FEATURE ARTICLE

Charting the future today: Psychiatric and mental health nurses in cyberspace

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ABSTRACT: *The development of the Internet is happening at a staggering pace and promises to have a dramatic impact on human relations. If nursing is to adapt to and benefit from these changes, consideration ought to be given to the experiences and opinions of nurses who have adapted to and use the technology. This paper provides an outline of the findings of an Email survey of psychiatric and mental health nurses who are experienced in using the Internet. Questions focused on what psychiatric and mental health nurses use the Internet for, how their use has changed, work-related benefits, and what impact they see the Internet having in the future.*

KEY WORDS: *computers, electronic mail, Internet, mental health nursing, psychiatric nursing.*

INTRODUCTION

It has become almost a cliché to point out the potential benefits of the Internet to nurses. So rapid has been the pace of technological change and increased accessibility to the Internet in Western countries during the 1990s that it has become unnecessary to even point out that the 'Internet' is the term used to describe an international network of computers which provides a means for the inexpensive and fast exchange of information. A search of the nursing literature will reveal in excess of 300 articles and books relating to the Internet published in the three years prior to 1999, excluding the vast amount of literature that is actually published on the Internet. As

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Hutchinson (1997: 46) observes, the Internet is no longer the domain 'of computer geeks and techno-junkies'. The Internet is rapidly becoming an essential tool for researchers, students, educators and clinicians who want to stay abreast of developments in the field of nursing.

The Internet is huge and complex. It consists of technical layers that include the physical hardware of the computer, the physical medium that connects the computers together, the software or operating systems that provide a common language so that the computers can share information, and software to provide meaningful applications such as Email or Web-browsing (Huang & Alessi, 1996: 864). An understanding of the technical layers of the Internet is necessary to understand 'how' it works, but an understanding of the human-interaction layer is necessary to 'make' it work. Huang and Alessi (1996: 864) suggest that the most difficult task for someone learning about the Internet is not mastery of the technical layers

of communication but acclimatizing to the shifts in expectations that are generated by new methods of communicating. Hannah (1995: 44) suggests that human nature is the biggest factor to consider when contemplating the future of the Internet for nurses. Can nurses adapt to the Internet, and can they adapt it to serve the purposes of nursing?

Developments over the last few years include nursing organizations establishing a presence on the Internet, the publication of refereed journals on the World Wide Web (WWW), the use of the Internet as a primary delivery medium for education, and the field of 'informatics' as an emerging specialty discipline. Over the last decade some psychiatric and mental health nurses have been communicating via Email, congregating using Email list groups, and developing expertise in the use of the Internet. The experiences of such people in using the Internet can inform the novice and ought to drive the development of the Internet to further its usefulness to nurses. Perhaps more importantly, their experiences reflect a small slice of history in the making, as the Internet stands to alter human relations in at least as profound a way as the advent of the telephone.

An Email survey of the psychiatric-nursing list in 1995 (Lakeman, 1996; Lakeman, 1997) examined what psychiatric nurses were using the Internet for, how they learned to communicate using the Internet and how they believed the Internet might be of use to nurses in the future. This group were taking advantage of available applications but were primarily using it for personal or professional communication. They saw the Internet as having the potential to facilitate a global network and culture of psychiatric and mental health nursing if a number of identified constraints could be overcome. Since then, the Internet has grown, technology has become more accessible to certain groups, and new applications have been developed

This research project aimed to revisit the experience of psychiatric and mental health nurses using the Internet, to track changes that have occurred in usage, and to provide a basis to anticipate and plan for the future.

METHOD

A descriptive survey design was used with Email being the sole method of data collection. An Email message was sent to the mailbase psychitric nursing and ANZ-psych Email lists to which the author was subscribing. The mailbase list was established in 1994 and was the first international open Email discussion group for psychiatric and mental health nurses. It has in excess of 550 subscribed members and an average of seven messages posted every day since its creation (as of 16 March 1999). The ANZ-PSYCH list was established by the Australian and New Zealand College of Mental Health Nurses in late 1997, has in excess of 150 members and has an average of two messages posted each day (as of 16 March 1999).

