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Running Head: ONLINE SOCIAL SUPPORT ON DISABILITY-SPECIFIC WEBSITES

Online we are all able bodied:

Online psychological sense of community and social support found through membership in disability-specific websites promotes well-being for people living with a physical disability.

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Keywords: Online social support, online sense of community, well-being, physical disability, Internet

Abstract

People with a physical disability are a population who for a number of reasons may be vulnerable to social isolation. Research into Internet based support sites has found that social support and an online sense of community can be developed through computer mediated communication channels. This study aims to gain an understanding of the benefits that membership in disability-specific online communities may have for people with a physical disability. An online survey was administered to a sample of users of such sites ($N = 160$). Results indicated that users did receive moral support and personal advice through participating in such online communities. Further, results indicated that online social support and feeling a sense of community online were positively associated with participants' well-being in the areas of personal relations and personal growth.

Recent research has begun to examine the potential that the Internet has in increasing knowledge, services and social exchange for people living with disabilities (e.g. Bricout, 2004; Guo, Bricout & Huang, 2005; Miller, 2008; Ritchie & Blanck, 2003). The current research aims to examine the potential of such websites to enhance the well-being of their members, through facilitating social interaction and social support between people with a physical disability.

While there is a large diversity in individual experience and circumstance, a number of barriers exist which may lead to increased social isolation for individuals with a mobility reducing physical impairment. Physical barriers can prevent people with a mobility impairment from creating social networks; their access often restricted in social meeting places (Barton, 1996; Matt & Butterfield, 2006). Such alienation may result in feelings of loneliness and isolation, low self esteem, symptoms of depression, and a lack of access to support information (Finn, 1999; Olkin, 1999; Matt & Butterfield, 2006).

A community psychology perspective emphasises the importance of connectedness to our human sense of well-being. Two important aspects of connectivity: sense of community (the perception of similarity and interdependence with others, and the general feeling that one is part of a larger, dependable stable structure, (Sarason, 1977) and social support – both have been found to buffer against the effects of stress, anxiety and depression and to enhance well-being (Coppola, Feldheim & Kennaley, 1990; Pooley, Pike & Drew, 2002; Pretty, Andrews & Collet, 1994).

Social support can be viewed in terms of functional support, which is concerned with the nature of the support received, and structural support that is linked to the type and size of a social network (Cohen and Syme, 1985; Doeglas et al., 1996). This division is of particular relevance to the current study, which aims to examine both the network of support available to members of disability-specific websites over the Internet as well as the function or kind of support these sites offer.

Internet sites developed specifically to encourage connections between people with physical disabilities may be capable of both fostering an online sense of community and increasing the availability of social support through information sharing, guidance, and the friendships developed with other members of online forms and newsgroups. Williamson, Wright, Schauder and Bow (2001) observed a sense of online community amongst people who are blind or vision impaired and found that it provided a means to create social ties with other members. Cummings et al., (2002) looked at an online self-help group for people with hearing loss and found those individuals who received low general social support experienced benefits from online emotional and informational support. Furthermore, they found that creating social ties with others experiencing similar circumstances positively affected their self-esteem. A study by Guo, et al., (2005) found that the Internet could significantly reduce physical and social barriers for people with a disability by allowing them to access education, information and expanded social networks.

However, research also highlights the negative potential of the Internet. Miller (2008) examined the effect of frequency and type of Internet use for individuals with spinal cord injury, and found a negative relationship between on-line games and well-being, but no positive associations between any other type of Internet use (e.g. email, chatting, or information seeking) and well-being. Other research has shown that the absence of physical contact, the lack of certainty of people's online identity (Colvin & Chenoweth, 2004), the risk of receiving misinformation, and the existence of aggressive members (Eysenbach, Powell, Englesakis, Rizo & Stern, 2004) may impact on trust and relationship development over the Internet.

Current Research

The research discussed above highlights the potential for Internet mediated communication to enhance the well-being of people with a physical disability by fostering connections between users (e.g., Guo, et al., 2005). However, research also suggests there may be negative consequences

such as the possibility of increased isolation (e.g., Wellman, Boase & Chen, 2002). The current research further explored Internet mediated communication between individuals with a physical disability through their common membership in support sites specific to their population.

