

## Health-Related Quality of Life in Children and Adolescents: Subjective Well Being

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The main objective of this study was to build a model, which includes personal and social factors, that helps to highlight factors that promote health-related quality of Life (HRQoL) in children and in adolescents. A sample of 3195 children and adolescents was acquired from 5<sup>th</sup> and 7<sup>th</sup> graders from all five Portuguese regions. In this study three independent latent variables were specified – Physical, Psychological and Social and two dependent latent variables were measured: Health behavior and Quality of Life. The integrative model was composed by different components: (1) health-related quality of life, integrated by 8 dimensions from KIDSCREEN-52; (2) health behavior, (3) variables related to physical health; (4) variables related to social health; (5) variables related to psychological health. As results were found strong correlation between psychological dimensions and self-esteem and other factors and a structural equation model was developed. The model presented a RMSEA index of .08. Similarly, adjustment levels for the CFI, NFI and IFI vary above or around .90, which suggests a good adjustment for the hypothesized model. The model presented significant chi-square. This study showed that in all the samples studied, the psychological variables were those that contributed at a superior level to HRQoL.

*Keywords: psychosocial factors, quality of life, children, adolescents.*

El objetivo principal de este estudio fue construir un modelo, que incluya los factores personales y sociales, que ayude a resaltar los factores que promueven la salud relacionados con la calidad de vida (CVRS) en niños y adolescentes. Se tomó una muestra de 3.195 niños y adolescentes, alumnos de quinto y séptimo grado de todas las 5 regiones Portuguesas.

En este estudio fueron especificadas tres variables latentes independientes: física, psicológica y social, y se midieron dos variables dependientes: el comportamiento de la salud y la calidad de vida. El modelo de integración estaba compuesto por diferentes componentes: (1) calidad de vida relacionada con la salud, integrado por ocho dimensiones del KIDSCREEN-52, (2) el comportamiento de la salud, (3) las variables relacionadas con la salud física, (4) las variables relacionadas con la salud social, (5) las variables relacionadas con la salud psicológica. Como resultado se encontró una fuerte correlación entre las dimensiones psicológicas y de autoestima y otros factores y se desarrolló un modelo de ecuaciones estructurales. El modelo que se presenta un índice RMSEA de 0,08. De manera similar, los niveles de ajuste de la CFI, NFI y el Fondo varían por encima o alrededor de 0,90, lo que indica un buen ajuste para el modelo de la hipótesis. El modelo presentado tiene una valoración de chi-cuadrado significativo. Este estudio mostró que en todas las muestras estudiadas, las variables psicológicas fueron las que contribuyeron a un nivel superior a la CVRS.

*Palabras clave: factores psicosociales, calidad de vida, niños, adolescentes.*

### *Quality of Life in Children and Adolescents*

Health-related quality of life (HRQoL) is generally conceptualized as a multidimensional construct encompassing domains such as psychological, mental, social and spiritual areas of life (Eiser & Morse, 2001). HRQoL can be viewed as a psychological construct which describes the physical, mental, social, psychological and functional aspects of well-being and function (Ravens-Sieberer et al., 2001; 2005).

The World Health Organization Quality of Life Assessment Group definition (World Health Organization Quality of Life Assessment Group, 1994) may not be directly applicable to the child's QoL. The Well-being and health-related quality of life (HRQoL) in children and in adolescents is a quite recent concept and is a concern amongst health professionals (Koot, 2002; Ribeiro, 1994). This must be considered within an ecological perspective, including multiple levels of analysis, namely self-perceptions and family perceptions (Harding, 2001). Children's perceptions of their HRQoL are influenced by several factors such as gender, age, personal and family characteristics, as well as their socio economic status (The KIDSCREEN Group Europe, 2006; Ravens-Sieberer et al., 2001; 2005).

Studies focusing on children's subjective well-being include interactions between demographics (e.g. age, gender and socio economic status), interpersonal characteristics (Self Perceptions, Psychological Well-being, Mood and Emotions) and perception of well-being and happiness; clear differences between gender, age and socioeconomic status can be found in the HRQoL of children and adolescents, for instance, girls' perception of health-related quality of life is inferior in all dimensions with the exception of "Social Support and Peers", "School Environment" and "Social Acceptance and Bullying". Adolescents (aged 12 to 16) presented an inferior perception of HRQoL in all measures except in the "Financial Resources" and "Social Acceptance and Bullying". Low SES perception of HRQoL is also inferior in all dimensions on behalf of children and adolescents (The KIDSCREEN Group Europe, 2006; Ravens-Sieberer et al., 2001; 2005).

