ART THERAPY ON-LINE:

A PARTICIPATORY ACTION STUDY OF DISTANCE COUNSELLING ISSUES

by

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES

Department of Counselling Psychology

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

November, 1998

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Date _March 19, 1999_

ABSTRACT

On-line counselling shows promise for making mental health care more available to people in remote locations, people with mobility limitations, and people who are home-based or homebound. In response to the lack of research in this burgeoning new area, Davor Cubranic and I conducted an exploratory, participatory study of on-line counselling in which we used computer-supported distance art therapy as a model. The project was a multidisciplinary collaboration between researchers in counselling psychology and computer science that included 10 additional co-researchers from the community. The three goals of the study were: (a) to develop a computer system specifically for on-line counselling, (b) to evaluate the system for the purpose of bringing forth key issues relating to on-line counselling, and (c) to conduct a cross-disciplinary sharing of knowledge and ideas.

The system we developed is an innovative alternative to the usual forms of on-line counselling (e-mail and videoconferencing). It supports audio and visual communication, and yet is suitable for standard home computer systems with dial-in access to the Internet. The study was a pilot project designed in part to put research needs into sharper focus. The issues identified as important during the study were not the ones highlighted in previous literature. Rather, they were: (a) problems associated with technical failure, (b) relevance for people with disabilities, (c) the need for clear communication protocols, (d) lack of shared physical presence, and (e) increased sense of privacy and protection from pre-judgment.

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ACKNOWLEDGMENTS

I would like to acknowledge Davor Cubranic, my research partner and co-author, whose wit, wisdom, and programming wizardry made this project possible, and the 10 people who generously contributed their time and energy as co-researchers with us: Debbe Gervin, Vaughan Miller, Dan Mitchell, Michelle Oucharek-Deo, Colleen Quee-Newell, Barbara Ringham, Jerry Stochansky, Ruth Violet, Moyra White, and one person who did not wish to be named.

Special thanks to the three members of my thesis committee: Bonnie Long, my supervisor, whose guidance and support have been invaluable; Kellogg Booth, the interdisciplinary liaison and facilitator of the collaboration, whose vision and expansive creativity allowed this project to flourish; and Shauna Butterwick, whose insightful suggestions and enthusiasm for innovative methodologies helped us take full advantage of the resources and opportunities available to us.

I would also like to thank the two research session assistants, and the many people who volunteered their time to test the system during the development phase.

I am indebted to Green College at the University of British Columbia--where the idea for this project was born--for the atmosphere of interdisciplinary scholarship and intellectual excitement that has been created there. Funding for the research was provided by the Webster Foundation and UBC's Media and Graphics Interdisciplinary Centre.

K. COLLIE

INTRODUCTION

On-line counselling is being heralded as a way to give more people access to counselling services, particularly people in remote locations and people whose mobility is limited because of illness or disability. Home-based women and clients who require extra privacy are also expected to benefit (Sampson, Kolodinsky, & Greeno, 1997). Although there are already hundreds of counselling sites on the Internet (Marson, 1997; Sampson et al.), so far there has been little systematic investigation of this rapidly expanding counselling medium (King, Engi, & Poulos, 1998; Sampson, 1997).

In this thesis, I describe an exploratory study of on-line counselling conducted in collaboration with a colleague in computer science, in which we used distance art therapy as an example. The three goals of this project were: (a) to develop a computer system specifically to support on-line counselling, (b) to evaluate the system for the purpose of identifying key issues concerning on-line counselling, and (c) to facilitate a cross-disciplinary sharing of knowledge and ideas between computer scientists and human service professionals, and between university researchers and community workers. The focus of this thesis is the evaluation, which was designed to address the following question: What key issues need to be considered when planning and implementing on-line counselling services, beyond those that have been identified previously? A secondary goal of the evaluation was to determine which issues might be especially important. These questions were answered through a content analysis of data generated during the evaluation sessions.

Our primary target population when we began to conceptualize the project was clients isolated by illness or disability--people we thought could benefit from group involvement as well as therapeutic help from a counsellor. We decided the computer system should support group art therapy for this reason. This decision was made in light of the recognized benefits of group support during recovery from long-term illnesses (Fawzy et al., 1995; Spiegel, Bloom, & Yalom, 1993) and the growing popularity of Internet groups for people with medical difficulties (Weinberg, Schmale, Uken, & Wessel, 1996).

Currently, most on-line counselling is conducted entirely with text--mainly asynchronously, using e-mail and electronic bulletin boards. It is expected that videoconferencing will replace these text-only forms as telecommunications technology advances (Sampson et al., 1997; Sleek, 1997). The system we developed during this study supports synchronous audio and visual communication (speech and hand-drawn images) using technology currently available to people with dial-in access to the Internet. The art images (created by the client) provide a visual dimension to the interaction without the extra expense and *bandwidth* (the volume of information that can be transmitted per unit of time) required for videoconferencing. The verbal communication is like telephone conversation, and the images made by clients can be seen by the counsellor as they are being made. Both the audio and visual communication are direct and immediate.

Art Therapy

In this thesis, the term *art therapy* is used generically to mean therapeutic art, art as therapy, or any kind of counselling during which the client makes art images. Art

therapy has a long history of use with people with psychological or emotional difficulties relating to long-term illnesses or disabilities (Breslow, 1993; Carmi & Mashiah, 1996; Edwards, 1993; Field, 1976; Garner, 1996; Johnson, Lahey, & Shore, 1992; Rosner-David, 1995; Weinberg, 1985). Already computers are being used as a medium for art therapy, usually with clients who have special needs or physical limitations (Lancioni, Coninx, Goossens, & Boelens, 1993). Potential advantages of using computers in art therapy include: (a) the ease of use, (b) the motivational effect of computers, (c) the sense of concentrated non-judgmental attention a computer can give, and (d) the feelings of mastery and increased self-esteem that can come from using a computer (Canter, 1989; Johnson, 1987). According to Canter, using computers can bring out creative abilities and, because any action can be undone with no trace, can reduce creative inhibition by providing security to experiment.

One of the foundations of art therapy is the idea that the creative process is intrinsically therapeutic (Tibbetts, 1995) and can bring hope and meaning in the face of hopelessness (Aldridge, 1993; Rider & Weldon, 1990). Another is that art-making brings forward transferable creative resources (Pöldinger & Krambeck, 1987). In art therapy, the client's art becomes a metaphor for the change process, and can be a symbolic arena for creating preferred scenarios--for bringing what is desired into the realm of possibility (Fryrear & Corbit, 1989). Making art is thought to promote a sense of mastery and control, to improve self-esteem, and to strengthen identity (Brooke, 1995; Estep, 1995; Hagood, 1991; Hargrove-Nykaza, 1994; Omizo & Omizo, 1989; Piccirillo, 1995).

The fact that these therapeutic aspects are somewhat independent of interaction with the art therapist is an additional reason art therapy is suitable for on-line counselling. Art therapy clients have therapeutic relationships with their art images as well as with their therapists (McNiff, 1992), and in distance art therapy clients are still present with their art even though the therapist is somewhere else.

Narrative Therapy

In literature about on-line counselling, Rogers's (1957) *client-centered* perspective is often used as a reference point (e.g., Lago, 1996; Robson & Robson, 1998). This is a perspective within which it is important for the client to be able to see the counsellor, because therapeutic change is thought to depend on the counsellor's ability to communicate acceptance of the client with both words and body language. Most literature about art therapy is based on a *psychodynamic* perspective. However, in the present study, we looked at on-line counselling through the lens of *narrative therapy* (Freedman & Combs, 1996; White & Epston, 1990), a social constructionist approach that engages the client's imagination and creativity, and therefore is suited to art-based counselling (Dunne, 1992; Riley, 1997). A precedent has been set for using narrative therapy for text-only on-line counselling (Murphy & Mitchell, 1998).

Narrative therapy holds that we are all subject to dominant cultural *narratives* or interpretive stories that are used to define power relations in societies. These narratives perpetuate the viewpoints of those in power and disallow alternative viewpoints, generally working against the freedom and functionality of individuals. Oppressive

narratives are understood to operate on the level of families as well as on the level of society at large, and are so strong that people accept them even if they are suffering within them. The underlying purpose of narrative therapy is to re-establish individual freedom by helping clients recognize and challenge oppressive narratives, and, through an interactive creative process, to discover more liberating narrative trajectories (Dunne, 1992; Freedman & Combs, 1996; White & Epston, 1990). This is achieved by asking clients a series of questions--some of which may be contained in *narrative letters* sent between sessions--that encourage clients to be experts on themselves. Narrative therapy lends itself to an on-line format because it *decentres* the counsellor and is not heavily dependent on the dynamics of the face-to-face interaction between the client and the counsellor. The four key ingredients of the narrative approach are: (a) externalization of the problem through the recognition that it is a product of social forces largely external to the person, (b) identification of the client's personal resources, (c) creation of a preferred narrative, and (d) witnessing of the new narrative by significant people in the client's life.

