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Help me, I'm fat! Social support in online weight loss networks

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ABSTRACT

Social networks have become an increasingly common way for people to share information and seek emotional support for issues surrounding weight loss. This study aims to explore how users of a commercial social networking site who are focussed on weight loss give and/or receive social support to/from other users. The authors use quantitative data from 145 members of the Weight Watchers Facebook page to explore how social support is both given and received, and the communication style by which this is achieved. This study reveals three groups—Passive Recipients, Active Supporters and Casual Browsers. Passive Recipients receive a high level of informational and emotional support but do so by being passive communicators. Active Supporters also receive a high level of both informational and emotional support yet are more active in their communication style. Casual Browsers receive little social support and exhibit a passive communication style. Thus, the authors find evidence that even though members of a social network may share a common interest, the way members choose to participate and interact, and the benefits they accrue by doing so differ substantially.

INTRODUCTION

The Internet has become an increasingly popular tool for individuals wishing to seek information, share experiences, ask questions and provide emotional support about health issues (Turner *et al*., 2001; Eysenbach *et al*., 2004; Jayanti and Singh, 2010). A key reason for this is that the Internet has many attributes that can help people feel more comfortable with openly expressing their problems and concerns (Hwang *et al*., 2010; Wu *et al*., 2010). Within the broad category of health issues, online support groups and communities have become an increasingly common way for individuals to share information and seek emotional support for issues surrounding weight loss (Wright *et al*., 2010). Many of these online exchanges are facilitated by social networking sites such as Facebook, which allow users to leave their network friends private and public messages, share photos and become members of a wide range of interest groups.

Social networking sites have also helped commercial organisations meet consumer demands by giving them the opportunity to become more personal, provide consumers with support, and get direct information about their consumers' wants (Moran and Gossieaux, 2010). Health organisations such as Weight Watchers are also using these sites to provide a means of communication for their members to give and receive social support. The purpose of this research is to explore how users of a commercial social networking site who are focussed on weight loss give and/or receive social support to/from other users. We achieve this through a quantitative examination of users of the Weight Watchers Facebook page.

Literature Review

Coulson *et al*. (2007) observed that there has been a proliferation of health-related information on the Internet. Reasons why individuals seek health-related information on the Internet can be attributed to some qualities that the Internet and social networking sites have to offer. For example, Barak *et al*. (2008) highlighted several attributes of the Internet that can be described using a common concept, disinhibition, which allows us to understand why individuals differ in what they say and do online, compared to what they say and do in a face-to-face setting. The reasons for this difference in behaviour include factors like anonymity, invisibility, delayed reactions, solipsistic introjections and the neutralising of status. All these factors can facilitate support for those users of an online community who are experiencing similar difficulties, such as issues surrounding weight loss.

The potential role of the Internet as a mechanism for social support on health-related conditions was highlighted by Wangberg *et al*. (2007). The authors examined the relationship between Internet use, social support and subjective health, with their results suggesting that the Internet has both a direct positive relationship to subjective health, as well as an indirect positive relationship, mediated through social support. Moreover, the role of weak social ties, which occur when people who are not interpersonally close interact in a limited way within certain contexts, was examined by Wright *et al*. (2010) in terms of the role they have on the perceived stress of participants in a health-related online support group. Contrasted with strong social ties, which are present in close relationships (i.e. family and friends), the authors found that participants preferred support from weak ties while online, as they provided benefits such as access to different viewpoints, objective feedback, reduced risk and reduced role obligations. Due to the sensitivity often associated with health-related issues, strong ties were found to act as a barrier to gaining social support.

