

Utilizing the New Media to Provide Mental Health Services to Young People

H. Kritzenberger, M. Herczeg
University of Luebeck,
Institute for Multimedia and Interactive Systems
Seelandstr. 1a,
D-23552 Luebeck, Germany

U. Ruhl
University of Bremen
Institute for Psychology (Methodology, Diagnosis and Evaluation)
Grazer Str. 2a
D-28334 Bremen

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Abstract-This paper reports on a project on a mental health service offered on the web for young people, who have drug problems, especially with ecstasy. The service is offered by the Medical University of Luebeck and was developed in interdisciplinary co-operation between medicine, computer science and design. The focus of the project was on meeting user-specific needs: providing information and help for young people and for their peer-groups. A pre-condition for success is to design the medium according to the user needs, which means an adequate use of the medium. We provide some usage data, which reveal a need for that kind of web service.

Compared with other psychotherapeutic counseling-services which are common in the USA for several years and which increase in Europe as well, there are some main differences. The e-mail and counseling service is for free, although it is provided by a professional psychotherapist, who is an expert in the subject area of ecstasy addiction and works also with young drug addicts in drug clinics. The work is based on strict confidentiality as it is given in consultations outside the web. Furthermore, the project will apply technology enabling anonymous web use.

I. INTRODUCTION

Consuming drugs influences many young people's lifestyles. They get party drugs or designer drugs, like ecstasy (XTC) or speed even at the school yard. According to a report there are 30 % of the young people in the age between 16-22 years in our country, who have already tried XTC when visiting a discotheque. Traditional mental health services would fail with these people, because they do not feel in danger of drug addiction. Nevertheless, XTC-users should be well informed about the drug's risks and dangers.

The Internet may offer an adequate and attractive medium for mental health services for this user group as youngsters regularly surf through the WWW and use e-mail or participate in chat rooms for communication (see recent study of German TV channels ARD and ZDF [1]).

This paper reports on our project, which wants to fertilize young people's inclination to the WWW for the purpose of

preventing drug use and providing help for resulting critical life situations.

A Web-Site and other Internet services were established. The information provided on this web site (www.mesh.de) [2] ranges from chemical facts to the risks of consuming XTC. The readers of the site are given hints on what to do and how to help immediately in the case of emergency. Authentic interviews with young drug addicts staying in a drug hospital for therapy were transcribed and made available to the public. A checklist and a questionnaire, designed by a professional therapist, are offered. They are motivated by the intention to help the youngsters to gain a realistic perspective on endangering addiction to drugs. The youngsters can feel free to fill in the questionnaire and return it by e-mail to the psychotherapist. Feedback (returning the commentary by e-mail) is given for free and without further obligations.

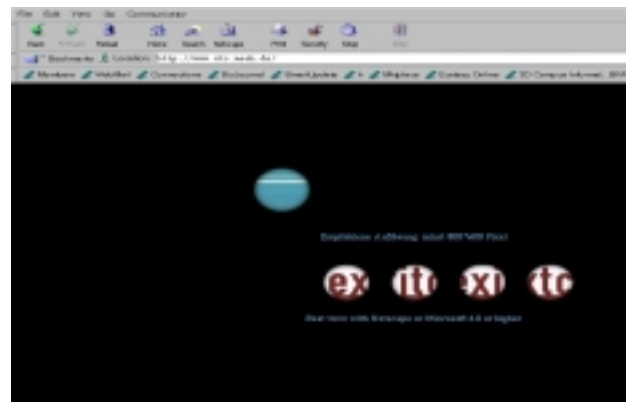


Fig. 1. Screen shot of the portal for www.xtc.mesh.de

II. IMPLICATIONS OF TECHNOLOGY

A. *Computer Simulations of Psychotherapists and of Patients*

There is a long tradition of co-operation between computer technology and psychotherapy. To name the most famous issues: ELIZA (cf. <http://www-ai.ijs/eliza/eliza.html>), PARRY, Mrs. Doolittle, Mr. Webowitz [3]. These are computer programs either simulating a psychotherapist or a patient. They claimed to demonstrate communication strategies between doctors and patients. Of course, questions about ethics and about human dignity and ideals of man were asked when philosophers and society were confronted with the capabilities and effects of these simulation programs.

B. *Psychotherapy and Counseling Services on the Internet: Some Questions on Effectiveness and Ethics*

During the last couple of years there have been dramatic changes in the possibilities of using computers that came up with multimedia and spreading use of the World Wide Web. The new technology offers the potential of Internet services for online-psychotherapy and counseling. It proved that counseling services have become well-established in America and recently developing in Europe as well.

