E-mental health:

Towards an Informal Online Learning Community for Student Mental Health at 3rd Level

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Declaration

I declare that the work described in this dissertation is, except where otherwise stated, entirely my own work and has not been submitted as an exercise for a degree at this or any other university.

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Abstract

The study sets out to explore the feasibility and utility of engaging the Internet and Information and Communication Technologies (ICT) in extending mental health services to students at third level.

Universities are facing significant challenges in responding to the diversity of mental health needs of the student population. Contributing factors include a general increase in mental ill health among young people and the rapidly widening access to higher education agenda (Rana, Smith, & Walking, 1999). In addition, suicide, in particular among young men, is increasing yearly.

Given the rise in Internet usage, especially to access health information (Escoffery, 2005; Hanauer, 2004), the 3rd level population's familiarity with the Internet and related tools (Christensen, 2000), the potential of ICT to make contact with the population (Donnelly, 2003) and the availability of new technologies, the study suggests that Mental Health service provision can be delivered through an online environment with a community building praxis (K. Anthony, and Goss, S., 2003; Brook, 2002; Karam-Hage, 2001; C. A. Richardson, and Hansen, E.A., 2002).

As a potential solution the project sought to develop and implement an informal online learning community for mental health support and education. The design is grounded in informal pedagogical principles and online community building practices. The online learning community was developed and launched in February 2006.

The trial was quite successful with positive features being the benefits to lurkers in such a community, the characteristic of disinhibition being supported by anonymity, online provision acting as a gateway to further support and online provision reaching an audience who ordinarily don't use face-to-face services. Other benefits include online mental health functioning as a supplement to face-to-face services and the educational import and potential of online mental health. At the same time difficulties particular to this type of community have surfaced including technical issues, implications of anonymity and user safety.

1. Introduction

1.1 Background

Universities are facing significant challenges in responding to the diversity of mental health needs of the student population.

'Mental health' describes a sense of subjective well-being and the capacity to live in a resourceful and fulfilling manner, having the resilience to cope with the life challenges, feeling in control, and being able to take responsibility (World Federation For Mental Health). Students can experience some difficulties in coping at different points in their college lives and some of these are typical reactions to the range of common life events. However, mental health difficulties can also describe long-term psychiatric conditions, which may have significant effects on an individual's functioning. Within a college community, the variety of mental health needs presented by students need to be responded to (Rana, 1999).

Many recent reports such as Reach Out (Health Service Executive, 2005), The Health of Irish Students (Hope, 2005), Young Men's Outlook on Life (Begley, 2004), and Young People's Mental Health (Sullivan, 2004), have recommended that mental health education be more readily available. These reports also highlight the potential of using the Internet and ICT for education. Further, Escoffery (Escoffery, 2005) and Christenson (Christensen, 2000) recommend the development of web portals for health related information within colleges and universities.

1.2 The Approach

Given the increasing demands on university mental health services this research seeks to investigate the potential utility and feasibility of the Internet and ICT in mental health service provision at third level. The proposed online service will be designed to enhance the existing

face-to-face mental health services. It will seek to do this through the development of a portal, an architecture that will support not only information provision but a variety of services; online counselling, peer moderated discussion boards, and e-learning content. Through using a combination of technologies a platform for an informal learning community can be constructed (Brook, 2002; Johnson, 2001; C. A. Richardson, and Hansen, E.A., 2002; Stanoevska-Slabeva, 2001).

The research sought to answer the question: can the use of the Internet and ICT be effective in delivering mental health services to third level students? Specifically, how effective is an informal online learning community for student Mental Health education? And what is the effectiveness of the different tools and resources within such a community, including online counselling, peer moderated discussion boards and e-learning content.

1.3 Implementation

The research was conducted at Trinity College Dublin. Traditionally, its population are predominately middle class and are selected from the brightest in the country according to national examination. This is still the case today, although there are some changes in the demographics with regard to the inclusion of an increasing number of non-traditional students (HEA, 1995, , 2004).

On February 7th, 2006 the portal was launched, an e-mail (Appendix .1.) was sent to all students inviting them to register. Posters were also made and distributed throughout the college campus by the peer supporters and word of month from peer supporters and professionals involved helped market the launch.

1.4 Research Methodology

The methodology for evaluating the project is mixed method research approach using triangulation of quantitative and qualitative data. The study included a pilot followed by an

evaluation by users and health professionals. Data was collected through the statistical

information gathered by the system (postnuke) on a daily basis, also by an independent online

statistical counter (statcounter.com). An online and anonymous questionnaire, that all

registered members were invited to complete, was used to collect quantitative and qualitative

data from users. The data collected was analysed using a statistical package (Excel and

SPSS) and the qualitative data was analysed using thematic content analysis (Willig, 2001).

1.5 Roadmap

Section Two: Literature Review

Given the demands on University mental health services, students' familiarity with ICT, and

their online health seeking behaviours it seems sensible to attempt to provide mental health

services online. As a potential solution this study explores the development of an informal

online learning community for mental health.

The literature recognises that the building of an online community needs sound pedagogic

principles and online community building practices informing its development. To this end

the review considers informal learning as a suitable pedagogy for this type of learning

community. The literature draws on similar developments in online mental health at other

universities internationally to inform the project.

Section Three: Design and Implementation

The rationale for needing an artefact leads into this section, which describes the artefact. The

artefact is firstly an information portal hosting a range of e-learning content. Secondly, it

features a model of asynchronous online counselling; lastly, the artefact has a peer moderated

discussion board. Section three details the design and implementation of the artefact.

Section Four: Evaluation

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This section details the results of the findings. Positive and negative elements of the research

are discussed.

Section Five: Conclusion

This highlights the key findings and also recommendations for future work, research and

development.

1.6 Conclusion

The rise in mental ill health issues, the widening access to education and decreases in funding

are all contributing to increased demands on university mental health services (Rana, 1999).

Consequently, university mental health services are seeking new and innovative ways of

responding to student's mental health needs. This research will investigate one possible

contribution to enhancing current services. At the same time transferring services online is

controversial and raises many concerns, such as questions about anonymity, ethical of clinical

responsibility, user safety and technical security (Rochlen, 2004; Tate, 2004).

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2. Literature Review

2.1 Introduction

In the last 10 years, or so, new technologies have become available that make it possible for online delivery of psychological support (Ritterband, 2003). There is scope for research to confirm the feasibility and utility of the Internet and ICT for mental health education. A review of the literature suggests that developing an informal online learning community for mental health is not only possible, but perhaps desirable (A. Barak, 2005).

The literature review addresses the background and rational for delivering mental health services online at University. Factors considered relate to increased demands on mental health services, the potential use of ICT for mental health education, and student's use of the Internet to access health information. Literature on online learning and online communities is also explored (Christensen, 2000; Escoffery, 2005; Karam-Hage, 2001). A critique of similar developments in other universities internationally will be drawn upon to support the thesis (A. Barak, 2005; A. Barak, Bloch, N., 2005; Drees, 2005; Efstathiou, 2005; Freeman, 2005; Topman, 2005).