Social support can be described as a type of interpersonal exchange that can make an individual feel either loved, esteemed, accepted, valued or motivated (Teoh *et al*., 2009). In the context of weight loss, social support has been linked to better health outcomes and as having a positive effect on weight loss behaviour and weight maintenance (Teoh *et al*., 2009). For example, Wing and Jeffery (1999) explored the benefits of social support for weight loss and maintenance

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by assigning a standard behavioural weight loss treatment to participants who were grouped with friends and family, and the same treatment to those who participated alone. They found that those with social support (the grouped participants) lost more weight and maintained their weight loss, compared to those who participated alone. More recently, Moisio and Beruchashvili (2010) described weekly Weight Watchers support groups as being both a spiritual and therapeutic companion, which gave them an aura of indispensability in members' lives. However, the above studies focussed on the role of face-to-face support groups, and it is not yet known if social support plays a similar role in online environments.

The Internet can be considered both an active communication medium and a passive one (Wangberg *et al*., 2007). Similarly, the way that individuals give and/or receive support online can further be described as being active or passive. Active social support occurs when participants are interacting with others in their online social network. An example of this interaction is when a participant comments on a message another participant has written on the 'wall' of an online social network. Within online communities, authors have shown that the reciprocity of social interactions positively affects loyalty towards an online community (Chan and Li, 2010; Shen *et al*., 2010), and how the shared values of community members can enhance both trust and relationship commitment (Wu *et al*., 2010). In contrast to those members who actively participate, online communities can also provide a learning function (and means of social support) for those individuals who decide to read and not contribute to the social interactions taking place, and who are often referred to as 'lurkers'.

Lurking behaviour, wherein people browse websites in a read-only mode, usually occurs because people want to learn about a community or topic, or want to gain a sense of belonging (Rafaeli *et al*., 2004). In essence, a person who lurks still receives social support, albeit passively, suggesting that they should be considered when investigating how people receive support in an online social network. The effectiveness of passive support has been evidenced by authors like Hwang *et al*. (2010), who found that the weight loss testimonies of others played a prominent role in participants' weight loss efforts.

The notion of passive support is similar to the idea of parasocial relationships, a one-sided relationship that can occur between a media user and the media being consumed, which has been examined in the context of online communities (Ballantine and Martin, 2005). Passive support is also conceptually similar to the description of two community member types, devotees (i.e. members who lack an interest in other users, yet have considerable interest in the focal activity) and tourists (i.e. members who have only a passing interest in the focal activity and little interest in other users), which Kozinets (1999) outlined in his seminal research on virtual communities of consumption. With both devotees and tourists having weak social ties to an online community, it can be argued that many social network users may prefer to observe rather than interact in network discussions.

Online communities and social networks have the ability to provide different types of social support to their members. Hwang *et al*. (2010) identified four main types of social support: informational, emotional, instrumental and appraisal, and this study will focus on the two most frequent types given and received within an online support group (Buchanan and Coulson, 2007): informational and emotional. Informational support includes activities such as advice giving, referral to experts, situation appraisal and teaching (Coulson *et al*., 2007), while emotional support includes aspects such as empathy, concern, caring, love and trust (Dalgard, 2010).

Beyond the types of social support given and received, users within an online community also differ with regard to their preferred type of communication, in that users can adopt either active or passive roles. The purpose of this study is to explore how users of a commercial social networking site who are focussed on weight loss give and/or receive social support to/from other users. We do this by exploring how users of the Weight Watchers Facebook page give and/or receive both informational and emotional support to/from other members and the active or passive communication roles they take in doing so. By addressing this aim and in keeping with the theme of this special issue, we hope to shed further light on the different types of interaction that can occur in online social networks.

METHODOLOGY

This study took a quantitative approach, where an online survey was administered to users of the Weight Watchers Facebook page. To help recruit participants, an introductory message was posted on the wall of the Weight Watchers Facebook page that outlined the purpose of this study. The message was posted approximately two times each day during the data collection period to ensure the continuous exposure of the introductory message, given the high volume of posting activity by members. The introductory message also included a survey link, which provided further information on the survey and a consent form. To encourage participation, a random prize draw was held where three participants who had completed the survey were awarded a $50 Amazon.com voucher. After a survey period of two weeks, the introductory message was removed from the wall of the Weight Watchers Facebook page.

