CHARACTERISTICS OF AN ON-LINE MUTUAL-HELP GROUP FOR DEPRESSION

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ABSTRACT

A recent development in mutual help has been the proliferation of on-line mutual-help and self-help groups. This study used a qualitative methodology to describe the characteristics of an on-line mutual-help group for depression. Posts (i.e., messages sent to the group) from two randomly chosen weeks ($N = 1863$ posts; 533 participants) were content coded in order to identify group characteristics. The characteristics identified were related to: 1) group access (universal accessibility and technical difficulties); 2) lack of physical and auditory presence (anonymity, lurking, and lack of personal information); 3) access to archived information; and 4) members' roles (development of out-of-group relationships and dispersion of leadership). These characteristics are discussed with reference to the unique context they create for the provision of mutual help.

A recent development in mutual help has been the proliferation of on-line mutual-help groups (Ferguson, 1996; Grohol, 1995; Kurtz, 1997; Madara, 1992). Kurtz (1997) argues that "the rapid growth of this medium in a few short years makes the development of community self-help over the previous 20 years seem minuscule in comparison" (p. 194). Although the number of on-line groups is growing, relatively little is known about them (Kurtz, 1997; Borkman, 1999). To date, much of the literature has been anecdotal (e.g., Gleason, 1995; Maciuskszo, 1990; Madara, 1995; Sparks, 1992). Of those empirical studies that have been

conducted, most describe mutual-help groups established by researchers (e.g., Bosworth & Gustafson, 1991; Brennan, Moore, & Smyth, 1991, 1992; Brennan, Ripich, & Moore, 1991; Furlong, 1989; Gustafson et al., 1993; Weinberg, Schmale, Uken, & Wessel, 1995).

A few studies have provided empirical descriptions of naturally-occurring, on-line groups. Luke (1997) in an overview of the variety of mutual-help groups available on the Internet, found that the groups varied widely in size, problem focus, activity level, involvement, and structure. Other studies of on-line groups have focused primarily on participation patterns and helping processes (Davison, Pennebaker, & Dickerson, 2000; Finn & Lavitt, 1994; Klaw, Huebsch, & Humphreys, in press; Salem, Bogat, & Reid; 1997; Winzelberg, 1997). Findings suggest that on-line and face-to-face mutual-help groups involve many of the same helping processes, including high levels of support, acceptance, self-disclosure, positive feelings, shared information, problem solving, and experiential knowledge (Finn & Lavitt, 1994; Klaw et al., in press; Salem et al., 1997; Winzelberg, 1997). However, the fact that face-to-face and on-line groups share these activities does not necessarily mean that they provide equivalent experiences for members.

The very nature of computer-mediated communication provides a unique social context within which mutual help takes place. First, on-line groups have the advantage of easy, 24-hour accessibility (Finn & Lavitt, 1994; Kurtz, 1997, Weinberg et al., 1995; Winzelberg, 1997). Writers have cautioned, however, that easy accessibility of the group may increase the risk that inaccurate information may be provided (Winzelberg, 1997), that members may be exposed to victimization by unsympathetic participants (Kurtz, 1997), that a person in crisis can be overlooked (Kurtz, 1997; Weinberg et al., 1995), or that participants who are expecting twenty-four-hour access may be frustrated when encountering technical difficulties (Kurtz, 1997).

A lack of visual and auditory cues has also been identified as an important characteristic of on-line groups (Winzelberg, 1997). This reduction in the number of communication channels creates an equalization of social status within the group (Kurtz, 1997; Winzelberg, 1997) and provides increased feelings of anonymity and privacy (Weinberg et al., 1995; Winzelberg, 1997). In addition, the lack of visual and auditory presence allows members to "lurk" or observe the group without making their presence known. Individuals can try out the group before contributing or can benefit from the contributions of others without ever participating themselves (Finn & Lavitt, 1994; Winzelberg, 1997).

