Review of Key Stakeholders for an mHealth Pilot Study in Malawi
Motivations and Expectations

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ABSTRACT

The trial and evaluation of mobile health (mHealth) applications in society is necessary to explore the potential use and benefits of the solution post-trial. In recent years, there is a proliferation of mHealth projects developed and tested in the continent of Africa. The complexity of these projects means that there are typically many stakeholders who are integral to the success of the project. Yet, extant research falls short of capturing the motivations and expectations of multiple key stakeholders (i.e. direct and indirect users) in a single study towards participating in mHealth pilots. To address this gap in research a conceptual model is proposed and examined to explore the impact of motivations and expectations on both community health workers ‘(direct users) and caregivers’ (indirect users) decision to participate in mHealth pilot studies. Findings reveal that both motivations and expectations positively impact decision making, i.e. their decision to participate in the study, with no significant differences emerging between these two groups of stakeholders.

Keywords: Caregivers, Community Health Worker, Developing Countries, Expectations, Mobile Health, Motivation

INTRODUCTION

In recent years, the development of mobile technology for use in the healthcare domain has surpassed expectations. This phenomenon is now widely recognised in the academic and practitioner domains as mobile health (or mHealth). A recent market analysis by Dehling et al. (2015) has put this proliferation into context by identifying nearly 24,500 mHealth applications available on the marketplace, classified as either ‘medical’ or ‘health and fitness’. Yet, mHealth applications are not limited solely to these two categories; other categories encompass treatment and disease management, data collection and disease surveillance, health support systems, health promotion and disease prevention, communication tool, and medical education (Nhavoto & Gruland, 2014). To further shed light on the increased development of mHealth applications it is reported that a vast number of mHealth studies have been conducted in a developing world scenario (Déglise

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et al., 2012; Mechael, 2010). This surge in mHealth development may be attributable towards the achievement of Millennium Development Goals (MDGs) established in 2002.

The overall aim of the eight MDGs is to meet the needs of the world’s poorest by 2015 by reversing poverty, hunger and disease affecting billions of people. The MDGs include (1) eradicating extreme poverty and hunger, (2) achieving universal primary education, (3) promoting gender equality and empowerment, (4) reducing child mortality, (5) improving maternal health, (6) combatting HIV/AIDS, malaria and other diseases, (7) ensuring environmental sustainability and (8) developing global partnerships (UN, 2000). mHealth research has played an integral role towards achieving some of these MDGs (Mechael, 2010); examples of which are subsequently described.

In their work, Lund et al., (2014) evaluated the association between a mobile phone intervention (‘Wired Mothers’) and perinatal mortality in a resource-limited setting; namely, Zanzibar. These authors found that the introduction of the mHealth intervention played a significant role in the reduction of perinatal mortality (19 per 1000 births as opposed to the baseline figure of 27 per 1000 births). In 2011, Zurovac and his colleagues reported the results from the assessment of an mHealth intervention targeting community health workers adherence to malaria treatment guidelines for severe malaria in sick children less than five years of age, spanning three years (2006-2009). This study found that two text messages sent daily, as compared with no text messages, significantly improved correct malaria case management by 24% (p = .004) both immediately after intervention and six months post-interervention. Additional examples are presented in Table 1.

While mHealth is playing an essential role towards achieving the MDGs, it is argued that more empirical work is required to understand mHealth projects in developing countries (Avgerou, 2008; Mechael, 2010; Admed et al., 2014; Brinkel et al., 2014). To ensure the longevity of mHealth initiatives requires an understanding of participant recruitment in such projects as those that are directly and indirectly affected that underpin the success of the project. mHealth research often encompasses numerous participants (Whittaker, 2012) dependent on the contextual

Table 1. mHealth initiatives in developing countries

<table>
<thead>
<tr>
<th>Study Focus/Outcome</th>
<th>Authors</th>
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<tbody>
<tr>
<td>Disease Surveillance and Monitoring</td>
<td>Asiimwe et al., (2011); Kamanaga et al., (2010); Gitonga et al., (2010); Nsanzimana et al., (2012); Weinberg et al., (2009).</td>
</tr>
<tr>
<td>Staff Training and Support</td>
<td>Bellina &amp; Missoni (2009); Rotheram-Borus et al., (2012); Siedner et al., (2012).</td>
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Combining Qualitative and Quantitative Methods in IS in Healthcare
Revisited
Bonnie Kaplan (2006). *E-Health Systems Diffusion and Use: The Innovation, the User and the Use IT Model* (pp. 198-211).
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