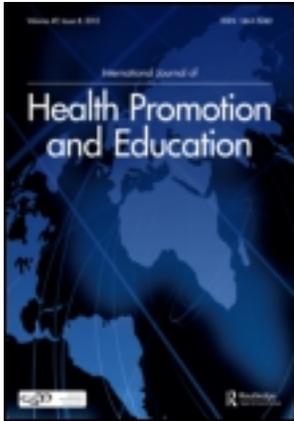


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Parental perceptions of children's quality of life: effects of a school health education program

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The aim of this study was to investigate the effect of the school health education program 'Skills for elementary school children' on parents' perceptions for the health-related quality of life of their children. Two hundred and nineteen ($n = 219$) parents of upper grade students participated. One hundred and nine ($n = 109$) formed the experimental group as their children participated in the 'Social Skills for Children in Primary School Program' while one hundred and ten ($n = 110$) formed the control group. For the evaluation of health-related quality of life, Kidscreen 52 was applied. Results showed that the perceptions of parents in the experimental group were improved significantly for physical and psychological well-being, autonomy, family life, friends, school environment, and social acceptance of their children. Similar improvement, although smaller, was found for the control group. Also, apart from reporting higher perceptions in the final measurement of all the above variables, parents in the experimental group outperformed those in the control group with regard to their children's mood and feelings, self-concept, and financial resources. It seems that such a program can affect positively parents' perceptions about their children's quality of life. This finding is considered important since parents' perceptions could influence their decisions and behavior toward their children, and affect further their quality of life.

Keywords: parents' perceptions; health-related quality of life; health education; primary school; Kidscreen

Introduction

Aristotle, the greatest thinker, philosopher, and founder of many sciences of Antiquity, set in his *Ethics* the foundation of the term bliss as 'well living' and 'well doing' (1095^a 16–20) and attributed obviously the term 'quality of life.' Quality of life is the result of the interaction of many factors (health, social and economic status, and environment) that affect growth and development of individuals and societies (Panagiotaki-David 2007). Recently, the World Health Organization (WHO) in an attempt to clarify this term placed emphasis on its physical, mental, and social dimensions (Papanis and Roumeliotiou 2007). With regard to its social dimension, good 'quality of life' is considered a desired outcome for each child and a goal of the society for all children (Dickinson *et al.* 2007). As violence and inequality are increasing daily, it is indeed more necessary than ever to help children explore and develop social skills. Research has shown that when the school and the family environment are based on basic and timeless values, they help the child develop cognitively and emotionally/socially (Lumsden 1994).

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Family is the primary nucleus by which the child learns to imitate and acquire its first experiences in order to be later able to establish an independent existence, which basically includes the total family, broader environmental, and hereditary influences (Toshiyuki *et al.* 2000). Through the interaction with their parents, and the acceptance and appreciation of their feelings, children learn to adjust successfully to school and to achieve social and cognitive goals (Morrison *et al.* 2003). Also, parental emotional support affects positively children's self-esteem (Morrison *et al.* 2003), performance and behavior (Lane *et al.* 2007), relations with parents and psychological development (Meier *et al.* 2006).

School, besides family, also plays an important role in students' health (St Leger and Nutbeam 2000). Lack of contact with the school and negative psychological climate are associated with the occurrence of behavioral problems (Jessor and Jessor 1974). On the contrary, appropriate and positive behaviors are adopted by increasing feelings of empathy and understanding, reducing tension between teams, and developing positive feelings toward others (Joyce *et al.* 1987). The WHO, UNESCO, the Council of Europe, and the United Nations confirmed the role of school and the need for students to be healthy. In relation to this, they developed well-organized school health education programs and strengthened the existing programs (International Union for Health Promotion and Education 2009) in order to cultivate children's skills, abilities, and attitudes and enable them to become accomplished students and citizens (Ministry of National Education and Religious Affairs 2010).

Regarding the behavioral or social skills, which are included in the goals of the above programs, research evidence revealed a significant improvement in both children's and their parents' personal and social-emotional values, in academic performance (Solomon *et al.* 2000) and communication skills, as well as a reduction in delinquent behavior of students (Bierman 2004).