Art making can facilitate the narrative process in the following ways: (a) externalization is aided by the fact that problems are expressed as images that are visibly external to the person; (b) art making brings the personal resource of creativity clearly into the foreground; (c) the client's involvement in a creative process facilitates the imagining of new narratives and art images can be used to give form to these narratives; and (d) art is meant to be looked at by others, and therefore therapeutic change represented in a client's images can be witnessed easily.

<u>On-line Counselling</u>

Presumed advantages and problems of on-line counselling are outlined by

Sampson et al. (1997) in a comprehensive overview of the subject. Advantages and

potential problems have been further explored by Murphy and Mitchell (1998) in their

account of their e-mail counselling practice, by Bloom (1997) in reference to the NBCC

(National Board of Certified Counsellors) standards for "WebCounselling," and by other

writers on the subject (e.g., Lago, 1996; O'Hearn, 1996). In addition to increased access,

potential benefits of on-line counselling are thought to include: (a) cost-effectiveness

(Verhoeve, 1997); (b) increased sense of privacy (Lago, 1996; Murphy & Mitchell, 1998)

and decreased concern about interpersonal risk; (c) reduced power imbalance between

client and counsellor (Mitchell & Murphy, 1997); (d) less likelihood of dependence on

the counsellor and a greater sense on the part of the client of being responsible for

positive change that occurs (O'Hearn, 1996); (e) the ability to maintain counselling

relationships after relocations; and (f) the possibility of including family members in the

therapeutic process (Mitchell & Murphy, 1997; Watts, 1997).

The primary problems of on-line counselling mentioned are: (a) verifying the

identity/credentials of the other person, (b) protecting confidentiality and ensuring

privacy, (c) compensating for the lack of visual cues, (d) the impersonal nature of

computers, (e) ensuring equality of access, and (f) dealing with the fact that the client and

counsellor may be covered by different laws, tax codes, and standards of practice.

Additional problems mentioned in the literature about telephone counselling also pertain.

These problems are counsellor distraction (Haas, Benedict, & Kobos, 1996) and the

difficulty of ensuring a suitable location and atmosphere for counselling, for both the client and the counsellor (Stein, Rothman, & Nakanishi, 1993).

There is disagreement about whether distance counselling occurs where the client is, where the counsellor is, or in cyberspace (Henry, 1996). This problem has implications for licensing and certification as well as for taxation and jurisprudence. In many written discussions, the assumption is that the counselling happens where the client is (Elias, 1997; Herr, 1997; Sleek, 1997). However, this interpretation is impractical, and guidelines for on-line counselling are being written with the assumption that on-line counselling happens in the counsellor's location (e.g., the NBCC Guidelines for WebCounselling). It may be that clients feel the counselling is taking place in cyberspace, an imagined actual place, which could have the safety, predictability, and physicality of a counsellor's office. There is also uncertainty around who the counselling relationship is with--the counsellor? the computer? both the counsellor and the computer? a fictitious counsellor? (Lago, 1996).

In a discussion of the dangers of confusing the medium with what it transmits, Kling (1995) points out that the Internet is currently in its formative stages and is exceptionally malleable. Consequently, this may be a good time for counsellors interested in on-line counselling to be proactive in developing computer systems and on-line communication techniques to meet the needs of the profession.

Even though the problems and advantages of on-line counselling mentioned in the literature are not derived from empirical investigation, they provided a rough framework for the design of this project. Several of the stated advantages (increased sense of privacy,

reduced power imbalance, decreased likelihood of dependence on the counsellor) are congruent with a narrative approach to counselling.

<u>Telephone Counselling</u>

We should point out that the computer system we created uses speech rather than text, making research about telephone communication perhaps more relevant than research about text-only Internet communication (e-mail, etc.). Telephones have been used as a medium for counselling for at least 50 years (Hunt, 1993) and there is a body of literature about this form of distance counselling (see Haas et al., 1996). Usage studies show that telephone counselling services--such as crisis counselling, career counselling, and smoking cessation counselling--are used heavily, mainly by people who have not sought counselling before (Sampson et al., 1997). Roach, Reardon, Alexander, and Cloudman (1983) found that telephone career counselling services were used mainly by people in previously under-served groups, such as home-based women and people with disabilities. According to Sampson et al., evaluations of telephone counselling services have shown high levels of client satisfaction. Zhu et al. (1996) give an example of using telephones to deliver counselling services to clients who are not part of the cultural mainstream.

Group telephone counselling has been used with people with life-threatening illnesses--such as end-stage AIDS (Rittner & Hammons, 1992) and multiple sclerosis (Stein et al., 1993)--illnesses that can result in both isolation and loss of privacy. When planning the on-line art therapy project, we were influenced by the assertions that trust and cohesion can develop in telephone groups.

Lago (1996) offers a perspective that may help explain why telephone counselling is possible. He makes the point that not all non-verbal cues are visual, saying that with "concentrated listening" people can have access to many "clues and cues communicated through paralinguistic phenomena" (p. 287), such as silences, pauses, tone of voice, and inflection. Similarly, Hines (1994) interviewed blind therapists, who emphasized the need to use auditory information more effectively when the client cannot be seen--by listening to tone of voice, voice volume, word choice, and changes in speech, and asking for clarification and listening to underlying patterns of communication.

Rutter (1987) has created a model to explain qualities that have been attributed to *sound-only* conversations. According to the model, the *purpose* of a sound-only conversation can determine whether it will follow a pattern (identified in previous studies) of being formal, objective, and task-oriented, with adherence to the roles required for the task at hand. He has proposed that when the role is to be *personal*, as in the case of counselling, adherence to this role will be amplified when visual cues and shared physical presence are lacking, resulting in greater psychological proximity. He maintains that "differences in media can be cancelled out by things that create psychological closeness" (p. 97). There may be types of psychological proximity that are only possible when the people communicating are not face-to-face.

Literature about telephone counselling suggests that counsellors and clients can adjust to the communication medium being used, and that the safety and efficacy of a communication medium depend more on the cultural norms, laws, and ethical guidelines surrounding that medium than on the medium itself. Experience with telephone

counselling shows that clients use different counselling mediums for different purposes. Therefore, it may be important to consider ways in which on-line counselling can go beyond what is currently available, rather than simply asking if it can simulate face-to-face counselling.

<u>Race, Class, and Gender</u>

The idea of using computers and the Internet to increase access to counselling services raises the issue of inequality of access due to class, race, and gender (Herr, 1997; Sampson et al., 1997). In describing efforts to make career counselling available to people in remote areas of Canada, O'Hearn (1996) states that only the few people with access to up-to-date computer equipment can benefit. Watts (1997) claims that in Britain, Internet users are usually middle class, and suggests that if on-line counselling is going to increase access to counselling services for under-served groups, it will be necessary to actively promote computer literacy and provide public access points. With these concerns in mind, we developed a simple, low-bandwidth system that can be used on a wide variety of computers by a wide variety of people, not just those with access to the latest technology.

In a biting critique of claims made about the equalizing effect of the Internet, Spender (1994) argues that the reason more men than women were participating in public forums on the Internet (such as newsgroups) at the time she wrote *Nattering on the Net: Women, Power and Cyberspace* is that women were being deliberately excluded. Spender and others (e.g., Morritt, 1997) have catalogued factors--such as unequal opportunities to acquire computer skills, rampant sexual aggression on-line, and social messages about the realm of computers being a male domain--which may have kept girls and women from

using computers, or from joining public discussions and games on the Internet. These concerns, and the fact that there are more male than female users of computers and the Internet (Shaw, 1998), raise the question of whether or not on-line counselling services would be able to increase access to counselling for women and girls as much as for men and boys.