First, the research examined the demographics and Internet use patterns of members of physical disability-specific websites. Further, it assessed the relationship between the amount of time participants spent online engaging with such sites on sense of community and well-being and their on and offline social support,.

Second, past research has indicated that the Internet can enhance connectedness between individuals and provide them with an additional source of social support, therefore this research investigated: 1) the differences in structural social support received online and offline and; 2) the most common functions of the support received online.

Third, the research examined the influence of online membership on participants' well-being.

Method

Participants

Participants were individuals aged between 18 to 64 years of age ($M = 37.89$, $SD = 12.63$) who access newsgroups, discussion forums, or belong to mailing lists or online support sites specific to those with a physical disability ($N = 160$). Males made up 33.7% of the sample, and females 66.3%. Forty-two percent of participants were from the United States of America, 25% from Australia, 18.1% from Europe, 10% from Canada, 3.8% from New Zealand and 1% from Asia. Fifty-five percent of the sample were single and 45.4% were either married or in a relationship. Length of Internet use ranged from three months to 18 years ($M = 8.37$ years).

Procedure

Administrators of English language mailing lists, newsgroups, discussion forums, or online support sites designed for individuals with a physical disability were contacted through e-mail and invited to participate in the research. Twenty-five administrators agreed to post an advertisement for the research. Selection criteria related only to having a physical disability that resulted in impairment to mobility. No other information about the specific nature of participants' disability was requested and no incentives were offered.

Measures

The survey consisted of questions relating to basic demographics, level of participation in discussion groups, hours per week spent in online communication, and the duration of membership with the site.

Social support. Both online and offline social support was measured using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988), a 12-item scale which gives an overall measure of social support as well as tapping into the structure of that support (family, friends, and a significant other). These items were adapted to measure online social support; the scale gave a measure of social support received from family members ($\alpha = .80$) and the online community ($\alpha = .90$); friends ($\alpha = .93$) and online friends ($\alpha = .92$); a significant other ($\alpha = .92$) and an online significant other ($\alpha = .92$). Items were measured on a 7-point scale ranging from 1 = "very strongly disagree" to 7 = "very strongly agree". Total social support was assessed by averaging all 12 items regarding offline social support ($\alpha = .93$), and the 12 items regarding online social support ($\alpha = .96$).

The functional nature of the online support participants received from other users was assessed using four items which asked participants how likely they were to receive the following:

¹ All alphas reported in text are calculated from current data set

personal advice, moral support, tangible help, and companionship online. They rated their responses on a 5 point scale ranging from 1 = “very unlikely” to 5 = “very likely”.

Well-being. Well-being was measured using Ryff’s Psychological Well-Being Scale (PWS; Ryff & Keyes, 1995) that was chosen because it examines these six facets of well-being: positive evaluations of oneself and one's past life (Self-Acceptance; $\alpha = .86$); a sense of continued growth and development as a person (Personal Growth; $\alpha = .86$); the belief that one's life is purposeful and meaningful (Purpose in Life; $\alpha = .74$); quality relations with others (Positive Relations With Others; $\alpha = .81$); the capacity to manage effectively one's life and surrounding world (Environmental Mastery; $\alpha = .69$); and a sense of self-determination (Autonomy; $\alpha = .68$). The short PWS consisted of 18 items assessing well-being over these six distinct dimensions.

Psychological Sense of Community. The participants’ sense of community was measured using the Sense of Community Index (SCI; Chavis, Hogge, McMillan & Wandersman, 1986) which has been used used in Internet communities (e.g., Obst et al., 2002). The SCI contained 12 items that were modified to refer to online disability-specific items. ($\alpha = .84$), and were scored using a 7-point scale ranging from 1 = “Strongly Disagree” to 7 = “Strongly Agree”.

Results

Internet Use

The majority of participants reported their principal communication with other members was through discussion forums (89.4%) whilst 10.6% used mailing lists. Over a third of the sample (37.5%) spent more than five hours per week in online discussion forums, 32.5% spent between two to five hours, 20% one to two hours, and 10% spent less than 1 hour per week.