However, in contrast with what happens internationally, the Greek school has not a clear and unambiguous position since health education programs have the form of school activities, and are under the responsibility of the National Education Health Education Network (Ministry of National Education and Religious Affairs 2000). These two- to six-month programs include a wide range of topics (nutrition, sex education, environmental education, interpersonal relations/mental health, volunteering, etc.). They are conducted by teachers, in cooperation with those responsible for health education for primary and secondary education. In primary education, they are either carried out as part of the Flexible Zone (5–10% of the total time for activities related to innovative actions), or during the activities of the all-day school. These programs have also workshops for parents.

The evaluation of the intervention programs that aim at developing social skills of children in Greece, wherever they are applied, has faced obstacles since data are collected from questionnaires and self-observations, which relate mainly to the characteristics of the interventions rather than to the achievement of their goals. Therefore, in Greece, the effectiveness of programs that refer to primary prevention in school has rarely been evaluated. An exception is the study undertaken by Koutsikou *et al.* (2005) in collaboration with the Center for Prevention 'Compass,' for the evaluation of the health education program 'With a compass in the classroom.' This program, however, was applied by the Prevention Center 'Compass' in order to develop personal and social skills that enhance self-protection of the child, out of the school curriculum, and especially self-concept and ability to express emotions. The results showed that this primary prevention program enhanced the ability of children to protect themselves by developing personal and social skills, but parents' perceptions were not included. Given that beliefs could be the best predictors of an individual's decisions (Pajares 1992), such an assessment seems important.

The proposal of parents' perceptions assessment has been taken into account in a research study that took place in a total of 13 European countries in order to examine the children's quality of life. Since children in this study did not participate in any interventional program, possible changes in parents' perceptions about their children's quality of life were not examined. In addition, the evaluation of the effectiveness of such programs is mainly conducted on unhealthy population (Bisegger *et al.* 2005).

Based on the foregoing, the purpose of this study was to investigate the effect of the health education program 'Social Skills for Children in Primary School' on parents' perceptions of their children's health-related quality of life and specifically of social skills relating to self-concept, acceptance of diversity, recognition and expression of emotions, prevention, and protection. It was hypothesized that perceptions of parents whose children participated in the program would be higher than those of the parents whose children were assigned in the control group.

Method

Participants

The study involved 219 parents of children 10–12 years of age from 12 primary schools of southern and northern Greece. Schools which were selected randomly from those implementing the health education program 'Skills for elementary school children' in some classes (its inclusion in school and class level is voluntary) consented to their participation and evaluation. Therefore, the experimental group ($n = 109$) consisted of parents whose children were enrolled in classes implementing the health education program, whereas in the control group ($n = 110$) there were parents with children in the same schools but in classes not enrolled in the program or in any other similar activity during the school year. Children and consequently parents for both groups were selected from the same schools to prevent the chance of selection bias and ensure randomization (Castillo 2009). Parents were informed that participation was voluntary, and that all provided information would remain confidential and available only to the researchers involved.

Design

The research design included one independent variable, the group with two levels: (a) group 1: experimental and (b) group 2: control. Research study hypothesis was tested through pre- and post-test in parents' perceptions of certain dimensions of their children's health-related quality of life: physical well-being, psychological well-being, moods and emotions, self-perception, leisure–autonomy, family life, financial resources, friends, school environment, and social acceptance (bullying).

Measuring tools

For the purpose of this study, the survey Kidscreen 52 was used (Ravens-Sieberer *et al.* 2007). It consists of 10 dimensions: physical wellness, psychological well-being, mood and feelings, self-concept, leisure–autonomy, family life, financial resources, friends (peers and social support), school environment, and social acceptance (bullying). All questions were answered with a five-point Likert scale (1 = never, 2 = rarely, 3 = quite often, 4 = often, 5 = always). Highest scores suggest better health-related quality of life.

The interventional program

From the health education program ‘Social Skills for Children in Primary School’ (Greek Centre for Addiction Prevention, KE.TH.E.A.-TACADE 1998), four units (A to D) with four lessons each were applied in a period of four months from mid January to early May. Also, there were introductory activities in the beginning of the program (three school hours). Teachers applied one lesson per week, in an in-school course called ‘Flexible Zone’, through discussion in groups and in plenary, simulation games, role playing, theater games, and exercises, physical and artistic creation. There were main and alternative activities in order for the results to be relevant, comparable, and measurable. The main aim of the educational material was to help children cultivate personal skills in order to understand their uniqueness, feel empathy and coexist with others, recognize, express and cope with their feelings, and resolve conflicts. Also, the aim was to help children take care of their body, feel safe, and understand when a secret is not a secret, and when the things that scare them are real or not. The objectives of each lesson were predetermined and clearly communicated by the teacher-coordinator to the children (Table 1). The teacher-coordinator was also responsible to set basic behavioral rules in class. Parental contribution was necessary in some of these activities.

