A Qualitative Investigation of Factors Enabling Sustained Use of Online Health Communities

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ABSTRACT
The duration of consumers’ use of an online health community directly impacts their health outcomes. However, little is known about factors enabling sustained use. Using survey methods, this study found that referral from trusted others, useful content, and large, diverse, and supportive community environment is associated with continuous use of online health communities. Implications for designing web-based health communities and interventions were discussed.

Keywords
Online health communities, health information seeking behavior, online communities.

INTRODUCTION
Online communities have become an important source for health information, particularly for those with rare diseases or chronic conditions. According a study conducted by the Pew Internet and American Life Project, one in four internet users (23%) living with chronic conditions, such as high blood pressure, diabetes, heart conditions, arthritis, and cancer have used online communities to find others with similar health concerns (Fox, 2011). Descriptive studies have revealed that exchanging information and emotional support are two major factors motivating consumers go to online communities (Coulson, Buchanan, & Aubeeluck, 2007; Mo & Coulson, 2008; Yan Zhang, He, & Sang, 2013). Participation in these communities has been shown to improve consumers’ competence in seeking online information, increase social support, and improve self-efficacy for participating in their medical care, emotional well-beings, and quality of life (Gustafson et al., 2001; Rains & Young, 2009; Winzelberg et al., 2003).

These benefits come with sustained use of these communities (Mo & Coulson, 2010; Rains & Young, 2009). However, little is known about what factors sustain users’ interests in a community and motivate them to continuously engage with the community. This study intends to fill this gap. Knowledge gained from this investigation will improve the current understanding of users’ behavior in this information environment and inform the design of such systems.

Recently, online peer-to-peer communities have increasingly become a common component of many interventions that help educate patients, improve self-management, or change health behaviors (Chou, Prestin, Lyons, & Wen, 2013; Rains & Young, 2009). Prior interventions suggested that online communities were favored by participants, but the use was dwindling over time (Glasgow, Boles, McKay, Feil, & Barrera, 2003). Thus, the study results will also contribute to the design of interventions to improve consumer health.

METHODS
A survey questionnaire was launched on Qualtrics, asking for participants’ demographics and basic information concerning their use of diabetes online communities, including what communities to use, which they visited the most, how long they have used this particular community, and the frequency of usage. Open-ended questions asked participants to think of their use of the most visited community and describe why they have joined the community, how did they join, why they kept using the community, and what they valued of the community. We chose to study diabetes because it is a common chronic condition that affects a large number of people and merit careful examination (World Health Organization, 2006).

The survey was posted on a crowdsourcing platform, Amazon Mechanical Turk (AMT), from November 13 to December 2, 2012 to recruit participants. A total of 212 responses were received, among which 85 completed 95% of the questions. Because the purpose of the study is to examine the sustained use of online communities, we screened the 85 responses and retained those that reported using a community for more than 3 months. As the result of this screening, 72 responses retained. Answers to the closed-ended questions were imported to SPSS for descriptive statistical analysis. Answers to the open-ended questions were imported to Nvivo 10.0 and analyzed using the
qualitative content analysis method (Zhang & Wildemuth, 2009). An open coding process was followed to allow themes to emerge from the data and constant comparison method was adopted (Glaser & Strauss, 1967).

PRELIMINARY RESULTS

Of the respondents, 32 (44.4%) were males and 40 (55.6%) were females. Among them, 18 (25.0%) were diagnosed with Type I diabetes, 20 (27.8%) were Type II, 17 (23.6%) pre-diabetes, 16 (22.2%) caregivers, and one (1.4%) diagnosed with PCOS and on diabetes medications and vulnerable to gestational diabetes. Respondents’ age ranged from 18 to 63 (M = 33.4; SD = 10.5).

