

SOCIAL SUPPORT, SOCIAL BELONGINGNESS, AND PSYCHOLOGICAL WELL- BEING: EVIDENCE FOR VALUES OF ONLINE HEALTHCARE COMMUNITY MEMBERSHIP

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Abstract

Despite increasing use of online communities for interaction with users, the values they generate for organizations and communities are still controversial. Previous research has mainly focused on the most visible and quantitative indicators for measuring business values of online communities. Yet, the value of these platforms can come from intangible and various other ways, which calls for more research into benefits of online and social communities for users. This paper studies the values of membership in online healthcare communities, and particularly 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 for exchange of information and 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 of social support through message exchange in community were amongst two main perceived benefit 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 crated by others, other users actively posted content and communicated with other members. Implications of the results and recommendations for future studies have then been discussed.

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

1 INTRODUCTION

Online Social Networks (OSN) 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 (Von Muhlen & Ohno-Machado 2012; Ellison & Boyed 2013). Despite a rapid in the growth of OSNs, non-recreational values of such communities for members still need further investigation. Current research has mainly focused on the most visible and quantitative indicators for measuring business values of online communities. Yet, the value of engagement with users on these platforms can come from various other ways, which calls for a more comprehensive classification of business values of online communities (Berger et al. 2014).

Health-related OSNs allow people who lack mobility or are otherwise unable to interact normally due to their illnesses to develop extensive supportive interactions and exchange information with like-minded people (Farmer et al.2009; 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 (Oh et al. 2014; Pan et al. 2015; Utz et al. 2015) which are predictors of better health outcomes (Nambisan 2011; Hong et al. 2012; Bui et al. 2015) such as greater psychological well-being (feeling happy, capable, well supported, and satisfied with life) (Liu et al.2014; Reineeke and Trepte 2014; Nabi et al.2013; Guo et al. 2014). However, more research is still needed about the capacity of OSN for health promotion in populations with poor health (Guo et al.2014; 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; Erfani et al.2013). Cancer-affected people use OSN 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. 2013; Erfani et al.,2016).

The aim of our study is therefore to explore benefits and values of community membership and participation in online healthcare context. The paper aims to investigate whether and how members of OSNs may develop a sense of belongingness to other community members and exchange a level of social support, and whether it will lead to favourable results for the members. 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

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

2.1 Social Information Processing Theory

Recent theories in the literature of computer mediated communication suggest that the effects of advanced information technologies such as electronic collaborative message systems are less a function of the technologies themselves rather, it is how technologies are used by individuals (Chidambaram 1996; Benbunan-Fich et al. 2003). In particular, 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; Lim et al. 2006). 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 the beneficial exchange of psychological and tangible resources between at least two individuals, (Shumaker & Brownell 1984). Social support is defined as emotional and informational resources exchanged between people through their social connections (Caplan 1974). Cutrona and Suhr (1992) listed five different types of social support: esteem support, emotional support, tangible support, network support and informational support. Esteem support refers to expressions of positive communication behaviours for support seekers' skill and abilities. Emotional support refers to expressions of caring, sympathy, listening, understanding, empathy, and encouragement. Network support refers to expressions of companionship and connection. Tangible or instrumental support is the provision of needed goods and services. Informational support refers to guidance, advice, facts, stories of personal experience, opinions and referrals to other sources of information and information that aims to eliminate or solve support seekers' problems or help in evaluating situations, (Chuang & Yang 2009). 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 (Cobb 1976; Eastin & LaRose 2005; Zhang & Yang 2015).

Online social support is important as it supports positive health outcomes, (Noronha 2013; Penwell & Larkin 2010) such as experiencing greater psychological well-being, (Kaniasty 2012). In one study, 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; Bui et al. 2015). Researchers showed positive correlations between the amount of participation in online breast cancer communities (through channels such as bulletin boards) and receiving social support, and consequently the psychological well-being of breast cancer survivors (Rodgers & Chen 2005; Hong et al. 2012; Kaniasty 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 outcome (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 (Baumeister & Leary 1995).

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; Abubakar et al. 2014). Social connectedness forms through supportive interactions (Lee & Robbins 1995). 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 OSN to develop supportive interactions and improve the psychological wellbeing of cancer-affected people.

Figure 1 demonstrates the perspectives of the theories that underpin this research. As this Figure 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, such as psychological-wellbeing for health-related communities.

