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ABSTRACT

The Internet provides a new means of obtaining psychological health care, but Internet site quality varies widely. To help in the search for reliable information in cyberspace, a ratings scale, which assesses six dimensions of site quality (accuracy, practicality, normalization, sense of belonging, referral, and feedback mechanisms) is offered here. Three hundred sixty-five web sites were evaluated on the 6 dimensions over an 11-week period on a 5-point scale. Descriptive information about the nature of the sources is supplied, allowing for comparisons of the relative quality of the available sites across the different content domains: anxiety disorders, parenting problems, eating disorders, and chemical dependency. Site ratings indicate that the availability of quality resources is associated with the prevalence of the problems being targeted. Common phenomena, such as parenting problems and chemical dependency, attract greater interest and resources for site development than do rarer conditions. Eating disorders are covered in a large number of high-quality sites, which may be attributable to the perception that this group of consumers is relatively affluent and well educated. Only 65% of sites could be re-accessed, indicating that marginal sites become abandoned, go out of business, or close for other reasons. Site surveys show that anxiety disorders sites feature subtle advertising of particular products, as do the chemical dependency sites. (RJM)

The Asymmetrical Quality of Psychological Internet Resources for Addressing Common Versus Rare Problems

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Abstract

The development of the internet has provided an entirely new means of obtaining psychological healthcare. Websites have been set up for the purpose of providing information about psychological problems and administering health. Unfortunately, the quality of these sites is not regulated and therefore varies widely. Thus, the authors have devised a rating scale in order to assess six dimensions of site quality including accuracy, practicality, normalization, sense of belonging, referral and feedback mechanisms. The present investigation will provide descriptive information about the nature of the sources evaluated. It will also permit a comparison of the relative quality of the available sites across the different content domains. These domains include anxiety disorders, parenting problems, eating disorders, and chemical dependency. This study will help to specify areas of unmet need and assist in the development of additional resources on the Internet.

Introduction

The Internet offers a myriad of opportunities to improve delivery of mental healthcare and enhance the lives of those affected by brain and behavioral disorders. The new electronic information technologies are fostering revolutions in how direct services are provided, and also facilitate optimal care indirectly, by keeping professionals more up-to-date and allowing larger-scale research on treatment effectiveness.

One example of the utility of computer technologies in improving the delivery of treatment is the Newark Target Cities Project. This project was undertaken in order to unify the fragmented substance abuse treatment programs in Newark, New Jersey and thus eliminate the inefficiency inherent to a divided system. This project created a network of treatment providers, provided a standard means of assessing and placing clients, and allowed for clients to be matched with the most appropriate treatment program via a computerized management information system (Kraft & Dickinson, 1997).

The major contribution of this system was it allowed for a treatment provider to access clients' complete case histories. Prior to the implementation of this system it was difficult for one treatment center to discover what previous sorts of treatments a client has undergone had been tried with a given client. Resources and energy were wasted on repeating entrance interviews and treatment programs that may have already failed.

This program effectively minimizes this sort of duplication waste by providing a complete record of a client across every treatment center (Kraft & Dickinson, 1997).

This is merely one example of the positive effects of one relatively small network. It easy to see what a global network such as the Internet can do to enhance treatment. It has allowed for collaborative peer consultation in the form of professional user lists. Chambliss (1996) illustrates the utility of these lists in providing timely information about how to proceed with relatively rare situations.

Innovations in direct service delivery include the development of problem-specific lists that create de facto support groups, expert-mediated Websites that offer everything from virtual milieu therapy to parenting advice, and electronic individual psychotherapy with therapists a nation away. For consumers who are introverted, home-bound, or for when privacy is a priority, these remote forms of treatment are extremely attractive. For those with the requisite cognitive and computer skills and the access to appropriate equipment, the Internet literally opens up a world of treatment possibilities previously unimaginable. The result is a growing optimism among treatment professionals concerning the future possibilities for the Internet. Sampson et al., (1997) envision the future "information highway" as providing clients in remote locations with access to a variety of specialists that would otherwise be unavailable. They predict that Internet therapy will consist of

a combination of counseling sessions by means of video conferencing and computer assisted instruction.