Respondents reported using 1-9 online communities (M = 2.54; SD = 1.4). They have been a user of the community that they visited the most for 3 to 120 months (M = 20.4, SD = 19.0). More than half of the respondents (65.3%) used the communities at least several times a week, and the remaining (34.7%) used on a monthly basis. Major most-visited communities (each respondent chose only one) included Diabetic Connect (16 respondents, 22.2%), the community associated with the American Diabetes Association (13, 18.1%), groups on Facebook (12, 16.7%), community on WebMD (11, 15.3%), Spark People (5, 6.9%), and Be Sure to Test (5, 6.9%).

Table 1. Community characteristics associated with sustained use of online health communities

<table>
<thead>
<tr>
<th>Categories of characteristics</th>
<th>Motivating factors</th>
<th>Description</th>
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<tbody>
<tr>
<td>Tech platform</td>
<td>Interactivity</td>
<td>Interactivity refers to the ways in which users interact with an online community. Users prefer to have simple (or no) registration and easy login. They also want the system to be easy to use and offers personalized interactions among members.</td>
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<tr>
<td></td>
<td>Privacy</td>
<td>Users want to remain anonymous to protect their privacy.</td>
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<tr>
<td></td>
<td>Brand</td>
<td>Users recognize the institute that hosts the community (e.g., WebMD and American Diabetes Association).</td>
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<tr>
<td>Content</td>
<td>Up-to-date</td>
<td>Users want the information to be new and updated frequently.</td>
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<tr>
<td></td>
<td>Comprehensive</td>
<td>Users want to see a large amount of information, covering various subjects.</td>
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<tr>
<td></td>
<td>Relevant/Personalized</td>
<td>Users want information to be sensible, suits their specific needs in terms of information subject, format, and type.</td>
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<tr>
<td></td>
<td>Reliable</td>
<td>Users want information to be reliable and of good quality.</td>
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<td></td>
<td>Free</td>
<td>Users do not want to have to pay for information.</td>
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<td>Group compositions</td>
<td>Group size</td>
<td>Users want communities to be large.</td>
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<td></td>
<td>Membership diversity</td>
<td>Users want communities to include people who are similar, and people who are expert on the subject.</td>
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<td></td>
<td>Group dynamics</td>
<td>Users want the community to be positive, supportive of members and members to be friendly, honest, and have a sense of humor.</td>
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DISCUSSION AND CONCLUSION

The technology acceptance model (TAM) suggests that ease of use and usefulness of a technology precedes a successful adoption (Davis, 1989). Consistent with the TAM, this study found that the technological platform that hosts online communities needs to be user friendly. Data from this study suggest that communities are not always easy to use. Respondents reported difficulties in navigating and accessing specific information that they need. Also consistent with the TAM, this study found that the content needs to be useful to retain users. More specifically the content needs to be comprehensive, which suggests that sole experiential information may not make a community successful; managers need to consider means to incorporate up-to-date information, as well as other useful information, such as news concerning new treatments, product reviews, educational materials, or recipes.

Suggested by the theory of reasoned action (TRA), users’ adoption of a technology is affected by subjective norms (Fishbein & Ajzen, 1975). This study demonstrated that users’ continued use of an online community is associated with referrals from trusted others, such as family, friends,
doctors, or peers with recognized expertise. This result suggests that word-of-mouth may be an effective campaign strategy to improve not only adoption, but also sustained use online health communities.

Moreover, the study identified several factors specific to online communities that may associated with sustained use: group size, membership diversity, and group dynamics. This result suggests that community managers, and intervention designers, need to pay attention to these group characteristics to ensure sustained use of the communities and to enable better understanding of mechanisms through which positive impacts of online communities on health outcomes can be realized.

In sum, it was found that many factors may contribute to sustained use of an online health community. Designers and managers can enable sustained use by making the technology easy to use, the content of the community useful, the number of participants reach a critical mass, and group members diverse and supportive. Future study could investigate how each identified factor impacts users' decisions to continuously use a community, and whether certain factors carry higher weight than others.

REFERENCES