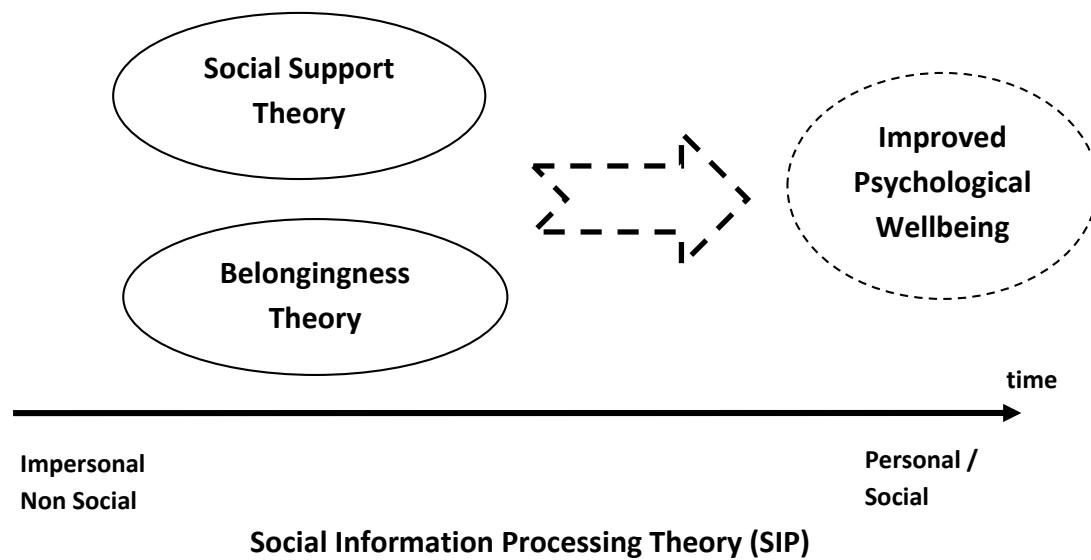


Figure 1. Theoretical framework of values of healthcare OSNs

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. 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. In February 2014 Currently OCA Facebook has over 12,000 members, with over 500 posts, comments, and shares every month, suggesting an active online environment (Hajli 2014). OCA Facebook is maintained and moderated by Ovarian Cancer Australia (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 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. Table 1 shows characteristics of the research participants.

| Interviewees' Characteristics | Number (%) |
|-------------------------------|------------|
| Age | |
| 18-25 | 2 (8%) |
| 26-35 | 5 (20%) |
| 36-45 | 7 (28%) |
| 46-55 | 5 (20%) |
| 56-65 | 6 (24%) |
| Months using OCA Facebook | |
| 2-5 | 2 (8%) |
| 6-11 | 4 (16%) |
| 12-17 | 9 (36%) |
| 18-23 | 7 (28%) |
| >24 | 3 (12%) |
| Interviewees' location | |
| Melbourne | 8(32%) |
| Sydney | 5 (20%) |
| Canberra | 4 (16%) |
| Brisbane | 3 (12%) |
| Perth | 3 (12%) |
| Adelaide | 2 (8%) |

Table 1. Interviewees' demographic and other characteristics

3.2 Interviews

Semi-structured interviews were chosen to give the interviewer freedom to modify the format and order of questions as appropriate (Creswell 2013). 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 themes, was used to identify, analyse and report themes, (Braun & Clarke 2006). We analysed the transcribed interview data using NVivo 8, software that facilitates the coding and sorting process. Responses were coded in six phases: familiarisation with data,

generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final reports, (Braun & Clarke 2006). First, each transcript was uploaded to NVivo and read several times to obtain a sense of the whole. 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 (Yin 2013). Next, the underlying meaning – that is, the latent content – of categories was 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 participants' experiences were represented.

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, four interviewees noted that:

I feel I belong to the community that is specific for people like me, I could meet new people and get some friendship from it and I could make sense of information provided by my doctors and feel good and happy. (Interviewee #21)

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)

Using OCA Facebook makes me feel involved it connects me with people who I am understood by them and I feel good. (Interviewee #21)

I see OCA as a community that I really belong to and I have a sense of togetherness with people on OCA Facebook that makes me happy (Interviewee #7)

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, interviewees 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)

I was talking to someone and commenting on her comments then she told me that there is a trial that I might be able to be involved to, there is so much information that you need to overcome cancer. (Interviewee #4)

Using OCA Facebook enabled me to learn about my illness and cancer risks, and I obtained information and learned different ways to cope with my cancer and I like to learn more. (Interviewee #20)

I do chemo every week, once that I posted, many posts came just in a minute to say, "Stay positive," I felt positive. (Interviewee #1)

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 through '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 extracts illustrate this point:

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

Using OCA Facebook made me feel positive and I believe that I can overcome cancer-related pressures and fight with cancer. (Interviewee #5)

I could learn healthy diets from other people on OCA Facebook and I could feel good and like to learn more. (Interviewee #20)

By using OCA Facebook, I could I obtain adequate cancer related information and sufficient input into my care; I understand my condition better and I am confident that I will manage my illness well (Interviewee #20)

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 of this is 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.

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.

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