Procedure

One of the researchers distributed the questionnaires to the children and they gave it to one of their parents to complete it. Afterwards, the health education program for the development of social skills in children was implemented by primary school teachers who had been previously trained. At the end of the program, four months later, a post-test measure was applied to determine the effect of the program on parents’ perceptions.

Statistical analysis

Statistical analysis was carried out with the Statistical Package for Social Sciences SPSS (version 15.0). To identify possible differences between the two groups in the initial measurement, multivariate analyses of variance (MANOVAs) were conducted for each of the 10 dimensions. Afterwards, in dimensions 1, 2, 5, 6, and 8–10, data were analyzed with MANOVAs with repeated measurements on the last factor (2 groups [experimental–control] \times 2 measurements [pre–post]). Univariate tests and Bonferroni multiple comparison tests for pre- to post-test comparisons within each group and for post-test comparisons between the groups followed. Also, covariance analysis was conducted for dimensions 3, 4, and 7, in which significant differences were found between the groups in the first measurement. In cases of significant differences, the effect sizes of partial η^2 were calculated (Cohen 1988). Test significance was based on a standard alpha level of $p < 0.05$. Homogeneity of variance and sphericity of factors’ scores, which were verified by Levene’s and Mauchly’s tests, respectively, were not significant.

Results

Means and standard deviations of the perceptions of parents in the experimental group and control group in both measurements are shown in Table 2.

The 2×2 (Groups [SBIPEP, TPEP] \times (Measurements [pre, post]) repeated measures MANOVA showed a statistically significant Group \times Measure interaction in the

Table 1. Units, lessons, and objectives of the program 'Social Skills for Children in Primary School,' and Kidscreen dimensions.

Program units	Lesson title	Lesson objectives	Kidscreen dimensions
Introductory session	1. Creating a caring class 2. Team work 3. The safe and caring school	<ul style="list-style-type: none"> To create class rules and a caring environment To examine class as a society To realize that they are valuable members of a group 	<ul style="list-style-type: none"> Friends School environment
Unit A I, an individual person	My uniqueness 1. Reinforce my self-esteem 2. Growing and changing 3. People I love (1) 4. People I love (2)	<ul style="list-style-type: none"> To realize that they are unique To recognize their capabilities and reinforce their self-esteem To realize their relations, their influences, and the special people in their lives 	<ul style="list-style-type: none"> Self-perception Family life
Unit B One of the many	Similarities and differences 1. Who is your friend 2. I co-exist/make relationships 3. People who help me 4. I care about the others	<ul style="list-style-type: none"> To identify similarities and differences among them To imagine of a world of inclusion and respect for all To realize the significance of friends and that relations end and hurt but it is worth it To understand the difficulties of people and to find ways to provide assistance and encouragement 	<ul style="list-style-type: none"> Psychological well-being Leisure and autonomy Friends School environment
Unit C Feelings and emotions	Realizing and expressing feelings 1. Face strong feelings 2. Resolving arguments 3. Other people have feelings too 4. Loss and sorrow	<ul style="list-style-type: none"> To express common feelings To value body language To recognize, accept their own and others' feelings, and deal with different emotions To learn ways to solve conflicts To deal with grief and loss To think of their relation with their body and well-being To find ways to care for themselves To accept and find ways to deal with their fears To think of ways to share a secret To achieve safety in school, home, or elsewhere To think of their dreams and their future 	<ul style="list-style-type: none"> Mood and feelings Physical well-being Friends Social acceptance
Unit D Caring for me	I care about myself 1. What scares me? 2. When a secret is a secret 3. Safe people – safe places 4. Obtaining security- personal goals		<ul style="list-style-type: none"> Physical well-being Mood and feelings Leisure and autonomy Financial resources

Table 2. Means and standard deviations of parents' perceptions in the initial and final measurement.

