

VALIDATION OF A QUALITY OF LIFE QUESTIONNAIRE IN CHILDREN WITH CANCER

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Objectives of the Study:

The global aim of this study is to test the psychometric properties of a 23 items questionnaire assessing Quality of Life in pediatric oncology patients. Specific objectives:

1/to obtain some elements of construct validity (comparing theoretical and empirical dimensions).

2/Reliability.

3/Differential studies with criterion groups.

Method:

A/Subjects: 151 patients were assessed at different ages, stages of illness and treatment phases. We assessed children diagnosed of cancer/brain tumor in oncology and neurosurgery units in "La Fe" Hospital (Valencia-Spain). The questionnaires are answered by the children if they are older than 5 years.

B/Variables: 5 independent variables were controlled: age at diagnosis/evaluation, diagnosis (brain tumor, leukemia, solid tumor), phase (treatment, relapse, survivor), treatment (combination of these three: chemotherapy, radiotherapy, surgery).

C/Procedure: The assessment was made during established visits or incomes always applied by psychologists since 1999 to 2002.

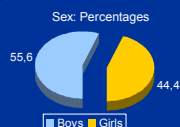
These patients are not a sample, so we can assume that the results offered in this poster are features from the real population.

D/Analysis: normality, reliability, univariate (ANOVA) and multivariate analysis (MANOVA), discriminant analysis were performed. Percentile punctuations to locate the patients are offered.

Results:

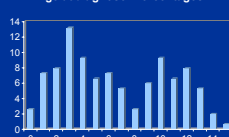
1. Frequencies of the population

There are more boys (55.6%) than girls (44.4%).

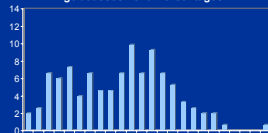


Patients between 9 and 15 years old at the age of diagnosis were assessed. The age at assessment was from 1 to 24

Age at diagnosis: Percentages

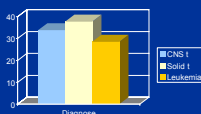


Age at assesment: Percentages

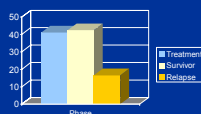


33.8% had CNS tumors, 37.7 solid tumors and 28.5% leukemias. 41.4% are in treatment, 42.4% were survivors and 16.6 were in relapse.

Diagnose (percentages)

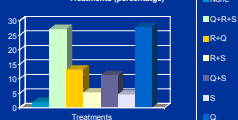


Phase (percentages)



27.8% received quemothotherapy (Q) alone, 4.6% only surgery (S), 2% didn't receive any treatment. The others are combinations of treatment: 11.3% Q+S, 5.3% R+S, 13.2% R+Q and 27.2% Q+R+S.

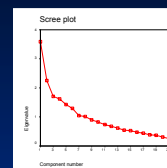
Treatments (percentage)



2. Factorial analysis

A Principal Component Analysis (Kaiser-Guttman criterion; Varimax rotation, 66.4% of the total variance explained) has found 8 dimensions: Social functioning, Symptoms, Autonomy, School achievement, Psychological discomfort, Functional limitations, Self-image and Psychological wellbeing.

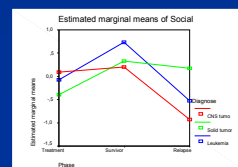
Adequate communalities of the items were obtained in these factors (0.53-0.77). Internal reliability coefficients ranged from 0.43 to 0.71 excluding two factors. All variables included in the study show significative differences between criterion groups. The most salient are: brain tumor patients show the worse punctuations across factors. Unlike Leukemia and solid tumors, brain tumors don't show improvement in their QL when they become survivors. Early age at diagnosis means long term worse social functioning, autonomy and school achievement. We also made percentile punctuations to facilitate the use of the questionnaire.



Factor	Reliability
Social functioning	7146
Symptoms	6138
Autonomy	6842
School achievement	0387
Psychological discomfort	4894
Functional limitations	4253
Self-image	4541
Psychological wellbeing	3294

3. Examples of differential behavior of clinical variables across dimensions in children with brain tumors

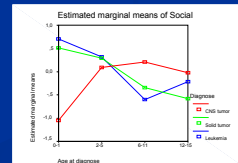
social behavior (I): They are the only group that doesn't improve their social relations when they become survivors (red horizontal line between treatment and survivor)



social behavior (II):

the diagnose between 0-1 years old produces a worse social functioning.

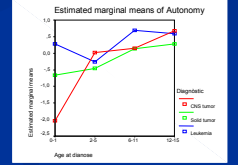
Solid tumors and leukemias diagnosed between 0-5 years show better social functioning than those diagnosed between 6-15.



at 0-1 years in Autonomy:

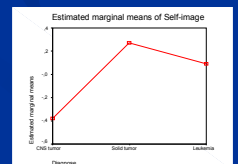
Diagnose between 0-1 years old produces a worse social functioning.

Solid tumors and leukemias diagnosed between 0-5 years show better social functioning than those diagnosed between 6-15.



Self-image:

Children with CNS tumor show the worst self-image among groups.



4. Comparative results on dimensions with other instruments

The are common and especifical dimensions across questionnaires. Fertility is a long-term side effect and is not included in only one questionnaire. Our questionnaire includes another dimension called Self -image.

Q.V. (Tina Barahona)	HUI 2	POQOLS	PCQL-32
Social functioning	2. Mobility		3. Social functioning
Symptoms	6. Pain	3. Reaction to treatment	
Autonomy	2. Mobility	1. Physical function	3. Physical functioning
School achievement	4. Cognition		4.School functioning
Psychological discomfort	3. Emotion	2. Emotional distress	
Functional limitations	1. Sensation		2. Emotional functioning
Self-image			
Psychological wellbeing	3. Emotion	2. Emotional distress	2. Emotional functioning
	7. Fertility		

Conclusions:

- Our questionnaire offers relevant information, good discrimination among groups of ages, phases, diagnostics and treatments.
- We have found similar dimensions than in other instruments.
- Three dimensions offer very good reliability (social, autonomy and symptoms) and other two need to be improved in order to reach more reliability (a way of improving the questionnaire is discussed)