EFFECTS OF A UBIQUITOUS MENTORING PROGRAM ON SELF-ESTEEM, SCHOOL ADAPTATION, AND PERCEIVED PARENTAL ATTITUDE

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We examined the impact of a ubiquitous mentoring program on self-esteem, school adaptation flexibility, and perception of parental attitude toward child rearing of elementary students from low socioeconomic status families. We selected 23 elementary-school students whom we had identified as high-risk and each student was paired with a trained mentor for 20 sessions of a mentoring program. Ubiquitous mentoring significantly changed the students' perception of parental attitudes about child rearing and their perception of parents using democratic and authoritative styles of parenting had increased after 20 weeks of mentoring. Social self-esteem rapidly declined from baseline to the 20th week and an increase in family self-esteem was noted on the 20th week of the program. A rapid decline in school adaptation flexibility was noted from baseline to the end of the mentoring program. The data indicate that a ubiquitous mentoring program can serve as a support system for vulnerable children. We found that outcomes were greatly influenced by the length and quality of the mentoring and these factors should be considered as topics for future study.

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Over the past decade, mentoring programs have grown in popularity as an intervention strategy designed to improve the well-being of vulnerable individuals, particularly children and at-risk youth (Bernstein, Rappaport, Olsho, Hunt, & Levin, 2009; DuBois, Holloway, Valentine, & Cooper, 2002; Keating, Tomishima, Foster, & Alessandri, 2002; Rhodes, Grossman, & Resch, 2000). The implementation of these programs has brought significant positive outcomes for at-risk youth, particularly behavioral change, self-esteem enhancement, and improvement in academic performance and school attitude (Converse & Lignugaris-Kraft, 2009; Dubois & Karcher, 2005; Johnson, 2007). In the United States, about 5,000 mentoring programs have been widely implemented; the aim of which is to cultivate a relationship that will foster positive development and well-being of target youth. The Big Brothers/Big Sisters (BBBS) of America program is quite popular and continues to be the source of benchmarking of various mentoring programs, given the success and beneficial outcomes it has provided to their mentees. In South Korea, the Korean Adolescent Mentorship Program has recently been established for the purpose of building cultural relationships and providing personal and professional development opportunities for Korean youth.

To cater for the needs of the mentee, approaches to mentoring have expanded beyond the traditional one-to-one approach. Innovations have been implemented to cater for the specific needs of the mentee and to improve accessibility of the mentor for the mentee, with some of the innovations being peer, group, team, and online or ubiquitous mentoring. Despite the vast number of studies related to the outcomes of mentoring programs, there is still little known about the effects of mentoring programs that have been designed for easy access on the part of the mentee. Most of the programs have been based on either a school-based or after-school approach and less has been documented on the kind of mentoring made available to the mentee at all times, that is, *ubiquitous* mentoring. Moreover, few studies have been conducted in which researchers have looked into how the mentoring process could bring significant changes in the mentee's perception of parental attitude toward child rearing, along with influencing his or her psychosocial, behavioral, and mental well-being. With the goal of providing significant change in the intellectual, social, and emotional domains of the mentees, the process of mentoring is quite dependent on the mentoring relationship and the mentoring program (Deutsch & Spencer, 2009). The involvement of parents, teachers, peers, and significant others plays an important role in significantly improving the mentee's well-being (DuBois, Neville, Parra, & Pugh-Lilly, 2002; Karcher, 2005; Rhodes, Reddy, Roffman, & Grossman, 2005).

In the current study, the process of mentoring was performed using a ubiquitous method, such that the program was available and accessible anytime and anywhere. A learning assistance program with learning and emotional support is a necessary component of the mentoring process with elementary-school students from families in poor socioeconomic circumstances. Maintenance of self-care learning, which includes counseling services, homework, and reviewing lessons to get good grades, can occur through the structured Internet-based education used in the ubiquitous program.