Researchers have also suggested that the use of written communication is an important quality of on-line groups. It provides an alternative avenue of participation for those who are not comfortable or skilled at communicating orally or in face-to-face situations (Finn & Lavitt, 1994; Kurtz, 1997; Weinberg et al., 1995). It allows members to compose their contributions before submitting them to the group and to keep copies of interactions for future use. Finally, it has also been

noted that the on-line format allows for the dispersion of leadership responsibility across members of the group (Finn & Lavitt, 1994; Kurtz, 1997).

It is important to note that although researchers have identified characteristics of on-line groups, to date this literature consists primarily of anecdotal descriptions. With the exception of the few studies described above (Finn & Lavitt, 1994; Klaw et al., in press; Salem et al., 1997; Winzelberg, 1997), which focus on participation patterns and helping mechanisms, there has been no systematic study of the characteristics of an on-line mutual-help group. This is an important focus for research about on-line groups, because studies of face-to-face mutual-help groups have found that group and organizational level factors influence members' experience and group viability (e.g., Maton, 1988; Maton, Leventhal, Madara, & Julien, 1989; Maton & Salem, 1995).

The goal of the current study is to increase our understanding of the context in which mutual help takes place on-line. In order to do this, we used a qualitative methodology to identify characteristics of an on-line mutual-help group for depression that emerged from members' contributions to the group. This approach is consistent with that advocated by many mutual-help researchers who argue that the complexities inherent in mutual help call for the use of qualitative and naturalistic methods (Kennedy, Humphreys, & Borkman, 1994; Tebes & Kraemer, 1991).

METHOD

Procedure

In order to select an on-line group for study, fifty-two mutual-help groups were identified from 5,849 Usenet[1] newsgroups available on our university's on-line system. Ten groups which focused on health or mental health problems for which there are face-to-face mutual-help groups were observed for several months. The groups varied considerably in terms of their level of activity, ranging from less than 100 to over 1,000 weekly posts (i.e., messages) to the group. The mutual-help group described in this study was selected because it had a high level of activity and because it was the group with the problem focus most similar to that of the only face-to-face mutual-help group that has been studied using behavioral coding of group interaction (Roberts et al., 1991).

All posts to the newsgroup during two, non-consecutive weeks (one month apart) were coded as part of a larger study. This included 1,863 posts from 533 persons (273 males, 173 females, 87 sex undetermined). Twenty percent of the posts ($N = 367$), posted by 173 different group participants, contained content that was coded as group structure or process (i.e., comments that made reference to group structure, format, and agreed upon ways of doing things or

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[1] Usenet is the system on the Internet that supports newsgroups.

to members' utilization of the group). These posts were the data used for the current study.

Data Analysis

Because we know so little about on-line mutual-help groups, we were interested in capturing the realities that emerged from the setting. Therefore, rather than coding for preconceived or *a priori* characteristics, one of the authors reviewed the posts and identified emerging themes. In qualitative research it is important to authenticate or confirm the accuracy of such themes (Bartunek & Louis, 1996; Guba & Lincoln, 1989). This is often done by discussing the findings with research participants (Sackman, 1991) and with disinterested third parties (Lincoln & Guba, 1986). Because the study used archived posts, findings could not be discussed with setting participants. We therefore had disinterested third parties authenticate the themes in two ways. First, two undergraduate research assistants worked together to identify themes in the original set of posts. Overall, there was good agreement between themes identified by the author and the undergraduate coders.[2] Second, the themes were authenticated by another disinterested third party (i.e., a graduate student who was not involved in the study), using 769 posts from a randomly selected week, approximately eighteen months after the initial data collection. The purpose of this was to confirm the presence of the themes occurring in the group discussion at a later point in time, increasing our confidence that they were salient and lasting group characteristics.[3]