There are many offers for online-counseling on the WWW, e.g.

- www.loveadvice.com (Dr. Tracy Capot, who wants 49,95 Dollars for a counseling session)
- www.netpsych.com/holmes (offer for online counseling by the psychotherapist Leonard Holmes)
- www.metanoia.org
- www.counselingcafe.com/ser_info.htm etc.

Many of these online-counseling services are offered by psychotherapists on the basis of e-mail contacts, sometimes there is additionally consultation via chat.

People can meet with a psychotherapist for private counseling, or asking questions to experts concerning emotional help. Online counseling is meant as a viable alternative source of help when traditional help is not accessible, e.g. if someone has no access to a therapist nearby or might be nervous or embarrassed about face-to-face counseling. Of course, these offers are not intended for people who are severely depressed or in need of clinical care. However, it is meant as an affordable solution for those who are simply going through a tough time. Licensed psychologists offer personal training for life and career, assistance for moving life toward dreams and goals by starting an online consulting service. E-mail counseling works by asking questions or telling the situation wanted help for. The person in search of help or answers can decide whether or not he or she wants to have an on-going relationship or just a one-time session.

There are some years of experiences with this kind of counseling in the USA, but less experiences in Europe. Some examples for online-counseling in Europe are mainly self-help groups, where counseling is for free. However, it is not always sure or even intended that advice is given by a professional in the respective area of interest. In some cases it is clear, that advice is given by a professional therapist or doctor, as it is the case with the following web addresses:

- www.profa.de/sextra (ProFamilia gives advice on questions concerning sexuality and pregnancy)
- www2.telecom.at/femwien/jugend.htm (online-counseling offered by the Austrian Society for Family Planning for Young People)
- www.telefonseelsorge.de/beratung/index.html (German telephone samaritans)

One of the latest offers for online counseling (since March 2000) in Germany is www.lifeline.de/navigation/index.html. Under the motto of “putting your questions to a doctor and get an answer” the web site offers e-mail contact, a chat café, tests and information on many subjects concerning psychological problems, sexuality, AIDS and so on. The users are offered a web form to fill in, where the insertion of name and personal e-mail address are optional. For taking part in the chat discussions the advice seekers can use a nick name. Lifeline strongly insists on the user’s acceptance of the conditions of usage and declares that lifeline doesn’t give any guarantee on correctness and accuracy of the answers given in any conversation or advice seeking dialogues. According to the way they see themselves, they offer only the technical platform for enabling communication between patients and doctors. In consequence, lifeline doesn’t take over any responsibility for damage and doesn’t want to pay compensation if things will go wrong. There are many other online-counseling services on the internet, see also Döring [4] for an overview and categorization of these sites.

With some exceptions mostly information, e.g. on organizations, services or subject areas of interest, is provided at web sites. Some of the exceptions to this practice are named above. These exceptions clearly indicate the new trend for online-counseling exists in Europe. But there is an intensive discussion on the use of media for psychotherapist’s practice. The new medium discussed is the internet, the new media some years ago where audio or video recordings of psychotherapist session. Under the media aspect, there are several arguments against the kind of online-counseling described above. Some mental health experts believe that it is an inferior method because the therapist cannot witness the patient’s body language, demeanor or tone of voice. So, the quality of communication will be limited and communication can fail in predictable ways, depending upon the model or stereotypes they employ [5]. As more and more counseling services appear, mental health professional organizations begin to consider the impacts, ethics and effectiveness of psychotherapists providing services over the WWW.

III. IMPLICATIONS OF THE MEDIUM

We see the arguments mentioned above against wide-spread online-counseling. However, there are good practices in media use for drug prevention. This are reasons for further asking about what criteria could be put forward to support effectiveness and ethics in providing mental health services on the WWW for youngsters.

A. Attracting the Users of the Target Group

Media adequacy is essential in order attract the target group to use the web site. Adequacy for a site for youngsters means to adapt verbally, in tone of voice, and visually with graphic design. This should not be done by adult people who are always in danger to adapt to their own mental models and stereotypes of young people. Authentic and user adequate design will involved young people's own experiences, their way of thinking and their attitudes towards proper life-style.