Unfortunately the use of the Internet does not only open up new possibilities, it also creates new problems. In fact, the interaction of counselors and clients by means of electronic media presents several legal and ethical problems. One major problem concerns the issue of confidentiality. Although the use of e-mail seems to be very private in nature, it is arguable that privacy in this form of communication is an illusion. The reason for this is that after messages are sent they commonly go to a large storage facility like that of a university. Once there they are fair game to any hacker who might be so inclined to peruse someone else's mail (Shapiro & Schulman, 1996).

Another problem with e-mail therapy results from the succinct and sporadic nature of the interaction between client and counselor. Healthcare providers in general do not condone the use of e-mail treatment as a plausible replacement for face to face counseling and indeed provide disclaimers that state this. It is assumed by the counselors that no professional relationship exists, but this can be subject to gross misinterpretation the part of the client (Shapiro & Schulman, 1996).

Regardless of these problems, the use of the Internet as a supplement to traditional methods of counseling is a worthwhile endeavor. If counseling is defined as "a learning process designed to help people learn more effective ways of coping with

their emotional, social, and career problems" (Sampson & Krumboltz, 1991), then the use of the Internet as a means of disseminating information is valid.

Research studies have already shown that computer mediated networking can be a valuable tool in education. One example of this is a study done by Kruger et al., (1996). They used a combination of face-to-face meetings and computer mediated communication to extend training in team problem solving. Though the subjects did not perceive the computer mediated communication to be as important as the face to face meetings, they did view it as important to their mastery of the training. Based on these findings, Kruger et al., (1996) concluded that the Internet has substantial promise for enhancing traditional training.

In April 1996, Sampson, Kolodinsky, and Greeno (1997) sought to determine the prevalence of these resources on the Internet. Using the WebCrawler search engine they conducted a search of the word counseling. They results of this search showed the existence of 3,764 home pages containing that term. Further analysis of these pages showed that 45% of these sites pertained to psychological counseling and the rest were either not accessible or merely contained the word counseling somewhere in their text. Sampson et al., repeated this search in the same search engine only three months later and discovered that the number of home pages had grown to 4,584. That is a 15% increase in three months. It is virtually impossible for both consumers and professionals to keep up with this rapid growth.

Much of the existing literature pertaining to the Internet within the field of psychology is descriptive in nature. The main focus of journal articles has been placed on the problems and technological limitations associated with the current Internet (eg. Sampson et al., 1997; Allen & Kostenbader, 1995; Frisse et al., 1994) and projections about its eventual utility (eg. Huang & Alessi, 1996; Sampson et al., 1997). The subject of the Internet as it is currently employed is given little attention.

The recent explosion of behavioral healthcare resources on the Net has left many consumers and professionals overwhelmed. The Quality of Websites and lists is very uneven; no systematic mechanism exists to evaluate the utility of a given resource efficiently. Jacobson and Cohen (1997) have discussed the importance of teaching students to evaluate the quality of Internet sites. They argue that the dimensions of accuracy, comprehensiveness, currency, availability of hyperlinks, and the website's style and functionality should all be considered by users of sites. The current study examined both the quantity and quality of extant behavioral healthcare resources on the Internet, for a wide variety of problems. Sites and lists were assessed in terms of criteria developed by the authors, reflecting the objectives of ideal electronic resources.

This study provides comparative data describing the quantity and quality of Internet services currently available to those affected by different disorders. This summary may be useful to

those interested in specifying areas of unmet needs. It may also help those seeking exemplary models of how this new medium can be effectively applied.

"The democratization of knowledge is all to the good, if that means the democratization of access to knowledge. But democratization of the access to knowledge should not be confused with the democratization of knowledge itself. And this is where the Internet, or any system of electronic networking, may be misleading or even pernicious. In cyberspace, every source seems as authoritative as every other.

The Internet is an equal opportunity resource; it recognizes no rank or status or privilege. In that democratic universe, all sources, all ideas, all theories seem equally valid and pertinent. It takes a discriminating mind, a mind that is already stocked with knowledge and trained in critical discernment, to distinguish between Peanuts and Shakespeare -- between the trivial and the important, the ephemeral and the enduring, the true and the false."