There is some suggestion that gender differences in Internet usage are decreasing as the Internet is increasingly seen as a place to develop and sustain relationships (Shaw, 1998). In recent years, there has been a wave of literature showing that there is nothing inherent to telecommunications technology that makes it unsuitable for women and girls, and nothing about girls and women that makes them unsuited to using computers or the Internet. In a study that involved observing five classes of fourth and fifth grade students over a period of 4 months while they used a closed computer network to help each other with computer-based assignments, Evard (1996) found that gender stereotypes did not hold in the situation she created. Girls posted more messages than boys, boys were hostile toward girls only occasionally, and when they were, the girls did not stop participating. In a study of gender differences in e-mail use within a small company, Allen (1995) found that women had more favourable views toward e-mail than men, and that they found it easier to use, more efficient, and more effective.

There is an assumption in literature on gender and advanced technologies that women and girls *should* be using computers and the Internet--that everyone should if they can. This project is not based on this assumption, nor on the assumption that increased use of advanced technology is necessarily a route to greater equality or individual

freedom. The study was designed with an eye to improving equality of access to human services through communications technology, but with the recognition that both the obvious and hidden costs of computerization can be high and need to be weighed carefully against the benefits.

Summary

Literature about distance counselling suggests that on-line counselling can increase access to counselling services, and that it has the potential to be effective in spite of the lack of physical proximity. Art therapy seems well suited to on-line counselling because it supplies a visual dimension (without the expense or bandwidth required for video), because it has a history of use with people with illnesses or disabilities, and because in art therapy the therapeutic relationship is partly with the art work itself. Computers have been used to make art therapy more accessible to people with disabilities, and there is an increasing number of assistive devices available to help people with a range of disabilities use computers. Art therapy seems especially suitable as a modality for on-line counselling within a narrative therapy framework.

The fact that the field of on-line counselling is growing quickly without a foundation of empirical data indicates an urgent need for research and for the active involvement of users (or potential users) of on-line counselling systems in shaping the field. As Sanders and Rosenfield (1998) have argued, one step that can be taken is for counsellors to collaborate with computer scientists in Human-Computer Interaction (HCI) and Computer-Supported Cooperative Work (CSCW) toward the development of therapy-specific computer applications--rather than relying on computer systems designed

to support corporate business communication. In the present study, the initial collaboration was between myself, a counselling psychologist with a background in fine art and experience facilitating therapeutic art workshops for people with life-threatening illnesses, and Davor, a computer scientist with a special interest in computer-supported communication and collaboration. In the later stages of the study, a group of 10 potential users participated in the continuing development and evaluation of the system we created.

To make on-line counselling viable, many things need to happen at once. Computer systems need to be developed specifically to support on-line counselling, research into the safety and efficacy of on-line counselling needs to be conducted, on-line counselling methods and techniques need to be developed, training programs for on-line counsellors need to be established, and ethical guidelines need to be adjusted to include on-line counselling (Bloom, 1997; King et al., 1998; Sampson et al., 1997). This study was designed to produce results relatively quickly and to lay groundwork for all five of these tasks. It was structured so that the three dimensions--the development of the computer system, the evaluation of the system for the purpose of identifying key issues relating to on-line counselling, and the cross-disciplinary sharing--could happen concurrently or at least overlap. The development phase continued into the evaluation phase, as feedback received during the evaluation was used to make further improvements to the system, and the cross-disciplinary sharing of knowledge and ideas occurred throughout the study. The focus of this thesis is the evaluation phase of the project. Aspects of the development phase are described in separate papers (Collie, Cubranic, & Booth, 1998; Cubranic, 1998; Cubranic, Collie, & Booth, 1998).

METHOD

Introduction

In the literature about on-line counselling, advantages, disadvantages and potential hazards are discussed at length. However, these discussions are not based on empirical research, and only in a very few cases (e.g., Murphy & Mitchell, 1998) are they based on direct experience with on-line counselling. This leads to the question of whether what is conjectured will be borne out by practice, or whether, through practice, different concerns will be revealed. In this study, we used direct experience of an on-line counselling system as a vehicle for uncovering new issues and concerns.

In order to cast a wide net that would catch as many ideas about on-line counselling as possible, Davor and I brought together a group of people interested in on-line art therapy who could offer perspectives on matters we assumed would be relevant to the topic, such as the ethics of distance counselling and needs of people with mobility limitations. We assumed that by sharing their ideas with each other and exploring the limits and possibilities of on-line counselling together, people with a variety of related backgrounds would be able to identify issues important to on-line counselling beyond what is contained in existing literature. It was crucial in this exploratory study to uncover as many previously unidentified issues as possible. Therefore, we structured the study to foster creativity and exploration. We used group activities designed to help people build on each other's ideas, and throughout the study we encouraged a flow of information and ideas.

Participatory Design

  We used a research methodology from the field of Human-Computer Interaction called *participatory design* (Floyd, Mehl, Reisen, Schmidt, & Wolf, 1989; Greenbaum & Kyng, 1991) as a conceptual structure for this multidimensional study, and adapted it to accommodate our three goals. Participatory design is similar to *action research* (Altrichter et al., 1993) in its goals and methods, and is used by computer system developers as a way to make work, technologies, and social institutions more responsive to human needs. The aim is to improve conditions of work and quality of life by involving workers, users, and community members in the process of design and development. A focus of participatory design is the empowerment of workers through actively engaging them in designing the systems they will be using (Bjerknes & Bratteteig, 1995; Clement & Van den Beeselaar, 1993). Two themes govern the practical implementation of participatory design principles: *mutual reciprocal learning* and *design by doing* (Floyd et al.).

  The methodology used here is grounded in the social constructionist idea that meanings are constructed and reconstructed interactively through an ongoing dialogical process that does not stop during research (Kreuger, 1994; McNamee & Gergen, 1992). Consequently, group interaction was emphasized throughout the study. The project was the kind of hands-on collaboration between developers and potential users of computer systems described by Bødker, Grønbaek, and Kyng (1995), in which simulations of future use situations are used to bring forward "tacit knowledge" (p. 216), and where success depends on creative interaction. Creative activity was the core of this study, and we

emphasized open communication and reciprocal sharing of knowledge.

There were three stages to the participatory process. The first was the initial collaboration between myself and Davor, during which we learned the possibilities and constraints of the other's discipline and began to design the system. When we had a working prototype, we worked with groups of graduate student volunteers to refine the system and to determine what kinds of communication it could support. In the final stage, the team of 10 co-researchers used their own engagement with the system as a springboard for generating ideas about on-line counselling.

(A breakdown of which parts of the project were carried out individually by Davor and myself, and which parts were done together is provided in Appendix A.)

Creating the System

In the first stage, we set out to develop a system that would support a form of group art therapy that I have used with people with long-term illnesses, in which the focus is imagining and symbolically creating preferred scenarios (Fryrear & Corbit, 1989). Our design decisions were made with an eye to enhancing both the relationship between art therapy and narrative therapy and the potential of computer-mediated art therapy to increase a client's self-esteem and sense of mastery and control.

We based the computer system on a face-to-face configuration in which a small group of clients sits around a table with an art therapist, with art materials such as pastels, markers, crayons, and watercolour paints in the middle of the table within easy reach. These are materials that require no training and can be used without much forethought. They favour directness and immediacy, and let the quality of the person's mark-making

show through. Each person starts with one piece of paper, with more paper on hand. In the first session, a pass-the-painting exercise is used for group-building and reducing people's inhibitions about making art. This is a lively exercise in which each person, including the art therapist, starts making an image on a piece of paper, and after a minute or so, passes that paper to the next person at the table, who adds to the image, and so on until each person in the group has done something on each piece of paper. In subsequent sessions, the art therapist guides the group through art activities that are done individually, talking intermittently to provide emotional presence and support, and glancing around to see how things are going--without looking closely at what people are drawing or painting (allowing some privacy). Group members are aware of other people making images, and typically feel supported and encouraged by being part of a group. They can also glance around without interrupting anyone. At the end of each 10- to 15-minute activity the group looks at what the others have done by standing up and walking around the table. When it is time for the group to discuss the art images together, the images are either put up on a wall or laid out on the floor in sequence.

The electronic version of this situation needed to support five tasks: speaking within the group, drawing, passing drawings, maintaining awareness of other group members' activities, and showing drawings to the rest of the group. Davor did this by creating an art program specifically for art therapy and combining it with a pre-existing communication program. He followed my specifications and made a program that is simple, naturalistic, and aesthetically pleasing. The program supports freehand drawing with a wide range of colours, and is maximally simplified for intuitive use. To prevent

people from feeling overwhelmed and to help them feel full mastery, there is nothing showing that is not needed--such as extra menus or commands. The program is similar to standard paint programs in that there is a small menu of "tools" (brush, marker, pastel, spray paint, eraser, colour-matcher, and pointer) at the side, and a large drawing space filling most of the computer screen. A new drawing space can be created at any time with one mouse click. Figure 1 shows what a client sees while using the system.