2.2 Mental Health and Students

Both nationally and internationally there has been a rise in the frequency and severity of mental ill health among the student population and a corresponding increase in demand for mental health services (Rana, 1999). Age is certainly a factor regarding student's mental ill health (Rana, 1999). For example, the onset of manic depression is usually between 16-25 years (Rana, 1999) and suicide and self-harm are most commonly attempted between the ages 20-24 (Health Service Executive, 2005).

Most students perceive mental health to be a fixed reality, yet mental health is fluid and dynamic (WHO, 2001). Many recent reports such as Reach Out (Health Service Executive,

2005), The Health of Irish Students (Hope, 2005), Young Men's Outlook on Life (Begley, 2004), Young People's Mental Health (Sullivan, 2004), and Men's Health (McKeown, 2004; N. Richardson, 2004) make clear the need to educate the population about mental health and have recommended that mental health information and education be more readily available. These reports also highlight the potential of using the Internet and ICT for education.

2.3 The access to higher education agenda

Increases in mental ill health among students also 'reflects the rapidly widening access agenda of young people' (Royal College of Psychiatrists, 2003). These students often require greater support then those from 'traditional' backgrounds (HEA, 1995, , 2004; Rana, 1999). The increasing number of students has not been accompanied by respective increases in counselling staff or resources (Moloney, 2005; Rana, 1999). Consequently, the waiting period to access mental health services is being affected (Trinity College Student Unions, 2004). This is contrary to the evidence of the beneficial impact of early intervention (Royal College of Psychiatrists, 2003).

2.4 Suicide and Depression

Irish research on the prevalence of depression among students found that 7.8% were depressed and 38% reported having had a period of depression in the past year (Union of Students in Ireland, 2003). Of particular concern is the rate of youth suicide (15-24 year olds) in Ireland, currently the fifth highest in the European Union (Callanan, 2004).

In addition, it can also be noted that for mental ill health issues such as suicide and depression that young adults are more likely to talk about their problems with a peer (Abbey, 1989). Preference for peer support (83%) outweighs preference for talking with a parent (46%), an academic tutor (5%), or a student counsellor (4%) (Hope, 2005; Moukaddem, 1995).

2.5 Young Men

Young men in particular have been identified as at risk of mental ill health (Kracen, 2003; McKeown, 2004). Although less likely to access face to face services (Sullivan, 2004), the Internet and ICT may in fact encourage men to access mental health education and other services (Begley, 2004; Donnelly, 2003).

2.6 Students, the Internet and ICT

A recent Eurostat report (Demunter, 2005) highlights that, at 57% University students are the highest users of the Internet and ICT in Ireland (Demunter, 2005). At University students have access to high speed Internet connections and well maintained equipment. Students are therefore facilitated in using the Internet and related tools. Most students have grown up with technology and are high users of the Internet and related tools (K. Anthony, Goss, S., 2003; Christensen, 2000; Escoffery, 2005). The project seeks to develop on this already established and increasing behaviour.

Most students are high users of the Internet and related tools (Escoffery, 2005) and students already use the Internet for health and mental health related information and education. In one study, 74% of college students were identified as using the Internet for accessing such information, 40% are doing so frequently (Escoffery, 2005). However, more research is needed in this area to make certain the claims. Further, Escoffery (Escoffery, 2005) and Christenson (Christensen, 2000) recommend the development of web portals for health related information within colleges and universities.

Given the demands on University mental health services, students' familiarity with ICT, and their online health seeking behaviour, it seems sensible to attempt to provide mental health services online. As a potential solution this study explores the development of an informal online learning community for mental health.

2.7 Informal learning online

An online learning community can facilitate informal learning (Kaplan, 2002), potentially enabling a constructivist pedagogy (Gulati, 2004). The internet and ICT's can facilitate informal learning because it allows individuals to seek out and use resources independently, control the pace and direction of their learning, and talk to and consult others (Imel, 2003).

The literature elucidates how learning, meaning making, sharing and transfer of knowledge can happen effectively when it is collectively constructed (Backroad Connections Pty Ltd., 2003; Johnson, 2001). It is only through the relationship and interactions of the individuals that knowledge is primarily generated (Edelstein, 2002). Technology can provide not only a means of communication, but a basis for community, whereby learners, through interacting with peers, professionals, and other resources that the community provides, can engage actively and collaboratively in informally constructing their learning (Russell, 1999).

2.8 Online Learning Community:

Communities don't just happen, they're made. Knowledge regarding the construction of effective online learning communities has grown and there is clear recognition that certain ingredients are required to help a community begin and grow. One central ingredient, and arguable the most important, is the presence of the moderator (Backroad Connections Pty Ltd., 2003; Salmon, 2000).

Alongside the important role of the moderator, the literature (Backroad Connections Pty Ltd., 2003; Brook, 2002; Johnson, 2001; Preece, 2003) defines the core characteristics of online communities as: a shared purpose and a shared context that includes social conventions and protocols; secondly, that members are motivated to interact through active participation; and thirdly, that reciprocity of information, resources and support occurs.

Developing an online community will require attention to many issues such as motivation, participation, interaction, and effective moderation (Salmon, 2000). Attention to the details of establishing a community for mental health service provision is also needed: protocols for security, crisis management, safety, information accuracy and service delivery, among others (Rochlen, 2004; Tate, 2004). An online learning community has the potential to facilitate peer support, a preferred source of support for college students (Richards, 2005) and an online learning community can play a significant role in educating students about mental health (Begley, 2004).

Building a ICT platform for student mental health at third level, is as much about the types of technologies employed as it is about having sound principles informing its development (K. Anthony, and Goss, S., 2003; Bork, 2001; Brook, 2002; Donnelly, 2003; Karam-Hage, 2001; C. A. Richardson, and Hansen, E.A., 2002; Stanoevska-Slabeva, 2001). There is a wide range of technological solutions available from static websites for advice and information, through to synchronous and asynchronous communication tools, to stand alone software and videoconferencing (K. Anthony, and Goss, S., 2003; A. Barak, 2005). Currently face-to-face mental health education includes counselling, peer support and education.

2.9 Technology in Mental Health

Technology in mental health is a controversial area, vigorously questioned over the last 10 years. The feasibility and efficacy of such services have not yet been established with certainty (Rochlen, 2004; Tate, 2004). Many clinical and research issues need to be addressed (Ritterband, 2003). The potential and probable benefits of online delivery can be found in the literature (Rochlen, 2004; Tate, 2004). Online anonymity directly reduces the associated barriers and social stigma. It also contributes to the disinhibiting effect of receiving support online (Suler, 2004). Online delivery can serve people with limited mobility, limited access to mental health services in an area, or time restrictions. It provides

the user with a resource bank of hypertext and hypermedia supports. It is primarily text based and research has demonstrated the therapeutic benefits of writing (Sheese, 2004).

