Usability Evaluation of Personal Digital Assistants (PDAs) to support HIV Treatment Adherence and Safer Sex Behavior in Peru

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ABSTRACT

Colecta-PALM is a Web-based application delivered on PDAs that provides behavioral messaging based on risk assessment responses for HIV patients. Usability testing was undertaken with 15 people living with HIV.AIDS (PWLHA) in two clinics in Lima. Sixty percent (9/15) were somewhat/very satisfied with Colecta-PALM, with usefulness rated 3.7/5. Users found the tool innovative, interesting, easy to use, educational, trustworthy, private, and non-judgmental. Colecta-PALM was well-received and easily usable by most.

INTRODUCTION

Innovative approaches are needed to enhance adherence to highly active antiretroviral treatment (ART) and to support HIV transmission risk reduction for people living with HIV/AIDS. PDAs may be a culturally appropriate way to support ART adherence and safer sex for PLWHA[1].

METHODS

We developed a Web-based application delivered on PDAs (Colecta-PALM) for PLWHA. Colecta-PALM provides behavioral messaging based on risk-assessment responses for HIV patients[2]. The application uses a wireless Intranet secure connection to transfer Web survey pages from desktop server to wireless-enabled PDA. Usability testing was undertaken using mixed methods including observation and semi-structured interviews.

RESULTS

15 PLWHA were interviewed in two HIV clinics in Lima, Peru. Users were 67% (10/15) mestizo with mean age 36.9 years (range: 26-55). All participants could use Colecta-PALM with minimal assistance. Time for session completion averaged 23.6 minutes; 67% (10/15) said length was acceptable. 60% (9/15) were somewhat/very satisfied with Colecta-PALM, with usefulness rated an average of 3.7 on ascending 5-point Likert-scale. Eighty percent (12/15) indicated that the audio features provided tranquility, security, and confidence. Users found the tool innovative, interesting, easy to use, educational, trustworthy, private, and non-judgmental. Users limitations noted were wireless connection problems, some sensitive questions and messages, tapping and scrolling were not initially easy for several people, and the PDA froze.

DISCUSSION

Colecta-PALM was well-received and easily usable by most. Computer counseling holds great potential for providing assessment and health promotion to PLWHA, particularly as a supplement to scarce staff resources. Researchers might consider the environment in which PDAs will be used when selecting Web vs. stand-alone applications (http://www.colectapalm.org).

REFERENCES

1. Curioso WH, Kurth AE. Access, use and perceptions regarding Internet, cell phones and PDAs as a means for health promotion for people living with HIV in Peru. BMC Med Inform Decis Mak 2007; 7:24.

2. Kurth AE, Curioso WH, Ngugi E, et al. Personal digital assistants for HIV treatment adherence, safer sex behavior support, and provider training in resource-constrained settings. AMIA Annu Symp Proc 2007;921.

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