Eight characteristics were included in the final coding process: universal accessibility, technical difficulties, lurking, lack of personal information, anonymity, access to archived information, development of out-of-group relationships, and dispersion of leadership. One characteristic, universal accessibility, contained five codes (see Table 1 for definitions). Two independent coders coded each post for the presence or absence of each of the twelve codes. If a code appeared more than once during the entry, it was only coded as present, not present multiple times. The two coders had an inter-rater reliability rate (i.e., agreement on presence and absence of the codes) of 95 percent. All disagreements between coders were

[2] Some of the themes identified by the undergraduates were not included because they were at the individual level of analysis (e.g., expressions of appreciation of an individual poster, explanations of an individual poster's absence from the group). The remaining themes included all of those identified by the author, although the undergraduate coders identified some of the structures and processes resulting from universal accessibility as separate characteristics. The decision was made to code these aspects separately, but discuss them as part of one theme (see Table 1).

[3] All of the themes were confirmed as present in the group discussion at time two ($N = 6$ to 20). One theme (lack of personal information) occurred in a different form. At time one, posters expressed frustration over a lack of information about one another. At time two, members made reference to steps that they had taken to address this concern (e.g., development of a personal profile system, posting of a birthday list). Although the content of the posts at time two authenticate the existence of this theme at time one, it is an excellent example of the fact that settings are dynamic and change over time.

Table 1. Group Characteristic Codes

Codes	Description
Group Access	
Universal Accessibility	This theme contained codes related to ease and comfort of access, group size, and negative acts.
Ease of Access	Posts referring to accessibility of the group.
Comfort with Medium	Posts referring to comfort with computer mediated communication.
Size	Posts referring to the large size of the group.
Hostile Acts	Posts referring to individually focused hostile acts.
Flaming	Posts referring to the act of flaming (i.e., messages intended to elicit anger or an emotional response).
Technical Difficulties	Posts referring to technical difficulties encountered while posting or reading the group and explanations of failure to respond to a post due to technical difficulties.
Lack of Visual and Auditory Presence	
Anonymity	Posts referring to the anonymous nature of computer communication.
Lurking	Posts referring to the practice of reading the group without participating or making oneself known.
Lack of Personal Information	Posts expressing the desire to know more about other members or commenting on suggested ways of providing additional personal information.
Use of Written Communication	
Access to Archived Information	Posts referring to the ability to save or retrieve posts or to the creation of archived documents.
Members' Roles	
Dispersion of Leadership	Posts referring to informal leadership and appreciation of regular posters.
Out-of-Group Relationships	Posts referring to out-of-group contact among participants.

resolved by discussing the post. The frequency of the characteristics ranged from seventeen to sixty-two. Individual aspects of universal accessability were less frequent, ranging (with the exception of hostile acts, $n = 4$), from nine to eighteen.

The benefit of this type of theme identification is that it leads to the identification of characteristics that members found salient (i.e., felt a need to comment on, explain, question, or change). One drawback of this approach is that these characteristics may not fit preconceived categories. Whereas there are clear distinctions in the organizational literature between group structure and process, this distinction was often blurred in the way members discussed the group. For example, some members discussed the fact that old posts are available (i.e., structure) and others attended to the creation of particular types of archived documents using those posts (i.e., process). Similarly, some members focused on the technical difficulties encountered when trying to post to or read the group discussion (i.e., structure) and others addressed the feelings of neglect and estrangement that resulted from technical problems (i.e., process). Rather than force an artificial process-structure distinction, we referred to these factors as group characteristics, many of which include aspects of both structure and process.