Anxiety Disorders

Among the wide range of psychological disorders that plague the lives of many people, Anxiety disorders are the most prevalent, anxiety disorders are disturbances characterized either by manifest anxiety or behavior patterns aimed to warding off anxiety. The disorders which comprise anxiety disorders

include panic disorder, generalized anxiety disorder, phobias, obsessive compulsive disorder, and post-traumatic stress disorder. Panic disorder involves recurrent, unexpected panic attacks followed by psychological or behavioral problems. Generalized anxiety disorder is associated with excessive worry,about several life circumstances over a period of at least six months . It is associated with an earlier and more gradual onset than most other anxiety disorders (Brown, Barlow, & Liebowitz, 1994). Phobias are intense and persistent fear of some object or situation which as the person realizes, actually poses no real threat and avoidance of the phobic stimulus. Obsessive compulsive disorder is comprised of obsessions, based upon thoughts and images which keep intruding into a person's consciousness; the person finds the thought inappropriate and distressing, and tries to suppress it, but it is still returns. Compulsions are actions that a person feels compelled to do repeatedly though he/she has no conscious desire to do so. Post-traumatic stress disorder is a severe psychological reaction, to intensely traumatic events lasting at least one month.

The common bond of these disorders is their involvement with anxiety, a state of fear and apprehension that effects many areas of functioning. In the typical life of a person unaffected, occasional thoughts and encounters with fear can be highly unpleasant and disturbing. The life of a person with an anxiety disorder can be severely distressing as a result of high intensity, active fears. In order for one to combat this

uncomfortable experience, successful treatment is mandatory.

Popular treatment options include drug therapy and counseling. In drug therapy a psychiatrist will prescribe one of the many drugs according to the needs of the individual and characteristics of the disorder. One classic counseling option is systematic desensitization (Wolpe, 1958). This involves the patient creating a hierarchy of fears, which is a list of increasingly anxiety-arousing situations. Clients are then taught muscle relaxation techniques which are then applied to the hierarchy anxiety provoking situations. Eventually clients should be able to apply these techniques, across all anxiety arousing situations and remain in a relaxed state. In the treatment of phobias and obsessive compulsive disorder the therapist will, many times, integrate this type of exposure with modeling (Alloy, Acocella, & Bottzin, 1996).

Obsessive compulsive disorder provokes specific interest because the presentation of compulsions often appears mysterious and confusing. The need for an individual to perform a compulsion may evoke a great deal of embarrassment. Often painstaking effort is made to conceal display of the compulsions. The result is a relatively severe impairment of social functioning.(Koran, Thienemann, & Daventport, 1996).

Obsessive compulsive disorder normally evolves in late adolescence or early adulthood . Men and women are equally at risk for having the disorder . Young, single men are more likely to have checking rituals and married women are likely to posses

cleaning rituals (Alloy, Acocella, & Bottzin, 1996).

Like other anxiety disorders, obsessive compulsive disorder can be treated with systematic desensitization and drug therapy. Drugs that are typically employed in the treatment of OCD include Anafranil, Prozac, and Paxil. These drugs modify the anxious symptomatic behavior and can be used in combination with systematic desensitization.

Most electronic information found on Anxiety Disorders is organized into specific web sites. Research takes a considerable amount of time and research facilities often have limited hours; however, these sites can be used by anyone whom has access to the Internet through a computer.

Although the information available on these sites varies in quality and quantity, it provides many advantages for its users. Web sites provide information on prevalence, treatment and often detailed descriptions of symptoms on specific disorders. Those suffering from Anxiety Disorders are able to easily find organized information in the privacy of their own homes. Web sites are generally a starting point of research. Often other Internet services, such as interactive lists are recommended as additional aides from these sites. Interactive lists provide patients with cutting edge information on treatments and current research on the disorder. In addition they are distributed globally, allowing many perspectives on the disorder to reach individuals (Allan & Kostenbader, 1995). Subscription to these lists are usually cost free and provide subscribers with the

option of asking professionals questions on various issues.

Perhaps the most useful online services are the discussion groups for specific disorders. Through subscription to an on-line carrier, those suffering from Anxiety Disorders can receive support from their peers via computer. This service is especially helpful to those inflicted with Agoraphobia. The main symptom of this disease is a fear of being in any situation or place from which escape or help would be unavailable in the event of panic attack. As a result, agoraphobics are often unable to leave their home for weeks or months at a time and seldom keep appointments with therapists. This inhibits their ability to seek treatment and support from others. On line support groups eliminate this fear while helping individuals to cope with their problems in a familiar environment.