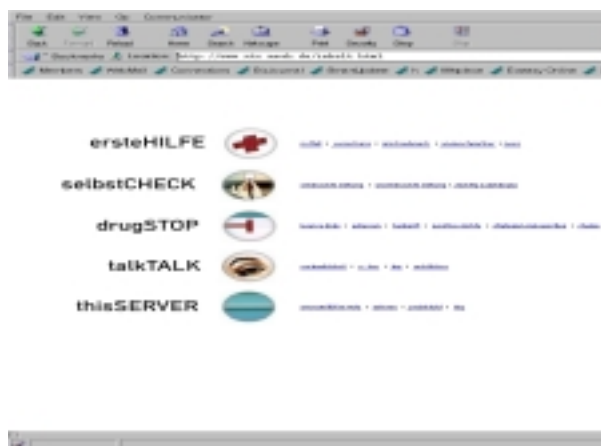


Fig 2. Screen shot of the starting site in Ecstasy-Online

The graphic design of the Web pages was done by a student of design (Muthesius Hochschule, Kiel, Germany) in order to meet people's taste and life-style.

The screen shot of "Ecstasy-Online" (Figure 2) shows the five subject areas, for which information is provided::

- What to do in the case of emergency (including subjects: what to do and how to help, effects drugs take, contact persons and so on)
- Information that will help a person to estimate the degree of her or his addiction to drugs and the risk taken by this.
- A subject area called "drug stop", which gives background information on drugs, e.g. chemistry, hints on literature and further information on subjects of interest.
- In the subject area "talk talk", communication means and interviews with drug addicted people reporting experiences in drug problems are provided.
- The subject area "This server" informs about the people responsible for the web site, about the service itself and about privacy and anonymity on the internet and what confidentiality means in the context of "Ecstasy-Online".

This division offers direct and quick access to subjects of interest. There was only positive feedback for design and information structure given by real users, who had e-mail contact with the psychotherapist.

Another aspect of adapting design of the web site to the user group is illustrated by Fig. 3. The information structure is built from small chunks of information. There are no long text passages, which might bore the target group. But the information structure is clear and concise, the important facts are bulleted.



Fig 3. Screen shot illustrating information structure in Ecstasy-Online

B. Some Potential Benefits from Online Mental Health Services

Since a couple of months we have some experiences in providing mental health services to young people over the internet (from October 1999 to May 2000). In the following sections some statistical data are given on information demand.

Table I shows the total number of pages requested in Ecstasy-Online from October 1999 to May 2000. In the most frequented months, March and May, about 10.000 pages were requested. This clearly shows that there is an interest in our service, even if it is currently restricted to the narrow

subject of Ecstasy and for the clearly defined target group of those young people, who are exposed to XTC addiction or are in danger of consuming this party drug, and their peer-groups like friends or parents.

The number of requests for pages differ over months. They are higher in November, March and May, which were months when we did marketing by other media, e.g. newspapers, scene magazines, posters in schools and discotheques, radio spots and so on.

TABLE I
NUMBER OF REQUESTED PAGES / MONTHLY SUMMARY

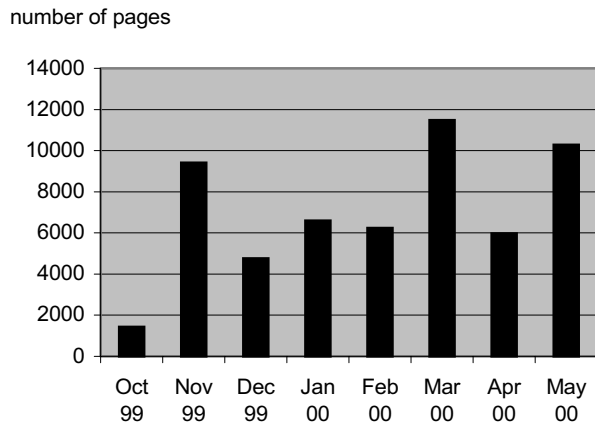
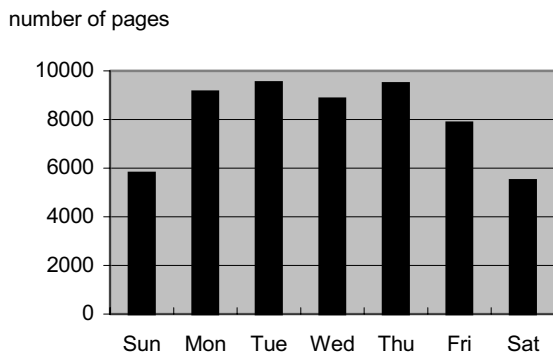


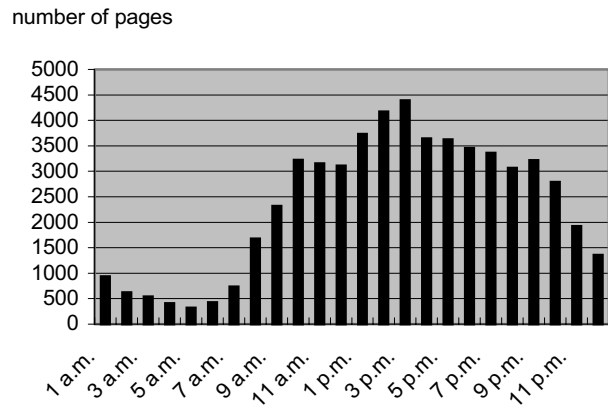
Table II shows a daily summary of the number of requested web pages in Ecstasy-Online. We see that information is demanded all over the week. Peaks are on weekdays (Tuesday, Thursday), less demand is during the weekend.