Many universities websites are information portals hosting a wide variety of materials on mental health. An example is the University of Chicago (http://www.dr-bob.org/vpc/, which provides a comprehensive selection of psycho-educational materials for students. .

Other universities have experimented with different models in delivering online mental health services to students. For example, Efstathiou (Efstathiou, 2005) at the University of Athens provides asynchronous online counselling to students, where students can post a submission to the counsellor and receive a reply. The website also provides a range of psychoeducational materials. During a 41 month period the service received 1,384 e-mail submissions. Female students sent 64.1% of messages and the mean age of users was 25.08 years old. According to the research the service enjoys high popularity amongst students. A characteristic of the service that the research identified is online disinhibition. Concerns highlighted in the evaluation included possible misreading of written communications, exclusion of computer-illiterate students and difficulties with strict anonymity in cases where students expressed suicidal or criminal intentions (Efstathiou, 2005).

Other universities have developed online peer support. Peer supporters are people who engage in a non-professional, multi-functional, interpersonal helping role for others. In a third level setting, the role of the peer supporter includes students meeting other students individually or in group settings to listen, advice, refer, tutor and provide general support (Richards, 2005). The University of Westminster show positive results from online peer support using e-mail (Drees, 2005). Another study has been carried out at University College London, where, in 2002, an online peer support community was established using discussion boards. It gives primacy to informal learning based on experiential knowledge. The discussion boards are moderated by a professionally trained counsellor. In the first year 2002-03, 142 individuals used the service, 33% posted and read messages, 64% read only

posts and 3% read only message titles. The most common issues raised were study difficulties, relationships, depression/sadness, eating concerns and employment worries (Freeman, 2005).

While this sampling of initiatives show predominately positive results, they also highlight issues of concern and challenges, for example, dealing with the lack of social signalling, misreading posts/mail content, the impact of time delay in responding, how to manage crisis intervention, cultural clashes, identity formation and disclosure online, security for users and providers, and legal and ethical issues (Drees, 2005; Efstathiou, 2005; Freeman, 2005).

2.10 Conclusion

Online communities have the potential to engage students with their peers and with professionals in learning and receiving support about mental health issues that concern them (A. Barak, 2005; Drees, 2005; Efstathiou, 2005; Garcia, 2004; Risque, 2005; Topman, 2005; Valverde Macías, 2005). Online services have the potential to make contact with a wider audience, especially males (Begley, 2004; Donnelly, 2003; Karam-Hage, 2001). Developing an online community, in general, will require attention to many issues such as motivation, participation, interaction, and effective moderation (Backroad Connections Pty Ltd., 2003; Pelz, 2004; Preece, 2003; Salmon, 2000). Attention to the details of establishing a community for mental health service provision is also needed: conventions and protocols for security, crisis management, and safety are needed (K. Anthony, and Goss, S., 2003; Rochlen, 2004; Tate, 2004). Studies in the area show promise as to the efficacy of online delivery of mental health (A. Barak, 2005; Drees, 2005; Efstathiou, 2005; Garcia, 2004; Risque, 2005; Topman, 2005; Valverde Macías, 2005). Online services can be professionally regulated for information accuracy and service delivery (Christensen, 2000). An online learning community has the potential to facilitate peer support, a preferred source of support for college students (Hope, 2005; Moukaddem, 1995; Richards, 2005) and an online learning community can play a significant role in awareness raising and educating students about mental health (Begley, 2004; Health Service Executive, 2005; Hope, 2005; McKeown, 2004; N. Richardson, 2004; Sullivan, 2004).

3. Design and Implementation

3.1 Introduction

The literature suggests that it is perhaps possible to provide mental health education and services in an online format. Based on growing demands placed on mental health services at universities, students familiarity with the internet and ICT's and their online health seeking behaviours, it seems sensible to provide services in an online format. Studies that have been carried out in the area show positive results and highlight the potential of online mental health education and service delivery. Further a recent Irish report, Reach Out (Health Service Executive, 2005) calls for the piloting and evaluation of new information services using ICT's.

While a broad range of tools can be employed in such a community (K. Anthony, Goss, S., 2003), for example, video, online gaming, synchronous and synchronous communication tools, it was decided to base the development of the TCD online mental health community on current face-to-face services, which include education, peer support and counselling. Therefore, three primary services were developed to extend current provision; these are elearning content, asynchronous counselling and peer discussion boards. A further justification for the selection of tools and services is that the model employed for online counselling has been successfully used for a university population (Efstathiou, 2005), so too have discussion boards been successfully applied for online peer support (Freeman, 2005). While this study did not allow the scope of resources to become more than the three primary resources described, experimenting with other resources, such as online gaming and synchronous communication, are areas for future research.

The project sought to create a platform where learners could potentially seek out and use a variety of different resources. The literature on informal online learning advocates students

choosing what they want to use; the pace, direction, and independence of their learning therefore is completely in their control (Imel, 2003). This arrangement can potentially enable a constructivist learning environment at the heart of which is an informal learning pedagogy. Such an environment can provide resources and the potential for users to create learning situations and occurrences either alone, with a peer or with a professional.

3.2 Design of the Artefact

Stanoevska-Slabeva & Schmid (Stanoevska-Slabeva, 2001) argue that choice of ICT's has a bearing on the impact and later success of online communities. Because it is an integrated system and because it could provide the necessary ICT's for the development of the TCD online mental health community, Postnuke, a content management system, was chosen for the design of the artefact.

3.2.1 Postnuke

PostNuke [http://www.postnuke.com/] is a community, content, collaborative management system, a C3MS. It's an electronic toolbox, a set of tools allowing one to build a dynamically generated website. Postnuke has a range of user friendly features that include: its modular structure that makes it easy to add or subtract modules on a needs basis. It allows for advanced user group permissions. It has a comprehensive site search tool. Its application interface is easy to use. It features a high level of encryption and security. It's easy to install, customise, change and revise. It provides advanced content management features while promoting collaboration, communication and community around the content. Lastly, and importantly, it is open source software held under the creative commons licence [http://www.creativecommons.org/].

While Postnuke was selected as the preferred system to use for this project, many aspects of the system needed revision before the system was appropriate for use. For example, Postnuke uses a generic and uncomplicated registration system. The current study needed to revise this and add fields to collect information including student's college identification number, and the e-mail addresses field was limited to University domains only [Figure .1.].