### *Personal and Social Factors that Influence the Quality of Life in Children and Adolescents*

The positive and healthy psychosocial development is influenced by individual and ecological factors (Bronfenbrenner, 2001, 2005). Eccles and Gootman (2002) consider that a positive youth development depends on the five C (competence, confidence, character, connection "connecting" and affection/support "caring"). The positive development is negatively related to risk behaviors and behavioral problems and positively related to well-being and perceived quality of life.

There are several factors that influence the health-related quality of life of children and adolescents. The factors found can be organized into two broad categories: (1) personal characteristics and (2) social characteristics. Studies on the subjective well-being of children and adolescents are recent and should focus on the relationship between demographic variables (e.g. age, gender and socioeconomic status), intrapersonal characteristics (e.g. self-concept, self-esteem, extraversion, locus of internal control. Life orientation style optimism versus negativism) and health behaviors (Gaspar & Matos, 2008; Gaspar, Matos, Ribeiro, & Leal, 2006; Gaspar, Ribeiro, Leal, Matos, & Ferreira, 2009a; Gaspar, Ribeiro, Leal, Matos, & Ferreira, 2009b; Gaspar et al., 2010; McCullough, Huebner, & Laughlin, 2000).

Personal and personality factors influenced HRQoL, namely, self-esteem, optimism, coping strategies, resilience, emotional management (Wrosch & Scheier, 2003). Positive self-concept and self-esteem promote personal goals and social interaction (Fonseca, Santos, Tap, & Vasconcelos, 2004). Optimism it is a psychological resource, related with mental health, better adjustment and it is very important when individuals face challenges and threat situations Jackson, Pratt, Hunsberger, and Pancer, (2005); Taylor, Kemeny, Reed, Bower, and Gruenewald, (2000). Optimism it is also related with wellbeing, psychological and physic health, lifestyles and health behaviors. (Albery & Messer, 2005; Carver & Scheier, 2002; Kelloniemi, Ek, & Laitinen, 2005; Peterson & Steen, 2002; Scheier, Craver, & Bridges, 1994).

As part of promoting a positive health of children and adolescents, there are focused positively guidelines that identify different areas of positive results, including the perception of subjective well-being and social support (Gaspar & Matos, 2008; Gaspar, Matos, Ribeiro, Leal, & Ferreira, 2009; Gaspar et al., 2010; Helgeson, 2003; Kana'laupuni, Donato, Thompson-Colón, & Stainback, 2005). Positive health, well-being and the HRQoL are affected by social support (Coventry, Gillespie, Heath, & Martin, 2004; Ethgen et al, 2004).

The social network and the perceived social support are extremely important for children's and adolescents' development. The structure and functions of social support are related to specific aspects of their welfare, particularly regarding self-concept, adjustment, and social skills as protective factors against stressful life events (Boosman, Meulen, Geert, & Jackson, 2002).

Social support can be considered a strategy that provides a good adaptation of the individual to new or potentially stressful situations, reducing the tension and sense of uncontrol. Gender differences were found regarding the social support: girls had higher values than boys. Whether within family or peers, girls seek support and share feelings, while boys tend to act as if the problem did not exist, externalizing sentiments and adopting compensation behaviors (substance abuse, violent behavior). Behind these

results may be cultural and psychosocial factors such as self-image, pre-set social roles and perception of virility (Costa & Leal, 2006).

Personal and social factors are related, and have mutual influence. Family relationship and parental styles influenced self-esteem, school achievement, learning and social skills development (Marinho & Caballo, 2002; Tuijl, Branje, Dubas, Vermulst, & Aken, 2005). Good adjustment, high self-esteem and school success, are related to positive/active coping strategies instead of dependent coping strategies (Plancherel, Bolognini, & Halfon, 1998).

According to the presented literature, and based on an ecological approach, is expected that all health aspects: physical aspects, psychological aspects, social aspects and health behavior related aspects will influence several HRQoL dimensions in children and adolescents. For this paper the hypotheses of the relation between HRQoL and related factors were based on the following model (The KIDSCREEN Group Europe, 2006, p. 33):

This multi-dimensional approach of HRQoL provides information about the different aspects of HRQoL and could work as a structure to identify and develop strategies that promotes HRQoL in children and adolescents (Helseth & Lund, 2005). The main objective of this paper is therefore, to propose a theoretical model about psychosocial factors that promotes HRQoL in children and in adolescents.