Correlations were run to examine the effect of the hours spent communicating with others online, on the level of perceived online social support and online sense of community and well-

being. The more hours spent online the greater the perceived online social support ($r = .27, p = .001$) and the greater the psychological sense of online community ($r = .32, p < .001$). Time spent online had no significant relationship with well-being ($r = .08, p = .51$) or offline social support ($r = .07, p = .41$).

Online Social Support

A mixed factorial ANOVA was run to examine the influence of the source of support, the location of the support (online v offline), and the gender of participants on perceived social support. A significant three-way interaction emerged ($F(2, 157) = 3.74, p = .02$). Post hoc analysis via Bonferroni adjusted comparisons and revealed that for males there were no significant differences between perceived social support received from friends or significant others either online or offline. Females reported significantly less perceived social support from a significant other online than offline (see Table 1).

Insert Table 1

In order to examine differences in the types of support participants reported receiving online, and to allow for the influence that may have influenced the amount of time spent online, a one way ANCOVA was run with time online entered as a covariate. Time online was a significant covariate $F(2, 157) = 6.87, p = .001$ that indicated a greater likelihood of receiving support the greater amount of time spent online. There was a significant effect of support type ($F(3, 156) = 4.06, p = .008$). Bonferroni adjusted post hoc tests indicated that Moral Support ($M = 4.33, SD = .56$) was rated as the most likely type of support to be received online, and Tangible Help ($M = 4.04, SD = .73$) the least likely. No differences emerged between Companionship ($M = 4.20, SD = .59$) and Personal Advice ($M = 4.20, SD = .64$).

Prediction of Well-being

To examine the relationship between perceived social support, online sense of community and well-being, a series of hierarchical regressions were run on the six types of measured well-being (Appraisal, Personal Relations, Self Acceptance, Personal Growth, Environmental Mastery and Purpose in Life). Age and gender were entered in Step 1, and reported offline social support was entered in Step 2. Online social support and online psychological sense of community were entered as Step 3. The overall model was significant for Personal Relations $F(5, 154) = 10.42, p < .001$; Self Acceptance $F(5, 154) = 2.41, p = .039$ and; Personal Growth $F(5, 154) = 2.61, p = .027$. Table 3 shows that each step in the model added significantly to the prediction of Personal Relations well-being. Only step 2 added significantly to the prediction of Self Acceptance with offline social support, and age was the only significant predictor. Gender was a significant predictor of Personal Growth and was made more significant by the addition of online sense of community. Post hoc analysis via independent t-tests showed that females had higher levels of Personal Relations well-being ($t(158) = 3.57, p < .001$) and Personal Growth ($t(158) = 2.44, p = .016$) than males.

Insert Table 2

Discussion

The current study was an investigation into the role that social support and a sense of community gained through involvement in disability-specific online communities, may play in the well-being of those with a physical disability. Overall, the research found that online social support and online sense of community did exist between members of these sites and this online connectedness was associated with individual well-being.

Results showed that more than sixty percent of the sample spent more than two hours a week engaged in Internet mediated communication with others with similar physical disabilities, and occurred mostly in online forums. These results indicate that open discussion using online forums does encourage members to share thoughts, emotions and information with other members.

Overall, the sample reported similar levels of online and offline social support. Females reported getting less social support from a significant other online than an offline significant other, which suggests that females found it more difficult or less appealing to engage in more intimate relationships via computer mediated communication.

The most common type of social support received online was moral support. Past research has suggested that tangible help is a form of support that may be difficult to mimic in an Internet setting due because it requires a hands on approach (Cohen et al., 1985). Although participants rated this as the least likely type of support they received, it was still rated highly, which is in line with other research that has found the presence of tangible help in online communities through exchanges of practical information (e.g. Guo, et al., 2002).