Online Student Mental Health Community							
Omme Student Mental Meanth Community							
Main Menu							
• <u>Home</u>	New user registration	Login User name					
Peer Support Forum	Register now! It's free!	User name Password					
<u>Send a message</u> to a counsellor	To register and become a member, create a username and use your TCD e-mail for username a fictitious name.	or registration. Make your Log in					
Read counsellors	The information collected will be held in confidence by the student counselling serv access to your information. In the website only your username will be visible.	New User? Sign Up!					
responses to student messages	Choose any Username you like. It is advised that you do not use your TC site	D username for this					
FAQ's on Mental Health	User name	Peer Support Discussion Forum					
• Search	TCD Student ID:	LAST FORUM POSTS					
Urgent! Feeling	TCD E-mail address	→DThought of the (5) Week					
If you are experiencing specific suicidal ideation	TCD E-mail address (for verification)	by Plunky mod					
or intent or you urgently need support, please	(Your password will be sent to the e-mail addre	ss you enter) Disamily life (0) by Guest					
consider contacting the Student Counselling	☐ I agree to be bound by this web site's <u>Terms of us</u>	e and Privacy policy • Depression and (23) Apathy Draft					
Service [Mon-Fri: 9-5] for an emergency	Newuser	by Plunky mod					
appointment or an organization such as Niteline [Thurs-Sun:	NOTICE: The preferences you set for your user accou	nt are stored in cookies. [Access Forum]					
9-2:30aml, the							

Figure 0 Student Registration Page

On successful registration students were sent a password generated by the system. The user could then log on with their username and password. This was necessary so as to ensure the security of users and also to enable duty of care to be fulfilled especially in case of any emergencies. In such an event users could be tracked and the protocols used for face-to-face duty of care in emergencies could then be put into action. Similarly, additional instruction needed to be included onto pages to guide students and scaffold them in their use of the website. This helped users unfamiliar with using the different technologies. It also helped users feel secure in using the services that the system was providing them with. Students also had to agree to the terms of use and privacy statement [Appendix 2].

3.2.2 Features of the system

The system contains three primary features; firstly it is an information portal hosting a range of e-learning content. A broad range of information on issues relevant to student's mental health is provided through the section 'FAQ's on mental health' [Figure .2.]. Face-to-face service already provides psycho-education to students through fact sheets and information resources on the website. The TCD online mental health community extends and supplements current provision by making information on a wide range of mental health issues available in an easy and assessable format for students.

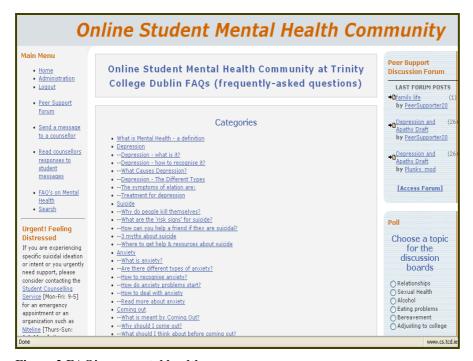


Figure 2 FAQ's on mental health

The second feature of the system is asynchronous online counselling where users can send a message to a counsellor, the system holds the submission until it is retrieved and answered by the counselling service; finally the original submission and reply are posted live to the website. Figure .3 shows the submission page – 'Submit your story'. There are clear instructions for the user and a simple form is used. Students could also select a topic under which they post the message. Topics included depression, eating problems, sexuality among many others. On submitting their story students received an e-mail from the site

administrator confirming receipt. When the submission was read and replied to it was posted to the website. Students again received an e-mail alerting them to this. Figure 4 shows an example of submissions that have been replied to and posted to the website. Online counselling is justified as it extends already existing services, in this way the Student Counselling Service could collect submissions and reply to them.

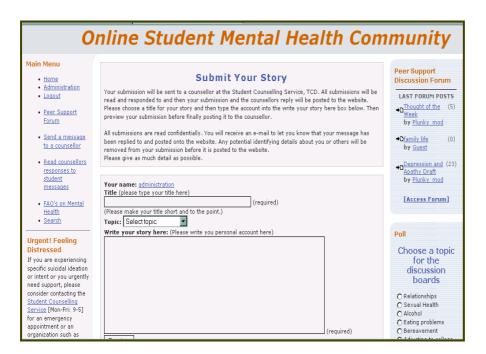


Figure 3 Submissions to a Counsellor

Others reasons for the use of the asynchronous counselling model include its previous use in a similar setting and as a pilot study it was in addition to current services at the student counselling service, therefore, human resources had to been considered. It was felt that the asynchronous model may exact a lesser demand than would synchronous communication. It could be managed with greater ease and flexibility as part of current provision.



Figure 4 Online counselling submissions

The third main feature is the discussion board. Transferring peer support online can occur using a variety of tools; because discussion boards have been successfully used in other studies it was decided to use them here also. Further, research on discussion boards shows positive outcomes for creating a safe, caring, and supportive environment, especially for discussing personal issues (White, 2001).

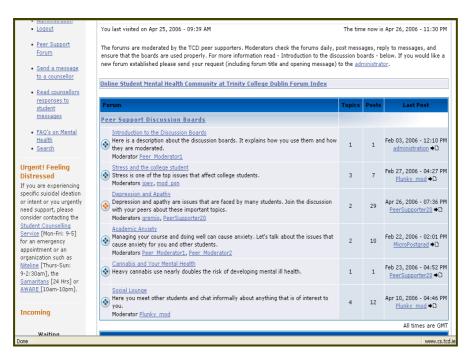


Figure 5 Discussion boards

Synchronous interaction was not chosen because it may have been too burdensome on individual peer supporters. Discussion boards are used by students in a variety of settings, for leisure and also as part of some courses, therefore student's familiarity with this technology provided further justification for their use. The university already has a peer support network of students trained in basic counselling and helping skills. The project employs their skills, working as moderators for an online peer discussion board.

Through the use of the different resources students can engage in learning about mental health and receive support. As the community was developed by professionals for a specific audience protocols for security, crisis management, safety, information accuracy and service delivery were also considered. For example, students registering onto the system had to agree to the terms and conditions of use and also the privacy policy in place. Also all information on the system was quality controlled by professional staff working at the student counselling service. Submissions made by students were read confidentially and answered by professionals. The discussion boards were moderated by the peer supporters, a trusted and trained group of volunteers. Any data collected was held in confidence by the administrator and permission was sought to use the data for the purpose of this research.

3.3 Implementation

On the 7th February 2006 an e-mail was sent to all students in the university inviting them to register and join as a member of the online mental health community. Many users used their TCD username as the name to complete the registration form. This may have led to complications and compromised user's anonymity. Two things were done to correct this issue; firstly, a note was added to the registration page indicating that it was desirable that the username be fictitious. Secondly, any user who posted a submission to the site was asked if they would like their username changed before the post went live. This added extra administrative work and future developments will needed to account for this.

Initially all content posted was available to users whether registered or not. In this way the public outside of Trinity College could access the content. As the community was only for TCD students, we had to change this and restrict the availability of content to only registered TCD users.