## Methods

### Participants

Sampling methods were derived from the international study of Health Behavior School-Aged Children, (Currie, Samdal, Boyce, & Smith, 2001) by enlarging the HBSC sample through a selection of randomly chosen 5<sup>th</sup> and 7<sup>th</sup>

grade classes from national schools (Matos et Aventura Social Team, 2006a, 2006b). To specify, the study combines a random national representative sample of 5<sup>th</sup> and 7<sup>th</sup> grade students in a cross sectional national analysis. Schools were stratified by National Educational Regions (5 in the entire country).

The study involved 95 schools and 162 classes. The sample of 3195 children and adolescents from the 5<sup>th</sup> (48.8%) and 7<sup>th</sup> grades (51.2%), were on average aged 11.8; SD 1.46, ranging from 10 to 16 (41.1% between 10.11 years of age and 58.9% 12 years of age or older), 95.3% have between 10 and 14 years old. Moreover, the participants included 49.2 % boys and 50.8 % girls. The majority of students came from a low socioeconomic status (62.2%), and 3% were not Portuguese - these students were immigrants from African countries and from Brazil. To define SES was used the Grafar scale related to the profession of the father, this Scale have 6 levels depended of the kind of profession, if the profession required more or less education level and level of specialization: 1(High)-5 (Low) (6) not identified, the dichotomized 1+2+3 (Medium/High SES) and 4+5 (Low SES). KIDSCREEN questionnaires were applied in a classroom setting, after the random selection of schools and classes. The questionnaires were filled in anonymously and voluntarily to ensure that all ethic issues were met.

### Measures

KIDSCREEN-52© (Gaspar & Matos, 2008; 6; Matos et al., 2006a) – is a self-response questionnaire for children and adolescents between the ages of 8 and 18, as well as for these individuals' parents. It is based on health issues and chronic illness and it takes an average of 10 to 15 minutes to fill in (Ravens-Sieberer et al., 2001). This instrument includes ten dimensions which describe quality

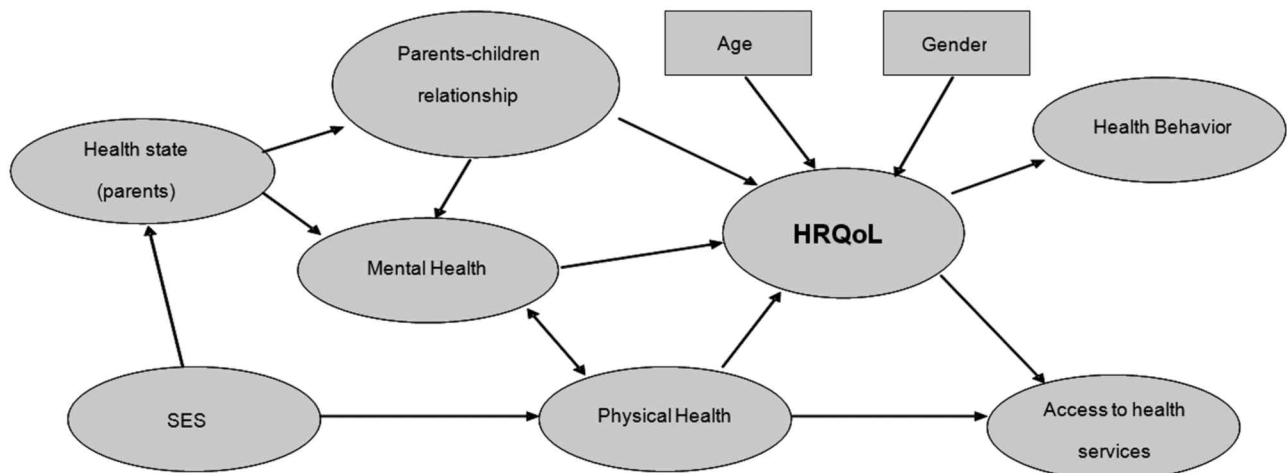


Figure 1. KIDSCREEN Model (The KIDSCREEN Group Europe, 2006, pp.33).

