
Using multimedia stories as a means of engaging adolescents in psychotherapy

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Abstract

The HCI community is increasingly engaging in societal issues by investigating the role of technology in addressing community needs. This paper explores the use of multimedia stories in psychotherapy and mental health service delivery with teenagers. It describes a study currently being conducted with adolescents attending the Child and Adolescent Mental Health Service at the Mater Hospital Dublin, Ireland measuring the effectiveness of a therapeutic group work intervention for adolescents experiencing depression, anxiety and other mental health issues. The intervention is essentially a Cognitive Behavioural Therapy (CBT) programme that uses an animated story building system in combination with a series of short movie vignettes to help clients develop their own coping skills, express their experiences creatively and increase their ability to communicate their emotions effectively.

Keywords

Storytelling, psychotherapy, cognitive behavioural therapy, multimedia, technology.

ACM Classification Keywords

J3. Life and Medical Sciences: Human Factors

Introduction

The use of technology in the area of mental health, counselling and psychotherapy is a relatively new phenomenon and one that raises interest from practitioners working in the field of HCI as well as mental health professionals, service users and researchers. The HCI community is increasingly engaging in broader societal concerns by addressing and responding to community needs. [9] Matters such as mental health service delivery are in the main non-technical but the role that technology has in potentially increasing access to, efficiency of and engagement in such services is what HCI investigators are interested in. Within the area of adolescent mental health one of the primary challenges faced by practitioners is in engaging young people in psychotherapy and support services. The central question is can the use of computers play assist in this process. Technology has become an integrated part of the human communications system. Interactive DVD's and websites, mobile phones and computer games hold great appeal for adolescents and are widely used by them, yet these types of resources are under-utilised in mental health services.

This paper will explore the potential of multimedia stories and internet technology as a means of engaging young people in the area of psychotherapy and mental health awareness. It will focus is on how multimedia stories can be used in a variety of forms in delivering reliable information on mental health issues, psycho-education, in Cognitive Behavioural Therapy programmes and as part of the Narrative Therapy tradition. The story metaphor can be used to teach

skills in dealing with emotions, practicing more positive social interactions and thinking strategies. We will discuss the development and evaluation of the Working Things Out DVD project [3] and the Transforming Stories software programme [4] as examples of current developments in this area and will refer to other initiatives using similar multimedia story methods. The second part of the paper will discuss collaborative design with youth in relation to IT mental health resources and highlight future research direction in aiming to develop a user centred approach to content and software development.

Stories in Psychotherapy

Telling and re-telling stories is a fundamental part of all psychotherapy approaches. Information embedded within a story can hold greater appeal than a series of facts alone and is much more likely to engage our imagination and hold our attention. Stories about people's lives and experiences can be appealing to an audience in that elements of the story can bring about resonance with the character and context.

Digital storytelling techniques are particularly relevant in the context of adolescent psychotherapy and mental health awareness. The computer provides a means of both expressing and listening to therapeutic stories. Multimedia facilitates the expression of the story by allowing the incorporation of sound, image, text and animation in the telling. Equally the computer facilitates the listening to the story, by providing interactive interfaces and databases that allow the listener to adapt the story to their own need and to make choices about what is relevant. Both the 'Transforming Stories' and the 'Working Things Out' projects outlined below aimed to build this potential for integrating digital

media in psychotherapy services for adolescents as a creative means of engagement.

Transforming Stories (TS)

TS is an online multimedia toolkit for therapeutic story building with children and adolescents. The software aims to streamline the animation process making it accessible to a wide range of mental health professional and their clients. The application consists of a database of customizable 2D characters and environments (school, home and community settings), and story props. Each character has a range of emotional expressions and users can set the mood by changing the character's emotion throughout the story.

Users have a choice of story templates and the process involves building up the story plot in scenes using the characters and background environments. The final animation is saved as a movie and can be viewed back and edited. In the therapeutic context the stories produced can be tailored to a problem that needs resolution or can be a general story that includes some positive change in the storyline. The role of the therapist/facilitator is important here, in helping the young person to focus on developing alternative endings that might bring about positive change and outcomes for the central characters.