The system (communication and art programs together) is designed for use by a small group who can all make images on separate computer screens and talk together as in face-to-face group art therapy. A special feature of the system is that as a person draws, the information that makes that picture is transmitted to all the other computers in the group. This information is transmitted as individual user actions, such as mouse clicks and strokes, rather than as whole images, so the bandwidth requirements for the image transfer are minimal. The images remain in iconized form on other group members' screens but are fully visible on the counsellor's screen. Thus, the counsellor can see the images as they are being drawn, and the group members can have an awareness that others are drawing without actually looking at the images. When it is time to discuss everyone's images together, the iconized images can be opened with a single click. It is possible to point to things in someone else's image, and to pass a drawing into someone else's control so that person may draw on it for pass-the-painting activities.

With the help of the volunteer testers, we were able in 6 months to produce a workable system that runs on a local network of computers on the university campus. The next step is to adapt it for use on the Internet, and the participatory design process will

Figure 1: Photo Taken During a Test Session, Showing the System in Use
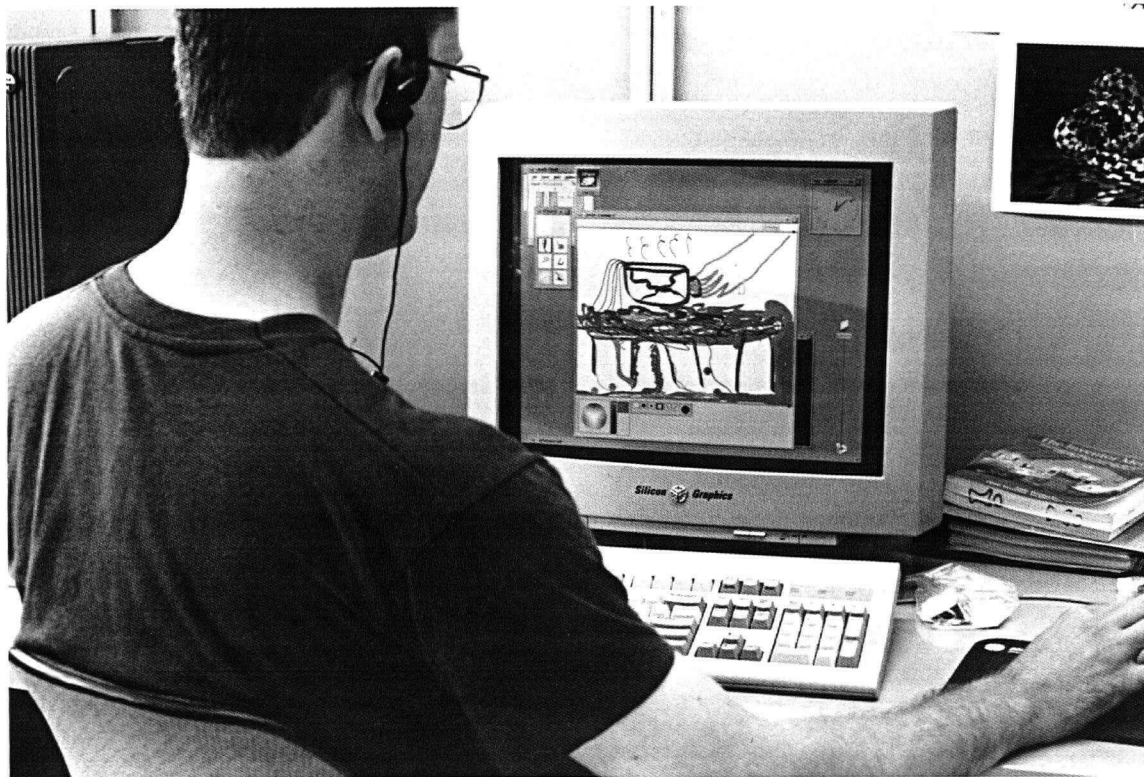
continue as this is done. Any adjustments that are required will be made in light of the feedback received from co-researchers who participated in this study.

We did not include small video images of the counsellor and group members on each person's screen because the capacity for full-speed two-way video transmission is currently not available to most people who access the Internet using modems. Given that a primary purpose of the study is to help expand access to counselling services, it was important not to include features that cannot be handled by standard computer systems. We were also concerned that any blurring of the distinction between the counsellor and the computer could be exacerbated by having a video image of the counsellor on clients' screens. Although there is evidence that at least some video contact could be helpful in on-line counselling (Rocco, 1998), it is not clear that it is necessary or that it would always be beneficial. People with illnesses and disabilities typically suffer a profound loss of privacy, sometimes coupled with sudden changes in physical appearance they do not consider flattering. Stein et al. (1993) found that members of a telephone group for people with MS were opposed to exchanging photos of each other and put high value on remaining unseen. Our decision not to include video is supported by research indicating that people using computer networks to do collaborative work adjust their communication according to the medium by focusing on what is most important when there are fewer channels of communication (Vera, Kvan, West, & Lai, 1998).

Recruitment and Procedures

We recruited using a *snowball* technique--asking people to suggest other people, and so on. Criteria for selection were: (a) an interest in the topic, (b) willingness to

participate, and (c) experience in areas such as art therapy, distance education, distance counselling, ethics and legality of Internet communication, or issues relating to people with illnesses and/or disabilities. We looked for people who did not have strong pre-set opinions either for or against on-line counselling (Kreuger, 1994), and who said they thought they would gain from the sharing of knowledge and ideas that we were proposing. During the recruiting period, I had conversations with 24 people who expressed interest in the study. After these people had been briefed about the project, they selected themselves. The 10 who participated were those who were most convinced that what they would gain would be worth the 10-hour time commitment. One person who was interested in the study said she did not want to experience simulated art therapy, and decided not to participate for this reason. It seemed that several men who expressed an interest had similar reservations. Only one person who wished to participate was not included (because we already had 10 people).

The aim of participatory design is to involve future users, and in this case potential future users include both clients and counsellors. In addition to having experience in other areas, such as art and computer science (see Table 1), all of the people who participated have at least some training as counsellors, art therapists, or support people working in counselling settings. Nine of the 10 work either full- or part-time at community human service agencies, including a cancer support centre, a centre for male survivors of sexual abuse, and a rehabilitation centre. The 10th person trains special education assistants. Although we did not specifically ask about this, it became clear as we were starting to work together that at least half of the co-researchers also had

Table 1

Co-researcher's Background Experiences

Name	Education	Relevant Professional Experiences
Group One:		
Colleen	BPE (psychology), MA	Vocational rehabilitation counselling/assessment with people who are injured or disabled, and with people in remote areas
Jerry	BSc, BFA, Diploma in Art Therapy	Art therapy in corporate settings and for survivors of sexual abuse; distance art therapy; computer art
Debbe	BA, MA, Diploma of Technology	Creative play workshops; computer science instructor; computer science administrator
Michelle	BFA, Diploma in Art Therapy	Art therapy for people who cannot get to a therapist's office and for people with mental or physical disabilites, injuries, or chronic illnesses
Vaughan	BA, PDip (teaching certificate), MA	Vocational rehabilitation counselling (general and adolescent); teaching
Group Two:		
Sylvia (pseudonym)	BA, MA, additional professional training	Individual and group counselling; counselling for people with disabilities; leading seminars/workshops
Moyra	Training in art and counselling	Counsellor/facilitator for people with cancer; co-founder of a support centre for people with cancer; art
Barbara	BFA, training in management and communication	Support services for people with cancer; computer science administrator; art
Dan	MA, additional professional training	On-line counselling; development of protocols and ethical guidelines for Internet-based counselling; addictions counselling; health promotion
Ruth	Diploma in Art Therapy, teacher training	Art therapy; teaching; training special education assistants; art

experience as counselling or art therapy clients or as members of personal growth groups --either through their professional training or for other reasons. So we had a team of co-researchers who could respond to the system from the point of view of both client and counsellor. Two members of the team have mobility limiting disabilities and use wheelchairs, and at least three live with chronic life-threatening illness.