The Email included an invitation to participate, a brief background to the research question, a statement of how data would be used, and an assurance that all responses would be treated as anonymous. An instruction was also provided to reply to the author rather than the list if people chose to participate by responding. The questions posed were:

1. How many years have you been using the Internet?
2. What do you primarily use the Internet for?
3. How has your use of the Internet changed since you began using it?
4. How has using the Internet helped you in your work?
5. How do you see the Internet affecting how you work as a psychiatric/mental health nurse in the future?

When responses were received, they were automatically routed on the basis of key words in the subject line of the Email into a directory in the author's computer. A note was made of the country of origin of the Email responses, and the length of time that people said that they had been using the Internet was entered manually into a spreadsheet for descriptive statistical analysis. The remaining responses were then imported into the software package NUD*IST (Non numerical Unstructured Data Indexing, Searching and Theory Building) and

the original Email responses (which might potentially identify respondents) were deleted.

A form of content analysis which approximated that described by Burnard (1991, 1995) was used to analyse responses to each question. With the aid of NUD*IST, all data were categorized line by line into themes or categories. Categories were then grouped together under higher-order headings. The entire data set was reviewed several times and some data re-categorized until no new themes or categories could be generated.

Sample

A total of 52 responses were received. The country of origin of an Email message may often be determined by a standardized suffix on an Email address. Responses were received from the United Kingdom and Ireland ($n = 15$), the USA ($n = 13$), Australia ($n = 9$), New Zealand ($n = 6$), Canada ($n = 1$), Norway ($n = 1$) and South Africa ($n = 1$). The country of origin of six messages could not be determined due to the Email address arising from a commercial organization (i.e. '.com'), which, while largely based in the USA, may well have been used by someone from any country. The length of Internet use of participants ranged from 4 months to 6 years with the average being 3.1 years (SD = 1.6 years). Some respondents made estimates such as '3 to 4 years', in which case the lower figure was entered for analysis; consequently, these figures should be considered conservative estimates.

RESULTS

What people use the Internet for

Responses to the question relating to people's use of the Internet were remarkably consistent. Communicating, networking with others ($n = 41$), and obtaining information ($n = 45$) were identified as the primary uses of the Internet by most respondents

Communication and networking

The Internet was used to keep in touch with family and friends, students, lecturers, supervisors, co-researchers and colleagues around the world. One person stated that they used Email to keep in touch with clients. The primary method used for this purpose was Email although some identified real-time chatting applications, newsgroups and Email list groups. Several respondents described developing friendships over the Internet and the advantages of computer-mediated communication over other forms of communication. Sharing ideas, perspectives and interests, and receiving support and advice were purposes specified.

Research/information gathering

The term 'research' was used by respondents ($n = 16$) to describe searching for information, although in some instances it was unclear whether or not respondents were referring to using the Internet for formal research. Many specified particular interests they had, for which they used the Internet to find information. Professional interests included rehabilitation, suicide prevention, pharmacology, law, health management and mental health practice issues. Personal interests included music, politics, religion, programming and sports. Some stated that they searched for information to inform roles or to prepare resources for teaching, consultancy or nursing practice. Other information which people described looking for were funding sources for research, employment opportunities, conference information and news. Undertaking literature reviews using library sites and databases on the World Wide Web was also described.

Teaching and learning

It was apparent that a number of respondents used the Internet as a requirement of courses of study that they were engaged in (11 made explicit reference to courses of study). Some also described using the Internet to publish course material for students and as the primary method for course delivery. Some simply described their primary use of the Internet as for 'continuing education'.

Pleasure, fun and games

Using the Internet appeared to be fun and rewarding for many respondents with entertainment

and playing games volunteered by some as their principal use of the technology. Others stated that they rarely played games. One person suggested that communicating with others using Email was most enjoyable.

Business and shopping

Participants identified shopping for books, music, computer equipment and software using the Internet as activities that they engaged in. Others had set up on-line courses, which they marketed to universities.

Computer maintenance and related activity

Obtaining software via the Internet was identified by several respondents. Software included games for children, updates of essential 'drivers' and updates for their computer systems.