Working Things Out DVD

The "Working Things Out" project took place at the Mater Hospital Child and Adolescent Mental Health Service, Dublin, Ireland from May 2003 to September 2004. It took a collaborative digital story making approach. The project resulted in the production of a

DVD/CD-ROM telling the stories of 11 young people who experienced depression and other mental health problems. The stories are short animated movies with voiceover narration and soundtracks. Each story tells of the personal experience of its author having overcome their challenges, and the focus is on passing on their advice and learning to other young people who are struggling with similar problems. The project was developed in partnership with the young people and their parents. It was created in collaboration with a group of animators and multimedia professionals using professional multimedia authoring packages including Flash, Freehand and Photoshop etc. The young people became involved in the creative and production aspects of building content for the CD-ROM/DVD and all recorded voiceovers for their own stories. The DVD is now being used as part of the mental health awareness component of the Social and Personal Health Education in participant secondary schools in Dublin, Ireland. The animated vignettes in combination with the Transforming Stories software also form part of a 10 session Cognitive Behavioural Therapy intervention for adolescents experiencing depression, anxiety and other mental health difficulties. The programme uses the multimedia storytelling resources as a way of bringing to life CBT concepts and as a tool for teaching new thinking skills. It is being evaluated as part of a wider mental health study within the CAMHS at the Mater Hospital Dublin.

Evaluation of technology based resources

Evaluation of the use of technological products within the mental health clinical setting poses its own set of challenges. Due to time constraints clinicians may not be in a position to carry out the type and level of data collection needed to fulfill the methodology best suited

to the HCI process. In addressing this dilemma a collaborative design and evaluation process is necessary where the clinical team and the technical design team integrate both ends of the research question. The technical designer will want to know if the product meets the needs of the end user from the perspective of usability, accessibility and intuitive design. The clinician's question will be does the use of this programme or product enhance the therapeutic effect of the intervention and is there an observable beneficial change for the client in using it.

The multimedia enhanced CBT programme described above is currently being evaluated from a purely clinical perspective in comparison with routine clinical care within a Child and Adolescent Mental Health setting. It uses a mixed methods approach. The desired outcomes of the intervention include reducing suicidal and self-harming thoughts and behaviours, reducing depressive symptoms, improving the young person's problem solving and coping skills and improving ability to communicate about emotions.

Study participants are assessed at pre and post intervention, and at 6-month follow-up complete standardized questionnaires. The instruments used in the pilot evaluation are described below. *The Strengths and Difficulties Questionnaire (SDQ)* [7] The SDQ is a behavioural screening questionnaire that provides information on young people's behaviours, emotions and relationships. We assess the change in the total problems score and in the subscale scores of the SDQ completed by adolescents and parents, pre and post intervention. *The Children's Coping Strategies Checklist (CCSC)* [1] is a self-rated questionnaire that

provides a measure of children's coping strategies in 4 domains: support seeking, avoidance, active coping, and distraction. *The Adolescent Well-being Scale* [3] is designed to pick up possible depression in older children and adolescents. The scale has 18 questions, each relating to different aspects of an adolescent's life, and how they feel about them. Throughout the group sessions the Youth Session Rating Scale [6] is used to get feedback from participant on their satisfaction with group content and process. The qualitative data is being gathered using semi-structured interviews, focus groups and feedback questionnaires designed to pick up the young peoples views and feelings about process and content of the sessions. Some of the qualitative data in relation to the use of the multimedia elements is outlined below.

In relation to the content of the programme, the development of new skills was acknowledged, such as problem-solving skills, managing emotions and cognitive coping strategies.

The problem solving stuff was good cause everyone has their own way of solving problems and it was good to hear them. I've tried some of them and they work.

The element of working with computers was met with positive responses from the young people, as can be seen in the following quotes:

The computers were great; I really loved the creativity side of it. Also, it forced you into talking to other people in the group and making friends.