We wanted the co-researchers to experience actual art therapy sessions as if they were art therapy clients, so that even those who may never have had the experience of being a client would be able to find out what the system felt like from that point of view. However, we were aware that they would be using a newly created and untested computer system that supports an unproven therapeutic modality (on-line art therapy), and I was concerned that there would be too great a risk of emotional harm if the co-researchers took the role of clients. It was only because they had training as therapists and counsellors that I was willing to conduct simulated distance art therapy sessions instead of simple demonstrations of the system. Therapists, counsellors, and other helping professionals are trained to protect themselves from emotional harm in educational and research settings. They are also trained to see through the eyes of others--which provided an additional advantage.

Level of computer competence ranged from novice to expert. One person (Moyra) had never used a computer before, and of the nine who have used computers, two had never used the Internet. Only three of the 10 people had used computer paint programs before. There were two men, one in each group, and both of them had previous experience with computer-mediated distance counselling. Dan has an e-mail counselling

practice in addition to his agency job, and Jerry has conducted distance art therapy sessions with individual clients using computers and modems. Education level ranged from high school completion to master's degrees, with 7 people having some kind of additional training beyond a BA. The age range was 28 to 53 with an mean of 39. One of the women (Debbe) has worked as a computer instructor, and has held the position of program head in the computer science department of a technical college. All of the co-researchers were White.

Each member of the team received a description of the project before coming to the computer lab. We explained that they would be co-researchers with us and that their observations were the focus, not our observations of them. They came to the computer lab in two groups of five. Each group participated in two 3-hour sessions spaced a week apart, with individual follow-up interviews a week or two after their second session.

It is important to point out that the team was not meant to be a representative sample of either group of potential future users (clients or counsellors). Nor was it composed of people who were certain to become users of the system, as is usually the case in participatory design. We were following guidelines used when focus groups are used for social science research and the goal is to maximize the generation and elaboration of ideas (Morgan, 1993). The success of the evaluation depended on having people with different kinds of knowledge explore the possibilities and limits of on-line counselling together: someone with knowledge of long-term illness who could imagine types of services that might be useful, someone who could talk about computers and what is possible technically, someone who has explored ethical issues and who could point out

situations where harm could occur, etc. We needed people with a diversity of backgrounds, and yet we knew that a key to successful focus group discussions is demographic homogeneity (Kreuger, 1994; Stewart & Shemdasani, 1990). We were concerned that if the groups were too diverse, they might not be able to build ideas together (Kreuger). We were aiming for diversity of knowledge bases, and were prepared to deal with such things as power differentials that could block the flow of the discussions (Stewart & Shemdasani). However, the people who came were quite similar demographically. They had many areas of commonality and what seemed to be a strong sense of common purpose (helping to expand access to social services). They were very able to generate ideas together, and when the discussions were over, it seemed that the blend of diversity in some areas and homogeneity in others had been ideal.

The Sessions

The sessions began and ended with face-to-face meetings and followed the format outlined in Table 2. It is important to note that the face-to-face contact may have had a significant influence on the research team's experience of the system (Rocco, 1998). We simulated geographical separation by using networked computers in separate rooms of the computer science building--one for me and one for each member of that day's group. Each person could communicate by speaking, and images made on one computer were immediately transmitted to all the other computers. Davor and an assistant were present to handle technical problems and to help with logistics. During two of the sessions (once for each group), one member of the team sat with me to observe the process from the point of view of the art therapist. At the end of the first session we gave everyone a packet

Table 2

Format for the Evaluation Sessions

Mode	Activity
1. Face-to-face	Introduction
	Demonstration of the system (first session only)
2. On-line	Practice using the system
	Pass-the-painting activity (first session only)
	Relaxation and guided meditation
	Art therapy activity
	Looking at each other's images
	Debriefing
3. Face-to-face	Group discussion

of information about on-line counselling derived from our literature review.

Technical failure is a possibility with any computer system, and we decided that if the system performed flawlessly we would induce it to crash, so that people could have direct experience of losing their image and/or being cut off from the group unexpectedly. As it turned out, some kind of technical problem occurred during each session and we did not have to simulate it.

The groups experienced several simple art activities, including spontaneous painting, an empowerment exercise, and a problem-solution sequence, in addition to the pass-the-painting exercise. The activities were set up so people could go as far as they wanted to--they could go through the motions just to get a feel for the system, or they could enter more deeply into a therapeutic process. The specific art activities were different in each session. Each one began with a relaxation exercise, and a brief guided visualization (conducted on-line) during which the co-researchers were asked to close their eyes and imagine specific things while listening to me talk. After each art activity, the team talked briefly about their experiences, and then, after securing permission, looked at each other's images.

The discussions following the art therapy sessions were based on the following questions: What was the experience like for you? What difficulties or problems arose while you were using the computer system? What kind of connection did you feel with the other people in your group while you were making your images? What comes to mind when you imagine on-line art therapy taking place with actual clients? What would need to be known about this modality before using it with clients? What kinds of clients (if

any) do you think could benefit? Generally these questions were answered without my having to ask them. Davor participated in the discussions, which were audiotaped by an assistant. Our aim was to create a permissive and non-threatening atmosphere to help the team speak freely and build on each other's ideas (Krueger, 1988). The team's comments were wide-ranging, exploratory, and thoughtful. There were differences of opinion and respect for others' viewpoints, with no evidence of negative responses getting amplified through the group process (Carey, 1995).

Follow-up Interviews

Within the 3 weeks following the group sessions, I contacted each member of the team for an individual interview. This gave everyone a chance to share any further thoughts about their experience, and to clarify things they said during the group discussions. Most of these interviews were conducted by telephone, and some developed into complex discussions that lasted longer than the allotted 30 minutes.

Data Analysis

The data collected during the evaluation phase consisted of: (a) transcriptions of group discussions; (b) our own observations; (c) notes taken by various members of the team during the sessions, including notes made by the participants who observed the art therapy sessions from the point of view of the art therapist; (d) notes made by participants between sessions; and (e) notes I made after the group sessions and during and after the individual interviews. We conducted a content analysis of these data to create a comprehensive picture of the issues that emerged. Due to the exploratory and preliminary

nature of the study, the analysis of the data was straightforward (Stewart & Shemdasani, 1990). We simply wanted to determine what issues arose, which ones (if any) seemed particularly important, and whether any new issues had emerged. Our data analysis strategy was based on methods used in focus group research (Kreuger, 1994; Morgan & Kreuger, 1993; Stewart & Shemdasani, 1990) and action research (Altrichter et al., 1993).

The analysis occurred in three stages as the study proceeded. In the first stage, the audiotapes of the four group discussions were reviewed (within 48 hours) and were given a first level of coding to facilitate introduction of the ideas that had already been generated into subsequent discussions. I listened to each tape carefully, wrote down all the ideas and topics that were mentioned on a master list, and coded the list using coloured pens. Each entry was listed with the name of the person speaking and the date of the discussion. The follow-up interviews were not audiotaped. However, with one exception they were conducted by telephone, so I could easily write down any new issues that were mentioned. These were added to the master list in a way that allowed them to be distinguished from the issues discussed during the group discussions.

When all the follow-up interviews had been conducted, the audiotapes of the group discussions were transcribed, and the transcriptions were used to check the master list for accuracy. Only a few minor changes were made. A new list was then generated using the first master list, our written records of the research sessions, and notes made by research team members. This list was divided into a new set of categories that we used to determine the next steps of the development process.

In the final phase of the analysis, the focus switched from compiling information

for use in the continuing development of the system, to identifying key issues pertaining to on-line counselling. From the list of all the topics that had been raised, we made a condensed list of main topics, and divided these into categories that allowed us to relate our findings to existing literature.

Once the list of main topics had been created, the data were reviewed again to determine which topics or issues had been given particular importance. Frequency of mention and the intensity of a comment were the main criteria we used to judge relative importance. More weight was given to specific comments than vague comments (Kreuger, 1994), and to comments stemming directly from participants' experience. Lack of disagreement was not taken as consensus (Morgan & Kreuger, 1993).

All the issues raised were then compared with the issues discussed in existing literature about distance counselling. Through this process, a list of issues that have not been discussed at length in previous literature was compiled. Finally, all the problems and potential problems that had either been encountered during the sessions or mentioned during the discussions were divided into those for which the research team could easily imagine solutions, and those for which they could not.

Co-researcher Review

After the data analysis had been completed, the 10 co-researchers were given an opportunity to check that our interpretation matched their experience, and to make any necessary amendments. This was done by mailing the Results section of this thesis to everyone, and then contacting each person by telephone or e-mail several weeks later to discuss any changes they might recommend. Everyone expressed satisfaction with our

summary of what occurred during the evaluation phase of the study, and said it matched

their experience. Eight people said they were pleased with the write-up as it was and had

nothing further to add. The other two people recommended minor changes in wording

(regarding references to people with disabilities) and in emphasis (regarding the

importance of not being seen). The data were reviewed again with these recommendations

in mind, and all the recommended changes were made.