Although benefits from mentoring are evident, the positive outcomes reported are not consistent across various studies. The Study of Mentoring in the Learning Environment (SMILE) showed least positive effects on students' peer relationship, social skills, and self-esteem and no significant outcomes on academic achievement of students were noted. (Karcher, 2008). School-based mentoring showed no significant results on grades, dropout rate, and self-esteem (Lee & Cramond, 1999). On the other hand, the evaluation of school-based mentoring for at-risk middle youth showed significant improvements in school attitude and reductions in office referrals (Converse & Lignugaris-Kraft, 2009).

In the present study we examined the effects of a ubiquitous mentoring program for elementary-school students from low socioeconomic status (SES) families, the aims of which were to influence positively the students' self-esteem and school adaptation flexibility, and to bring significant changes in their perception of the parental attitude to child rearing. Specifically, in this study our focus was on the effects of mentoring for students whose parents are unable to afford and sustain the cost of the expensive after-school program available in South Korea. Durlak, Weissberg, and Pachan (2010) observed that the limitations in various studies include the lack of data on consideration of either the SES or the cultural background of the mentees. Most youth from low-income families have limited access to alternative support such as guidance, counseling, and mentoring programs for their development and well-being, making them more likely to engage in risky behaviors such as violence, substance abuse, teenage pregnancy, and poor school performance (Black, Grenard, Sussman, & Rohrbach, 2010; DuBois, Holloway, et al., 2002; Foster, 2001). This necessitates the identification of the nature and characteristics of the at-risk youth, and the need for an accessible process of mentoring through a high-quality program. We hypothesized that the accessibility of the mentors, as well as the high quality of the mentoring, would bring positive changes in the self-esteem of the children being mentored, would improve their school adaptation flexibility, and their academic performance, and would also change their perception of parental attitude toward child rearing.

Rhodes (2005) expressed the view that mentoring affects youth through three interrelated processes: (a) by enhancing their social relationships and emotional well-being, (b) by improving their cognitive skills through instruction and

conversation, and (c) by promoting positive identity development through the mentor serving as a role model and advocate for the mentee. Of paramount importance to the outcome of a mentoring program is its effects on individual self-esteem, the adolescent's perception of their parents' attitude toward child rearing, and their adaptation in school, which includes improved academic performance and the maintenance of good relationships with peers and teachers.

Mentoring Programs

As defined by Freedman (1999), *mentoring* is a one-to-one relationship between a pair of unrelated individuals, with the mentor being an older person with more life experience who seeks to develop the character and competence of the younger mentee. Mentoring programs are becoming popular as an intervention strategy to assist at-risk and problematic individuals, particularly youth experiencing behavioral problems such as substance abuse, teenage pregnancy, violence, and decline in school performance. The success of mentoring programs has proven their worth to vulnerable children and youth in social-emotional domains. It has been found that mentoring programs, in which the focus is on problem-solving skills and providing guidance, reduce the number of episodes of problematic behavior among youth (Foster, 2001).

The success of a nontraditional approach of mentoring was highlighted in a telementor program that included 2,000 mentors, 1,650 students, and 140 teachers. A telementor program involves the use of computer-based opportunities through online electronic communication mode of developing relationships (Foster, 2001). This program was found to be beneficial and useful, highlighting the great potential of the use of this technology to enhance learning opportunities for students of all ages (Cobb, 1997). On a smaller scale, in an online mentoring program conducted in the US for at-risk junior-high youth with university students as mentors, the mentees developed a more positive attitude toward reading and the number of books they read during the semestral program increased (Lesesne, 1997).

Both the structure and length of a mentoring program have a significant impact on its outcomes. In an evaluative review of mentoring programs, Jekielek, Moore, Hair, and Scarupa (2002) concluded that relationships characterized by more frequent contact were associated with more positive youth outcomes, and that mentoring relationships that end prematurely have the tendency to lead to a decline in function. Deutsch and Spencer (2009) pointed out that sustaining a quality relationship over time brings better quality and outcomes. Quality and quantity are of paramount importance in implementing an effective mentoring program. A high-quality mentoring program will feature trained or experienced mentors, opportunities for matches or pairing of mentor and mentee, involvement and participation of parents and significant others, frequency and duration of

contact, a community setting, and systematic monitoring and evaluation of the program (Dubois, Neville, et al., 2002). Consideration should be given to the essential elements, particularly the screening of mentors, effective and careful matching of the mentor with the mentee, orientation and training for the mentoring process, and ongoing and continuous support and supervision (Foster, 2001).