Ethical Considerations

This research raises important ethical issues that should be considered when conducting research about newsgroups. Newsgroups on the Internet are public forums and the regular presence of posts by reporters, researchers, and others should make members aware that non-members are reading the group's communications for a variety of other purposes. In spite of its public accessibility, however, there has been considerable debate regarding the ethics involved in the use of information posted on-line, particularly the use of quotes (e.g., MediaMOO Symposium, 1997). Bier, Sherblom, and Gallo (1996) point out that our ethical standards do not always keep pace with the evolving settings in which we conduct research. They argue that the unique and powerful role that the Internet plays in many people's lives requires that we think carefully about the possible harm our research in this context can do. In line with this caution, we have taken a conservative approach to the issues of anonymity, confidentiality, and protection from harm. This is particularly important, given that indexer programs make it possible to search for and make publicly available any message posted to a Usenet group (Kurtz, 1997). Therefore, rather than using quotes to support our content analysis, representative examples of on-line communication were paraphrased. The paraphrased examples and the original posts were reviewed by two reviewers (i.e., a graduate student and colleague who were not involved in the theme identification or coding) to be sure that: 1) the content, structure, and tone of the original post remained intact; 2) no example could be traced to an individual poster based on identifying information, unique content, style, or language; and 3) no

poster would be able to identify an example as his\her own based on identifying information, unique content, style, or language.

RESULTS AND DISCUSSION

Four types of group characteristics were identified: 1) group access (i.e., universal accessibility and technical difficulties); 2) lack of physical and auditory presence (i.e., lurking, anonymity, and lack of personal information); 3) access to archived information; and 4) members' roles (i.e., the development of out-of-group relationships and dispersion of leadership). These characteristics create a unique social context for the provision of mutual help.

Group Access

Two characteristics related to group access were identified: universal accessibility and technical difficulties.

Universal Accessibility

The group's universal accessibility means that anyone with Internet access can use the group. This makes membership possible for those who are not comfortable attending a face-to-face group or who cannot access one (e.g., because of the debilitating nature of their problem or distance from a group). It also makes the group accessible on any day and at any time that a member feels a need for contact or self-expression.

> The more distant quality of the computer has allowed me to develop friendships on-line.

> When I don't feel good, it's easier to E-mail than to call or visit people.

For this group, easy access resulted in a large number of members ($N = 533$). The large size of the group helped members realize they were not alone.

> It is comforting to know that there are hundreds of people here who know and care about you.

Although universal access linked members to others who understood, it also had drawbacks. First, the large size of the group could be overwhelming to members.

> When I haven't been on my computer recently, I can feel discouraged and oppressed by the sheer number of messages I have to read. They all contain so much pain.

A second problem associated with the public nature of the group was that it was accessible to individuals who were not sensitive to the issues that members discussed. All members of mutual-help groups face issues of stigma and insensitivity (Levy & Derby, 1992), but the public and anonymous nature of on-line

groups may make members particularly vulnerable to negativity and harassment. Members may be confronted with a variety of hostile acts ranging from the posting of insensitive messages to purposeful harassment of individual members. During the weeks we observed, there were no overtly hostile acts on-line, but members discussed the issue of "flaming" (i.e., posting messages intended to elicit anger or an emotional response). Members seemed to agree that they were attempting to create a supportive, rather than a provocative, environment.

> Would those of you who are posting to multiple groups please remove this one from your list. We are a support group and do not want to be part of a flame war.

Opinions differed, however, on whether or not flaming was ever appropriate on the group.

> We DO NOT EVER flame one another in this group.

> Everyone should be able to post what they want. Sometimes that means there will be a flame.

> I would never flame a person in need, but I will flame misleading information that can hurt people.

Members were also subject to personal harassment. For example, one member described being "mail bombed" (i.e., purposefully inundated with multiple copies of messages). Other members responded with sympathy and embarrassment that this was happening.

> It happened to me once and I hated it. I received hundreds of messages a day.

> I hope no one on this group is mail bombing you. Maybe it is someone outside of the group.

Technical Difficulties

Many posts contained references to technical difficulties members encountered while posting or attempting to read the group. Members complained about not receiving all posts, not being able to access the group, and a variety of other technical difficulties.

> I'm having a lot of problems with posts disappearing. I see a response, but have never seen the initial post.