Sharing of Knowledge and Ideas

There were several reasons to make the sharing of knowledge and ideas an

important part of the study. We were interested in helping community workers become

involved in the conceptual formation of the field of on-line counselling. This is a field

that is growing rapidly and may have the potential to significantly improve the delivery of

counselling services. We wanted to pass the infomation we were acquiring about the

promises and pitfalls of on-line counselling into the community, and to set up avenues for

information to flow quickly from research institutions to social service agencies. Above

all, we wanted to reciprocate, and give back to the co-researchers at least as much as we

were receiving from them.

The sharing of knowledge and ideas began during the initial collaboration when

Davor and I were learning about each other's fields, and it continued during the

evaluation phase when the co-researchers shared their ideas with us and with each other.

We gave the research team access to all the information we had amassed for the study and

we provided everyone with a written summary of this material. Later we shared the

results of the study with the team, and we continue to be in touch with them.

RESULTS

Overview and Context

During the evaluation, there was surprisingly little discussion about the viability or advisability of on-line counselling. The position the group took was that on-line counselling is going to happen anyway, so the discussions focused on how to harness the potential of the Internet to provide services that could not be provided otherwise, and on how to make on-line counselling work well. For the most part, the group used face-to-face counselling as a standard of comparison, but Dan pointed out that this might keep us from assessing on-line counselling in its own right and suggested we think critically about on-line counselling in relation to clients' needs rather than in relation to face-to-face counselling.

As we had hoped, people not only reported on their own experiences with the system, but also extrapolated from their experiences to consider the implications of using a system like this with a range of clients. In general, the research team's comments were client-focused; that is, advantages and potential problems were explored in terms of the impact on the client.

The co-researchers found the system pleasurable and easy to use. Even people with no previous computer experience learned how to use the system in less than 15 minutes. There was a rough association between team members' degree of computer experience and the degree of their enthusiasm for the idea of on-line counselling. However, it was the person on the team (Debbe) who had worked as a computer science instructor who emphasized the fallibility of computers and the ever-present risk of

technical failure. Two members of the team who initially were somewhat opposed to the idea of on-line counselling changed their minds after experiencing the system. In the role of the counsellor during the sessions, I found that the main difference compared to face-to-face counselling was that I had to use my intuition more in order to know what was going on with the group and to judge how to pace the sessions.

Spoken and unspoken assumptions about counselling that informed the discussions became apparent during the data analysis. Foremost amongst these was the assumption that a client's sense of control and agency should be maximized during, and as a result of, counselling sessions. This is one of the cornerstones of narrative therapy (Freedman & Combs, 1996; White & Epston, 1990). It was assumed that sense of connectedness with the group is important in a group counselling situation and should also be maximized. The group agreed that the computer system should be easy for a client to use and that too much awareness of the technology would be a distraction that would weaken the therapeutic encounter.

Many problems or potential problems were revealed, and many solutions to these problems were put forward, usually in the form of protocols for using the system. Only a few of the problems discussed did not seem to have easy solutions. These were: (a) problems associated with technical failure, (b) the amount of preparation required before beginning therapeutic sessions with a client, and (c) the lack of shared physical presence during sessions.

Some potential problems that we expected would be discussed at length were not seen as major stumbling blocks by the group. For example, the lack of tactile/physical

dimension of the art materials was only mentioned briefly by two people (Jerry and Debbe). Although lack of shared physical presence was considered important, lack of visual cues was not seen as a major disadvantage. Confidentiality of Internet communication was discussed at length, but it was not considered any worse a problem than in other forms of communication. The problem of building trust and cohesion when group members do not see each other was mentioned repeatedly--and ways of overcoming the problem were offered--but no one thought it would be impossible to develop trust and cohesion in an on-line group. Considering how many problems and pitfalls were discussed, it was surprising that the issue of counsellor competence and specialized training for on-line counsellors was mentioned only once.

Space does not permit a complete report of all the issues listed in Table 3. What follows are elaborations of three categories of issues relating to on-line counselling: (a) those that seemed particularly important, (b) those not discussed at length in existing literature, and (c) those for which the team could not easily imagine solutions. There is some overlap between these categories (see Table 4). Technical issues relating specifically to this system are not included here as they are described in Davor's master's essay (Cubranic, 1998).

<u>Ten Key Issues</u>

<u>Technical failure.</u> The research team experienced a variety of technical problems, ranging from minor glitches in the art program to complete disconnection. There was concern about the distraction caused by technical problems, and especially about the distress a client could experience if a disconnection occurred in a moment of pain or

Table 3

Main Topics of Discussion (by category)

Category	Topic
Technical Issues	* Technical problems
	Ease of use
	Awareness of the technology
	Access to adequate hardware
	Access to technical support
	Synchronous communication
	Audio plus visual communication
Using the System	* Protocols for using the system
	Time required for advance preparation (including screening and client training)
	Protecting clients' safety
	Ensuring privacy
	Minimizing interruptions
	Connectedness with the group

Advantages	* Sense of privacy; neither client nor counsellor judged by physical attributes
	Increased access to counselling
	Reduced power imbalance between client and counsellor
	Sense of control and enhanced self-esteem from using a computer
	Decreased inhibition about art making
Disadvantages	* Lack of shared physical presence; lack of "positive energy" from another person
	No access to body language or facial expressions: hard to build trust, hard to interpret silences
	Possible negative effects of looking at a computer screen
Clients Who Might Benefit	* People with disabilities
	Adolescents
	People experiencing shame
	People in remote locations
Larger Issues	The trend toward computerization
	The pressure to computerize
	New counselling paradigms

* indicates topics the research team deemed particularly important.

Table 4

Key Issues (by category)

Category	Issue
Most important issues	Problems associated with technical failure
	Relevance for people with disabilities
	The need for clear and detailed protocols for communication
	Lack of shared physical presence
	Increased sense of privacy; protection from pre-judgment
Issues not discussed at length in existing literature	Clients' sense of control
	Age as a factor
	Relevance for people with disabilities
	Sense of connectedness with the group and awareness of other group members
	The need for clear and detailed protocols
	Possible deleterious effect of looking at a computer screen
	The need for public access points
Problems without ready solutions	Problems associated with technical failure
	The lack of shared physical presence during sessions
	Time, expense, and effort required for preparation, orientation, and set-up

vulnerability, possibly resulting in feelings of abandonment or loss of control. Barbara said that when the system crashed in the middle of a session, she felt abandoned by the group and could not regain her focus when the system was working again. Procedures were discussed for preparing clients for technical problems, and Ruth recommended rehearsing with each client what to do in the event of a disconnection. Jerry suggested that telephones could be used as a back-up, or that someone could be present with each client to offer both emotional and technical support if needed. But the purpose could be defeated and the cost-effectiveness negated if each client had to have face-to-face assistance. Therefore, it would be useful for the counsellor to have enough technical knowledge to be able to provide technical support from a distance.

Disability. It was agreed that on-line art therapy has great potential for people with disabilities, especially given that there are assistive devices to help people with disabilities use computers. The computer as a medium of expression and the capacity to span geographical distance were both seen as valuable for people with disabilities. Sylvia (not her real name), who uses a wheelchair and who works as a counsellor with people with disabilites, was emphatic about the importance of anything that can reduce the isolation that many people with disabilites experience. I pointed out that counsellors with disabilities could also benefit. Colleen was concerned that people with certain kinds of disabilities might be excluded from using this kind of computer system, but Michelle and others offered examples of people with a range of special needs, disabilities, and cognitive limitations becoming adept at using computers.

Most people said they found it liberating to draw with an input device (mouse)

they could not control well enough to make refined drawings. However, Sylvia, whose disability affects her dexterity and arm movement, had the opposite reaction and said she would have preferred an alternate input device. Vaughan, who also has dexterity limitations, used a large track ball instead of a mouse and found this to be freeing in the same way the mouse was for the people without motor disabilities.

Protocols. As the team imagined how to create appropriate conditions for on-line counselling, procedures were suggested that would ensure such things as confidentiality, privacy, autonomy, and a non-judgmental atmosphere. A set of protocols for on-line art therapy communication emerged; these were: (a) identify yourself before speaking, (b) speak to maintain connection with the group, (c) expect pauses and silences during group interactions, (d) provide information about your surroundings as you talk with the group, (e) let the group know if anyone is present with you, and (f) provide information about how you are feeling and what is going on for you. It was emphasized that clients should be given detailed descriptions of what to expect.