Survey instrument

The survey was formulated using Qualtrics, which provides a platform for designing, distributing and evaluating online surveys. The survey was divided into three main sections and was designed to take approximately 5 minutes to complete. The first section covered general questions about why and how participants use the Weight Watchers Facebook page. The second section covered questions based on the participants' communication style and the types of support they sought from an online weight loss network. The last section concluded with questions about the participants' demographics (i.e. gender and age), Facebook usage and level of Internet ability.

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Measures

Several scales were developed specifically for this research, as the constructs were not developed in the literature. An eight-item measure was developed to capture the informational support construct based on the exploratory research of Hwang *et al*. (2010). Emotional support was also measured with an eight-item scale developed from Hwang *et al*. (2010). Communication style was measured with an eight-item scale developed from the work of Rafaeli *et al*. (2004), who examined active and passive users within online communities. All items were measured using a five-point Likert scale anchored strongly agree to strongly disagree, with exploratory factor analysis being used to refine the scales. The scale items used in this study are provided in Table 1.

RESULTS

The online survey website was left open for a period of two weeks during September 2010, and at the end of this time, 168 surveys were submitted. Of these, 145 surveys were suitable for inclusion in the final sample, with 23 surveys being removed due to systematic response patterns or a failure to fully complete the questionnaire. In terms of demographic characteristics, 98 per cent of participants were female. Participants aged 31–40 were most common (37%), followed by 21–30 (23%), 41–50 (21%) and 51–60 (14%). Most participants used Facebook for 1–10 hours per week (58%), followed by 11–25 hours (30%), with 85 per cent of participants rating their Internet ability as being good or very good.

Table 1. Measures used in this study

Informational support
I use this page to gain information about how I should be exercising to lose weight.
I find out valuable dietary information on this page.
This page helps me understand which foods I should and shouldn't be eating to lose weight.
This page provides me with effective weight loss information.
If I have a question related to losing weight, I can usually find the answers on this page.
I use this page for information about suggested activities to lose weight.
The information provided by other members of this page helps me plan my weight loss programme.
I get good tips on how to lose weight from this page.
Emotional support
Using this page makes me feel important.
I feel that members of this page care about me as they can relate to what I am experiencing.
I gain a feeling of acceptance from using this page.
I use this page to receive comfort from others when I am disappointed with my weight loss outcomes.
When I want to express my feelings, I use this page.
People on this page give me encouragement to lose weight.
People using this page are sympathetic towards me.
Seeing the success of others on this page helps me stay on my weight loss programme.
Communication style
I prefer to observe rather than post messages on this page.
I use this page by observing discussions that are taking place.
I would classify myself as an interactive user of this page.
I like to express my opinions on this page.
I do not interactively communicate on this page as I have nothing to contribute.
If I have advice to give in regards to what someone has posted, I will comment.
I would classify myself as a user who browses this page.
If I have a weight related question I want answered, I will post a question on this page to get a response.

Principal components analysis (with Varimax rotation) was used to assess the underlying structure of the measures used. Based on this analysis, a three-factor solution emerged. These factors explained 65 per cent of the variance, with all eigenvalues being over 1, all items loading heavily onto one of the factors, and with all factors also being easily interpretable. Table 2 provides the factor loadings for each of the scale items. The dimension of informational support was found to contain eight items, emotional support contained five items, while communication style contained three items. Measures were then assessed for their internal consistency using the Cronbach's alpha reliability procedure (Cronbach, 1951). Table 3 reports the means, standard deviations and reliabilities of all the measures used in this study.

To determine if participants held common perceptions about informational support and emotional support, and communication style, cluster analysis was used to uncover any similarities that might be used to help identify distinct groups within the sample. These groups were identified following a two-step procedure (e.g. Milligan, 1980; Hair *et al*., 2006). First, hierarchical cluster analysis using Ward's method was applied to the mean item scores of the three factors. Adopting the 'stopping rule' (e.g. Hair *et al*., 2006), the changes in the within-cluster sum of squares suggested three clusters as an initial solution. Second, K-means cluster analysis was then used to fine-tune the clusters assuming three groups. The mean factor scores for each of these three groups are provided in Table 4. The descriptive profiles for each of the three groups were developed based upon these mean ratings, and the results of a series of analyses of variance (using post-hoc Scheffe tests) to identify any pairwise differences in mean factor scores.