of life related with health (HRQoL). Portuguese translations and validation presents the follows internal consistency: (1) Physical Well-being (5 items)  $\alpha = .77$ ; (2) Psychological Well-being (6 items)  $\alpha = .84$  (3) Mood and Emotions (7 items)  $\alpha = .86$ ; (4) Self-perception (5 items)  $\alpha = .60$ ; (5) Autonomy (5 items)  $\alpha = .81$ ; (6) Parent Relation & Home Life (6 items)  $\alpha = .84$ ; (7) Financial Resources (3 items)  $\alpha = .88$ ; (8) Social Support and Peers (6 items)  $\alpha = .84$ ; (9) School Environment (6 items)  $\alpha = .84$ ; and (10) Bullying (3 items)  $\alpha = .75$  (Matos et Aventura Social Team, 2006b; Gaspar & Matos, 2008; Gaspar, Matos, Ribeiro, Leal, & Ferreira, 2009).

The Self Perception Profile for Children SPPC (Harter, 1985) was translated into Portuguese and adapted to the Portuguese population Martins, Peixoto, Mata, & Monteiro, 1995). This scale SPPC, (Harter, 1985) is composed of 36 items in six subscales: Academic Competence; Social Acceptance; Athletic Competency; Physical Aspect; Behavioral Attitude; and Global Self-esteem. The first five sub-scales are connected with competency self-perception and the last is associated with a self-esteem subscale. Each subscale is constituted by six items. The score for each item is completed in a scale of four points. The attribution of 1 point indicates low competency perception while the attribution of 4 points shows a high competency perception. Once the scores have been established, the next step consists of calculating the mean for each of the subscales. By following these procedures, one may acquire six total scores which allow us to trace an individual's profile. Moreover, some of the statements were constructed in the negative (1, 2 and 6), which implies registering the results inversely to the subjects' responses. The Portuguese version with better internal consistency for the Global self-esteem subscale ( $\alpha = .80$ ) was the one carry out by Gaspar, Ribeiro, Matos, Leal, & Ferreira (in press), that was the one used in the present study.

The Life Orientation - Revised Test LOT-R (Scheier, Carver, & Bridges, 1994) is a self-response instrument which is composed of ten items, four of which are distracters and six of which evaluate dispositional optimism. The possible responses are presented in an ordinal scale of five points which vary between "I totally agree" to "I totally disagree". The respondents should therefore register the degree of agreement in relation to the statements presented. The Life Orientation - Revised Test LOT-R (Scheier et al., 1994) was translated and adapted for children and adolescents by Gaspar, Ribeiro, Matos, Leal, and Ferreira (2009) with a internal consistency of  $\alpha = .59$ .

The Satisfaction with Social Support Scale SSSS (Ribeiro, 1999) measures satisfaction with social support and was constructed for young adult and adult populations in situations of illness as well as chronic and psychological disease. On constructing this scale, a group of health-related and well-being dimensions were considered along with other directly related dimensions. The original SSSS is composed

of 15 affirmative sentences that are displayed for self-response. Subjects should mark the degree with which they agree with the statement (if it applies to the individual) on a *Likert* scale with five positions from "I totally agree" to "I totally disagree". These 15 items are distributed through four dimensions or factors which are empirically generated to measure the following aspects related with Social Support Satisfaction: "Satisfaction with Friendship", "Intimacy", "Family Satisfaction", and "Social Activity". The Satisfaction with Social Support Scale SSSS (Ribeiro, 1999) was translated and adapted for children and adolescents by Gaspar, Ribeiro, Matos, Leal, and Ferreira (2009) and obtained an internal consistency of  $\alpha = .77$ .

The Health Behavior School-Aged Children Scale (Currie et al., 2001; Matos et Aventura Social Team. 2006b) is a result from a WHO international study (41 countries were involved in 2006) and which provided items to evaluate the dimension of health behavior in children and adolescents. In the present study, 17 of these questions were used from the total scale. The questions used presented social and demographic issues, as well as a group of items related with physical activity, free time activities, drug and alcohol use, family context and relations, academic context and involvement (friends, teachers and violence), dieting and body image, and perceptions of happiness.

### *Procedures*

The instrument was applied on the Social Adventure Team with the same protocol and procedure used in the Health Behavior School Aged-Children study implemented on a national random sample of 5<sup>th</sup> and 7<sup>th</sup> graders (Currie et al., 2001; Matos et Aventura Social Team, 2006a, 2006b).

This study followed strictly all the ethical and scientific recommendation and requirements, namely informed consent and anonymity.