Effects of Mentoring

Self-esteem. Mentoring programs can have substantial positive effects on youth development and well-being. In a longitudinal study of young adults, Dubois and Silverthorn (2005) reported that adolescents who had completed mentoring programs showed markedly improved academic performance, enhanced self-esteem, and better physical health, and a decline in problematic behaviors. In a meta-analysis conducted by Dubois, Portillo, Rhodes, Silverthorn, and Valentine (2011), the authors reported that the study findings supported the value of mentoring programs in producing positive outcomes affecting behavioral, social, emotional, and academic domains of the development of the adolescents who had received mentoring. However, mentoring programs have had only limited positive effects on the emotional, behavioral, and educational functioning of participating youth (DuBois, Holloway, et al., 2002).

School adaptation and flexibility. In quite a few studies the findings have shown the positive effects of mentoring in improving the mentees' school performance, with a significant benefit for social skills. Mentoring programs for elementary-school students have increased their academic achievement and have yielded positive results in terms of attitude, work ethic, motivation, social skills, and work quality (Foster 2001; Caldarella, Adams, Valentine, & Young, 2009). In a randomized pilot study the results demonstrated the positive effect of group mentoring on cognitive and behavioral outcomes of elementary-school students (Jent & Niec, 2009). In an impact study of the BBBS program in the US, students who were mentored for 1.5 years improved their academic performance and gained a positive self-perception of their academic abilities. However, in another study of the same program it was found that the academic improvements were not sustained into the second school year (Herrera, Grossman, Kauh, & McMaken, 2011).

Children's perception of parental attitude toward child rearing. Parents play a significant role in the emotional development and formation of the personality of their children. It has been noted that a mentoring program can improve the academic performance of students who maintain a secure relationship with their parents (Larose et al., 2012). Therefore, adult mentors should be trained to be less like peers and more like good parents (Langhout, Rhodes, & Osborne, 2004). The success of mentoring relationships has been associated with marked improvements

in the relationships of youth with their parents, other adults, and peers (DuBois, Neville, et al., 2002; Karcher, 2005; Rhodes et al., 2005). Although a great many studies have been conducted related to the positive outcomes of mentoring, few empirical studies have been conducted in which the researchers have examined the effects of mentoring on the children's or adolescents' perception of parental attitude toward child rearing. Little is known on the perception of at-risk youth of the parent–child relationship, parental support, and how parenting style affects their psychosocial and emotional development during a mentoring program. In the study by Herrera et al. (2011) these authors noted there were no improvements in the relationships of the adolescents with their parents, their teachers, or their peers at the end of a mentoring program.

Method

Participants

We considered 30 high-risk elementary-school students, as identified by the directors of the community children's centers in Daegu and Masan Cities in South Korea, for participation in the study. The community children's centers provide support for children from low SES families. We asked the directors to identify students at high risk of behavioral problems based on the following criteria: low scores in the questionnaire (which covered demographic characteristics, self-esteem, school adaptation and flexibility, and perceptions of parental attitude to child rearing); low income and/or single-parent family; lack of a strong social support system. After a thorough review of the completeness and accuracy of the responses to our initial questionnaires, 23 of the 30 elementary-school students were invited to participate in the mentoring program. Of the 23 mentees, 12 were boys and 11 were girls. The students were in grades 4 to 6 and ranged in age from 10 to 15 years. The mentors were 23 nursing students in their sophomore year of study, with an average age of 21 years (1:1 = mentor–mentee ratio).

Measures

Each of the students completed self-report instruments on self-esteem, school adaptation flexibility, and perception of parental attitude to child rearing. Cronbach's α for self-esteem, school adaptation flexibility, and perceived parental attitude toward child rearing were calculated at the pretest time point (Table 1).