> I haven't been able to get logged on for a long time.

Perhaps the most prominent technical problem was the time lag between posting a message and receiving a response. This was particularly frustrating for those with immediate needs and sometimes resulted in a member feeling unsupported by the group.

> I posted to de-lurk, but the anonymous server has been very slow.

> No one has answered me—doesn't anyone have something to say?

In order to combat estrangement, group members often responded to such posts by explaining that they were not ignoring each other, they had simply not received the post.

> Time is a real problem. I still haven't seen your original post, but we really do care.

> I never saw your last post. We do not mean to ignore you. Please keep posting.

In summary, twenty-four-hour access to the Internet from anywhere in the world can clearly facilitate participation in on-line groups. Although many face-to -face groups do attempt to provide members with twenty-four-hour support by exchanging phone numbers (e.g., Salem, Seidman, & Rappaport, 1988), they cannot provide this type of unlimited access. Ironically, although technology makes the group highly accessible, it was also the source of the members' greatest frustrations. The benefits of twenty-four-hour access can be substantially undermined if members face frequent difficulties in posting and receiving messages or if they experience harassment or an overwhelming sense of need from other members.

Lack of Visual and Auditory Presence

Members described three qualities of the group that were related to the lack of physical and auditory presence in computer-mediated communication: lurking (i.e., reading the group without actively participating or making one's presence known), anonymity, and a lack of personal information.

Lurking

The nature of on-line communication makes it possible for people to lurk on the group. During the weeks we observed, several new participants alerted the group that they were delurking (i.e., making their presence known to the group by posting).

> I've been reading this group for a while and might never have had the nerve to post, but I was so moved by your words.

In fact, the group norm appeared to be that contributors were expected to lurk and learn about group practices before becoming active participants.

> Normally I would lurk more before participating, but . . .

> Internet etiquette says lurk before you post.

Group members and their families used (and were sometimes encouraged to use) the group exclusively or almost exclusively as lurkers.

> We don't have all of the answers, but keep reading, lurk, post—just stay.

> This is a great place to be, even if you just lurk and never post.

Lurking, unfortunately, had a downside for group members who were aware that all lurkers are not trustworthy and well-intentioned.

> I post anonymously, because I'm concerned about who might be lurking.

Anonymity

On-line groups offer members the opportunity to participate in the group anonymously, by posting their messages through an anonymous server that strips the message of any identifying address information and forwards it to the group. A few posters made direct reference to their decision to post anonymously.

> I'm sorry I had to post anonymously.

> I'm using someone else's name at this point.

For the most part, however, anonymous posting appeared to be accepted practice in the group. Most of the discussion of anonymity concerned how those who wished to remain anonymous could participate in the creation of archived documents (e.g., personal profiles, collections of poetry, personal descriptions of depression) without threatening their sense of privacy.

> I'd be happy to collect personal descriptions of depression and remove any identifying information so they would be completely anonymous.

> I'd submit an anonymous profile so that people can link my anonymous ID to something more meaningful, at least until I stop being too nervous to use my own name.

Lack of Personal Information

Some members expressed a sense of frustration regarding the lack of personal information available about fellow participants.

> I would like to know more about people on this group. I find the lack of information frustrating.

Many members tell the story of their experience with mental illness when they first post to the group. Over time, they often provide additional personal information, including basic demographic information (e.g., sex, marital status) and more intimate details about their lives. However, there are often gaps in the information members have about one another. Newcomers are particularly disadvantaged in this regard, as they may have missed these posts. In order to address this problem, it was suggested that the group archive members' personal profiles.

> People often tell about themselves when they delurk. I think it would be a good idea to collect people's biographical statements in one place.

The idea was received by the group with both enthusiasm about the opportunity to know more about each other and concern about threats to members' privacy.

> I have seen directories of personal profiles done on other groups. I thought it was really nice to learn more about regular users.