### *Data Analyses*

Following the correlation analysis using SPSS program, the maximum likelihood method of the Lisrel 8.3 Structural Equation Modeling (SEM) program was used (Joreskog & Sorbom, 2001). The maximum likelihood estimation procedure is also known to be robust against deviation from normality (Byrne, 1998). The model containing all the participants of the study was tested. Before testing the model, the assumptions related to univariate and multivariate normality of data were examined and all variables presented a distribution under or close to the standard normal curve for  $Z = \pm 1.96$  (Fleming & Nellis, 2000).

The analysis involved an estimation of paths amongst variables. Also, the overall fit was assessed by using the following indices of fit: qui-square ( $\chi^2$ ), root mean square error of approximation (RMSEA), normative fit index (NFI) and comparative fit index (CFI).

A non-significant qui-square value indicated that the two matrices were not statistically different and that the data fits the model (Schumacker & Lomax, 1996). AIC was used in the comparison of two or more models with smaller values representing a better fit of the hypothesized model (Bentler & Hu, 1999). NFI and CFI values close to 1 indicated a very good fit (Bentler, 1999); finally, the smaller the RMR is, the better, values of RMSEA equal or less than .10 indicate a good fit.

Results

The correlations between instruments were examined and a Structural Equation Model was built.

The correlation analysis results show that all of the scales are highly correlated ( $p < .01$ ). Some of the highest correlations ( $r > .5$ ) include “Psychological Well-being”, “Mood and Emotions” and the Global Self-Esteem. On the other hand, lower correlations were found amongst the following variables: “Bullying”; “Financial Resources” and health-related behavior.

In our model, three independent latent variables were specified – Physical, Psychological and Social and two dependent latent variables were measured: Health behavior and Quality of Life. Scale scores were used as observation indicators to build latent variables.

The integrative model presented in Figure 2 is composed of diverse components: (1) health-related quality of life (HRQoL), compiled of 8 dimensions from

KIDSCREEN-52; (2) health behavior (compiled of four factors from the health behavior scale), (3) variables related with physical health (health state – with or without chronic illness); (4) variables related with social health (global social support satisfaction); (5) variables related with psychological health (global self-esteem scale and life orientation scale).

The model presented a RMSEA index of .08. Similarly, adjustment levels for the CFI, NFI and IFI vary above or around .90, which suggests a good adjustment for the hypothesized model (Please see table 2). On the other hand, the qui-square was significant for all the models. According to Schumacker and Lomax (1996), the qui-square has a tendency to indicate a significant probability as the sample size increases (normally above 200 subjects).

The analysis of the general model behavior (graphic 1) referring to the total sample reveals that in the relation between latent variables, the social dimensions show a greater association ( $\gamma = .504$ ) with the quality of life in children and adolescents. This social variable interferes negatively in terms of health-related behavior ( $\gamma = -.310$ ). As for the relation between observed and latent variables, we highlight the fact that self-esteem contributed in higher levels ( $\lambda_x = .77$ ) to the psychological dimension. Moreover, from the ten measures of Kidscreen, the psychological variables ( $\lambda_y = .72$ ), such as, “Humor and Emotions” ( $\lambda_y = .71$ ) and with “Parent Relation and Home Life” ( $\lambda_y = .70$ ) present a higher association with the latent dimension of quality of life.

Table 1

*Pearson Correlations between the KIDSCREEN – 52 dimensions and the other scales (global self-esteem scale, life orientation scale, social support satisfaction scale and health-related behavior scale)*

