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SOCIAL SUPPORT, SOCIAL BELONGINGNESS, AND PSYCHOLOGICAL WELL-BEING: BENEFITS OF ONLINE HEALTHCARE COMMUNITY MEMBERSHIP

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Abstract

Despite an increase in users interacting using Online Social Network Sites, the value they generate for health purposes are under-researched. Previous research has mainly focused on the capacity of Online Social Network Sites for improving social and organisational value. Yet, the value of these platforms can be investigated in the other context such as health. This paper studies the value of membership in health related Online Social Network Sites, and in particular investigates how participation in such communities benefits users’ psychological well-being. Twenty-five qualitative semi-structured interviews were conducted with users of the Ovarian Cancer Australia Facebook page (OCA Facebook), the exemplar online community used in this study. The participants were people who were affected by ovarian cancer and were members of the OCA Facebook community where they exchanged information and received support. Using a multi-theory perspective to interpret the data, results showed that a sense of belongingness to a community with like-minded people as well as receiving social support through message exchange in the community were two main perceived benefits of the OCA online community membership. Findings also showed that most interviewees used OCA Facebook on a daily basis. While some were passive users and only read/observed the content created by others, other users actively posted content and communicated with other members. The paper concludes with implications of the results, recommendations for future studies and proposes a qualitative theoretical framework to examine the value of online communities in a more holistic way.

Keywords: Online social network sites, Facebook, cancer-affected people, psychological well-being, social support, and social connectedness.
1 INTRODUCTION

Online Social Networks (OSNs) are networked communication platforms where users can create profiles and content, establish connections, share content, develop interactions with their connections and consume content provided by their networks (Ellison & Boyed 2013). Many studies have affirmed the capacity of ONS for improving social and organisational value (Pan et al. 2015). Yet, the value of engagement with users on these platforms needs to be investigated in other context (Berger et al. 2014). In particular, less research attention has been paid to the less healthy people and people living with serious health conditions that could (theoretically) benefit from OSNs use (Erfani et al., 2013).

Information Systems researchers have stressed the capacity of OSNs in fostering informational and emotional exchange, knowledge sharing and development of extensive supportive interactions (Pan et al. 2015) which are predictors of better health outcomes such as greater psychological well-being (e.g. feeling happy, satisfied with life) (Liu et al. 2014). However, more research is still needed about the capacity of OSNs for health promotion in populations with poor health (Erani & Abedin 2014) such as cancer-affected people (people who have been diagnosed with cancer, including those who are either in treatment or have completed their treatment) (Hong et al. 2012). Cancer-affected people use OSNs for exchanging information and emotional support with others with similar health concerns, or with people who can address a cancer-related cancer (Bender et al. 2011; Erfani et al. 2016).

The aim of our study is therefore to explore the benefits and values of community membership and participation in health related OSNs. The paper aims to investigate whether and how members of OSNs develop a sense of belongingness to other community members and provide a level of social support. In particular, this study will bring evidence from cancer-affected people’s use of Ovarian Cancer Australia Facebook page (a health-related OSN that provides cancer-affected people with support, awareness, and content), and how their psychological well-being may be affected through exchange of social support.

2 THEORETICAL UNDERPINNINGS

This section reviews three theories that argue social support and social belongingness can be developed and exchanged in the OSNs, which in turn may improve the psychological well-being of online community participants.

2.1 Social Information Processing Theory

Social information processing theory suggests that participants in computer mediated communication (CMC) develop individual impressions of others through accumulated messages and interactions and consequently may develop relationships through textual or verbal cues (Walther 1992). According to this theory, through message accumulation, individuals can adapt verbal and paralinguistic behaviours to communicate in the CMC environments. Based on this theory, over time, CMC group members can adapt their verbally transmitted or textual messages in order to exchange social information. Online community members do not just passively receive the technology; rather, they adapt their behaviour to obtain the benefits of the technology (Walther 1992). As also shown in the previous studies (Abedin et al. 2011), the above theory distinguishes the inherent structures of advance information technologies, which are anticipated by designers, with those structures that emerge in humans’ actions as they interact with such technologies.
2.2 Social Support Theory

Social support is defined as emotional and informational resources exchanged between people through their social connections (Caplan 1974). Social support in online communities measures how an individual experiences the feeling of being cared for, responded to and assisted by people in their social networks. Online social support is important as it supports positive health outcomes (Noronha 2013) such as experiencing greater psychological well-being. Longitudinal predictors of change in subjective well-being of breast cancer survivors were examined using hierarchical multiple regression; improvements in subjective well-being were found to relate to higher levels of social support (Neuling & Winefield 1988). Studies have reported online health communities such as online support groups as a useful source of social support for cancer survivors (Kreps & Neuhauser 2010). Researchers showed positive correlations between the amount of participation in online breast cancer communities and receiving social support, and consequently the psychological well-being of breast cancer survivors (Hong et al. 2012).

