Determining Technological Functionality and Design Requirements for Adolescent Populations

Amy Knoblock-Hahn, Ph.D., M.P.H., M.S., R.D.
March 11, 2014
Conceptual Model for Socio-Ecological Assessment of CHT within the Context of the Chronic Care Model -
UCD Approach

- Target group users are in the drivers seat
- Includes “user mental model”
- Method enhances user acceptance, usability and functional propriety
- Has been shown to improve system usefulness, information quality, and interface quality

D’Alessandro, 2001; Gagnier, 2009; Johnson, 2005;
UCD Process

http://usability.msu.edu/approach.aspx
Figure 1: Research Model for Intent to Use UCD Application for Overweight and Obese Adolescents Age 12-17

- Performance Expectancy (UTAUT) *A, D, P
- Effort Expectancy (UTAUT) *A, D, P
- Social Influence (UTAUT) *A, D, P
- Facilitating Conditions (UTAUT) *A, D, P
- Observational Learning (SCT) *A
- Reinforcements (SCT) *A
- Principle of Virtual Rewards (PT) *A

*Applies to:
A=Adolescent
D=Doctor
P=Parent

Bandura, 1972; Fogg, 2003; Venkatesh, 2003
Supporting Questions for each Construct:

How could smart phone or Internet applications be helpful in your role in supporting your child’s weight management?

Effort Expectancy
Degree of ease associated with use of the system.

Performance Expectancy
Degree to which individual believes using the system will help him or her meet goals (for supporting adolescent weight management).

Social Influence
Degree to which individual perceives important others believe he or she should use the system.

Intent to Use
Intended, predicted, or planned use of the system.

*Adapted from Venkatesh

Summary

- As we continue to rely on technology as a form of meaningful intervention, it is important to get meaningful and useful design and functionality for the target audience in the early stages of development.
- Behavioral theory applied to the UCD model can enhance usability, intent to use, and use behavior.
- Traditional qualitative methods such as focus groups and interviews are appropriate to use as a first step to the UCD process.
- Questions at amykhahn@gmail.com