothers in promoting positive discipline. A previous study found that Japanese and South American immigrant mothers are more apt to lack parenting knowledge, especially about normal child development and parent-child relationships, compared to

European American mothers (Bornstein & Cote, 2004). Formal learning opportunities, such as parenting programs, can provide this necessary knowledge. However, not many Korean American parents have access to these educational opportunities because they, especially mothers, are not fluent in English. In this study, 83% of mothers were not fluent in speaking English. Providing the parenting program in Korean was an effective way of reaching Korean American mothers.

Several limitations must be noted. First, due to a small sample size, the study had low power for detecting a moderate effect size (22% power for an effect size of .5) and good power for detecting a large effect size (82% power for detecting an effect size of 1.2). Thus, sample size alone may explain the lack of significant treatment effect for some outcomes. Low power concern is increased further when the small sample was then divided to examine acculturation. Second, because volunteers for the study were recruited from a language school, these mothers may have been more involved in the Korean American community and willing to learn new discipline strategies. Further, the mean score of the positive and harsh disciplines for this community sample mothers were similar to those from Webster-Stratton's (2001) study with a Head Start population. The Parenting Practice Interview measurement does not have a norm published for the general population. Therefore, it is difficult to say whether or not these Korean American mothers really use less positive discipline or more harsh discipline than general American population. Further, these mothers rated their children as having problem behavior means in the normal range; this may have created a potential floor effect on the study variable. Hence results cannot be generalized to the total Korean American parent population.

Third, a 2:1 assignment to the intervention group limited the size of the control group and weakened the strength of a randomized controlled experimental study. Fourth, 30% of the control group mothers, compared to only 4% of the intervention group, dropped out at post-assessment. Although all of the mothers agreed to participate in the study regardless of their randomization, not getting into the intervention group disappointed control group mothers and resulted in a higher drop out rate. This may be related to limited access to parenting programs offered in Korean language. In addition, both intervention and control group mothers received \$10 for completing each of three research assessments. Intervention group mothers also received weekly contact, benefit of intervention, and payment of \$100 for attending all intervention sessions. This may explain the higher retention rate in the intervention group. In Webster-Stratton's study, 15% of intervention group mothers dropped out at post-intervention assessment, compare to 21% in control group (Webster-Stratton, Reid, & Hammonde, 2001).

Fifth, this study relied on mothers' self-report rather than on behavioral observation, which might have yielded more objective data on actual maternal and child behavior. Sixth, borderline alpha reliability ($\alpha=.69$) for the American Orientation scale of acculturation might have influenced the acculturation findings. The lowest acceptable reliability for psychosocial measurement is .80 for a well-developed instrument and .70 for a newly developed instrument (Burns & Grove, 2001). Seventh, the videotape was shown in English and translated into Korean, which took time that could have been used in teaching content. Eight, four interracial married Korean mothers were included in the study. This might have affected the outcome measurement as these mothers might be qualitatively different from those who married Korean men. This small pilot study did not have a sample size to examine this population separately. Finally, maternal acculturation needs to be reexamined using four group comparisons (i.e., high and low acculturated subgroups in the control group and in the intervention group). This study used two group comparisons only in the intervention group mothers, due to the small sample size.

5. Conclusion

The results are preliminary based on a small sample size and should not be considered as a final statement about the effectiveness of the Incredible Years Parenting Program on Korean American mothers. Future research should be conducted with a larger sample size, assessment of both mothers and fathers, a 1:1 randomization allocation, a waiting control group, and observational data. Furthermore, showing videotapes in Korean language would facilitate understanding of the content. Evaluating intention to use strategies, self-efficacy or confidence, actual implementation, and dosage effect would also be useful. Implications for healthcare practice must be viewed with caution since this was a pilot study utilizing a small sample. Nonetheless, healthcare professionals can provide parenting education to positively change Korean American mothers' discipline practices. For example, specific discipline strategies such as praise and rewarding can effectively increase mothers' positive parenting. Healthcare professionals need to keep in mind that mothers' level of acculturation may affect intervention effect.