3.4 Conclusion

The chapter has described the artefact and its main features. The artefact is firstly an information portal hosting a range of e-learning content. Secondly, it features a model of asynchronous online counselling; lastly, the artefact has a peer moderated discussion board. Implementation for the most part was successful, although complications, most of a technical nature, included difficulties with the server and revision of the PHP code. Difficulties with user registration could have potentially compromised anonymity. Future developments will need to account for these and other potential technical and user difficulties.

4. Evaluation

4.1 Introduction

The TCD online mental health website was live for ten (10) weeks prior to this evaluation and is the first of its kind for Ireland. The study sought to evaluate the potential feasibility and utility of engaging the Internet and ICT in constructing an informal online learning community for mental health education to a third level student population.

The trial was a success and features that are evaluated as being successful including the role of the lurker in such a community, the characteristic of disinhibition being supported by anonymity, online provision acting as a gateway to further support and online provision reaching an audience who ordinarily do not use face-to-face services. The evaluation demonstrates that online education and support is meeting a need in the community. It also highlights reciprocity of information and support, and knowledge sharing and creation, features of any well defined learning community.

In addition, regular marketing of the website and its services to students, active professional involvement in the website, the use of polls to gather data on students interests and needs, the use of external links, and continuing the service for the student population have each been positively endorsed by students. At the same time difficulties particular to this type of community have surfaced including technical issues, implications of anonymity, potential dependence and user safety.

4.2 Subjects

The subjects of this study were all registered students at the University. In total 389 users registered, 65% female, 26% male. This is slightly higher in favour of females than that of the total college population gender divide [female: 60.91%: male: 39.09%]. The traditionally

reported gender divide in using ICT is not apparent; females are more than equally represented (Demunter, 2005). The analysis also shows 4% of registered users are staff at the college; this would include staff at the Student Counselling Service and other interested staff.

User Group Profile by Gender

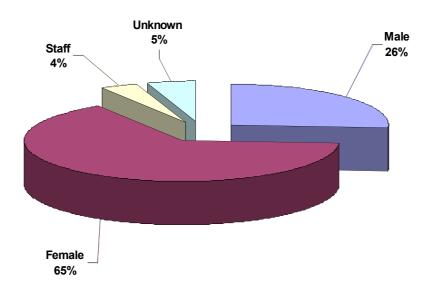


Figure 1 User group profile by gender

Five percent [5%, N=19] of users are unknown, this is accounted for by the possibility of other staff having registered and/or some students registered who failed to provide accurate student numbers. This is a weakness in the system; it doesn't automatically match student college identification number with e-mail address. Users were contacted by the system administrator and asked to provide their correct student number, but not everyone responded. Future work will need to account for this apparent weakness of the technology and its implications for security and professional service delivery.

The following chart displays the academic standing of the registered users. Of the undergraduate population, first year students have the highest representation in the user group [29%]. One percent [1%] are Year 9 students, these are visiting students.

User Group Profiles Academic Standing

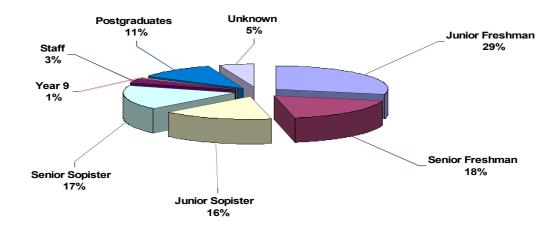


Figure 2 User group profile by academic standing

JF representation in the user group [29%] is 12% higher when compared with their representation within the entire Junior Freshman college population [17%]. Other undergraduate years are fairly representative of the college population at large [SF: 17%; JS: 16% and SS: 17%]. Postgraduates are underrepresented at 11% compared to a 28% representation within the entire college population.

User Group Profiles by Faculty

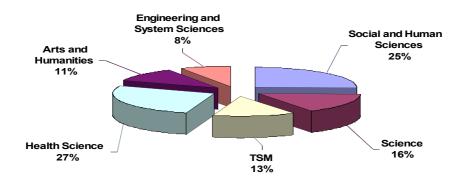


Figure 3 User group profile by faculty

4.3 Instruments and Method

On a daily basis data was collected through the statistical information gathered by the system (postnuke) and also by an independent online statistical counter (statcounter.com). An online and anonymous questionnaire (Appendix 3), which all registered members were invited to complete, was also used to collect quantitative and qualitative data. The questionnaires design was divided into 7 sections and had a total of 19 questions (Harvey, 1998; Willig, 2001). The questionnaire was designed to collect qualitative and quantitative information. The findings were analysed using Excel and also thematic content analysis for the qualitative data.

The number of completed questionnaires was low [N=13]. Reasons for this include technical difficulties where some students completed the evaluation form but the results were not collected by the database. A second possible reason is the time of the year that the invite was sent, as students were engrossed in assignments and preparing for examinations and consequently may not have had the time to complete the evaluation. Of those who completed the questionnaire, 69% are females and 31% are males. Respondents are representative of each of the four undergraduate years and also postgraduates.

The methodology for evaluating the project is a mixed method research approach using triangulation of quantitative and qualitative data. Because of the low number of respondents to the online questionnaire the analysis is tentative. However, the data collected from the online questionnaire is useful in as much as it supports the data already gathered from the user group and their usage of the system, therefore, the author has decided to triangulate the results in support of the evaluations' findings (Willig, 2001).

4.4 Analysis and discussion

4.4.1 The discussion boards:

Discussion boards are a popular tool being used in delivering psychological support and education. Their advantages seem to outweigh any possible disadvantages (White, 2001). An already trained and established group of peer supporters, who would normally work in a face-to-face capacity, were used to moderate peer discussions on issues relating to mental health and students.

The peer supporters, in consultation with staff at the Student Counselling Service, initially populated the discussion boards with five forums, they are:

- Introduction to the discussion boards
- Stress and the college student
- · Depression and apathy
- Academic anxiety
- Social lounge

The three main forums relate to the three highest referral reasons by students to the Student Counselling Service over the past year 04-05 (Student Counselling Service, 2005). They are:

Forum	Topics	Posts	Replies	Views
Stress and the college student	3	7	4	326
Depression and apathy	1	26	24	1323
Academic Anxiety	2	10	8	349
Total	6	41	35	1773

Table 1 Main forums: topics, posts, replies & page views

Because the forums relate directly to concerns among the student population they are consequently important. While the majority of users preferred not to post or reply, the page views provide some evidence that many students were reading the material available. Evidence for this is provided by the official statistics gathered by the system and also by questionnaire respondents reporting high usage in reading the forums [54%]. Further, and for a variety of reasons particular to such an online learning community for mental health, the

place of the lurker/reader is held in positive regard for it is recognised that not everyone will want to post and or reply and that reading is therefore deemed equally valuable. The lurker is typically encouraged to interact; here the lurker is given a new ground, a place where he can feel safe and part of the community through just reading.