Construct validity was tested in a preliminary investigation by confirmatory factor analysis (CFA) using AMOS for the evaluation of measurement invariance. CFA was performed to verify the number of underlying dimensions of the instrument (factors) and the pattern of item-factor relationships (factor loadings). We removed items with a factor-loading value below .50.

Table 1. *Cronbach's α of Self-esteem, School Adaptation Flexibility, and Perceived Parental Attitude*

Variable	Subvariable	Item	Total number of items	Cronbach's α
Self-esteem	General self-esteem	1, 2, 3*, 4, 5*, 6, 7, 8*, 9*, 10*, 11*	11	.902
	Social self-esteem	12*, 13*, 15, 16*, 17*, 18, 21*, 22*, 23, 24*, 26*, 28*, 29*, 30*, 32, 35*	16	.817
	Family self-esteem	19, 20, 25*, 27, 31*, 33, 34*	7	.816
Total			34	.932
School adaptation flexibility	Interests of school	1*, 2, 3, 5*, 6, 7	6	.807
	Academic achievement	9*, 11, 12	3	.654
	School norms	13, 14, 15, 16*, 17*, 18*, 19*, 21*, 22*	9	.840
Total			18	.885
Parental (nurturing) attitudes	Democratic style	1*, 2, 4, 9 13, 15, 20, 22,	8	.741
	Authoritative style	3, 5, 10, 17, 18, 19	6	.862
	Authoritarian style	6, 7, 12	3	.771
Total			17	.791

Note. $N = 23$; * reverse-scored item.

Self-esteem. We measured self-esteem using the Self-Esteem Inventory (Coopersmith, 1968) and the Self-Esteem Scale (Rosenberg, 1965). Items were grouped into the categories of general (self-perception and self-efficacy), family (perception of relationship with family members and parental support), and social (relationship with peers and social interaction) self-esteem. From both instruments we extracted 35 items using CFA and these were rated on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. One item that overlapped with school adaptation flexibility was excluded as a result of the CFA, so that 34 items were included in the analysis. The total score for self-esteem, therefore, ranged from 34 points to 170 points, with higher scores indicating higher self-esteem. Cronbach's α was .932 (Table 1).

School Adaptation Flexibility Scale. We used this scale developed by Park (1998). It is composed of three domains: interests in school (seven items e.g., attendance and tardiness, participation in extracurricular activities), grades and academic achievement (five items), and school norms (10 items e.g., attention in class, behavior, following school policy). Cronbach's α of the original scale

was .81 (Park, 1998). In this study, the scale was reconstructed by removing four items (one item from norms, one item from school interest, and two items from grades and achievement) that had low factor loadings. The remaining 18 items, each scored on a 5-point Likert scale from 1 = *strongly agree* to 5 = *strongly disagree*, were included. Cronbach's α was .885 (Table 1).

Perceived Parental Attitude Toward Child Rearing Scale. This scale was developed by Park, Lee, Lee, & Jung (1997) and we adapted it through factor analysis for use in our study related to authoritative (involving children in discussion and treating them with respect), democratic (parents are more responsive, nurturing, and forgiving toward their children), and authoritarian (children are expected to follow the strict rules established by the parents) styles of parenting. The scale consisted of 22 items related to the students' perception of parenting attitude, each measured on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The scale was reconstructed by removing five items that had low factor loadings (two items from democratic, one from authoritative, and two from authoritarian). Cronbach's α was .791 (Table 1).