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Table 1

Demographic Characteristics

Characteristic	Pre- and post-intervention		1-year follow-up	
	Intervention group (n = 20)		Control group (n = 17)	
	M ± SD / n (%)	M ± SD / n (%)	M ± SD / n (%)	M ± SD / n (%)
Mother	Age	36.95 ± 2.74	36.89 ± 4.59	37.18 ± 2.92
	Education	14.35 ± 2.91	15.78 ± 3.03	13.74 ± 2.19
	US residency	9.45 ± 5.27	11.44 ± 7.89	8.94 ± 4.56
	Christian	18 (90%)	8 (88.9%)	15 (88.2%)
Religion	None	2 (10%)	1 (11.1%)	2 (11.8%)
	Citizen	8 (40.0%)	4 (44.4%)	6 (35.3%)
Visa status	Permanent resident	8 (40.0%)	3 (33.3%)	8 (47.1%)
	Temporary	4 (20.0%)	2 (22.2%)	3 (17.6%)
Father	Age	40.37 ± 3.85	39.57 ± 4.12	40.06 ± 4.07
	Education	15.84 ± 2.65	17.43 ± 2.70	15.50 ± 2.56
	US residency	17.00 ± 11.25	14.57 ± 13.19	16.94 ± 11.34
Child	Age	5.80 ± 1.54	5.56 ± 1.81	5.76 ± 1.52
	Sex: Girl	9 (45%)	2 (22%)	7 (41.2%)
	Boy	11 (55%)	7 (78%)	10 (58.8%)
Number of children		2.0 ± .65	1.89 ± .78	1.94 ± .66
	Under 40,000	3 (15%)	4 (44.4%)	3 (17.7%)
	40,001-80,000	11 (55%)	1 (11.1%)	9 (52.9%)
	Over 80,001	4 (20%)	3 (33.3%)	3 (17.7%)
Annual family income	missing	2 (10%)	1 (11.1%)	2 (11.8%)
				1 (14.3%)

Note: No significant difference on all demographic variables between mothers, fathers, and children in intervention and control groups using ANOVA and χ^2 at baseline, post-intervention, and 1-year follow-up

Table 2
Study variables and effect size, ANCOVA, and paired t-test between and within intervention and control group significance

Scale	Group	T1 ^a Mean ± SD	T2 Mean ± SD	T3 Mean ± SD	Immediate treatment effect (T1 & T2) Effect size (confidence interval)	ANCOVA F [†]	Paired t-test t [‡]	Long term effect (T1 & T3) Effect size (confidence interval)	ANCOVA F [†]	Paired t-test t [‡]
Positive discipline	Treatment	4.44 ± .79	5.16 ± .75	4.86 ± .79	1.13 (.44, 1.82)	12.03 ^{**}	4.79 ^{***}	1.09 (.31, 1.86)	5.60 [*]	2.43 [*]
	Control	4.60 ± .65	4.59 ± .68	4.50 ± 1.03			-.07			-.10
Appropriate discipline	Treatment	3.89 ± .67	3.98 ± .72	4.16 ± .74	0.08 (-.67, .83)	.11	.73	0.46 (-.37, 1.30)	3.93 [#]	2.39 [*]
	Control	4.21 ± .45	4.23 ± .80	3.94 ± .39			.05			-1.66
Harsh discipline	Treatment	2.49 ± .73	2.02 ± .61	2.18 ± .72	-0.40 (-1.18, .37)	.10	-3.07 ^{**}	-0.06 (-.92, .80)	.00	-.94
	Control	2.14 ± .77	1.94 ± .47	2.01 ± .68			-.96			-.35
Problem behaviors	Treatment	80.50 ± 17.95	72.18 ± 14.54	67.02 ± 11.40	-0.26 (-.98, .47)	.12	-2.34 [*]	-0.91 (-1.81, -.02)	3.27 [#]	-4.31 ^{***}
- Intensity	Control	73.98 ± 18.13	71.89 ± 20.72	70.57 ± 16.75			-.26			-.27
Problem behaviors	Treatment	13.09 ± 9.63	5.17 ± 4.58	5.95 ± 6.56	-0.14 (-.94, .67)	.00	-4.39 ^{***}	0.13 (-.75, 1.00)	.71	-3.37 ^{**}
- Numbers	Control	11.72 ± 8.18	4.89 ± 4.96	3.57 ± 3.60			-2.61 [*]			-2.30 [#]
Social competence	Treatment	43.30 ± 8.71	46.15 ± 8.96	50.24 ± 7.44	0.53 (-.20, 1.25)	1.06	1.60	0.50 (-.35, 1.34)	.71	3.67 ^{**}
	Control	46.56 ± 8.14	45.22 ± 9.55	49.29 ± 9.78			-.59			1.13

