Interactive Assessment to Support Patient Care in Children With Cancer

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Abstract

SiSom is a computerized, interactive assessment and communication tool to help children with cancer report symptoms and problems through animations, pictures and spoken text, and to assist clinicians in providing patient-centred care. In this exploratory study that tested effects of SiSom in patient consultations we found significant group differences in favor of the intervention group in number of symptoms addressed; level of child participation; and number of times the physician directly addressed the child. The study showed beginning evidence that SiSom can significantly improve patient-centered care for children with cancer.

Keywords:

Interactive assessment, Children, Cancer

Introduction

Children diagnosed with cancer are particularly vulnerable because they lack the personal resources or life experiences that help them cope and make sense of the many problems associated with the illness. Therefore, we developed SiSom, an interactive communication tool to help children with cancer report their symptoms / problems in a child-friendly, age-adjusted manner and thus give them a "voice" in their care. SiSom uses a "sailing from island-to-island" metaphor where symptoms and problems are placed on islands that children can visit, denote if a problem applies to them and select the level of severity. When the child has finished a child-friendly assessment summary report that summarizes the child's feedback is immediately created to support care providers in their consultation with the child.

Methods

The purpose of this quasi-experimental design study was to explore the impact of SiSom on patient-centered care in consultations with children with cancer.

Procedures

IRB approval was obtained prior to the study. In the experimental group children completed SiSom on a touch-pad tablet computer in the outpatient waiting room in preparation to a consultation prior to being seen by their doctor. The resulting assessment summary was provided to physicians. In the pre-intervention control group, children did not use SiSom and received usual care. All consultations were video- taped and consensus coded by the two raters according to a specially developed coding scheme. The final material consisted of videotapes from 10 pretest control group and 16 post-test consultations in the SiSom intervention group. T-tests and descriptive statistics were used to analyze the data.

Results

Of 23 children who were approached, 15 agreed to participate (65% response rate) six boys and seven girls age 8-12 with different types of cancer. Children participated in 1-3 control or intervention consultations. 15 physicians participated in 1-5 consultations each.

Effects on patient-centered care

As shown in Table 1, there were significant group differences in favor of the intervention group in number of symptoms / problems assessed and identified; and number of times the physician directly addressed the child. Also, children participated significantly more often in the conversation.

Table 1-Effects on patient-centered care

	Control N=10		Exp group N= 16			
	M	SD	M	SD	t	p
Symptoms assessed	4.3	3.1	7.9	5.1	2.0	.057
Symptoms identified	1.7	1.6	4.5	3.1	3.1	.005
Child participation	3.7	2.6	6.4	4.9	2.1	.05
Child addressed	3.9	2.8	6.3	5.1	2.1	.05

Discussion and conclusion

This is the first study that evaluated the effects of an interactive communication tool in a pediatric context for children with cancer to assist clinicians in clinical practice in systematically eliciting and integrating patients' symptoms, problems, and concerns into patient care. Despite the small sample, this study shows promising results. When children used SiSom to report their symptoms, problems, and concerns

and physicians had the resulting assessment summaries available to support them in their care, physicians assessed and identified significantly more symptoms and problems and the consultation became more patient-centered: the child was more often directly addressed and participated more. Further studies should be designed to test SiSom with a larger sample size and on other pediatric populations.

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