Intervention. The ubiquitous mentoring approach was designed to cater for the needs of the elementary-school students individually. Prior to beginning the mentoring program, each mentor underwent training facilitated by the community children's center where the mentors' expectations of attitude, behavior, academic needs, and sociodemographic characteristics of the mentees, developmental characteristics of children, childhood illnesses, therapeutic communication techniques needed for mentoring, and the characteristics of the community children's center were discussed. The mentoring program was initiated online as the basic approach. The mentees were told about a web page created by the Mental Health Promotion Center that could be used to facilitate mentor-mentee interactions at any given time. The focus in the online interaction was on improving the learning capabilities of the students in language, arts, mathematics, and English. The program lasted for 20 sessions and comprised an orientation phase, rapport building between the mentor and mentee, primary interaction, problem solving, and a termination phase. During the orientation phase, the purpose and details of the program were explained, and careful matching of mentors and mentees was initiated. Sessions 2 to 5 comprised the rapport- and trust-building stages. Mentors explored common difficulties of the students with regard to school life, family situation, and relationships with peers. Initial support was given in the form of learning and emotional support. Sessions 6 to 9 comprised the primary interaction stage, in which the mentors implemented an individualized intervention with their mentee, based on the difficulties that had been identified. During these sessions, the mentees were invited by their mentor to engage in leisure activities with the mentor, such as going to sledge parks and gallery exhibitions, reading newspapers, playing

football, watching movies, and visiting the library. During the problem-solving stage, which comprised sessions 10 to 18, mentors provided assistance targeted to the academic needs of the participants. To further strengthen the mentoring program, mentors encouraged behavior modification in the form of counseling and engaged in one-on-one communication with the mentee to provide emotional support. During the termination phase, the mentors conducted one-to-one talks with the students to explore how they felt about the mentoring program.

Procedure

This was a single-group pre-, mid-, and posttest study. Prior to data collection, the purpose and details of the procedure were clearly explained to each participant. Approval of the Ethics Review Committee of Keimyung University Dongsan Medical Center Institutional Review Board was obtained prior to the conduct of study. Data were collected from the time the questionnaires were initially distributed at the community children's center until the end of the mentoring program, which was conducted from November 2012 to August 2013. This included the identification and selection of students for the mentoring and pretesting the variables, implementation of the ubiquitous mentoring program, and the evaluation of the effects of the mentoring. The mentees utilized the web page through which mentors assisted them in their studies specifically in relation to learning practices, such as completing homework and preparing for periodic tests in language, arts, mathematics, and science. Weekly counseling sessions were also provided during the 20-week mentoring program. Using the selected Self-Esteem Scale, the Scale for School Adaptation Flexibility and the Perceived Parental Attitude Toward Child Rearing Scale, posttest measurements were done after 10 weeks and after 20 weeks of the program. The focus of the interactional program was on improving learning ability especially in language, arts, mathematics, and English. Once or more per month, the mentor-mentee leisure activities previously described were encouraged.

Data Analysis

SPSS WIN version 18.0 was used for statistical analyses. Descriptive statistics were used to assess general characteristics (gender, grade level, number of siblings, religion, after-school care arrangement, and family members' employment status). Repeated-measure analysis of variance (ANOVA), followed by Bonferroni post-hoc comparison tests were performed for all variables. The Kolmogorov-Smirnov test was performed to assess the normality of the distribution of the sample. The required sample size was estimated to be 23. This estimation was performed using G-power software 3.19 and was based on repeated-measures ANOVA with an effect size of .25, statistical power of 80%, level of significance of .05, and correlation among repeated measures of .6.

Table 2. *General Characteristics of the Students*

Characteristic	Categories	*f* (%)	
Gender	boy	11 (47.8)	
	girl	12 (52.2)	
Grade	fourth-year	8 (34.8)	
	fifth-year	6 (26.1)	
	sixth-year	9 (39.1)	
Number of siblings	none	4 (17.4)	
	one	6 (26.1)	
	two	7 (30.4)	
	three or more	6 (26.1)	
Place where spends after-school hours	home	1	
	lyceum	1 (4.3)	
	community child center	21 (91.3)	
	friend's home	1 (4.3)	
Hospitable family member after school	always	8 (34.8)	
	sometimes	12 (52.2)	
	sometimes not	1 (4.3)	
	always not	2 (8.7)	
Family living circumstances	with parents		
	with father	17 (73.9)	
	with mother	3 (13.0)	
	with grandfather	1 (4.3)	
	not living together	2 (8.7)	
Educational level of parent (father/mother)	high school diploma	3 (13.0)	4 (17.4)
	college graduate	10 (43.5)	12 (52.2)
	higher qualification than	8 (34.8)	6 (26.1)
	college graduate	2 (8.7)	1 (4.3)
Type of job (father/mother)	not living together	1 (4.3)	2 (8.7)
	unemployed	3 (13.0)	3 (13.0)
	sales	2 (8.7)	6 (26.1)
	company employee	5 (21.7)	3 (13.0)
	private business	1 (4.3)	2 (8.7)
	official	3 (13.0)	1 (4.3)
	specialized job	8 (34.8)	2 (8.7)
	other		4 (17.4)
Religion	Christian	11 (47.8)	
	Catholic	0	
	Buddhist	7 (30.4)	
	no religion	5 (21.7)	