How Internet use has changed

All participants acknowledged that their use of the Internet had changed over time. The following response appears to be most reflective of those received:

> When I first started using the net I did a lot of exploring (surfing) and discovered chat lines which I had a lot of fun with. Shortly after this I started a post registration, part time nursing degree and I began to use the net for information gathering and research with varying degrees of success. During this time I discovered the usefulness of Email, firstly at getting a prompt reply to non-urgent questions from lecturers and tutors. These people are often difficult to get on the phone but people now seem to set time aside during their day to answer Email. I also subscribe to a couple of discussion forums that utilise Email. My Email use has now spread to friends, family members and colleagues as more people become connected to the net. The use has also become more sophisticated as not only text but pictures and sounds are exchanged. I have also made purchases over the net.

More sophisticated and focused

It was apparent that people's use had become more sophisticated and that most had become more proficient at finding the information they were seeking. Respondents described becoming more sophisticated, confident and selective, stating things such as 'I can zero in on what I need', 'I can access information quickly' and 'I no longer trawl endlessly through trashy sites (some just filled with porn), but go directly to sites with content that may be of interest to me'. They also described their use becoming more 'serious' and related to work. People described how they may have once 'surfed the net for hours for fun, to no real end' and how their skills in using search tools and the use of 'bookmarks' had improved.

The applications to which the Internet can be put are growing. Some commented that there now appears to be much more relevant and useful content available on the Internet and that working from home using the Internet had become '… more beneficial than going to libraries'. One graduate student stated that they undertook all their research from home using the Internet and that 'I feel now that I can't live without it'. As a result of increased personal confidence and competence in using the technology, several respondents said that they recommended sites to others and provided others with guidance and assistance. Some respondents stated that they had recently made purchases over the Internet.

Integrated into daily routines

Several respondents stated that they now used the 'Net' more heavily but many also stated that their use of the Net had lessened with being able to find information more quickly and being more 'connected' with colleagues. Most commented on their increased use of Email relative to other Internet facilities and that Email had become part of their daily routine. Increased use of Email appeared to be related to people's networks being extended as they encountered others with similar interests and friends and family who have access to the Internet. One person stated that 'access to the Internet helped me to stay in touch with all the happenings in my field and made me feel part of the global village'.

Publication and production of resources

Many respondents described participating more in Email discussion groups and news groups as they became more confident with the use of technology. Others discussed the kinds of resources that they had published on the Internet such as personal and professional home pages, and on-line courses in psychiatric and mental health nursing. For those who appeared to be involved in teaching, it appeared that the use of the Web as a resource for students was being promoted.

How the Internet assists in the work of psychiatric mental health nurses

Two respondents were somewhat equivocal about the impact of the Internet on their work but for others the superlatives rolled freely. Typical responses were 'How could we do without it?', 'Exceptional empowerment for myself that translates to consumers' and 'The Internet helps with everything!'.

Keeping up to date

Keeping up to date with developments appeared to be the main theme in response to this question. This was realised for many through 'word of mouth' via Email and also through WWW resources. Respondents described the ease and speed with which they were able to obtain up to date information compared with traditional modes of information dissemination. Examples were cited related to obtaining information on new drugs, changes in law and regulations, policy development and searching the literature.

Obtaining an international perspective

Respondents described how they were exposed to different ideas and perspectives and developed increased awareness and insight into professional issues. Some described how belonging to Email discussion groups had assisted in challenging assumptions and exposed them to debate which they would not normally be part of. Others described how they used the Internet in a focused way to compare and contrast models of service delivery and outcomes in different countries when developing local services.

Access to expertise

People described how the Internet facilitated access to expertise that may not always be available locally, for example: 'I can also access alternate views on current practice, being less reliant on a small pool of experts in my immediate vicinity'. Others described using the Internet to identify partners in collaborative research, writing and reviewing articles.

Education

Participants described how the Internet was of assistance in their formal courses of study. For educators, the Internet was considered a tool to obtain resources in order to inform teaching and as a forum for teaching.

Marketing and employment

One person described how they had obtained their current job through contacts that they had made through the Internet. Others spoke of using the Internet (through Email lists and service WWW sites) to advertise jobs and market their service. Researchers discussed how the Internet provided an inexpensive and effective means to share research findings and to promote research instruments. People also spoke of their increased awareness of distance education opportunities.