There are differences between the three main forums. The forum on Stress has two conversations, one titled 'In a complete rut', the other 'Anxiety, I am the queen'. These are separate conversations based on the posts of two users. They are replied to by peer moderators. They focus primarily on the individual's particular concerns; their focus can perhaps be described as 'narrow'. Outside of the moderators, they do not involve other students in posting and replying. However, they do involve students in reading the material as indicated by the page views. As such the forum is a place where a user can post their individual concerns and receive a multiplicity of responses from different users and moderators, providing a variety of perspectives and opinions for the users.

In the forum on Anxiety there are multiple participants [N=6] and the conversation does not just focus on one individual and his/her issues and concerns. The conversation brings in many related issues including: time management, life balance, social participation in college, writing essays, and life experiences. In contrast to the forum on stress, the participation of multiple users and the discussion of multiple issues would suggest the discussions, perspectives and opinions offered are more likely be of use to many students. Again page views indicate high readership. The focus can perhaps be described as 'broad but contextual'.

The forum on depression was the most active in the last 10 weeks. It involved 14 participants posting, with a combined total of 26 posts and 24 replies. It is also the forum with the highest page views [N=1323], and this provides some evidence that online education and support for depression is meeting a need in the community. The conversations focused on many issues related to depression, medication, accessing professional help, people's personal experience with depression, and managing depression. The use of quotes provides some evidence of

participants listening to and responding to each other on a range of issues. In this scenario, and in contrast to the other main forums, members have the opportunity to avail of the combined wisdom of users' varied posts and replies particular to a specific topic. The focus therefore can perhaps be described as 'defined and targeted'.

The discussion threads also demonstrate disinhibition (Suler, 2004), where students write more openly and reveal more about themselves and their personal lives than might ordinarily happen in a face-to-face setting. Also, one can perhaps infer the existence of the Pennebaker effect, the therapeutic impact of writing for the contributor (Sheese, 2004). As one student reports:

"Really fantastic for those such as myself who find it extremely difficult to spontaneously articulate feelings. It is much easier in writing, and seeing the entries of others is heartening."

The literature on online forums speaks about offering students a place where they can interact without the added pressure of having to construct something meaningful towards a discussion thread or topic. Therefore the social lounge was created. To date it has 11 posts and 7 replies with a total of 506 page views. Activity has been low and perhaps such a community does not need a social lounge, at least not as much as it may be needed in another educational setting. Further research is needed to establish the importance and usefulness of a social lounge for this type of community.

Another forum to be established was the Introduction to the Discussion Boards. This forum outlined how the discussion boards were operated. In total it received 74 page views over the course of 10 weeks. This is quite low and perhaps indicates that most users are familiar with discussion boards and do not require instruction on their use. Certainly the literature advocates that such tools are being used frequently by young men and women, therefore the low view count may indicate support for the literature.

In summary, the research has provided some evidence to support the usefulness of discussion boards for an online community for mental health. The evaluation places the lurker on new ground. Typically within an online learning community lurkers are accepted with the implicit, or at times explicit, agenda that they will at some point actively engage by posting or replying. However, in an online mental health community the lurker is deemed equally a member as any other, as reading is active engagement. There are differences in the use of the forums, the focus of the three main forums in terms of activity can perhaps be described in contrast as 'narrow', 'broad but contextual', and 'defined and targeted'. More research is needed to establish the usefulness and qualitative differences of different forums for such a community. However, in regard to the forum with the highest activity, and perhaps the other main forums too, one can be fairly certain that it is meeting a need in the community. The forums' posts and replies, number of users, page views and active use of quotes is evidence of this. The literature is supported in that the posts, like the online counselling submissions, clearly characterise disinhibition. It seems that the social lounge that often accompanies other virtual learning communities may require redefinition. Certainly further research is needed to establish the role of such a forum in discussion boards for mental health. Students seem to be familiar with the technology and therefore it is wise to build on this established behaviour. Lastly one can infer the presence of the Pennebaker effect, the therapeutic relevance of writing (Sheese, 2004).

4.4.2 E-counselling submissions:

Asynchronous e-counselling is one of the services that the project provides. Student could write their personal accounts and send them to a counsellor at the Student Counselling Service. Once the message was received, it was replied to by staff at the student counselling service and posted live to the website.

A majority [85%] of respondents rated this model of online counselling as very useful or extremely useful. A similar number [84%] rated it as educational. In total 29 submissions

were received in a 10 week period. Submissions were made by males [31%, N=9] and females [69%, N=20]. This is similar to the representation at face-to-face services for counselling [Male: 31.80 %, Female: 68.20%].

The submissions clearly demonstrate disinhibition; each of the submissions has the characteristic of revealing much about the person and their situation and of a personal nature. For example, one of the submissions details a number of personal issues that include academic anxiety, relationship difficulties, alcohol misuse, depression, sexual dysfunction, and eating concerns. This is not an unusual characteristic; all of the submissions demonstrate similar disinhibition. Because of confidentiality, it is not possible to quote supporting qualitative data; the author concludes though that the anonymity of online services facilitates such disclosures.

The following table displays the faculties and their registered student's representation in the user group and use of online services and also their representation in the college population and use of face-to-face services.

Faculty	Representation	Representation	Use of Online	Use of Face-to-
	in the user	in College	counselling	face
	group	population	service	counselling
Social &	25%	11%	42%	14%
Human				
Sciences				
Health	26%	22%	7%	8%
Sciences				
Science	15%	16%	31%	10%
TSM	13%	15%	4%	45%
Engineering &	8%	15%	9%	9%
System				
Science				
Arts and	11%	22%	14%	16%
Humanities				

Table 2 Comparison of online and face-to-face counselling

A comparison of students use of online counselling compared with their use of face-to-face [f:f] counselling reveals that for students from some faculties there is an increase in online service usage. For example, the highest number of submissions was made by students from the faculty of Social and Human Sciences [42%, N=12]. They occupy the second largest percentage [25%, N=88] of the user group. The faculty is more than doubly represented compared with their total college representation [11%] and further, their use of online counselling is three times their attendance and use of face-to-face services [14%]. Another example is students from the faculty of Science. Their use of online counselling represents a threefold increase [31%, N=9] compared to their use of face-to-face services [10%]. Likewise, the faculty of Engineering and System Sciences, who are traditionally low users of face-to-face services [9%], representation in the user group [8%, N=30] is a little more than half their college representation [15%], but their use of online services, at 9%, is the same as their face-to-face use of services. This data would suggest that online mental health is perhaps reaching an audience that might not ordinarily use face-to-face services.