> Profiles may create privacy problems. There are others, like insurance companies, who would love a list of people with this mental illness.

In summary, the lack of visual and auditory presence on-line gives members the ability to control the amount of information they provide to the group. This can range from simply choosing to withhold one's name to keeping one's presence on the group private by lurking.

This sense of invisibility or anonymity allows members to overcome concerns about confidentiality, anonymity, stigma, or shyness that might interfere with their attendance at a face-to-face group (Levy & Derby, 1992). Lurking allows potential users to gather information about the group without interpersonal risk (Finn & Lavitt, 1994). The ability to post anonymously allows members to interact with others who share their concerns without making their identity known. Although face-to-face mutual-help groups seek to deal with issues of fear and stigma by having strict policies on privacy and anonymity and by welcoming newcomers to observe the group without participating, there are no truly parallel processes in face-to-face groups. The decision to attend a group and see what it is like amounts to public disclosure of a shared problem; members always risk being recognized when they attend meetings.

The ability to lurk and post anonymously may facilitate participation in the group, but the lack of a physical presence can minimize what members know about one another. In some cases even a poster's sex is unknown to fellow participants. Although this lack of information can facilitate communication by creating an equalization of social status (Kurtz, 1997; Winzelberg, 1997), it can also engender frustration in members who want to know more about others.

It is important to note that although on-line groups do offer seemingly more anonymous participation (i.e., no one can see you while you are participating in the group), computer-mediated communication lacks any true guarantee of privacy (Kurtz, 1997). The feelings of anonymity that members experience may help them to overcome barriers to participation that exist in face-to-face groups, but may ultimately lead to feelings of vulnerability when members disclose personal information in what is essentially a public forum (Winzelberg, 1997).

Access to Archived Information

The use of written communication, by definition, creates documents that can be saved and reused by group members. Archived information allows members to

refer back to old posts in order to help newer members. Members may also save posts that they find particularly meaningful—either for their own use or to share with family members or friends. One member described keeping a collection of posts from the group in much the way people collect snapshots. Another described saving threads[4] that he found worthwhile.

> When I'm feeling particularly moved, sometimes I pull out my old posts and look back on what was said.

> I saved a lot of that thread. I found it very powerful and helpful.

During the weeks that the group was observed, a suggestion was made that the group archive members' descriptions of their mental illnesses into a single document. Others liked the idea and offered to help.

> That would be a great thing to make them available on a Web page.

The ability to save, refer back to, and archive members' contributions creates the potential for the group and individual members to develop a wealth of useful, written information. Many face-to-face mutual-help groups address this need by creating a group literature (McFadden, Seidman, & Rappaport, 1992); this might include a newsletter, a leadership circular, member stories, and/or a book outlining the group's philosophy and procedures. On-line groups are not dependent on writers and editors to create these publications, nor do they need additional financial resources to print and distribute them. In addition, members can create their own personalized record of the group by saving what they find most meaningful.

Members' Roles

Two characteristics related to members' roles were identified: the development of out-of-group relationships and the dispersion of leadership.

Development of Out-of-Group Relationships

The formation of out-of-group relationships appeared to be an important component of this on-line group. Although one reference was made to two members talking on the telephone, most references to out-of-group contact concerned private e-mail as a means by which group members provide extra support and exchange more personal feelings.

> I would be happy to correspond with you . . . Please write . . . I know that we are not really friends yet, but I would like us to be.

> I would like to E-mail you directly. I'm hesitant to say how I really feel about you by posting on the group.

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[4] A thread refers to a series of posts about the same topic.

Dispersion of Leadership

The on-line group that we observed differed from most face-to-face groups, and some on-line groups, in that there was no designated leader. Although no formal leadership roles existed, high users (referred to by the group as "regulars") took on these responsibilities informally. Many members appeared to be well aware of who these individuals were and expressed appreciation for the role they played in the group.

> I very much appreciate the regulars in this group.