TABLE II
NUMBER OF REQUESTED PAGES / DAILY SUMMARY



Similarly, the hourly summary on requested web pages, given in table III, shows that information on demand is needed. Although there are peaks in the early afternoon (1 p.m. to 3 p.m.), there is also considerable demand in the evening hours and also during the night. Therefore, this statistics as well as the statistics summarizing the weekly demand show that availability of information-on-demand seems to be an important need of this user group.

TABLE III
NUMBER OF REQUESTED PAGES / HOURLY SUMMARY



Although the statistics on use of our web services shows that the information pages are frequently asked for, there is a discrepancy between requests for information pages and e-mail contacts with the psychotherapist. More details on the nature of e-mail contacts is given in the statistics given in table IV.

From summarizing the figures in table IV, a discrepancy between the number of requests of information pages and the number of e-mail contacts is deduced. However, the e-mail contacts were only in five cases with young persons who had a drug problem themselves. The other e-mail contacts were with persons who worried about a friend having a drug problem. Nevertheless, in these five cases the persons had, even according to their self-awareness, a feeling of clear symptoms (partial amnesia, depressive mood) and a need for a therapy. Therefore, the contact centered around passing on to a out-patient department.

From table IV is also obvious that people seldom contact the psychotherapist twice.

TABLE IV
Kind of services requested from Ecstasy Online
(in December 1999 and January 2000)

Kind and quality of the web service	no.of requests
requests for information pages (web site)	11367
E-Mail requests (total)	57
E-Mail requests for detailed information	45
E-Mail requests for counseling	20
single e-mail contact	36
two e-mail contacts	16
three and more e-mail contacts	5
questionnaire filled in	2
pgp encoding	0

These figures and experiences with e-mail contacts seem not to prove our initial hypothesis. We supposed, that mainly those people having drug problems themselves would use the service. This came from the considerations that consuming designer drugs is a question of modern life-style of young people. Their self-images are in a sharp contrast with common images of traditional mental health services, which have an aura of a drop-in center for junkies, who are in no way figures for identification. Therefore, they need other kinds of mental health services as they could be provided over the internet. To avoid confusion here, online counseling should in no way aim at replacing other kinds of mental health services. They should provide only temporary arrangement for preparing face-to-face counseling. This solution covers the advantage that the young person, who is in search for help, gets an opportunity to collect positive experiences with expert help without losing control over openness and honesty.

When starting the e-mail service, our second hypothesis was, that communication by e-mail and in chat rooms offers young people a context for playing with other perspectives and new ways for dealing with subject themes. The medium allows role-taking for looking at things from a different angle without being forced to proof one's identity. Role-taking and playing with alternate identities are options helping youngsters to minimize inhibition thresholds for talking about embarrassing and highly explosive subjects. Otherwise they would not be prepared to deal with such issues in face-to-face communication with therapists as engaged in traditional mental health services. This thesis was not proven either.

Instead the services seems to be successful offered for the needs of the peer-group of people with drug problems. The information offered on the web site seems not to be detailed and situation specific enough meeting their information needs. They often wanted the therapist to look at their concrete situation and specific context and embedded problem. They asked the psychotherapist about an estimation of the degree of drug addiction and if they overvalue the observed symptoms. Many of them asked for advice how to help the person with drug problems or drug addiction to gain insight and awareness of the real problem and how to communicate.

As most persons from this peer group had similar problems, internet counseling is an alternative for them. To give advice to friends and to other contact persons of persons

with ecstasy problems is from a developmental psychological point of view very important, because the peer group is influential in formation and growth of attitudes towards drugs.

In ten cases persons from the peer-group of the friends asked also, how they could manage to inform the parents. This shows that the social surroundings from the point of view of these young people have changed dramatically. This change of the peer-group was in most of the cases estimated as being dramatically. This also gives a hint on the importance of the peer-group for attitude towards drugs and for consuming drugs, as proofed by scientific results reporting about young people's becoming addicted to something. Facing this relationship between peer-group and addiction, it is interesting, that in no case any mother or father was in seek for help, maybe because of their lack of web experience, which seems to be more common with the younger generation.