The members of the first group (Passive Recipients) were found to have the highest informational support ratings. They had similar ratings on emotional support to the Active Supporters but with high communication style scores (indicating a preference for a passive communication style). Overall, people in this group received a high level of informational and emotional support from the Weight Watchers Facebook page but did so by being passive members of this social network. There were 68 participants in this group (46.9% of the sample). The second group (Active Supporters) also perceived high informational and emotional support benefits but had the lowest communication style scores (indicating a preference for an active communication style). Thus, they received a high level of both informational and emotional support from the Weight Watchers Facebook page but did so by being active members of this social network. There were 47 participants in this group (32.4% of the sample). The final group (Casual Browsers) had the lowest informational and emotional support scores, while also having the highest communication style scores (indicating a preference for a passive communication style). Overall, they received

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Table 2. Factor loadings for scale items

Item	Factor		
	Informational support	Emotional support	Communication style
This page helps me understand which foods I should and shouldn't be eating to lose weight.	0.82		
This page provides me with effective weight loss information.	0.79		
I use this page for information about suggested activities to lose weight.	0.78		
The information provided by other members of this page helps me plan my weight loss programme.	0.78		
I use this page to gain information about how I should be exercising to lose weight.	0.77		
I find out valuable dietary information on this page.	0.75		
I get good tips on how to lose weight from this page.	0.71		
If I have a question related to losing weight, I can usually find the answers on this page.	0.63		
I gain a feeling of acceptance from using this page.		0.84	
I feel that members of this page care about me as they can relate to what I am experiencing.		0.84	
People using this page are sympathetic towards me.		0.81	
If I have a weight related question I want answered I will post a question on this page to get a response.		0.72	
I use this page to receive comfort from others when I am disappointed with my weight loss outcomes.		0.72	
I use this page by observing discussions that are taking place.			0.82
I would classify myself as a user who browses this page.			0.73
I prefer to observe rather than post messages on this page.			0.71
Variance explained (percentage)	37.57	17.67	9.83

Table 3. Means, standard deviations and reliabilities of measures used

Factor	Mean	SD	α
Informational support	3.68	0.60	0.88
Emotional support	3.75	0.69	0.84
Communication style	3.74	0.77	0.76

Table 4. Final cluster centres (mean factor scores for each cluster)

Factor	Group		
	Passive recipients	Active supporters	Casual browsers
Informational support	3.85	3.75	3.16
Emotional support	3.98	4.01	2.82
Communication style	4.13	2.87	4.22

little social support from the Weight Watchers Facebook page, while being passive users of this social network. There were 30 participants in this group (20.7% of the sample).

To further understand the characteristics of each of the three groups, the demographic information provided by participants was used to see if any demographic differences existed between the groups. No differences were found in terms of participant gender, age, Facebook usage or level of Internet ability. Additional comparisons were made between the groups in terms of their Facebook usage. When asked how long they had been a member of the Weight Watchers Facebook page, Active Supporters were found to have been members the longest ($\chi^2 = 12.733$, $p = 0.047$) when compared to both Passive Recipients and Casual Browsers. When asked to rate their level of satisfaction with the Weight Watchers Facebook page, Passive Recipients were the most positive, followed by Active Supporters and Casual Browsers ($F = 9.432$, $p = 0.000$). Active Supporters were found to be the most likely to post messages on the Weight Watchers Facebook page, followed by Passive Recipients and Casual Browsers ($F = 27.346$, $p = 0.000$). Similarly, Active Supporters were found to be more likely to leave comments on the messages posted by others, followed by Passive Recipients and Casual Browsers ($F = 21.185$, $p = 0.000$).