2.3 Belongingness Theory

Belongingness theory provides a useful theoretical lens to explore the power of social connections in forming social connectedness and consequently better health outcomes (Grieve et al. 2013). Social connectedness is described as emotional connectedness and a sense of belonging between an individual and other people (Lee & Robbins 1995). According to belongingness theory, individuals develop meaningful relationships to experience a sense of belonging and consequently experience greater psychological well-being and better mental health. Studies on peer support context showed that cancer survivors experienced sense of belonging when participating in online support groups, and explained that belonging to a peer network can promote optimism (Morris et al. 2014). Other studies introduced social connectedness as a significant, positive predictor of perceived health and well-being (Galloway & Henry 2014). Research has highlighted the capability of OSNs in enhancing supportive interactions (Erfani et al. 2013; Lin et al. 2015). Thus, belongingness theory can explain the capability of OSNs to develop supportive interactions and improve the psychological wellbeing of cancer-affected people. As Figure 1 shows, over time, online community members can exchange social support, feel connected to the community, and develop social bonds and relationship through message exchange. This in turn can result in favourable benefits for community members.

![Diagram](image)

Figure 1. Theoretical framework of values of healthcare OSNs
3 DATA COLLECTION

3.1 Environment under study

A case study approach was used for conducting in-depth investigations and developing deep knowledge of social support and sense of belongingness in the OSNs environments. Ovarian Cancer Australia (OCA) Facebook was an appropriate OSN for an examination of this study, as it is used by large numbers of cancer-affected people for exchanging informational and emotional support. Currently OCA Facebook has over 12,000 members, with over 500 posts, comments, and shares every month, suggesting an active online environment. This community is maintained and moderated by OCA, an independent national organization that supports people affected by ovarian cancer. OCA Facebook offer authoritative cancer-related information, posts positive stories to support staying healthy while living with cancer, and enables people affected by ovarian cancer to develop supportive interactions and communications. Commercial and unrelated content and negative comments and posts are not permitted.

Twenty-five women who were affected by ovarian cancer (mean age=39 years, median=41 years, SD=5.6) participated in this study. The participants were aged from 18 to 65. All participants were from Australia and were members of the OCA Facebook community for at least two months, and with an average of 12 months membership. The sample size for this study was not predetermined, but rather decided by the saturation point of the data. Recruitment ceased when the information collected from a sufficiently variable sample became repetitive across individuals, and new themes no longer emerged (Francis et al. 2010). This point occurred during the 25th interview.

3.2 Interviews

Semi-structured interviews were chosen to give the interviewer freedom to modify the format and order of questions as appropriate. The interviews were conducted via telephone, Skype and Face-to-Face, depending on participant preference, in February and March 2014. Questions were phrased to allow interviewees to tell their story in their own way, while an interview guide was used to ensure the information needed was gathered. Interviewees were asked 13 open-ended questions to gather feedback on participants’ experiences with using OCA Facebook, their assessments of their mental health states after using OCA Facebook, and their perceptions of the usefulness and helpfulness of OCA Facebook.

4 ANALYSIS OF INTERVIEWS

Thematic analysis, the process of collecting candidate themes and creating relationships between these themes, was used to identify, analyse, and report themes found in the interview transcripts. We analysed the transcribed interview data using NVivo 8, a toll that facilitates the coding and sorting process. Interview responses were coded in six phases: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final reports. First, each transcript was uploaded to NVivo and read several times, to obtain a sense of the entire interview. The interview text was divided into content areas based on theoretical assumptions derived from the literature. Within each content area, the text was divided into meaning units. The condensed meaning units were abstracted and labelled with a code. The various codes were compared and sorted into nodes in NVivo. Codes that were closely linked in meaning were formed into categories, creating the manifest content (Kurnia et al. 2015). Next, the underlying meanings – that is, the latent content – of
these categories were formulated into themes. Themes were reviewed to compare and reconcile discrepancies, and themes with a similar meaning were combined in matching nodes. Throughout this process, the theme descriptions were continuously augmented and clarified to ensure that all of the study participants’ experiences were represented. Rigor was addressed in this study by following Yin’s guidelines (Yin 2013) with respect to construct validity and internal validity. To ensure construct validity, two techniques were used. The first was triangulation through the use of multiple sources of evidence, including the authors own systematic literature review on the use of internet-based interventions for cancer-affected people (Erfani & Abedin 2014). The second technique was to have interviewees review the case study reports to ensure the accuracy of the transcription, establishing a chain of evidence through the use of a case study repository. Internal validity was addressed by carefully selecting cases and interviewees, using sound data collection procedures, selecting the correct theories, and conducting a literature review. Reliability was addressed in this study by using a case study protocol for all of the interviews, using a case study repository to store all of the study data, and conducting a pilot study to ensure that the interview questions used for the study were appropriate.