> After reading what the regulars have written to others, I feel like I know them. Their messages mean a great deal to me.

Both the diffusion of leadership and the development of out-of-group relationships can create a sense of consistency, cohesion, and ongoing support in a group that lacks formal leadership. Diffusion of leadership has been observed in other on-line settings. In the groups observed by Finn and Lavitt (1994), leadership functions such as the provision of information and support, promotion of group norms and solidarity, encouragement of participation, and modeling of appropriate behavior were also dispersed among regular users. Similarly, Roberts, Smith, and Pollock (1997), in a study of an on-line chat room, concluded that the continued presence of regular users provided a sense of community within the chat room. The regulars appear to provide the group with a sense of constancy and support, while potentially avoiding the burn out that has been documented among some mutual-help group leaders (Revenson & Cassel, 1991). The importance of shared leadership has also been observed in face-to-face mutual-help groups (Maton & Salem, 1995).

The ability to form out-of-group relationships and friendships has also been identified as an important component of many face-to-face mutual-help organizations (e.g., Salem et al., 1988). These relationships have been found to be related to greater self-esteem and well-being (Lieberman & Videka-Sherman, 1986; Maton, 1988) and to greater perceived group benefits and satisfaction (Maton, 1988).

Both the diffusion of leadership and the development of out-of-group relationships provide members with the opportunity to take on meaningful social roles as informal leaders and help-givers. The benefits members experience as a result of taking on leadership responsibilities (Rappaport, Reischl, & Zimmerman, 1992) and helping others (Maton, 1987; Riessman, 1965; Roberts et al., 1999) have been observed in face-to-face groups. On-line groups provide an easy avenue for shared leadership and the adoption of helping roles. There is no need for a designated leader to lead meetings, open locked buildings, buy snacks, or distribute literature. In on-line groups, leadership is a function of time, interest, and willingness to participate (Finn and Lavitt, 1994). These groups also provide a unique venue for the development of out-of-group relationships that parallel many of the qualities of

the on-line group (e.g., anonymity, social distance, asynchronous communication). As such, they provide access to an alternative type of helping role for those who may be less comfortable in face-to-face interaction.

CONCLUSIONS

This qualitative study identified group structures and processes of an on-line mutual-help group. Our findings suggest that computer-based groups are not on-line equivalents of face-to-face groups; they are an alternative that offers a unique context in which mutual-help can take place. It is common wisdom within the mutual-help movement that participation in a particular group is a matter of fit and choice (Zinman, 1987). On-line groups increase the breadth of mutual-help options available to potential participants.

On-line groups make it possible for anyone with access to a computer to overcome many of the logistical barriers to mutual-help participation, such as geographical isolation, lack of transportation, lack of groups for rare conditions, conflicting work schedules, caregiver responsibilities, or physical disabilities that make attendance difficult. Beyond helping participants to overcome possible physical or logistical barriers, the on-line format may help individuals to overcome emotional or motivational barriers to attending face-to-face groups.

On-line groups appear to offer potential participants a level of choice and control beyond that found in face-to-face groups. First, the on-line format provides a spectrum of involvement opportunities that come before the first step in active membership and participation. On-line, members can use the group for as long as they want as lurkers. Without disclosing their presence, they can observe what it is like to participate in the group, learn group norms, gather valuable information, and experience the feeling that they are not alone with their problem. Second, if they choose to participate, they can then do so without publically identifying themselves and with complete control over what personal information they disclose. Finally, when participants feel a need for the support of the group, they can choose between reading recent contributions, posting to the group, writing a private e-mail to another group member, or reviewing particularly meaningful posts that they have saved.