Innovation in practice

Some respondents were using the Internet in innovative ways such as to keep in touch with clients and to receive supervision.

How the Internet may affect the work of psychiatric/mental health nurses in the future

Most respondents identified the Internet as being of continued use to them in the future (*n* = 50) but a number of respondents identified constraints to its potential usefulness (*n* = 3), such as slow connection speeds, the lack of access to Internet facilities in the workplace, and the limited number of nurses that use the Internet. It was observed that the Internet often provides appetisers but seldom the main course when it

comes to information: 'Most good information is still in journals and books'. There were a number of different themes that emerged in response to this question.

Breaking down boundaries

The Internet transcends geographical boundaries. One respondent stated that the Internet '… allows us to feel as close as next door'. People spoke of how this assisted those in isolated places to feel part of a global community. For those who worked in places characterized by itinerant populations or where tourism is a main industry, it was suggested that the Internet may assist in discharge planning and networking with services in other regions and countries. One person described how psychiatric telemedicine was already a reality in remote communities in Asia and the Pacific and how the Internet might further assist in reducing the isolation of such communities. The transcendence of geographical boundaries may lead to greater understanding and appreciation of cultural differences.

The Internet has the potential to break down boundaries between researchers, academics, clinicians, managers and 'experts'. The Internet may assist in making not only the ideas and observations of different groups accessible, but also the people themselves at a personal level. Participants described the potential benefits to students and practitioners of being able to access expert advice or guidance despite status or distance.

The Internet may potentially become a tool of emancipation for consumers. The essentially egalitarian nature of the Internet means that information is accessible to whomever chooses to search for it. One person challenged nurses to 'either adopt it as a tool to enhance professional work or certainly consumers will do away in many respects with the need for a mental health worker to provide for their needs'. The Internet may facilitate the development of supportive networks for both consumers and professionals.

Education

Respondents described continuing their education both formally and informally through the use of the Internet. It is in education that many felt the Internet would have the greatest immediate and long-term impact through changing the process of education and making a vast amount of information readily available to students. Some foresee the field of 'informatics' to be a growing discipline that will provide many future opportunities for training and employment.

Communication

Several respondents described the Internet as likely to 'revolutionize' communication with the demise of 'snail mail' or the humble letter as the first casualty. Computer-mediated communication may become increasingly important as a tool for clinical supervision; keeping in touch with clients, students and research, and as a means to obtain emotional and professional support.

DISCUSSION

Limitations

This research utilized a convenience sample which cannot be considered to be representative of the diverse population of psychiatric and mental health nurses. All respondents belonged to Email list groups, which presupposes that they are interested in communicating with other psychiatric and mental health nurses using the Internet.

Changes since 1996

A larger number of responses were obtained within a shorter period of time in this study compared with the first similar study undertaken by the author (Lakeman, 1996; Lakeman, 1998). The sample obtained was also large compared to an earlier comparable study undertaken by Murray (1995) on a general nursing list. Of the 36 people who contributed to the first study, only one volunteered that they had shared resources on the Internet. However, in the current study many people claimed to have developed and published information resources. Respondents also appeared more sophisticated in their use of the Internet and were taking

advantage of improvements in applications and the greater amount of information available to them.

Globalization

The growth of the Internet parallels and facilitates the growth of information, technology, globalization, consumerism and capitalism. The Internet and these movements are having an impact on human relations. Any kind of information that can be digitized may be communicated via the Internet without regard to geography or time. Furthermore, people may interact with and obtain information in increasingly imaginative and sophisticated ways. These factors facilitate the development of global networks, movements and relationships.

Globalization and computer-mediated communication challenge the concepts of relationship and identity, which need not be bound to geographic, institutional or national boundaries. Kirkpatrick, Brown and Atkins (1998) describe the need for nurses to have an awareness of cultural diversity and global concepts, and outline how they have attempted to use the Internet to facilitate this awareness in nursing students.

Nurses need to be cognisant that people may have significant relationships founded and sustained using computer-mediated communication. 'Self-help' and support groups on the Internet have been the subject of nursing research (Klemm & Nolan, 1998) and are recommended as a meaningful form of emotional support for nurses to be aware of (LaPerriere, Edwards, Romeder & Maxwell Young, 1998).