C. *What About Confidentiality and Anonymity for Communication over the Internet?*

When talking about online-counseling and therapy, several keywords are relevant: professionalism of the advisor, obligations and liability of the advice given and also confidentiality. These three aspects are relevant for counseling and therapy in general, but they get another quality, if the mental health services are provided on the web.

As far as professionalism is concerned, one can never be absolutely sure, if the e-mail or chat conversation partner is really a professional expert in this field. In order to enhance the trust in the professionalism of the communication partner, the German professional association of psychotherapists is discussing to give a certificate for those, who should be allowed to provide online counseling and online therapy.

Liability is another aspect, which cannot easily be guaranteed with online-counseling. Internet contacts are easily subject to be stopped any time. Although this fact makes internet contact very attractive for many people, there is also a disadvantage connected with. There is no reliable basis for receiving a relevant answer right in time, e.g. in the emergency case.

The most interesting ethical aspect of online-counseling and online-therapy is confidentiality. Strict confidentiality for e-mail contacts has to be guaranteed by the expert providing assistance and help, as the psychotherapist can do in our project, who is motivated by his professional background and affiliation. This is important from the point of view of data security. Above this common criteria critical questions may cause severe threat for punishment which would prevent youngsters in face-to-face communication situation from openness and honesty.

In the context of online-counseling personal and highly sensitive data are generated, which have to be exchanged and recorded under consideration of data protection aspects, e.g. data encoding. On the one side there is a need for confidentiality and anonymity in communication with mental health services, on the other side, however, every user leaves traces of data when using the internet. They allow attackers to keep in track and assault privacy.

In our project “Ecstasy-Online” data encoding with PGP (pretty good privacy) is the first step of severe data transfer in e-mail communication. Online counseling needs secure methods to prevent attacks and guarantee confidentiality and anonymity of communication for which methods are to be developed, evaluated and adapted.

However, in none of the contacts with the psychotherapist anyone pgp encoded the e-mail messages. We suppose this is for reasons of providing no user-friendly interface. We take this also as a hint that user’s mental models [6] on confidentiality differ from real technical conditions of a lack of privacy.

Our next step will be to enable anonymity for communication over the internet. As every use of internet services generates data traces, which can be recorded and combined at every step taken on the transfer path [7], it bears the danger of third parties to take a look at the content. All data transfer over the internet is of limited confidentiality in the above sense. In order to guarantee a maximum of confidentiality, technical concepts like anonymity and being unobserved for communication are suggested [8]. This concepts will be implemented in summer 2000 for application in Ecstasy-Online in cooperation with the commissioner for data protection in Schleswig-Holstein in the project WAU – web surfing anonymous and unobservable, funded by the European Commission, where a technology for anonymity on the web based on Mix-techniques [9] is developed.

D. About Privacy on the Internet

Being anonymous and unobserved on the internet is intensively discussed by politicians in the context of cyber crime and therefore subject to legislation in several countries ([10], [11]). Furthermore, there is a legislation draft of the European Council against cyber crime. This legislation initiative foresees that internet providers will be forced by law to collect data on the internet communication of their clients in the case they are asked for by the legal authorities. Another proposal for data collection of individual internet data transfer was put forward by the USA at the G-8-Conference [12], defining a kind of international internet police. Although this proposal was refused by “Internet Alliance” and by “Global Internet Project” it reveals international legislation’s interest in stricter regulation and control for the communication and internet data transfer.

According to their concept only digital signature should be allowed, but not the kind of anonymity needed for example for the kind of personal service offered in our project.

However, in situations like mental health services for young people, there is absolutely no need for anyone to be able to reveal the identity of the communication partner or to get knowledge of sensitive personal data.

IV. OUTLOOK

Designing an online service for providing mental health services for young people needs interdisciplinary co-operation. In the case of our project the co-operating partners were computer scientists, information scientists, designers, psychotherapists, and the commissioner for data protection at the Government of Schleswig-Holstein (Germany).

Our results suggest that utilizing new media to provide mental health services to young people comprise benefits for the youngsters, as well as for empirical researchers and for daily work of the mental health services. All these advantages were discussed in the sections above.

However, the beneficial potential of the new media for the target group does not reveal itself and is not automatically inherent to the new media. Rather it is the case that media usability has to be designed and design criteria have to be discovered and generalized for common use. These design criteria may range from interface design, to adequate communication strategies for e-mail messages and chat rooms and to methods that guarantee confidentiality and anonymity for the use of internet services. Here are many demands for further research and societal discussion.

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