To address the problem of not being able to see who is looking at one's image, protocols for looking at other people's images were also formulated. These were: (a) only look with permission to look, (b) say that you are looking, and (c) use *active looking* (i.e., have your pointer present and activated in the image you are looking at, use it to track your gaze, and point to the parts of an image you are talking about).

Lack of shared physical presence and privacy. The team described both advantages and disadvantages of the physical separation between counsellor and client. In general, the team thought it would take longer to develop trust without shared physical

presence, but that trust *could* be developed and working therapeutic relationships could be established. Moyra, the member of the team with the least computer experience, thought therapy would not be possible, saying that for someone to let themselves feel as vulnerable as is necessary for therapeutic work, there needs to be someone else physically present. She said increasing human connectedness is a key ingredient of healing and expressed the strong opinion that to advocate on-line therapy is to condone the separateness between people that many therapeutic interventions are aimed at repairing. Sylvia agreed that although counselling relationships may be able to be initiated on-line, healing work may not be possible. Overall, the research team had a favourable view of on-line counselling *if* it could create human connection where there otherwise would not be any, but *not* if it would replace face-to-face interaction.

Advantages were described with reference not only to people who might not have any contact otherwise, but also to people, such as sexual abuse survivors, whose reasons for seeking help are coupled with shame, and to people who want protection from the gaze of the counsellor to avoid being judged by their physical appearance. One person said it was easier to focus (as a client) with no one else in the room. Jerry, an art therapist who works with male survivors of sexual abuse, said there would be great demand for on-line counselling services by this population, and Moyra, who has extensive experience working with people who have faced life-threatening illness, was enthusiastic about the possibility of having an identity not based on the state of the body. Vaughan explained that people with disabilities who require daily assistance from attendants have very little privacy and might appreciate the opportunity to be alone during counselling sessions.

Sense of control. Ruth pointed out that *control* is a key issue for many clients, and the group explored ways in which a client's sense of control could be increased through on-line counselling. The client has control over more aspects of the counselling sessions than in face-to-face therapy, and more control over what is shared. It was agreed that feeling in control of a computer could have positive therapeutic effects, especially if the program is as reactive and responsive as the team reported this one to be. However, several people stated strongly that the sense of control could be negated in a potentially harmful way if the system crashed mid-session.

Age. There was concern that older people without computer experience--perhaps the very people experiencing isolation--would not take to on-line counselling. This was countered by the idea that using a computer might be particularly empowering for people who are intimidated initially. It was generally agreed that adolescents who are familiar with computers and already have on-line relationships--and who might be averse to face-to-face counselling--are obvious candidates for on-line counselling.

Connectedness. The system supports group awareness with audio channels for speech (that can be heard by everyone in the group), and with sharable images that remain in iconized form on other clients' screens until it is time for the group to look at them together. According to the research team, this provided an appropriate degree of awareness of other group members--not too much and not too little--as long as people could know when someone else was looking at their images. The team had a sense of connection with the group and also a feeling of privacy. The threat to group cohesion and

connectedness posed by technical failure was discussed at length.

Effect of looking at a computer screen. Moyra expressed concern about the effects of looking at a computer screen and wondered if viewing computer monitors suppresses the imagination the way watching television is purported to do. Some of the participants said they could imagine and visualize in a normal way while using the system; others said they could not. Although working interactively with a computer is a different kind of activity than watching a television program, and computer monitors differ from televisions in their frame rate, interlace speed, and spatial resolution, this is a potentially significant issue that has not been addressed in literature about on-line counselling.

Public access points. When the group discussions began, the model being considered was one where the client is at home. Problems intrinsic to this model (lack of technical help and emotional support for the client, and the fact that many people do not have computers or Internet access) pointed to other scenarios--for example, Internet access from clinics or community centers, where other people would be available to give technical and/or emotional support.

Preparation. Several people, especially Dan, expressed concern that so much preparation would be required to get started with an on-line client that it would not be practical. Initial screening would be more complex, as it would need to include such things as assessing physical needs and assessing a client's limitations pertaining to comfort with computers and computer literacy, stamina, cognitive ability, and ability to handle technical failure. Time would be needed for getting the system going, making sure

it was working reliably, and taking care of any incompatibility problems between the clients' and counsellor's computers. Training and orientation in the use of the system would be required and protocols for communicating and procedures for recovering from technical failure would need to be learned.

Results of the Sharing of Knowledge and Ideas

By generating ideas together and sharing our knowledge with each other, we all deepened our understanding of the possibilities and limitations of computer supported distance counselling. All the co-researchers now have an understanding of the current state of the field of on-line counselling and know where to get more information if they want it. Two of the people who work with people with disabilities expressed an interest in continuing their involvement in on-line counselling because of the possibilities it holds for their clients.

We encouraged the co-researchers to use the results of the study for their own purposes and to share them with other people--so the flow of information we began can continue to spread. Jerry and Dan have included information from the study in conference presentations, and Ruth will write a report about the project for the newsletter of the art therapy organization to which she belongs. We (Davor and Kate) are also sharing what we learned with colleagues in our respective fields, both informally and at conferences.

This thesis represents a further continuation of the knowledge sharing that formed the core of the study. It is written to be understandable to readers outside the fields of counselling psychology and computer science, and a version of it will be submitted for publication in a counselling journal. We have presented aspects of the study at

conferences in the areas of Human Computer Interaction (Cubranic, Collie, & Booth, 1998), participatory design (Collie, Cubranic, & Booth, 1998) and gender and technology studies (Collie & Cubranic, 1998), and two of these conference papers have been published.

Davor and I both found that our ideas were changed significantly during the course of the study. For Davor, it was a revelation to see computers being used as a medium for artistic expression and emotional processing. The co-researchers' reactions, and their ideas about the ways a system like this could be used, dispelled his idea that there is something intrinsic to computers--an inherent coldness--that restricts their use to the usual productivity and entertainment applications. My perspective was changed through learning what kinds of computer-mediated communication are possible, by witnessing how easy it was for everyone (including me) to use the system, and especially by the enthusiastic comments made by co-researchers with disabilities and long-term illnesses. The initial premise of the project was that on-line art therapy might be able to serve people with illnesses and/or disabilities in several significant ways at once. The research team's comments suggest that a system like this could help people with mobility limitations or disabilities in even more ways than we had initially imagined, through assistive devices that make it possible for people with communication impairments to use computers as tools for personal expression. For me, these considerations outweigh my lingering skepticism about the advisability of on-line counselling, and point to future participatory design projects that focus on accessibility features and low-bandwidth systems for home use.

DISCUSSION

<u>Overview</u>

At the writing of this thesis, the three objectives of the project have been met. We developed a computer system to support distance art therapy, the evaluation produced answers to both the primary and secondary research questions, and there was a rich and exciting exchange of knowledge and ideas between computer scientists and helping professionals, and between university researchers and community workers. By developing the system in a collaborative, participatory way and letting the three dimensions of the study overlap, we were able to make efficient use of our time and resources and to lay groundwork for addressing the simultaneous needs mentioned in the introductory chapter: for computer systems designed specifically for on-line counselling, for research data about on-line counselling, and for specialized techniques and guidelines for conducting on-line counselling.

The results of this study need to be considered in light of two limitations. The first is that the literature about on-line counselling cited in this thesis is based almost exclusively on text-only forms of on-line counselling, whereas the computer system we developed supports communication by speech and images. This limits the comparisons that can be made between of the results of this study and ideas contained in previous literature. The second limitation has to do with who the co-researchers were. We assembled a research team with a range of backgrounds, so people could make comments from a variety of points of view; and because our primary target population is people with mobility limitations caused by illness or disability, we included people with first-hand

knowledge in these areas. However, it is important to note that demographically the team was relatively homogenous, in that everyone who participated was White, English-speaking, and working age. Several members of the team mentioned that their comments perhaps would not apply to certain groups of clients, for example youths and older people. Most of the co-researchers are very educated, and for this and other reasons were speaking from a position of privilege. Almost all of them are counsellors or therapists. Although the study was structured to help the team understand the system from the point of view of both client and counsellor, there were no clients involved who are not also counsellors, educators, or support workers. This is important because if there are future users, most will be clients not counsellors, as each counsellor will have multiple clients. What we are reporting here is not meant to be an authoritative or exhaustive list of important issues. A different group of people working together on this project may have come up with important considerations that this group could not have imagined.