The computers were fun, and the DVD story was really good as it was almost the exact situation I'm in so it was really useful to watch.

Working with the computers was good as it got your mind working as to how to solve the problem. The stories were good cause they were things that everyone goes through.

The majority of the adolescents described the computers as an interesting and fun addition to the programme.

Engagement

In almost all genres of counselling and psychotherapy there is an important 'joining stage' where the counsellor seeks to establish connections with their clients. Mental health practitioners working with adolescents often use conversation, questions about likes and dislikes, hobbies etc. to create points of connection. This part of the process of establishing a trusting relationship with the young person can significantly contribute to the positive outcomes of the therapy. [10] Therapists use media such as art, clay and techniques such as journal writing and work sheets as a way of helping the young person to express their ideas and feelings. In a similar way computer technology and multimedia can provide a new and novel means of establishing a connection with the young person and offer them a medium to express themselves creatively. In the field of education the use of technology can enhance student learning and bring a subject matter to life. [8] Using multimedia stories such as the Working Things Out DVD and the Transforming Software in a psychotherapy session can similarly enhance the young person's therapeutic learning experience. In using TS they are helped to plan and structure the narrative by creating and

linking scenes. This 'linking' of material can give the client a way of processing often-difficult emotional content.

Many of the psycho-educational resources available to teenagers are predominantly text based. A poor reader will quickly become discouraged by texts that are difficult for them to read fluently. Story and animation in this context can reach a larger audience and may have a higher impact. It is important that these possibilities are researched and developed further, as it will contribute to the development of innovative new approaches to adolescent mental health work.

The Internet

Transforming Stories software is available through a moderated portal (www.transformingstories.com) that aims to build up a series of stories on different topics relevant to youth mental health. The stories which are created by portal users can be shared on a public space and accessed by others who are interested in similar topics e.g. stories on bullying may be accessed and edited by teachers who are discussing this topic with a class group, or youth group leaders who may want engage young people around the topic of depression. The stories in this context are used as an aid to teaching mental health awareness and coping skills.

The proliferation of social sites accessed by youth such as 'Bebo' and 'My space' offer a very important new forum to be explored in terms of offering positive mental well-being messages and services. Currently one of the main blocks facing youth mental health service providers is the lack of engagement by teenagers in traditional type services and a lack of access to those services. Other avenues for reaching this population are now possible via Internet. ReachOut

(www.reachout.com.au) is one such website based around public health prevention and promotion principles. Of particular interest here is a game-based program of a cognitive behavioural approach aimed at improving young people's skills at managing life difficulties. Reachout takes a public health and well-being approach to improving coping across the youth population. The Spun Out (www.spunout.ie) youth web-site had been developed collaboratively with users with a strong emphasis on young people developing content and ongoing material for their peers on all issues relating to youth well-being.

Collaborative design and future research direction

An increasing amount of work on the development of software and educational IT resources is now conducted in collaboration with the users for whom it is being designed. A user centred design process with a focus on user contribution ensures that the users' needs drive the development of the technology. In the field of educational software development examples of this type of design approach can be seen in projects such as Kidpad, The International Digital Children's Library, Ambient Wood, Ecolab, and StoryStation. [2]

Within the mental health service arena in particular there are significant methodological and resource issues in relation to consultation with and engagement of young users. In building the Working Things Out DVD engaging the adolescent participants and their parents in the process was both time consuming and difficult to sustain, yet it was the central important factor that led to the success of the project.

The aim of future research would be to draw together work in the area of collaborative design with youth, to present key findings and explore the nature of the methodologies that are appropriate and effective for engaging different groups of users in this design process. The aim would be to identify specific user issues and facilitate users to reflect on their needs and give insight into the ways in which IT software and resources can address these.

Conclusion

This paper has discussed the potential for multimedia resources in providing a fun and appealing tool for this purpose. The process of developing IT resources for youth mental health can potentially be done collaboratively with end users as contributors to both content and design.

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