The Internet also provides many general advantages when compared to traditional treatment methods. Embarrassment and cost of treatment are common obstacles for those individuals suffering from mental health disorders. Many people are fearful of others knowing that they suffer from what they consider to be odd symptoms. The confidentiality established through the use of a computer can greatly reduced this fear. Those individuals that are unable to receive treatment because of the high price of healthcare are also within reach of treatment, through the Internet. Many sites and groups provide information on low cost or free mental health care. In addition, the general use of Internet provides access with minimal cost .

The Internet is a useful and accessible tool for providing mental health care; however, specific goals and standards for its use must be met. Managed care organizations are already investigating means for reducing costs through computerized-based medical education, and such forces will further encourage the development of networked information resources (Huang & Alessi, 1996). By anticipating the potential abuses of the Internet by the health care systems, professional associations must assure that the information highway helps rather than harms clients. Although it would be beneficial for clients to be as knowledgeable about their disorder as their therapists, inaccurate and inappropriate information could be detrimental to the outcome of their treatment. The validity of data delivered via computer networks needs to be screened prior to patient and public exposure (Sampson, Kolodinsky & Greeno, 1997). Conversely, counselors need to be educated and trained in administering this treatment. With this advance in technology in combination with therapists information, support groups and interactive lists, treatment can be accessed at the flip of a switch.

Parenting Problems

Parenting in today's fast-paced, rapidly changing society can be a confusing and stressful experience. Societal factors including challenges to the traditional notion of motherhood and

fatherhood, have exposed contemporary parents to a variety of child-rearing methods. In response to such changes, parents are looking to others for reassurance and advice on child rearing. "In a recent survey of 413 parents of infants and toddlers, over half reported that they needed help in dealing with stress and someone to talk with about child-rearing problems" (O'Brien, 1997). Increasing mobility has reduced access to traditional sources of support for parents, especially the extended family. Reduced regular participation in formal religious organizations has also eliminated one formerly important source of advice and reassurance for many modern-day parents.

Since children respond optimally to different parenting strategies at different ages, parents are engaged in an ongoing experiment with various interventions aimed at helping their child discover satisfying ways to develop competence and confidence that do not infringe upon the rights of others. Like all good experimenters, parents are eager to find ways of assessing the outcome of their efforts, and to evaluate the consequences of their choices.

While feedback from children provides an important indication of parenting success, normal variations in children's moods and their inevitable dissatisfaction with certain reasonable limits makes it problematic to rely solely on children's happiness in measuring parental effectiveness. Similarly, while parents can use their own sense of happiness as an index of their effectiveness in parenting, expected

fluctuations in affect can make self referencing unreliable.

Evaluating one's effectiveness as a parent is generally quite difficult in a social vacuum. Gauging the appropriateness of the rules one establishes, and the means of enforcing boundaries one uses, is impossible without a frame of reference. Since one of the main goals of child rearing is socialization, others' opinions about the acceptability of one's children's behavior provides valuable, relevant information.

While formal parenting effectiveness training programs offer one strategy for filling the social void created by rising mobility and falling religious service attendance, many parents are reluctant to commit themselves to structured educational programs. Some find the time commitment burdensome; since two-paycheck families are now the norm, most families with children find time to be scarce. Some are uncomfortable focusing directly on parenting issues because they find the process to be threatening. Others are concerned that participating in such programs may imply inadequacy in what most parents describe as their most important role. For these reasons, many parents chose to obtain the advice and support they need via other, more informal avenues.

There are several different avenues parents can take in order to obtain parenting information; these include friends and other family members, physicians, books and magazines, and the Internet. Traditionally, basic information concerning child-rearing came primarily from friends and family, while physicians'

advice focused primarily on any special, physical needs of the child. However, with the advancement of technology came changes in the expectations of good parents. This resulted in increasing demands for assistance with psychological and behavioral issues pertaining to childrearing.

Eating Disorders

Today's society places a large emphasis on physical appearance. People have to look a certain way in order to gain respect from society. If they differ from the ideal image portrayed by the media, they are considered deviants from the norm. As little as thirty minutes of television can have a negative impact on body shape perceptions of late adolescent women (Myers & Biocca, 1992).