Note. T1= pre-intervention, T2 = post-intervention, T3 = 1-year follow-up

Sample size for T1 & T2: intervention n = 20, control n = 9, Sample size for T1 & T3: intervention n = 17, control n = 7

^aNo significant difference on all variables using ANOVA

^{*} Standardized effect size

[†] F-value for ANCOVA comparing post-test score controlling for pre-test scores

[‡] t-value for paired t-tests comparing scores from two time points for each group

[#] p < .10.

^{*} p < .05.

^{**} p < .01.

^{***} p < .001

Table 3
Study variables and effect size, ANCOVA, and paired t-test within high and low acculturation group significance (N = 19)

Scale	Acculturation group (n)	T1 ^a Mean ± SD	T2 Mean ± SD	Change Score Mean ± SD	Immediate treatment effect ANCOVA F [†]	(T1 & T2) Paired t-test t [‡]
Positive discipline	Low (9)	4.21 ± .92	5.07 ± .89	.86 ± .80	.10	3.23*
	High (10)	4.66 ± .63	5.25 ± .62	.60 ± .51		3.72***
Appropriate discipline	Low (9)	3.85 ± .50	3.69 ± .61	-.16 ± .61	4.77*	-.81
	High (10)	3.92 ± .82	4.25 ± .74	.33 ± .49		2.17 [#]
Harsh discipline	Low (9)	2.55 ± .72	1.78 ± .51	-.77 ± .67	5.01*	-3.44**
	High (10)	2.43 ± .78	2.23 ± .64	-.21 ± .58		-1.12
Children's problem behaviors - frequency	Low (9)	80.78 ± 19.47	67.62 ± 13.37	-13.16 ± 10.84	2.92	-3.64**
	High (10)	79.90 ± 18.47	76.80 ± 15.49	-3.10 ± 19.20		-.51*
Children's problem behaviors - numbers	Low (9)	13.70 ± 10.54	5.59 ± 3.92	-8.10 ± 8.44	.08	-2.88*
	High (10)	12.54 ± 9.26	4.78 ± 5.28	-7.76 ± 7.76		-3.16**
Children's social competence	Low (9)	42.00 ± 7.78	47.44 ± 9.81	5.44 ± 7.60	1.18	2.15 [#]
	High (10)	45.60 ± 9.20	45.90 ± 8.54	.30 ± 8.22		-.12

^a At T1, no significant difference on all variables except inconsistent discipline using ANOVA.

[†] p-value for ANCOVA comparing post-test score controlling for pre-test scores

[‡] p-value for paired t-tests comparing Time 2 To T1 scores for each group

[#] p < .10.

* p < .05.

** p < .01.

*** p < .001

Table 4
Parent perceived easiness and usefulness of specific discipline strategies

	Easiness of using			Usefulness		
	Easy 1-3 (%)	Neutral 4 (%)	Difficult 5-7 (%)	Useful 1-3 (%)	Neutral 4 (%)	Useless 5-7 (%)
Praise	85	0	15	100	0	0
Rewards	95	0	5	80	20	0
Ignoring	65	15	20	95	0	5
Good commands	58	37	5	79	21	0
Timeout	44	28	28	72	22	6
Natural and logical consequences	44	33	22	71	29	0
Problem-solving with child	61	22	17	83	17	0

Note. Easiness: 1= extremely easy, 2 = easy, 3=somewhat easy, 4 = neutral, 5 = somewhat difficult, 6 = difficult, 7 = extremely difficult
Soulfulness: 1= extremely useful, 2 = useful, 3=somewhat useful, 4 = neutral, 5 = somewhat useless, 6 = useless, 7 = extremely useless