Submissions by Faculty

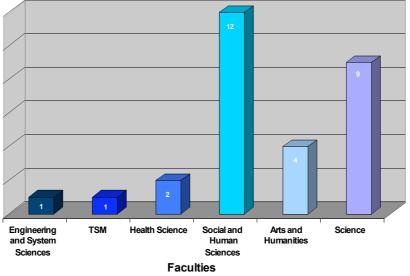


Figure 4 Submissions by faculty

A small number of students [N=3] who used the online e-counselling submission thereafter accessed face-to-face counselling services. This reinforces the idea that online mental health can act as a supplement and complement face-to-face services. Further, 46% of respondents to the online questionnaire agreed that online mental health can certainly act as a gateway to further supports. One student reported:

"It helped me realise how good it was to share things. That influenced my decision on seeking support"

Online counselling of itself is effective; one student's submission reported a variety of difficulties including alcohol misuse. In the two weeks between the online submission and the user attending face-to-face services, the student reported that the alcohol misuse had ceased. As already mentioned the majority of respondents rated the online counselling to be very useful or extremely useful. Student's comments provide further supporting evidence:

"Personal touch as opposed to a general answer, the reply was about my specific problems I'd say it would be helpful"

"Counsellor gave me very helpful advice and recommendations"

"Very relevant and thoughtful responses"

Submission by Date

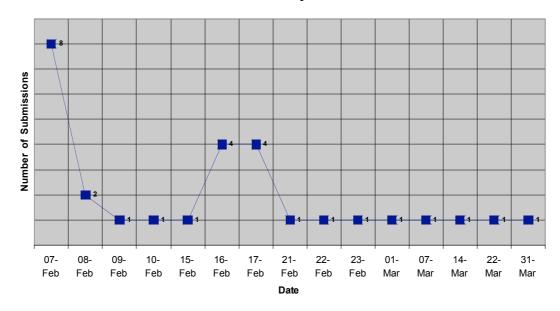


Figure 5 Submissions by date

The pilot began in February and continued through to the second week of May 2006. In February 23 submissions were made. The chart above shows a peak of submission when the website was first launched. This levels out and in weeks 6 and 7 there is an increase. This is accounted for by a marketing e-mail that was sent to all registered users on week 6. From week 8 onwards activity levels out again. This demonstrates the importance of marketing, raising awareness of the service and keeping in touch with members of the community to let them know what is happening.

In summary, respondents have rated online counselling to be useful and educational. Many males used the online counselling. It is clear that anonymity has facilitated disinhibition. Online counselling has demonstrated that it has the potential to reach an audience that might not otherwise access face-to-face supports. The evaluation also provides evidence of online services acting as a gateway to further supports, in this way acting as a supplement rather than a replacement of face-to-face services. The online counselling provided by the community has demonstrated its inherent effectiveness and potential as a tool for psycho-education and support for students at third level.

4.4.3 Educational value of the online community

To date students have amassed a total of 26,000 page views. The following chart maps the use of the system in terms of page views over a 10 week period

Online Mental Health Page Views over 10 weeks

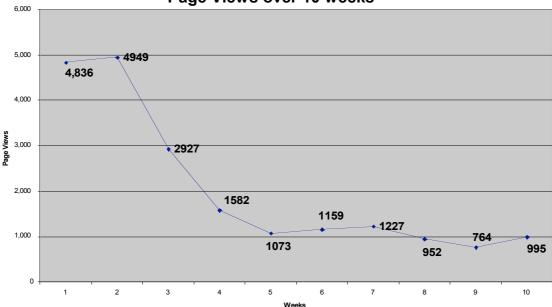


Figure 6 Page views over 10 weeks

The graph shows an understandable burst of users recorded in page views at the launch, followed by a decrease over weeks 2.5 - 5. From week 5 there was a gradual increase in page views. Week 8 and 9 report a decrease and this corresponds to a period where students were on three weeks holiday. Week 10 marks a return of students to College and reports an increase. Weeks 4 to 10 represent a steady state of activity.

The majority of respondents report using the website between 0-5 times [59%], 33% used the site between 5-10 times and 8% 10-20 times. Average visit lengths ranged from 5-10 minutes [54%] and 10-30 minutes [46%]. Students' reports about their visits to the website and the time they spent using the website potentially suggest that enough time was spent visiting and engaging with the website and its resources for the exercise to be educationally useful. This is corroborated in how student's rated the usefulness of the website. The majority of respondents found the website to be useful or extremely useful [85%]. Students reported that:

"It's nice to be able to communicate anonymously with other students",

"nice to see other people's opinions and hear you are not alone. I think I would have used more if I had not been as busy with study",

"someone told me something sensitive that I needed to ask a counsellor so it was very useful",

"Very good services, good idea to start it up",

"There is a very accessible vibe to the whole thing - it really feels like the information given is for students by students, as well as the counsellor responses are packed with useful stuff".

Student's comments provide some evidence that the website is highly regarded and furthermore that it is facilitating a community of learning and support.

The informal online learning community allows individuals to seek out and use resources independently and control the pace and direction of their learning (Imel, 2003). Respondents rated the following activities highly in frequency of use: reading the discussion boards [54%], reading the online counselling submissions and replies [54%], and accessing and reading the e-learning content (FAQ's and External links on mental health) [43%]. In respect of the FAQ's one student wrote: "Very good source of information and very varied".

Learners, through interacting with the resources that the community provides, can engage actively and collaboratively in informally constructing their learning (Russell, 1999). In conjunction with use of the different resources and services students were asked if they learnt about mental health and the different issues that face students. The majority [54%] confirmed compared to 31% saying no and 15% not answering. Students provided supporting comments such as:

"The fact that some college people struggle";

"That a lot of people have problems and similar difficulties to me. That there is help / advice available.";

"That depression and anxiety are so common for us students - and that we are not alone in this ":

"I suppose another thing I learned is that communicating what is going on is immensely helpful, as well as reading what others are going through. I felt a sense of community and unity in this. Like I was not alone and could get through my stuff.";

"I learned that everyone goes through the same thing. I learned that depression and apathy is the biggest problem. I learned that others have bigger problems than myself".

Student's remarks indicate instances of learning and provide some confirmation of the learning and knowledge building that students have engaged in as members of the community.

Students were also asked to rate the educational value of the model of online counselling that the website uses; 84% of respondents rated the service as educational, most indicating that it is extremely educational. One user qualifies this and writes: "I suppose a good way of seeing things from other angle". The same trend occurs with the ratings of the educational value of the discussion boards, 47% rate them as educational. One student reports: "I like the peer discussion boards - they are fun and supportive too. Helpful". Again further confirming the inherent learning potential of the informal learning community for mental health.