5 RESULTS

Findings from the interviews revealed clear evidence for the values of participation and membership of OCA Facebook page for the community members. These findings suggest that community members received a significance level of social support and social connectedness, which in turn increased their level of perceived psychological wellbeing. The experiences of belongingness and social connectedness emerged from 80% of interviewees’ transcripts; they showed that OCA Facebook enabled cancer affected people to experience emotional connectedness and a sense of togetherness with other people with similar health concern and people who could address concern and queries related to Ovarian cancer. Using OCA Facebook allowed cancer affected to have a sense of belonging, form satisfying friendship and meet their social needs and consequently feel good and happy. For example, one interviewee noted that:

_I feel a connection and sense of belonging, you feel like you've got something in common and they tell you things that makes you satisfied because when you go through cancer, people who haven't had cancer tell you lots of things and they really don't know what you're going through._ (Interviewee #3)

Furthermore, evidence for social support from 78% of interviewees’ transcripts, which showed that the use of OCA Facebook helped community participants to receive recommendations, advice, caring, understanding and empathy through chatting, creating and reading content, and observing posted content. These benefits led interviewees to feel well supported and able to resist cancer related social pressures. Interviewees reported that obtaining emotional and informational support made them capable, optimistic and encouraged them to continuously develop their personal potential to overcome cancer related concerns and continue their health improvement. For example, one of the participants noted that:

_When doctors have told you that you might not make it to Christmas it doesn't give you much hope, but when you use OCA Facebook and read their hopeful quotes you say doctors are not God and they don't know what is going to happen so, yes, look, there is emotional support there and it does make you positive._ (Interviewee #6)

And finally, findings of the interviews also showed that cancer-affected people reported feeling good, positive, happy, well supported, and hopeful as a result of using the OCA Facebook and exchanging support on this forum. Our findings showed that while some community members
would actively participate in the OCA Facebook activities (by posting new content, or interacting with existing comments though ‘likes’ and replies), some other group members had more a passive approach to it and would only read others’ messages and contents.

Moreover, all interviewees felt that the use of OCA Facebook significantly enhanced their positive mood and they felt supported. OSN use helped them to form satisfying relationships, meet their social needs and empowered them to resist cancer-related pressures and encouraged them to continue improvement in their health. The following extract illustrates this point:

*Using OCA Facebook makes me feel positive about myself. (Interviewee #1)*

6 DISCUSSION

This study shows that the use of OSNs helped community members to feel connected to the community, exchange social support over a period of time, which improved their psychological well-being, regardless of whether they used it actively or passively. In general, interviewees reported the use of OCA Facebook enhanced their reception of social support and experiences of connectedness, which and ultimately increased their feelings of happiness, satisfaction, being well supported, positive attitudes and willingness to continue development, all indicators of psychological well-being.

Interviewees had a sense of belonging to people in OCA Facebook. The use of OCA Facebook helped cancer-affected people to fulfil their social needs, achieve positive attitudes and form satisfactory relationships. This is consistent with belongingness theory and previous studies that found experiencing social connectedness in social environments is positively associated with a higher level of positive mood and greater psychological well-being (Galloway & Henry 2014; Morris et al. 2014).

The use of the OCA Facebook enabled cancer-affected people to experience the feeling of being cared for, responded to and assisted by people in their social community, as well as feel positive and well supported. This is consistent with social support theory and studies which hold that these kinds of support are formed through individuals’ connections and play an important role in keeping them informational and emotionally supported and enabling them to experience greater psychological well-being (Neuling & Winefield 1988).

Another finding was that through the use OCA Facebook and social connectedness and informational and emotional support exchange between participants, cancer-affected people learned new things through both passive and active use of the site which increased their motivation to continue development of personal potential to manage and control cancer related problems. These findings are consistent with previous studies which explain that learning occurs through observing others’ interactions and also developing interaction with others in a social environment, and that individuals’ learning resulting from their social ties was associated with greater well-being (Hoybye et al. 2005).

7 CONCLUSION AND FUTURE RESEARCH

This study provided insights into the benefits and values of OSNs for cancer-affected people in Australia. This contributes to a better understanding of the ways that OSN use is associated with the psychological well-being of cancer affected people. This study demonstrates that OSN use does indeed have possibilities for promoting psychological well-being of cancer-affected people, arguing for the sustainability of Internet-based interventions and showing the advantages that OSN use can have in the context of healthcare, with respect to cancer-affected people.
The theoretical framework should be empirically tested in future studies to ascertain the value of OSNs to individuals, organisations and the community. The value of OSNs can to some extent be measured using quantitative methods, however the value is more likely to be intangible. The theoretical framework using belongingness theory and social support theory in conjunction with social information processing provides a way of examining the value of OSNs to psychological wellbeing. These theories demonstrate that human relationship development happens in online communities over time and over accumulated messages, which can then assist users to feel connected/belonged to the online community and exchange social support.

Future empirical studies should further explore other potential benefits and values of OSNs for healthcare as well as other fields. Studies are needed to be conducted to quantitatively and longitudinally examine the relationship between the OSN use, online social support, sense of belongingness, and the mediating factors on beneficial outcomes of community membership such as psychological well-being of users. Organisations should consider introducing strategies for using OSN as an online support resource to generate tangible and intangible outcomes for community participants. Future studies also should examine the level of perceived/exchanged social support and belongingness in other public or private OSNs, and compare that with perceived outcomes from participation/members in such communities. This could show whether and to what extent community types as well as participation/membership types/levels could determine the perceived value and benefits of community membership.

**References**