Note. N = 23.

Results

There was a significant difference in level of family self-esteem and social self-esteem before mentoring compared to after completion of the mentoring program. However, there was no significant effect of the mentoring program on general self-esteem (Table 3). Social self-esteem was statistically significant in negative correlation with the length of the program from baseline to 20th week. Family self-esteem was statistically significant in negative correlation with the length of the program at the 10th week and was statistically significant in positive correlation at 20th week. This could be attributed to the short-term nature of the mentoring program. In terms of school adaptation flexibility, school interests were statistically significant in negative correlation with the length of the mentoring program at the 20th week (Table 3). The mentoring process influenced the students' perceived parental attitude. The students' perception of parental attitude on child rearing using a democratic style was statistically significant in negative correlation with the length of the program at the 10th week and statistically significant in positive correlation at the 20th week. More students perceived their parents to be using an authoritative style at the end of the mentoring program than did at the beginning (Table 3).

Table 3. *Mean Comparison with Subvariables of Self-esteem, School Adaptation Flexibility, and Parental Attitudes, During and After the Program*

Variables	Subvariables	AA		BB		CC		*F*	*p*	Post hoc*
		M	*SD*	*M*	*SD*	*M*	*SD*			
Self-esteem	General self-esteem	42.57	8.97	43.43	7.40	43.22	6.12	.235	.792	
	Social self-esteem	54.26	9.34	54.61	7.72	51.26	9.10	4.033	.025	BB>CC*
	Family self-esteem	26.48	5.49	22.48	3.51	27.22	4.13	28.408	< .001	AA>BB **BB< CC**
	Total	41.10	7.31	40.17	5.52	40.57	5.74	.446	.643	
School adaptation flexibility	School interests	21.35	4.80	21.70	3.52	18.30	3.88	14.725	< .001	AA>BB** BB>CC**
	Grades or school life	8.17	1.80	8.04	1.87	7.87	1.66	.292	.749	
	School norms	29.74	4.37	29.65	4.71	30.17	4.72	.600	.553	
	Total	19.75	3.15	19.80	2.81	18.78	2.76	4.117	0.23	
Parental attitude	Democratic style	18.09	2.98	16.17	2.74	18.43	3.07	11.857	<.001	AA>BB** BB<CC**

Note. N = 23; AA = preprogram, BB = during the program, CC = post program.

Discussion

Most vulnerable young people come from a home environment characterized by lack of parental support and lack of interaction among family members, which can diminish the young people's physical, cognitive, social, emotional, and academic growth. The ubiquitous mentoring program used in this study yielded significant effects for students from low SES families who are unable to afford costly after-school programs. As an intervention, the mentoring program brought positive effects in family esteem and social esteem. This can be attributed to the establishment of a sustained and supportive relationship with the adult mentor, which was relevant to the mentee's social and emotional development. Through the presence and accessibility of their mentors, mentees had found a support system to which they could turn. As stated by Erikson (1968), the key to identity achievement lies in an adolescent's interaction with others. As a form of youth development strategy, mentoring provides a structured caring relationship between adults and youth. In our study the attention and caring rendered by the mentors over time to their mentees allowed the students to feel worthy of the mentor's time. In effect, the consistent attendance and active participation of the mentees in this study brought them opportunities to shape their sense of self. This result conforms to those of previous studies of mentoring as a youth development intervention, in which the results have shown that mentoring results in positive behavior changes, such as improved interpersonal skills and relationships, increased self-control, and improved academic achievement (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004).