|                               | a1    | a2    | a3    | a4    | a5    | a6    | a7    | a8    | a9    | a10   | b     | c     | d     |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>KIDSCREEN (Dimensions)</b> |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Physical Well-being           | —     |       |       |       |       |       |       |       |       |       |       |       |       |
| Psychological Well-being      | .54** | —     |       |       |       |       |       |       |       |       |       |       |       |
| Mood and Emotions             | .36** | .63** | —     |       |       |       |       |       |       |       |       |       |       |
| Self-Perception               | .29** | .44** | .50** | —     |       |       |       |       |       |       |       |       |       |
| Autonomy                      | .43** | .56** | .48** | .39** | —     |       |       |       |       |       |       |       |       |
| Parent Relation and Home Life | .33** | .56** | .50** | .43** | .53** | —     |       |       |       |       |       |       |       |
| Financial Resources           | .28** | .35** | .32** | .27** | .44** | .45** | —     |       |       |       |       |       |       |
| Social Support and Peers      | .39** | .49** | .42** | .33** | .57** | .44** | .48** | —     |       |       |       |       |       |
| School Environment            | .27** | .48** | .43** | .34** | .37** | .44** | .29** | .37** | —     |       |       |       |       |
| Bullying                      | .22** | .27** | .41** | .33** | .24** | .24** | .30** | .33** | .14** | —     |       |       |       |
| <b>Complementary scales</b>   |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Global self-esteem            | .35** | .55** | .55** | .55** | .42** | .52** | .35** | .39** | .40** | .32** |       |       |       |
| Optimism                      | .28** | .36** | .41** | .30** | .24** | .32** | .23** | .26** | .27** | .23** | .44** |       |       |
| Social support satisfaction   | .30** | .41** | .44** | .37** | .42** | .45** | .38** | .50** | .31** | .34** | .50** | .44** |       |
| Health-related behavior       | .35** | .31** | .26** | .14** | .28** | .29** | .30** | .37** | .30** | .21** | .25** | .22** | .32** |

\*\* $p < .01$

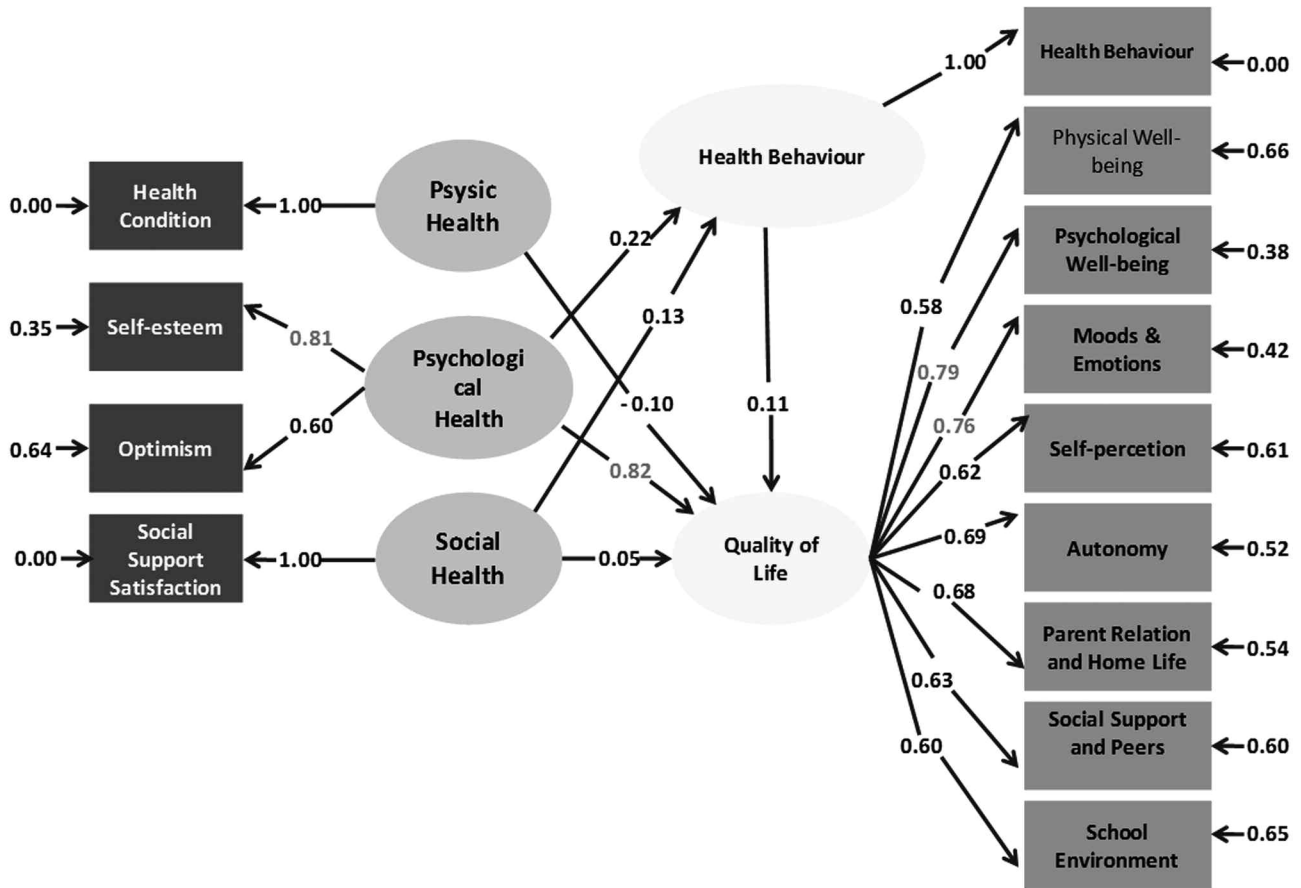


Figure 2. Standardized Structural Model of the relations between physical, psychological and social health, health elated behavior and health-related quality of life.

