DESIGN AND PRELIMINARY EVALUATION OF A MOBILE APPLICATION FOR OBESITY EXPERT AND CHILDREN TEAMS

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Overview

Introduction

Childhood obesity is one of the major disease patterns of the twenty-first century. Due to the need for multi-professional therapies requiring intensive personnel and financial resources, IT-supported interventions promise help. Meta analyses, however, show their limited impact on health outcomes up till now.

Method

The current work aims therefore to design and evaluate a mobile application that increases the cooperation between obesity experts and children. For that purpose, four IT experts, five therapists, nine obese children 10 to 14 years old and their parents adopted a structured design-science methodology (Janzen et al. 2010). Perceived characteristics of the application and direct effects on cooperation of therapists and children were evaluated.

Results

The resulting application provides recipe recommendations based on ingredients available at home and desired by children. It further allows to document groceries and meals via a photo functionality. All interactions with the application were recorded to document screen time and utilization for efficient shopping and healthy meals.

First feedback from seven therapists, six children and their parents indicates that the application is perceived useful, easy and fun to use. With regard to direct effects on the cooperation between obesity expert and children teams, there is evidence that the application supports shared understanding and cross understanding.

Outlook

Future work will incorporate further components of therapy programs, such as physical activity or relaxation, but will also investigate in a longitudinal field study how the use of this application within a therapy program influences health condition of obese children.





Design





University of St.Gallen

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Evaluation

	Construct	Related Work	Therapist		Child		Parent	
#			T1	T2	T1	T2	T1	T2
1	Perceived usefulness of the application	Davis 1989	_	_		4.00 (.816)	_	3.50 (1.73)
2	Perceived ease of use of the application	Davis 1989		_		3.75 (1.26)	_	5.25 (.96)
3	Perceived enjoyment during application use	Kamis et al. 2008	5.17 (.75)	4.75 (.50)	4.50 (.84)	4.00 (.89)	5.67 (.52)	4.00 (.00)
4	Shared understanding between child & therapist	Maass et al. 2011	5.17 (.75)	5.25 (.50)	5.50 (.55)	4.50 (.58)	_	_
5	Cross understanding between child & therapist	Huber & Lewis 2010	4.83 (1.17)	4.75 (.50)	4.83 (.75)	4.50 (.58)		_





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