Parents' perceptions	Initial measurement				Final measurement			
	Exper- imental group		Control group		Exper- imental group		Control group	
Dimensions/Fields	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Physical well-being (25)	17.2	2.4	17.3	2.0	22.4	1.8	20.5	2.4
2. Psychological well-being (30)	21.3	6.0	21.5	2.4	25.7	2.4	24.0	3.6
3. Mood and feelings (35)	26.0	3.9	27.2	3.1	29.2	4.5	29.0	4.7
4. Self-concept (25)	16.7	2.8	17.9	2.6	21.0	2.7	20.2	3.2
5. Leisure–autonomy (25)	14.4	3.3	14.6	3.3	19.2	3.3	17.4	3.7
6. Family life (30)	20.9	3.2	21.5	3.1	25.3	2.6	23.7	4.0
7. Financial resources (15)	8.6	2.2	9.3	2.0	12.3	1.9	11.2	4.6
8. Friends (30)	18.4	3.8	18.6	6.4	23.7	2.6	20.2	4.2
9. School environment (30)	20.9	2.6	21.4	2.8	25.9	2.7	23.7	3.3
10. Social acceptance (bullying) (15)	10.5	1.3	10.7	1.4	13.9	1.5	13.3	2.3

dimensions: (1) physical well-being, $F(1,217) = 21.6, p < 0.01$, partial $\eta^2 = 0.091$, (2) psychological well-being, $F(1,217) = 7.46, p < 0.01$, partial $\eta^2 = 0.033$, (5) autonomy, $F(1,217) = 9.98, p < 0.01$, partial $\eta^2 = 0.044$, (6) family life, $F(1,217) = 15.2, p < 0.01$, partial $\eta^2 = 0.066$, (8) friends, $F(1,217) = 21.5, p < 0.01$, partial $\eta^2 = 0.091$, (9) school environment, $F(1,217) = 24.2, p < 0.001$, partial $\eta^2 = 0.10$, and (10) social acceptance, $F(1,217) = 5.8, p < 0.05$, partial $\eta^2 = 0.026$. Pre- to post-test comparisons within each group showed that the perceptions of parents in the experimental group were improved significantly for dimensions: 1 ($p < 0.001, \eta^2 = 0.76$), 2 ($p < 0.001, \eta^2 = 0.34$), 5 ($p < 0.001, \eta^2 = 0.54$), 6 ($p < 0.001, \eta^2 = 0.59$), 8 ($p < 0.001, \eta^2 = 0.58$), 9 ($p < 0.001, \eta^2 = 0.65$), and 10 ($p < 0.001, \eta^2 = 0.74$). Similarly, the perceptions of the parents in the control group were improved significantly, but less than those of the experimental group, for all the above dimensions. Specifically, parents in the control group reported higher perceptions for dimensions: 1 ($p < 0.001, \eta^2 = 0.50$), 2 ($p < 0.001, \eta^2 = 0.24$), 5 ($p < 0.001, \eta^2 = 0.21$), 6 ($p < 0.001, \eta^2 = 0.15$), 8 ($p < 0.001, \eta^2 = 0.04$), 9 ($p < 0.001, \eta^2 = 0.20$), and 10 ($p < 0.001, \eta^2 = 0.47$).

Moreover, although Bonferroni multiple comparison tests showed no significant differences between the experimental and the control group in the initial measurement, the latter group presented significantly lower perceptions than the former group in dimensions: 1, $p < 0.001, \eta^2 = 0.15$, 2, $p < 0.001, \eta^2 = 0.07$, 5, $p < 0.001, \eta^2 = 0.065$, 6, $p < 0.001, \eta^2 = 0.057$, 8, $p < 0.001, \eta^2 = 0.19$, 9, $p < 0.001, \eta^2 = 0.126$, and 10, $p < 0.05, \eta^2 = 0.023$ in the final measurement.

In addition, based on the results of analysis of covariance, parents in the experimental group reported significantly higher perceptions than those in the control group in the final measurement in relation to dimensions: (3) mood and feelings, $F(1, 215) = 6.6, p < 0.05, p < 0.001, \eta^2 = 0.028$, (4) self-concept, $F(1,215) = 12.69, p < 0.001, \eta^2 = 0.05$, and (7) financial resources, $F(1,215) = 6.25, p < 0.05, \eta^2 = 0.027$. The above significant effects are considered small when $\eta^2 = 0.01$, moderate when $\eta^2 = 0.06$, and high when $\eta^2 = 0.14$ (Cohen 1988).