Most face-to-face groups attempt to maximize their members' choice and control as well, but the nature of the format has inherent restrictions. Groups typically have strict policies concerning anonymity and confidentiality, and they encourage prospective members to attend meetings to learn about the group without any pressure to speak or disclose information about themselves. However, because these steps prior to membership require a person's physical presence, some level of personal disclosure and compromising of anonymity is necessitated. Once people become members, face-to-face groups provide a wide range of ways to access support including meetings, encouraging members to exchange phone numbers and to develop supportive relationships outside the group, and providing

literature that members can use when the group is unavailable. However, face-to-face groups cannot provide the twenty-four-hour accessibility of support that on-line groups do.

The unique context created by on-line groups may create a way for those who might not choose to participate in a face-to-face group to benefit from mutual help. It is clear from the contributions to this group, however, that this does not come without potential costs. Members can be frustrated by technical difficulties, long time lags, lack of personal information, and the ultimately public nature of on-line groups. In addition, it is important for future research to examine whether those qualities that make on-line groups an appealing option, may weaken or undermine some of the essential growth- and change-facilitating qualities that have been identified in face-to-face mutual-help groups. For example, Rappaport (1993) has suggested that recounting personal narratives plays an important role in a face-to-face group's ability to help its members. He argues that, over time, members change their views of themselves by revising their personal stories to resemble the group's story. On-line, the existence of profile pages, the ability to archive posts, and the tedium of retyping one's story over and over may compromise this process. Similarly, Borkman (1999) argues that observing peers is an important component of experiential learning, particularly for those with physical conditions that affect appearance. She suggests that the lack of visual cues in on-line groups may limit the exchange of experiential knowledge.

It is important to note that there are weaknesses inherent in a single case methodology, which may limit the generalizability of our findings to other on-line groups. Although the characteristics observed in this group were quite consistent with those reported by other researchers, there is a great deal of variety in computer-based mutual-help groups (e.g., presence of designated leaders, synchronous versus asynchronous communication, problem focus, length of time in existence).

Some of the group characteristics we identified are likely to be similar across most, if not all, on-line groups. For example, most are widely accessible, allow for the possibility of lurking, and are subject to technical difficulties. Other characteristics may vary considerably depending on the problem definition, norms, and structure of the group. For example, groups for less common or more highly stigmatized problems (e.g., sexual abuse) may remain small, in spite of easy access. Groups for less stigmatized issues (e.g., parenting) may be less concerned with anonymity and members may share more personal information (e.g., a picture archive of members). The presence of a designated leader would be likely to lessen the informal leadership role of regulars. Finally, there are on-line groups made up of members of face-to-face mutual-help organizations who know each other outside of the group. In these cases, issues of anonymity and lack of personal information would not be relevant. As Yin (1984) points out, however, the goal of case study research is not to generalize from one population to another, but to identify potentially generalizable concepts. The characteristics identified in this

group provide a starting point for exploring the consistency and variety of on-line groups.

It is also important to point out that we cannot assume that all members share the same conception of the group. For example, new or infrequent users may not be aware of the role played by regulars. Similarly, for some participants the lack of personal information available on-line may be an advantage of the group. Whereas some characteristics were clearly widely recognized by many participants (e.g., 62 references to technical difficulties), in other cases only a small number of posts addressed a particular theme. The number of times a theme is mentioned is not necessarily a good indicator of its importance, however. For example, only seventeen posts addressed the lack of personal information, yet, eighteen months later, several new structures (e.g., profile page, birthday list) had been implemented to address this issue.

This study provides one of the first empirical descriptions of the characteristics of an on-line mutual-help group. The identification of characteristics of an on-line group poses many questions for future research. Are these characteristics generalizable to other groups? How do group characteristics enhance or impede members' participation? Do specific group characteristics lead to specific benefits for group members? Are some group characteristics (e.g., a core group of regulars who act as leaders) related to group utilization or survival? Do the same helping mechanisms (e.g., narrative stories, experiential knowledge) seen in face-to-face groups exist in on-line groups? Further research, focused on these questions, will allow investigators to understand the special challenges and opportunities on-line groups create for their members.

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