The recent outburst in the media of models who are frail looking is tremendous. Many advertisements consist of women who are extremely thin and emaciated. This image is much different from the outward appearance of majority of the members in society.

According to a recent study (Stice et al., 1994), media exposure has a direct impact on eating disorder symptoms and indirectly effects the audience through gender role endorsement, ideal-body stereotype, internalization, and body satisfaction. It was shown that internalization of sociocultural ideals of thinness has caused an increase in the rate of eating disorders.

Williams (1992) says many women are unhappy with their appearance because the cultural ideal of women models is on average 9% taller and 16% slimmer than the average United States woman. Society seemingly places these models on a pedestal. Their body shape is unattainable for the majority of society, but yet still idealized. This idealization is the main contributor to the development of eating disorders. Women perceive their own body figure to be heavier that the figure they perceive as ideal or as most attractive to men (Joiner & Kashubeck, 1996).

Anorexia Nervosa, Bulimia Nervosa, and Binge Eating Disorders have become predominant in American society. There has been a steady increase in the prevalence and incidence rates in adolescents in the past decade. The prevalence rate is 1-4% of upper-class adolescents and young adults (American Psychiatric Association, 1993a). In a study done by Gross and Rosen (1988) within the general population of American adolescents 3-10% are effected by anorexia or bulimia.

Anorexia and Bulimia are often linked to a drive for the perfect body. This desire usually begins at an early age. The predictors of eating disorders are low self-esteem and high levels of anxiety (Canals et al., 1996). The majority of people with eating disorders are women, but recently more men are being diagnosed. It has been revealed that there is a significant relationship between family environment and those at risk for developing an eating disorder (Felker & Stivers, 1994).

Typically, though not exclusively, people with eating disorders come from families where there is a lack of parental care or empathy (Cole-Detke & Kobak, 1996). Parental socioeconomic status, body size, and childhood environmental circumstance are all factors in a child's perception of self-image (Greenlund et al., 1996).

Often, these women have been sexually, physically or verbally abused (Laws & Golding, 1996). Society may set unrealistic goals for people, leaving these people to create unrealistically high standards for themselves. People who are prone to eating disorders see this standard and try to achieve it. Focusing on looks gives them a territory where they can have some control; making food the enemy gives them a sense of power in a society that equates thinness with attractiveness (Cole-Detke & Kobak, 1996). The irony, of course, is that an eating disorder makes them feel more out of control than ever, because it is a way of avoiding their real problems and those problems run deep. Imagine the mental pain someone must be in to feel she deserves to afflict such damage upon her own body.

Women with bulimia are more likely to admit they have a problem because their secret rituals are deeply disturbing to them. Anorexic women, on the other hand, usually deny the severity of their illness. Starvation brings on physiological and emotional changes that make it increasingly difficult for them to view their bodies realistically, therefore the disorder becomes more entrenched. Many women say they know they need to

eat more, but in the next breath will refuse a chair in group therapy because they have calculated that standing uses a few more calories than sitting. Of women who have an eating disorder, only 50% recover. More than 10% of the people hospitalized for anorexia will die- from starvation, cardiac arrest, electrolyte, imbalance, or suicide.

Interestingly, the widely held belief that eating disorders are most prevalent among white, upperclass, well educated women is being questioned. (Gross & Rosen, 1988; Rosen et al., 1988; Snow & Harris, 1989). Root (1990) found women of ethnic minorities feel more pressures from mainstream society because of economic and sociopolitical factors. In fact Dolan (1991) found eating disorders even more prevalent in ethnic minority women who had been exposed to Western society compared to those women who had not had this exposure.

With the high prevalence of eating disorders, many people are turning to the Internet to decide if they are suffering from one. With the Internet rapidly gaining popularity as a source of information, it is easy to assume that victims of eating disorders can gain information. People are also looking for information to learn how to help someone who is suffering from an eating disorder. It is important to remember the highly effective manner in which a person to person contact operates. While the Internet is a wonderful resource for information, it may be best used in conjunction with another source. What we hope to determine is exactly what kind of information is on the

Internet about these disorders and if the information available will provide the help the readers are looking for.