Another aspect that adds to the potential educational value of online learning communities for mental health is the ease in which students can discuss personal problems in comparison to face-to-face settings. Strikingly, in a comparison based on ease of discussing personal difficulties online and face-to-face respondents are clear of the difficulties of talking face to face [70% rate it as not very easy] whereas this seems to reverse itself in the online environment [70% rate it as very easy]. Also and interestingly all male respondents reported the latter. This does not suggest a replacement of traditional services, but the majority of students [77%] are clear that online provision has a future in acting as a supplement to traditional services.

Self-selection for change is a good indicator for actual change (Netemeyer, 1991). Students were asked to report on whether their engagement with the online learning community affected positive change in their lives regarding mental health and well being. 46% of students reported that it did, 31% reported the opposite and 23% did not answer. Of those that reported positively they further added:

"Its a great way to vent any stress"

"It helped me face up to and deal with some problems I was having"

"I felt less stressed and alone."

"Just somewhere to turn to at crisis point. Writing out my problems allows me to get a grip of them"

In summary, an online and informal learning community for mental health has potential for educating students about mental health and well-being. The evaluation has identified several features that indicate positively towards this conclusion. They include the high usage of the website as shown in page views, students reported use of the website, the time they spend at each visit and how the majority rate the website as extremely useful. Further, activities including reading the discussion boards, reading the counselling submissions, and reading the e-learning content demonstrate student's engagement with the materials and resources of the online community. In conjunction students reported positively on the educational value of these activities and clearly show that they have not only learned from using the online community but that such learning can affect positive change. A particular feature that further contributes to the potential educational value of online learning communities for mental health is the ease in which students can discuss personal problems in comparison to face-to-face settings.

4.5 Conclusion

The evaluation has generated evidence to support the claim that an informal online learning community for mental health at third level has potential and value for mental health education and support for students. At the same time difficulties particular to this type of community have arisen. Students reported on the absolute significance of anonymity (100%) for the accurate workings of such a community. However, students also reported on potential breeches of anonymity in such a community. The study collected usernames, e-mail addresses and student identification number, thereby compromising absolute anonymity. As one student reports, speaking about the model of online counselling:

"I'd say it would be helpful. But to be honest, because the service has my student number and anonymity is paramount, I feel it could be traced back to me".

At the same time professionals are aware of the many ethical and legal implications of anonymity and striking a balance is required, ultimately user safety is paramount in such a community, especially given that it is for young people at third level.

Although respondents reported on the educational significance of the community, it is advisable to treat with caution their reporting based not only on the tentative nature of the questionnaire data but also on how respondents construe their learning and whether learning indicates understanding. Although in defence of this, the content provided was regulated by professional staff at the Student Counselling Service. This would have contributed to reducing misinformation and consequently misunderstandings.

One respondent reported that "I depend on it", this is potentially worrying because it alludes to internet dependence and dependence on technology. As Burrows (Burrows et al, 2000) writes, 'if online relationships replace real-life social interactions, a decline in quality of life may result' (White, 2001). At the same time it can also be read as a supportive comment for the potential of the online community.

Difficulties can arise in working with technology, for example some students registered and failed to provide accurate identification number. This has implications for user safety and anonymity. Consequently it has implications for ethical and professional service delivery. The technology needs to be robust and able to manage the requirements necessary to meeting the needs of the community.

Other elements such as regular marketing of the website and its services to students, active professional involvement in the website, the use of polls to gather data on students interests and needs, the use of external links, and continuing the service for the student population have also been positively endorsed by respondents of the online questionnaire.

6. Conclusion

To conclude, an online and informal learning community for mental health has potential for educating and supporting students about mental health and well-being.

The research has confirmed the usefulness of peer supported discussion boards for an online community for mental health. Student's familiarity with the technology has facilitated their use. The evaluation positively places the lurker on new ground; the lurker is deemed a member through reading as active engagement. In regard to the forums it is clear that they are meeting a need in the community. The forums posts and replies, number of users, page views and active use of quotes is evidence of this. The literature is supported in that the posts, like the online counselling submissions, clearly characterise disinhibition. Lastly one can infer the presence of the Pennebaker effect, the therapeutic benefit of writing.

Students have rated online counselling to be useful and educational. It is clear that anonymity has facilitated disinhibition. Online counselling has demonstrated that it has the potential to reach an audience that might not otherwise access face-to-face supports. The evaluation also provides evidence of online acting as a gateway to further supports, in this way acting as a supplement rather than a replacement of face-to-face services. The online counselling provided by the community has demonstrated its inherent effectiveness and potential as a tool for psycho-education and support for students at third level.

The high usage of the website as shown in page views, students reported use of the website, the time they spend at each visit and how the majority rate the website as extremely useful indicate the success of the online community. Students reported positively on the educational value of the different activities and show that they have not only learned from using the online community but that such learning can affect positive change. A feature that contributes to the potential value of the online learning community for mental health is the

ease in which students can discuss personal problems online and anonymously in comparison to face-to-face settings.

As a pilot study it has been a success. The difficulties that have been encountered have been minor, such as some students experiencing difficulties with registration and management of content requiring alternations to the PHP code, each of these were easily resolved. What's important to note here is in developing the pilot the author gave consideration to many issues such as crisis management, anonymity, safety, ethical and professional practices. Each of which have been build upon from current face-to-face practices and learning from other research studies such as online counselling at Athens (Efstathiou, 2005) and peer support discussion boards at University College London (Freeman, 2005).

6.1 Further Research

A continuation of the present work and a future evaluation by users would certainly contribute to establishing more solidly the tentative nature of some of the data gathered for this pilot. The pilot, however, has shown that an online community can be successful for mental health. Future work could build on this success, and include further research into the discussion board and the online counselling models used.

The pilot established tentatively the inherent effectiveness of online counselling. Further research in this area could well contribute positively to establishing the effectiveness of such delivery, whether synchronously or asynchronously. Also the discussion boards have been demonstrated as useful, more insight into the nature of their workings and benefits to participation in the context of an online community for mental health could be positive.

Establishing more concretely the place and role of the lurker in an online mental health community could be useful. The significance of anonymity and experimenting with different

modes of anonymity, and evaluating further the role of disinhibition in online mental health are areas for further research.

To establish more accurately the actual online health seeking behaviours of students at university in an Irish context, and to assess the claim that online provision acts as a gateway to further supports, in other words how online supplements traditional services for students are valid questions requiring further enquiry.

An element of extending services online is its potential to reach an audience who may not ordinarily use face-to-face services. While the current study shows positive results, more research into this might establish its potential, especially for reaching more vulnerable groups such as young men.

Many recent statutory and public body reports are calling for the implementation and evaluation of new mental health information and education services using ICT, especially for young people. In such an online informal learning community it can be difficult to assess the learning that is occurring; more research into this would be welcome.

While this study limited resources to match traditional service provision, there is no reason why its continuance could not incorporate other tools and resources, such as video conferencing, online gaming, multimedia applications, synchronous communication tools, among others, and their evaluation.

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