DISCUSSION

The Weight Watchers Facebook page examined in this study provides an online social network for members to give and/or receive social support to/from other users. When the type of social support given and/or received was examined in conjunction with communication style, three distinct groups of users were found to exist. Passive Recipients received a high level of informational and emotional support from the Weight Watchers Facebook page but did so by being passive members. Active Supporters also received a high level of both informational and emotional support, but unlike Passive

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Recipients, they did so by being active members of this social network. Finally, the Casual Browsers received little social support from the Weight Watchers Facebook page and were passive users of this online forum.

No demographic differences were found between any of the three groups. However, Active Supporters were found to have been members of the Weight Watchers Facebook page the longest. Similarly, this group of users was also found to be the most likely to post messages in this social network, as well as being the most likely to respond and provide comments on the messages posted by others. In this respect, the actions of this group support the findings of Chan and Li (2010) and Shen *et al*. (2010), who showed that the reciprocity of social interactions (i.e. more involvement with members of the group) can positively affect loyalty in an online community.

This study also provides some support to the findings of Wright *et al*. (2010), as two of the groups in this study (Passive Recipients and Casual Browsers) exhibited a style of communication which suggests that they did not feel strong social ties to the Weight Watchers Facebook page. Thus, rather than actively post and comment on the messages posted by other group members, both of these groups preferred to browse and observe the messages posted by others. However, even though they preferred to take a passive communication role, the Passive Recipients clearly valued the informational and emotional support they experienced from this social network. In this respect, the Passive Recipients group took the role of lurkers, in that the social network provided a learning function, as well as a means of social support, even though they typically did not return the social support they received from the Weight Watchers Facebook page. This finding shares similarities with the arguments provided by Ballantine and Martin (2005) regarding parasocial interaction in online communities. Even though the relationship between Passive Recipients and those members who posted on the social network was typically one-sided and non-reciprocated, it was evident that they valued the informational and emotional support that was available. This usage of a social network is also similar to the devotees identified by Kozinets (1999): members who have little interest in other users yet have considerable interest in the activity being discussed. In contrast, the smallest group identified in this study, the Casual Browsers, was conceptually similar to the tourists described by Kozinets (1999). Thus, while they had little interest in taking an active communication role, the results suggest that they gained little social support from the Weight Watchers Facebook page.

Limitations and future research

There were two main difficulties associated with this study that may have acted as limitations. First, the high number of postings on the Weight Watchers Facebook page meant that the introductory message posted to recruit participants was often pushed off the bottom of the wall after a relatively short period of time. To resolve this issue, the message was posted twice daily over a two-week period, yet it cannot be known how many members of this social network were exposed to the invitation. Secondly, some members of this social network initially perceived the introductory message as spam, which may also have led some users to decide not to participate in this study.

While this study provides an initial understanding of how users of a commercial social networking site who are focussed on weight loss give and/or receive social support to/from other users, some constructs were not included that could shed further light on this topic. For example, dimensions of trust (e.g. Wu *et al*., 2010) could be included in order to understand how members of the three groups identified in this study perceive the information provided by others. This would allow researchers to understand why some members did (or did not) value the informational and emotional support that was available.

CONCLUSIONS

The results of this study highlight how a social network can provide informational and emotional support to its members, even though users may differ in how they provide this support to other members (if indeed they do). Thus, while some members of a social network may take an active role in providing as well as receiving social support, the results of this study suggest that many members also accrue informational and emotional benefits by taking the role of a passive recipient. Indeed, the benefits enjoyed by being a member of a social network can still be obtained by those users who choose to act as passive observers of the social exchanges of others.

This study also adds to the literature on how the Internet can serve as a mechanism for health-related outcomes. Although the focus of this study was on how users of a commercial social networking site who are focussed on weight loss give and/or receive social support to/from other users, the findings of this study might also be applied in other online contexts where social support can play a key role. For marketers interested in understanding how consumers use social media, this study highlights how consumers may obtain beneficial outcomes from using an online social network, even though they may appear to be taking a non-active role. With many companies choosing to have an online presence through social networking sites such as Facebook, it is important that such companies are aware of the different ways that consumers may choose to interact and provide support to each other, and the benefits they can gain by doing so.

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