Table 2  
Estimation values (standardized) and adjustment indices

| Model (N = 3195)                           |     |        |          |
|--|-----|--------|----------|
| γ 2.1 (Physical to Quality of Life)        |     |        | .399     |
| γ 2.2 (Psychological to Quality of Life)   |     |        | .376     |
| γ 2.3 (Social to Quality of Life)          |     |        | .504     |
| γ 1.1 (Physical to Health Behaviour)       |     |        | .654     |
| γ 1.2 (Psychological to Health Behaviour)  |     |        | 1.098    |
| γ 1.3 (Social to Health Behaviour)         |     |        | -.310    |
| β 2.1 (Health Behavior to Quality of Life) |     |        | -.091    |
| Adjustment Indexes                         |     |        |          |
| χ <sup>2</sup>                             | .02 | 986.31 |          |
| df   | 59  | 59     |          |
| Fit Indexes                                |     |        |          |
| RMSEA                                      |     |        | .075     |
| AIC  |     |        | 1535.321 |
| NFI  |     |        | .908     |
| CFI  |     |        | .913     |
| IFI  |     |        | .913     |

## Discussion

The results of this study highlight the importance especially of the psychological variables for HRQoL, its relation with social, behavioral and physic factors. For this paper the hypotheses of the relation between HRQoL and related factors were based on the model proposed in The KIDSCREEN Group Europe (2006, p. 33) and in the definition of health defended by World Health Organization (1994), basically were health was described as involving physic health, psychological health and social health. The selected variables related with HRQoL were based on literature research, that defend that physic health influenced HRQoL; social factors, specially related with social support satisfaction and psychological factor mostly related to Self-esteem and life orientation style.

The interaction and impact of those variables were one of the contributions of this study, such us, the influence of the self-esteem and the life orientation style especially in HRQoL and in Health behavior, greater than the impact of social factor and physical factors. Other aspect, uniquely related with HRQoL dimensions, are that Psychological factor

(psychological well-being and moods and emotions) have a stronger contribute to this variable, less that physical well-being and social factors (school and family). Psychological factors (psychological well-being and moods and emotions; self-esteem) are the ones whose are stronger correlated with almost all other variables and dimensions. However, school and family also have influence in HRQoL, namely, in family relationships and school involvement and learning (The KIDSCREEN Group Europe, 2006; UNICEF, 2007).

Those results are consistent with other studies. Matos, Dadds, and Barrett (2006) and Levin and Currie (2010) present data from HBSC/WHO study related to the impact of family and communication in children and adolescents mental health. The children and adolescents perception of psychological school involvement are very important for their wellbeing (Haapasalo, Valimaa, & Kannas 2010). Peers Group and activities can be a protective factor in children and adolescents health (Zambon et al., 2010).

The main contribute of this study in relation of Psychology, and Health Psychology, it is that psychological variables, in this specific case, self-esteem, optimism and feelings and emotions are the ones that showed a strongest impact in HRQoL in children and adolescents. In other hand the variables that influenced more the quality of those psychological variables are interpersonal variables, such as, the relation with parents and peers group.

This knowledge should be used in HRQoL promotion activities, namely in promotion of interpersonal social skills. If children and adolescents have a more positive relation with peers group and their parents, consequently, they will present better and more positive self-esteem, optimism, feelings and emotions.

The model proposed by Cummins (2005) suggested that extra-individual factors have a more indirect than direct impact in HRQoL. This model highlights the importance of how those extra-individual factor acts indirectly in HRQoL (Chipuer, Bramston, & Pretty, 2003).