In our study, self-esteem was categorized into three subcategories to allow general, social, and family dimensions of self-esteem to be separately explored. Although the aim in the program was to find positive effects, not all aspects of self-esteem changed significantly. This can be attributed to the time constraints for the mentor to establish trust and rapport with the mentee. Moreover, the lack of consistency and frequency of contact in our program exerted a significant effect on the quality of the mentor-mentee relationship. It is important to note that a strong emotional connection between mentor and mentee is associated with better outcomes, and a relationship that is not close and well established only marginally affects a mentee (Deutsch & Spencer, 2009).

The lack of significant change in the general self-esteem of the students might be attributed to an inability of the mentors and researchers to control the impact of environmental challenges that could possibly affect the mentees' behavior and perception. Implementation of the program in a way that failed to involve parents and teachers could have affected the way the mentees perceived themselves. To further strengthen the impact of a mentoring program on the general self-esteem of the mentees, there may be a need for the mentors to initiate a mentoring

relationship characterized by structured activities, and to establish expectations, such as conditional support (Langhout et al., 2004). When mentors set some form of structure in place, they have a tendency to feel more positive about themselves, and this can have an impact for the mentee at various levels. Therefore, mentors should consider the needs and circumstances of the mentees (Langhout et al., 2004), and identify the strengths and constraints imposed by family SES and the need for structured relationships with their mentees. To promote a significant change in the general self-esteem of the participants, mentors should devote ample time to assessment of the specific needs and concerns of their mentees. Furthermore, mentors should make themselves easily accessible to their mentees so that they can monitor their mentee's individual progress.

The elementary-school students who were members of low SES families, and who were unable to access after-school activities, benefited from the mentoring program delivered in this study. At the end of the program they showed an increased willingness to participate in school activities and norms. The mentors provided encouragement and support for academic success. The socialization component of the mentoring had a significant impact on the social component of self-esteem of the mentees.

However, we noted a decline in the academic performance of the mentee after the mentoring program ended, which might have been associated with its short duration and with less frequent contact between the mentor and mentee after the mentoring program. The decline might also be attributable to the mentors' failure to establish goal setting from the beginning of the program and the lack of involvement of parents and teachers in the process.

The aim of the ubiquitous process of mentoring we used in this study was to have a significant effect on the perception the students had of parental attitudes. We found significant differences in the students' perception of parental attitude during and after the mentoring program. This may have been as a result of a change in the expectation of the students. They perceived that their parents were more lenient and more considerate about giving them some freedom. Martínez Sanchez, García Pérez, and Yubero Jimenez (2007) reported that certain parenting styles can elicit more favorable developmental outcomes for children. Furthermore, better outcomes are expected when the support is manifested in a kind of relationship where the child can depend on one reliable alliance that provides all forms of close, dependable support, and where there is reciprocity (Cutrona & Cole, 2000).

Limitations in our study were, firstly, that the single-group design limited the conclusions that can be drawn in relation to the effects of the intervention and, which limited the validity of the study. In addition, exploring the needs of the mentees in the form of an interview, apart from the questionnaire, would have been better in analyzing the specific needs of the mentees. The involvement and

participation of the parents and teachers might also have had an impact on the outcomes of this study. Finally, the fact that insufficient funds were available caused limitations with regard to the progress of the program.

To further improve the ubiquitous mentoring process, the relationship between mentor and mentee should be well-established, mentors should devote ample time to their mentees, and should ensure they are easily accessible at all times to closely monitor the progress of their mentee. Furthermore, characteristics and behavior of the mentees, environmental factors, as well as capabilities of the mentors to deal with at-risk individuals, should also be considered in the process. Qualitative and quantitative hybrid research could be conducted to seek empirical support and to gather in-depth understanding of the factors affecting the attitude and behavior of at-risk youth. It will be helpful to conduct further studies to support our findings in this research.

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