Overall, the amount of time engaged in disability-specific Internet forums was related to levels of reported online sense of community and online social support. As research also indicates that that overdependence on online communication can result in increased social isolation (e.g., Wellmann et al., 2001), care must be taken that computer mediated communication augments – not replaces – offline communication. It was encouraging to see that in the current sample, the time participants spent online was not associated with their perceived offline social support, indicating it was not a lack of offline support that encouraged individuals to spend more time in online communication.

The current research utilised the numerous aspects of well-being outlined by Ryff and Keyes' (1995) psychological model. Using this multidimensional approach added depth to our understanding of exactly which aspects of well-being were enhanced by participants' involvement with disability-specific online communities.

Age and offline social support were positively associated with Self-Acceptance. Online support or a sense of belonging were not related to self-acceptance, which may be linked to the fact

that although participants share personal information over the Internet, there remains a sense of animosity in participating in a predominately text based forum. Thus, while interacting with others may enhance self acceptance, this interaction is not face to face and participants can chose what they reveal to others, may explain why only face to face interactions promoted self acceptance in the current sample.

Gender and online sense of community emerged as significant predictors of personal growth. Females scored higher on this subscale than males, a common finding in the literature (Ryff and Keyes, 1995). Interestingly, personal growth was not significantly associated with social support either offline or online but rather with a sense of online community. Thus, a feeling of belonging and connection with a larger community of similar others may promote self-reflection and positive change.

Age and gender, offline and online social support and online sense of community all emerged as significant predictors of positive relations with others. Again females scored higher on this scale than males, consistent with research that suggests females are more concerned with intimate friendships than males (Ryff and Keyes, 1995). The results of the current research provide evidence that the support found online and sense of belonging to a community of similar others can enhance personal relations well-being above that of offline social support alone.

None of the variables measuring aspects of connectivity to others emerged as significantly related to the well-being aspects of environmental mastery, purpose in life, or autonomy, which focus more on self-management and self-determination, while purpose in life has an individual spiritualist or philosophical aspect. Thus, these types of well-being may be cultivated from within rather than enhanced through connectivity with others.

The current research attests to the benefits of the Internet in facilitating social interaction and access to similar others. Such websites may also function as central points for creating specific

lobby groups around issues that impact on the daily lives of those with a disability as well as provide a way for mobilisation on such issues.

These results have implications for administrators of such sites and those working in the field of disability. Administrators need to keep the information on their sites up to date. Use of the existing discussion forms and mailing lists may be a way for administrators to garner information about the needs and wants of the users of their sites.

With any Internet based research, the self selected sample, unknown response rates and lack of control over who accesses the survey are limitations of the current study; however, the results do indicate that membership in a disability-specific online group can be beneficial to members by providing social support and a sense of connectedness. As people with a physical disability may lack large support networks, being a member of an online community specific to members with physical disabilities, can provide access to a large social network of others who may share similar life stories, interests and values. Furthermore, participating in such online communities can enhance understanding through reciprocal information exchange on a multitude of issues which impact on daily living – transport, housing, employment, recreation, education and healthcare. Access to the Internet continues to grow, and online communities offer people with a disability an opportunity to connect to similar others, thereby reducing isolation and increasing the availability of social support, and ultimately enhancing well-being.

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Table 1

Mean rating of social support received by males and females of receiving from sources offline and online.

Source of Support	Males Mean Rating of Online Support	Males Mean Rating of Offline Support	Females Mean Rating of Online Support	Females Mean Rating of Offline Support
Significant Other	5.30 (1.25)	5.26 (1.33)	4.83 (1.69)*	5.61 (1.47)*
Friends	5.50 (0.83)	5.21 (1.22)	5.56 (1.32)	5.43 (1.19)

* $p < .05$

Table 2

Statistics from the final models for hierarchical regressions predicting the well-being components of Personal Relations, Self Acceptance and Personal Growth

	Personal Relations		Self-Acceptance		Personal Growth	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.15*		.014		.096*
Age	.332*		.178*		.096	
Sex	.290*		.031		.179*	
Step 2		.061*		.039*		.014
Offline Social Support	.321*		.195*		.170	
Step 3		.065*		.006		.030
Online Social Support	.237*		.016		.163	
Online Sense of Community	.237*		.075		.178*	

Note. * $p < .05$