This evidence is clear for the tested structural equation model. Diverse studies defend the fundamental impact of psychological factors in subjective well-being and in subjective perception of quality of life. We also underline the fact that children and adolescents function as a whole. Nonetheless, the social and psychological variables affect other areas of competency profoundly, namely, cognitive, emotional and behavioral competencies, as well as expectations and motivation (Coventry et al., 2004; Cummins, 2005; Gaspar et al., 2006; Matos et Aventura Social Team, 2006a).

The correlation analysis results show that all of the scales are significantly correlated ( $p < .01$ ). The results presented also confirm the complex and multidimensional character of the HRQoL. They reinforce that HRQoL is related with physical aspects, such as, health, personal aspects, self-esteem, optimism, positive and negative emotions, self-perception and autonomy, and social aspects,

such as social support satisfaction, family relation, school, peers and health-related behavior, These results are confirmed by different authors (Bronfenbrenner, 2005; Cummins, 2005; Gaspar & Matos, 2008; Harding, 2001; Matos et Aventura Social Team, 2006b; Ravens-Sieberer et al., 2005; World Health Organization Quality of Life Assessment Group, 1994).

The conceptual model which explains the perception of quality of life related with health in children and in adolescents in the focused academic years integrates all of the results and has the literature review as the basis of its substantiation. In this analysis, the proposed conceptual model is not adjusted in the sense of obtaining a more robust model. This decision was made considering that the theoretical consistency was more important than an adjustment of the model to increase robustness. The model integrates physical psychological, social and behavioral factors and its association to health-related dimensions of the HRQoL from the KIDSCREEN-52 was evaluated.

The theoretical basis for this model is the ecological perspective in which psychosocial development is considered positive, healthy and influenced by individual and ecological factors (Bronfenbrenner, 2005). Child and adolescent behavior is influenced by diverse factors, such as, self characteristics, family type, social and economical status, parental style, parental stress and life experience. Consequently, socio-economic disadvantages, as well as social isolation, poor life conditions, mono-parental families, interpersonal violence and conflicts between family members, parent psychopathology, high levels of stress and the lack of social support are generally associated to problems with child behavior.

The concept of quality of life is related with all of the well-being aspects of the individual – physical, psychological, social and environmental aspects. It is primarily a multi-dimensional and subjective concept (Harding, 2001). Moreover, quality of life is associated with present and past experiences, as well as future preoccupations and expectations (Cummins, 2005). Cummins highlighted the importance of understanding the way in which extra-individual factors (social, environmental and health-related behavior) act indirectly in children and adolescents' quality of life.

The present study considers Ravens-Sieberer's proposed conceptualization and The KIDSCREEN Group Europe (2006), where quality of life is defended as a comprehensive, subjective and multi-dimensional health model. These authors underline that quality of life is related with health and may be seen as a psychological construct which describes physical, psychological, social and functional aspects of well-being.

The results that were evidenced in this study allow us to better understand the impact of personal factors in promoting HRQoL in children and adolescents. In this sense, they help us identify risk-groups in their subjective well-being and HRQoL.

We concluded that promoting health implicates an active support of the physical, psychological and social well-being in children and in adolescents. In promoting health, we should thus consider factors which constitute risks for children and adolescents' well-being, through preventive interventions based on mediating health at all levels. Subjective health or the perception of well-being are considered important aspects in promoting health and are also relevant indicators in areas such as public health.

For this paper the relation between HRQoL and related factors were based on the model proposed in The KIDSCREEN Group Europe (2006, p. 33), had been selected some relevant factors, however, some other important factor included in this model were not considered in our study, namely, mental health and health services use. Would be important include in future studies mental health measures, because psychological factor presented so important in our results.

In future studies could be interesting testing the model proposed in this study by gender, age, sócio-economic status and nationality, as had been done for the health behavior model proposed by Matos et al. (2006) e Gaspar, Matos, Ribeiro, and Leal, (2006).

In terms of public health and health psychology, HRQoL monitoring is imperative in children and adolescents with and without chronic illness and diverse individual, social and cultural differences. In this sense, we suggest a longitudinal study or the repetition of this study in regular time periods. It is therefore pertinent to apply the KIDSCREEN instrument, as well as the instruments which measure variables that promote HRQoL, in early ages (Other KIDSCREEN European countries validated the instrument from 8 years old to 18 years old, The KIDSCREEN Group Europe, 2006) in clinical and in academic contexts, in individual and in community evaluation programs of HRQoL intervention and promotion in children and adolescents. Lastly, we proposed that they may be further studied in psychology, health sciences, psychosocial and educational research.

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