Analyzing the Persuasive Design Features in a tool aimed to improve Health Literacy: the case of COMJUNTS Webapp.

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♦ Introduction

Health Literacy has turned into one of the most important challenges in public health. In the field of Rare Diseases, its importance is critical to help parents to improve disease knowledge, not only on medical aspects, but also on psychological and social topics.

We have designed an educational Webapp (COMJUNTS) aimed to help families to understand the key aspects that show up during the firsts days after receiving a diagnosis of a paediatric rare disease (from birth to five years).

To foster families' adherence to this tool, we have decided to analyze whether our Webapp first version incorporates persuasive design elements, and if the website where the Webapp will be hosted should incorporate persuasive design principles.

♦ Objectives

Our first aim was to analyze if in COMJUNTS first design, it was shown some of the persuasive principles from Oinas-Kukkonen's Persuasive Design Model (2009), being that we did not conceive that first design as a specific tool aimed to be a Persuasive Webapp.

Our second aim was to make a proposal displaying how the persuasiveness of the Webapp COMJUNTS could be improved by introducing some of the Oinas-Kukkonen's principles in the website where this app will be hosted. We consider this as a complementary and alternative strategy to increase the persuasiveness of the whole intervention (Webapp + Website).

♦ Methods & Materials

We analyzed the persuasive principles of COMJUNTS Webapp as described in the four categories of the PSD Model (Persuasive System Design).

We did two separated analysis. In the first analysis, we identified the principles found in the first version of our design. In the second analysis, we thought over different ways to include persuasive systems in the introductory website in which we will present and offer (for free) our Webapp.

Both analysis (see Table 1) offer information on the principles that are present on the Webapp (green), the principles that are not included in the Webapp (yellow), and the principles that do not fit our Webapp COMJUNTS (red).

The second analysis was on the feasibility of including those principles identified as "Medium" in the first analysis (yellow), and lay out the way we can incorporate them in the support website that we are designing.

♦ Results

Design Principles (Oinas-Kukkonen&Harhumaas, 2009)

	Included in COMJUNTS design	How they are included	Improving COMJUNTS persuasiveness beyond the app
PRIMARY TASK SUPPORT			
Reduction	Yes	Reduce task complexity ("just one finger")	
Tunneling	Medium		By a downloadable User Guide "How to use COMJUNTS" from the Website
Tailoring	Yes	Design a specific app for a clearly defined group of users (parents with 0 to 5 years old kids affected by a rare disease)	
Personalization	Yes	The content is a result of a thorough research of the needs of the group	
Self-monitoring	Yes	The design allows users to check their own evolution	
Simulation	Not applicable		
Rehearsal	Medium	Vicarious learning from experiences explained by other families	
DIALOGUE SUPPORT			
Praise	Medium		Praise parents for their progress in overcoming challenges in COMJUNTS
Rewards	Medium	"Social rewards" such as praise or support from other parents, from patient's associations' members and so on.	Specific praises to those parents who also use the website
Reminders	Medium		We will send specific reminders from outside the webapp (from FEDER site)
Suggestion	Yes	In the videos recorded by doctors and parents, they recommend using COMJUNTS	
Similarity	Yes	The protagonists in the shown videos are parents living the same o similar experience with a paediatric rare disease	
Liking	Yes	A very careful design performed by specialists in art	
Social role	Yes	We offer specific psychologists advice from the Spanish Federation of Rare Diseases	
SYSTEM CREDIBILITY SUPPORT			
Trustworthiness	Yes	COMJUNTS has been developed in collaboration with prestigious Spanish organizations, such as the Spanish Federation of Rare Diseases (FEDER) and the Hospital Vall d'Hebron (Barcelona)	
Expertise	Yes	Renowned specialists in rare disease field are collaborating with us	
Surface credibility	Yes	Communication and design experts in the layout of the webapp	
Real-world feel	Yes	Real families living with a kid affected by a rare disease explain their own experience with the disease	
Authority	Yes	It includes advice from five health professionals from a well recognised Hospital in Spain (Hospital de la Vall d'Hebron). Physicians and board members of patients associations recommend the use of COMJUNTS	
3rd party endorsements	Yes	In the videos from families and patients associations, they suggest using COMJUNTS	
Verifiability	Yes	Both authorship and contact information are available	
SOCIAL SUPPORT			
Social learning	Medium		We add specific content on experiences from other people
Social comparison	Medium		In the website project "JUNTS", we will make the app available to future users
Normative influence	Not applicable		
Social facilitation	Medium		We will offer data on the number of families that are using the webapp
Cooperation	Yes	We will invite parents to collaborate and share experiences	
Competition	Not applicable		
Recognition	Yes	We offer social recognition to parents and provide support to their work as their kids' caregivers	

♦ Conclusion and Discussion

We have been able to identify some different persuasive principles in our Webapp COMJUNTS, both in the first and second analysis mentioned before. In the first analysis (67,5% 19/28), we identified the persuasive principles incorporated without having a specific aim in persuasion (green). In the second analysis (29,6% 8/28) on including new persuasive principles (yellow) to increase the persuasiveness on the support website that we will create. After doing an analysis of the persuasion principles, we consider that it is feasible to increase the number of persuasive principles by doing some small changes.

♦ References

Oinas-Kukkonen, H., & Harjumaa, M. (2009). Communications of the Association for Information Systems Persuasive Systems Design: Key Issues, *24*(28), 485–500. Retrieved from http://aisel.aisnet.org/cais

♦ Persuasive principles: examples

Expertise

Trustworthiness

Veriafibility

3rd party endorsements

♦ Credits & Acknowledgements