The essentially egalitarian nature of the Internet mitigates against the gatekeeping of knowledge that has been a hallmark of modern professions (Giddens, 1994). Nurses can expect that consumers will become increasingly informed, that services will be judged against evolving global normative standards rather than local tradition and that consumer movements will become global in nature. Consumers will also expect to be able to reach mental health providers via the Internet (Huang & Alessi, 1996). Indeed, organizations are increasingly

likely to be judged on the face of their Internet presence and the accessibility of office holders via computer-mediated communication.

Education

The results of this research confirm the profound impact that the Internet is making and will continue to make on nursing education. The Internet may well evolve into the dominant and preferred medium for delivery of distance education. Institutions will need to adapt to this evolving medium. Already, tertiary education providers are placing course work on the WWW and providing entire courses and degrees using Internet technology (Martyr, 1997; Murray, 1996; Ribbons, 1998). Continuing education credits required by some nursing regulatory bodies as evidence of competency to practice may also be completed on-line (Plank, 1998).

The evolution of Internet technology will render the need for students to be present in lecture theatres less important than it is at present. Institutions will be challenged to collaborate with each other in the provision of on-going education. At present it may be expedient for students to attend a local university or polytechnic because it is close. However, in future the decision to study at a particular institution is likely to be related to the expertise of the educator in the field to which courses relate and flexibility of study options. The experience of one respondent in this study of developing a course and marketing it to a number of universities is likely to be the way of the future. Those institutions which, at the end of this millennium, continue to give priority to capital expenditure in bricks and mortar over human resources and information technology are swimming against the tide and may well be making investments in empty classrooms within the next two decades.

Preparing for the future

There is an inevitability about the changes that Internet technology will bring and to some extent psychiatric and mental health nurses are being washed along on a wave of globalization and technological advancement. Bachman and Panzarine (1998) suggest that knowledge of the relevancy

and use of the information superhighway is crucial to the future survival of nursing in a rapidly changing health-care arena. Cheek and Doskatsch (1998) suggest that we are faced with an over-abundance of information, and that all nurses require skills to effectively access and make sense of information.

The respondents in this study showed a sophisticated use of the Internet to meet their purposes. There is some evidence that teachers (Saranto & Tallberg, 1998) and nurses (Royle, Blythe, DiCenso, Baumann, & Fitzgerald, 1997) as a group do not presently possess the skills needed to take advantage of the technology. This perhaps represents a transitional period in nursing. In future, nurse educators will be no more likely to have to explain how to use Internet technology than to have to explain how to use a telephone. Meanwhile, the existing barriers to nurses utilizing Internet technologies needs to be overcome. While schools of nursing generally have access to Internet technology, many lack a coordinated plan for its use (Carty & Rosenfeld, 1998).

The experience of many respondents presage the modification and adaptation of existing roles for psychiatric and mental health nurses. These include the provision of computer-mediated counselling, clinical supervision, debriefing, support and education. Respondents in this study already use the Internet to work collaboratively with others in research, writing and nursing practice. Their experiences provide some indication of what might be expected in the future. Clearly, the development and use of the Internet requires those in nursing to consider security of information, ethical problems that may arise (Phillips & Legler, 1997), governance and legal jurisdiction over nursing activity on a global scale.

The need for further research

The author acknowledges that an unsophisticated method was used in this research. The use of communicated mediated communication by nursing is a fledgling field of interest, and many questions remain unanswered. How, for example, do men and women differ in their use of Internet technology? What is the best method to learn the norms of communication using the Internet? What impact will the use of computer-mediated communication have on consumers of mental health services? It must also be acknowledged that respondents in this survey tended to have a positive view of the Internet and many others may have 'dabbled' and not had good experiences. While the Internet may be a good and useful tool, it may also have negative effects for nurses and consumers. Dobson (1999), for example, has argued that some people may use the Internet to promote or encourage suicide. The problems inherent with this new technology are not insurmountable but require urgent consideration if nursing is to realize the potential of Internet technology for the good of the profession and for the users of the services in which we work.

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