Discussion

The purpose of this study was to investigate the effect of the health education program 'Skills for Primary School Children' on parents' perceptions of the health-related quality of life of their children. The findings revealed that the health education program improved significantly parents' perceptions in the experimental group with regard to their children's physical well-being, psychological well-being, autonomy, family life, friends, school environment, and social acceptance. Although the typical school curriculum also affected positively parents' perceptions in the control group, this effect was remarkably lower than that of the health education program. Apart from this, the former group outperformed significantly the latter group in all the above dimensions of health-related quality of life in the final measurement.

The greater improvement of the experimental group along with its advantage over the control in the final measurement verifies the effect of the health education program and supports the hypothesis of the study with regard to the aforementioned dimensions of health-related quality of life. On the other hand, the improvement of the perceptions of the control group might be related to the interaction among parents during the school year. Another possible reason could concern the fact that the final measurement took place at the end of the school year, when children feel better and consequently influence positively their parents.

At the end of the program, perceptions of the experimental group in comparison to those of the control group were also significantly better in the dimensions mood and feelings, self-concept, and financial resources. Although the initial differences between the two groups of parents in the above variables prevent from attributing this finding directly to the health-related program, its positive effect on the above dimensions cannot be precluded.

By analyzing these findings, parents in the experimental group considered that after the intervention program, their children had a better physical and psychological well-being. According to Nousi and Christou (2010), when children's everyday life is improved, the perceptions of their parents are improved. Parents also realized that their children had greater appreciation of their time; they could participate in more activities in their spare time, or go out with their friends more often.

Moreover, parents believed that after attending the intervention program, their children became more aware of the love they offer and feel, were happy at home and school, had better relationships with their peers and their teachers, and did better in their lessons. Finally, parents strongly believed that their children were less exposed to arguments with their classmates. In general, these findings are in accordance with other studies which showed that such intervention programs and the involvement of parents in children's lives improve children's behavior, strengthen family supervision and control, create better communication between family members while simultaneously enhancing the child-parent, student-teacher, and student-school relationships (Barnard 2004, Liddle *et al.* 2002, Wyatt *et al.* 2008).

Furthermore, parents in the experimental group improved their perceptions on what their children think about their appearance, their body, and even their clothes, reflecting a higher self-concept, after the intervention program. This finding is considered important since research has shown that the image of children about their body and their appearance in general are closely linked to their wider self-perception. Also, high self-concept is positively related to self-esteem. On the contrary, children's low self-esteem for their body is related to sadness, loneliness, and stress (Strauss 2000) and with poor mental and physical well-being (Mann *et al.* 2004).

In addition, as mentioned above, parents improved their perceptions of the economic power of their children, reporting that they were more satisfied with the provided financial resources and that they could therefore do several things with their friends. According to Dunst *et al.* (1988), adequacy of financial resources improves the quality of life of children and their families, as well as their interpersonal relationships.

Given that similar health education programs for children and parents affected positively the involved groups and were also related to prevention of child delinquency and delinquent behavior (Piquero *et al.* 2010), the findings are considered important for the school curriculum. Also, it has to be taken into account that the parents' workshops program which is included in the health education program of primary prevention 'Social Skills for Primary School Children' but has not been implemented until now would have probably strengthen further parents' perceptions. Likewise, the application of the whole program (in the present research only four out of six units were applied, since teacher training started a few months after the beginning of the school year) might have yielded in even better results.

Limitations

Accordingly, the delay in the program initiation and the absence of parents' workshops could be considered limitations of this study. Another limitation could concern data collection which was based merely on quantitative measures.

Conclusions

Even though the health education program 'Social Skills for Primary School Children' was applied to children alone, its effectiveness on parents' perceptions was proved. It can be concluded that this program can ameliorate parents' perceptions, remarkably more than the typical school curriculum, with regard to personal and social aspects of their children's health-related quality of life. Its positive effect concerns aspects of children's physical and psychological well-being, autonomy, family life, friends, school environment, social acceptance, and possibly, mood and feelings, self-concept, and financial resources. Children's involvement in the program seemed to have an impact on their parents' perceptions of their quality of life. Taking into account that perceptions influence decisions and behavior, positive parents' perceptions could affect further children's quality of life. Therefore, the health education program should be a core activity of the school curriculum.

Future research could examine the relationship between parent-child perceptions with regard to children's quality of life, with questionnaires, interviews, and observation in real settings in order to set a common goal that will lead to prevention and early intervention, if needed.

Notes

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