Chemical Dependence/Substance Abuse

Substance abuse is a common problem in the United States. Most Americans at some point in their lives behave in ways that are characteristic of substance disorders, which include the abuse of depressants, stimulants, opiates, and hallucinogens. These disorders are responsible for the death of 500,000 Americans each year. (Durand & Barlow, 1997)

There are currently two models to explain substance abuse; moral weakness and disease model of dependence. The moral weakness model sees substance abusers as lacking the responsibility to control their use of substances. The disease model sees substance abuse as a physiological disorder. The implications that stem from these two models lie at opposite poles. The moral weakness model rests the blame for abuse problems on the abuser whereas the medical model absolves the abuser of responsibility. (Durand & Barlow, 1997, 361)

Unfortunately, mainstream society is seemingly more likely to support the moral weakness model. As a result, obtaining help for these problems involves various social stigmas. As an example, think of the ramifications for a pharmacist that caries the label "substance abuser". This makes it necessary for abusers to seek private methods of obtaining treatment. Common

treatment methods involve public contacts, with one or many. Many successful treatment methods involve group meetings such as Alcoholics Anonymous, which require a relatively high level of acceptance of the substance abuse problem before taking such a step. The Internet provides new ways of accessing treatment in a private manner. Individuals, provided that they have access to the web, may seek information on the Internet. Informative pages, treatment center advertisements, and on-line counselors and support groups are readily available to those who possess some computer skills.

The Internet however, is not without its faults. The ability to post information on the Web is available to virtually anyone. This allows for false and inaccurate information to surface and be passed on to other web users. Since there is no form of regulation, there is no way to decipher helpful information from detrimental information. As a result, the quality of information varies widely.

It is the goal of this research to evaluate the psychological help resources on the Internet that pertain to chemical dependency. It is an attempt to separate the high quality sights from the low quality sights.

Method

Source and researchers

A total of 365 web sites were evaluated from 4 different psychological problem categories which included anxiety

disorders, parenting problems, eating disorders, and chemical dependency. The sites were chosen randomly from various common search engines on the Internet. The evaluations were completed by 9 trained undergraduate psychology majors from a small liberal arts college on the east coast. After two months of training in the psychological problem areas, each rater evaluated roughly 40 sites, pertaining to one of the four categories. After the initial ratings, sites were reassigned to a second evaluator, in order to permit assessment of interrater reliability.

Materials

Several computers linked to the internet served as tools for access to the internet. A standardized evaluation form assessing 6 separate dimensions was used to record the ratings for each site. Evaluators were asked to rate how well each site provided the following: 1) clear and accurate information 2) "how-to" suggestions for change: practical exercises 3) destigmatizing information; promotion of normalization 4) promotion of a sense of belonging; information to help combat loneliness 5) referral mechanisms, if users found that additional help is needed and 6) outcomes assessment; feedback mechanism.

The 365 web sites were evaluated on the 6 dimensions over a period of eleven weeks on a 5-point scale ranging from zero to four. A zero was given for absent information, one indicated extremely inadequate, two indicated somewhat inadequate, three indicated somewhat adequate and four represented provision of outstanding information.

Results

Scores on the 6 dimensions were totaled for each site, yielding a summary measure of each site's quality. Interrater reliability was moderately good ($r = .64$; $p < .01$). The reaccess rate in the second evaluation trials was only 65%, suggesting that the operation of many current sites is unreliable. A one-way ANOVA was performed to compare the summary quality scores across the four problem topic groups. Significant differences ($p<.0001$) emerged across the problem topics. Ratings for sites related to parenting problems received significantly more positive evaluations than those for the other topics (see Table 1).

Overall, the ratings suggested that the average quality of the current sites was not very impressive. The mean rating across problem topics for all site dimensions was 2.27 (s.d.=.97) on the 0-4 point scale where 0=absent, 1=extremely inadequate, 2=somewhat inadequate, 3=somewhat adequate, and 4=outstanding.

Inter-item correlations revealed significant relationships among all items used to rate the resources. However, correlations were not so high as to suggest items failed to make a meaningful discrete contribution to the overall rating (see Table 2).

Discussion

The results of this study suggest that the availability of quality resources on the Internet is associated with the prevalence of the problems being targeted. Common phenomena, such

as experiencing parenting problems and chemical dependency, attract greater interest and resources for site development that do rarer conditions, such as the anxiety disorders.