Implications for Counselling Practice

The research team as a whole had a favourable impression of on-line counselling by the end of the study. The issues that emerged as most important were not the same ones that have been highlighted in existing literature. Although lack of shared physical presence was seen as a significant problem, lack of visual cues was not. Confidentiality of Internet transmissions and the coldness of computers were seen as minor concerns compared to technical failure and the availability of technical support. The team's perspective on the issue of confidentiality is in keeping with the idea that emphasizing confidentiality in on-line counselling is condescending (Lanning, cited in Morrisey, 1997)

and that counsellors should not be trying to protect clients against themselves (Watts, 1997): "If a client is informed about confidentiality risks..., why do we think those clients cannot make intelligent informed choices about the Internet as we assume they do in traditional counselling?" (Morrisey, p. 6).

The development of on-line counselling techniques was not one of the stated goals of the project. However, through using the system, protocols for on-line communication were developed that could be used in a range of on-line groups and there was some exploration of new counselling methods and paradigms to use with this medium.

The research team's positive comments reinforced our ideas about the appropriateness of a narrative art therapy approach for on-line counselling. Art making and computer usage both provide opportunities for clients to increase their awareness of their own strengths and resources, and indeed the potential for clients to feel empowered by participating in on-line art therapy was mentioned frequently by the research team. Seven people reported that their ability to be creative without inhibition was enhanced through using a computer to make art images. The tendency toward spontaneity and candour that is popularly held to infuse on-line communication was mentioned during the discussions, and one person (Moyra) said using a computer "speeded up her thinking." Vaughan said the ephemeral and mutable nature of computer images would give clients more scope for trying out new meanings and narratives, with freedom to choose which ones to discard (with no trace) and which to carry forward. The fact that electronic images can be transmitted to other computers facilitates the witnessing of clients' images.

The research team did not discuss the need for special training programs for on-line counsellors. However, the fact that technical failure and social protocols emerged as two of the most important issues suggests that on-line counsellors need specialized knowledge in the areas of both on-line communication and computer technology. In the absence of training programs, on-line counselling skills can be gained by running simulated groups under the supervision of counsellors who have experience with telephone groups or on-line groups (Hines, 1994; Stein et al., 1993).

The evaluation addressed the question of ethical concerns in two ways. It provided information about where there might be dangers that do not exist in face-to-face counselling--such as problems associated with unexpected disconnection--and also about where there might be less danger than has been assumed--in the area of confidentiality, for example.

Currently there is great pressure to computerize almost every type of work. Moyra made an analogy between computers and cars, which are so much a part of the fabric of industrialized life that they are used even when they are not needed, in spite of great individual, societal, and environmental costs. It seems important, while proceeding with on-line counselling, to use computers only when they will improve the quality, availability, or cost-effectiveness of counselling services, and to be attentive to hidden costs--such as job loss--and to the way resources (money and time) are deflected from other initiatives when new computer systems are introduced. The computerization of work can lead to increased control of workers (Kling, 1995), so it will be important to make sure that on-line counselling does not lead to types of monitoring that

disenfranchise either clients or counsellors.

To avoid exacerbating inequality of access through computerization, the development of on-line counselling services needs to go hand-in-hand with efforts to expand access to all kinds of social services--rather than being part of the conservative push to enlarge the technological sphere while reducing social services. Clearly, making computers available to under-privileged people also needs to be an intrinsic part of any expansion of on-line counselling services.

Ironically, the use of more complex technology may bring quintessentially human skills, like intuition, more into the foreground. The observation made by Stein et al. (1993)--that it is necessary to rely more heavily on intuition when conducting distance counselling--was reinforced in this study.

Implications for Research and Development

There was nothing in the research team's comments about the system to indicate that its development should not continue. The strong positive comments about the potential benefits for people with disabilities point to a participatory collaboration among a team of people with a range of disabilities who could work toward making a system that is more widely accessible to people with disabilities.

The team's comments about the advantages of not being seen suggest that even where the money and bandwidth are available, videoconferencing may not be the best medium for distance counselling. Clearly, it is important to explore inexpensive, low-bandwidth alternatives when the main objective is to expand access to counselling services. The project described here provides an illustration of a system that has more

scope than text-only systems, and uses technology that many individuals and agencies already have. One of the next steps in the development phase is to adapt the system for use on the Internet, and to conduct studies similar to this one using the Internet instead of a local computer network.

When working with computers, it is easy for the equipment to become a focus of attention, and for the distinction between the computer system and the information it carries to get lost (Kling, 1995). The fact that protocols for on-line communication emerged as one of the most important themes in the research team's discussions suggests that when developing on-line counselling services, the primary focus needs to be on the communication, not on the system that is the vehicle for the communication. In describing how *communication work* is crucial to the success of computer networked design teams, Robertson (1997) makes the point that this work is often overlooked and devalued because the skills of communication, relationship building, and coordination have historically been considered women's skills. She has advocated "making communication work more visible within the discourses of technology design", and for designing systems that are flexible enough to "accommodate the highly specific ways that language is used to accomplish...communication work" (p. 272). As the development of this and other systems goes forward, it will be important to make sure that computer systems and methods of using them are being developed together. Counsellors are specialists in communication, and it is likely that the communication skills developed by counsellors for on-line counselling will be widely applicable to computer-supported cooperative work.

The issues that emerged from this study as important, as not yet explored, and as difficult to resolve can be used as starting points for future research projects. During the group discussions, there were many comments about the potential benefits for adolescents, and about how young people's attitudes toward computers may be different from the attitudes of people in the age groups represented in this study. This could be an important area of investigation, and one that would bring the issue of verifying identity (for the purpose of verifying age and securing appropriate consent) into the foreground.

This collaboration has involved two disciplines (counselling and computer science) that might may seem quite dissimilar. However, issues of importance to on-line counselling are also being examined by researchers in fields such as Human Computer Interaction and Computer-Mediated Communication--for example, trust development in distributed groups (e.g., Rocco, 1998) and the effect of distance on trust and truthfulness (e.g., Moon, 1998). Therefore, studies that follow this one need to include cross-disciplinary exchanges in order to coordinate on-line counseling research done by counselling professionals with research in other fields.

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Appendix A: A Note on the Value of a Multidisciplinary Approach

This has been a joint project that we, Kate and Davor, planned and carried out

together. Although the work was divided quite differently in the different phases, we saw

the project as an equal collaboration for which we were both responsible. Both our

master's degrees depended on this work, and as we had never worked together before,

and were both entering uncharted terrain, we took a risk by agreeing to rely on each other

for our degrees. We knew that the risk would be worthwhile. By working together, we

were able to undertake a more ambitious research project than we would have been able

to individually, and by bringing our different knowledge bases together, we could make a

genuine contribution to an exciting new field. On-line counselling is inherently

multidisciplinary, and research in this area requires bridging gaps between domains that

are usually very separate. This project is an illustration of a bridge not only between

disparate fields, but between university researchers and community workers. The

structure of the project, with its emphasis on egalitarianism and knowledge sharing, is

part of our contribution.

We understand that this is the first thesis to be submitted to the University of

British Columbia library that will carry the name of a research partner on the title page.

We are proud of this, and hope that the university will commit itself to facilitating more

collaborative research projects among graduate students.

To satisfy university requirements, we need to specify what each of us

contributed: In the first phase, Davor did the work of creating the computer system, using

specifications developed by Kate. The two of us conducted the test sessions with the

volunteers together. Kate designed and oversaw the evaluation, which included:

(a) securing permission from the ethical review committee to conduct a study with human

subjects; (b) recruiting the research team; (c) generating consent forms and letters of

invitation for the members of the research team; (d) hiring assistants for the research

sessions; (e) briefing the research team; (f) compiling background information about

on-line counselling for the research team; (e) developing art therapy activities to use with

the system; (f) organizing and leading the research sessions; (g) moderating the group

discussions; (h) conducting the follow-up interviews; and (i) securing feedback from the

research team about the evaluation results. The data were analyzed by Kate in

consultation with Davor. The sharing of knowledge and ideas was intrinsic to the project

and we both participated in it. All the written material provided to the co-researchers was

prepared by Kate. The literature review outlined in this thesis was done by Kate, and the

manuscript was written by Kate with feedback from Davor. Very small portions of what

is presented here were taken from a paper we wrote together (Collie, Cubranic, & Booth,

1998).