The availability of a greater number of high quality sites for those interested in eating disorders may be attributable in part to the demographics of this group of consumers. These people tend to be perceived as relatively affluent and well educated, making them quite attractive targets for both commercial and altruistic providers of on-line assistance. The fact that these demographics also imply that these consumers have more ready access to electronic technologies with which to avail themselves of these new forms of assistance also probably influences the level of site development.

The fact that the reaccess rate was relatively low (65%) suggests that many of the current sites do not function very reliably. The difficulty in retrieving sites previously rated sites may be attributable to several factors. More marginal sites may get abandoned; some unsuccessful commercial sites have gone out of business. Computer malfunctions may result in the loss of service, and some site authors may lose access to machines formerly dedicated to supporting a given site. Also, some cases of faulty listing of addresses within the sites themselves complicated the process of reaccessing the relevant sites.

Impressions gleaned from this large-scale review of psychological Internet resources suggest several issues of potential concern. In general, anxiety disorder sites were found

to reflect a great deal of subtle advertising of particular products (e.g. books, tapes). Similarly, the chemical dependency sites surveyed were largely commercial and seemed primarily motivated by interest in profit. Biased, distorted information about treatment options often included myopic portrayals of services being offered for sale, with negative advertising directed at competitors' approaches. Apparently, in order to coerce consumers, alternative treatments were portrayed negatively and as being of little value. While some chemical dependency sites, including testimonials and sites that made AA meetings available online, were not commercial, the general impression was that many sites were somewhat exploitative of those suffering from these serious problems.

One serious limitation of the first phase of the present design was the initial confounding of raters and topic. Differential use of scale criteria across topic groups may have inflated the ratings of the parenting sites. Use of multiple raters for each site in the second phase of this study permitted assessment of interrater reliability. Although the interrater reliability was significant, it was not as high as would be ideal.

Discrepancies in quantity of available sites across topic groups may also have contributed to the present findings. Large numbers of sites were available for chemical dependency, eating disorders, and parenting problems in comparison with the more limited number of sites directed at sufferers of anxiety

disorders. Although efforts were made to randomly sample among available sites, selective focus on more well-developed sites may have inflated the ratings of those from the more widely addressed topic areas. Parenting and anxiety disorder sites seemed more altruistically motivated and directed at sincere helping.

Extensions of this study should include additional training of raters in the consistent use of the rating system in order to improve interrater reliability. Randomized assignment of cases to raters would further reduce the problems of confounding, although this would require that all raters become expert in all problem areas. Inclusion of behavioral healthcare consumers in the panel of raters would also enhance the usefulness of this research.

Appendix A

The Explosion of Psychological Help on the Net

Electronic Behavioral Healthcare

I. Information re: treatment and research cutting edge, state of the art, expert information for consumers, breaking down the barriers between consumers and experts; NAMI

Opportunities for "passive" learning

A. Web sites

B. Listserv groups

II. Interactive electronic treatment

Opportunities for "active" learning

A. Support groups

B. Expert mediational groups

III. Referral to in vivo Psychotherapy

IV. Outcome Evaluation: Follow up mechanisms & tracking usage

A. What is lost without face-to-face contact?

B. What is lost without continuity of a real relationship?

V. Issues

A. Privacy

B. Accessibility

C. Potential for abuse, exploitation

VI. Model of Ideal Electronic Resources

A. Clear & accurate information

B. How to-suggestions for change; practical exercises

C. Destigmatizing information; promotion of normalization

D. Promote sense of belonging; combat loneliness

E. Referral mechanism-if additional help is needed

F. Outcomes assessment; feedback mechanism

Rater_____

Resource_____

Evaluation of Electronic Helping Resources

Use the 5-point scale described below to evaluate the resource on each of the following dimensions.

0=absent

1=extremely inadequate

2=somewhat inadequate

3=somewhat adequate

4=outstanding

_____ A. Clear & accurate information

_____ B. How to-suggestions for change; practical exercises

_____ C. Destigmatizing information; promotion of normalization

_____ D. Promote sense of belonging; combat loneliness

_____ E. Referral mechanism-if additional help is needed

_____ F. Outcomes assessment; feedback mechanism

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