Positive Expressive Technologies for Mental Wellness

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Abstract

Following in the positive psychology tradition, this research aims to provide new insights into the design of positive expressive technologies for mental wellness. A collection of artifacts, termed *PosiPost* is being developed, enabling users to share positive emotions. We take an iterative approach to the design process, analyzing the ways in which different technologies are developed in order to support the expression and sharing of positive emotions for augmenting mental wellness. By taking advantage of technologies' flexibilities in space and time, the potential for positive expressive applications to support mental wellness via low-level access outside of the psychiatrist's office is explored.

Keywords

Mental wellness, positive psychology, mental health, positive emotions, expressive technologies

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

Within the HCI community, there is a growing awareness that technologies should be designed to

appropriately address the complexity of human needs in order to make a positive contribution to a person's wellbeing [7, 11]. However, taking the appropriate design steps to facilitate these is a complex process. It requires a thorough understanding of the mechanisms through which the use of technologies influence psychological mental health. Methodologies from the field of HCI offer a valuable starting point for gaining this understanding, but fall short when it comes to knowledge in the field of mental care. Clinical psychology and psychiatry have a long tradition of dealing with issues and treatment of mental health. However, they often rely on fixed face-to-face interactions with patients that have serious diagnosable mental health conditions. In contrast, communication technologies such as mobile phones are playing an increasingly important role in people's everyday life and practices. As such, because they are often to hand, technology-mediated mental wellness interventions could be easily accessible to everyone. However, to realize this aim, mobile applications that allow for mental wellness interventions need to be developed. Research (e.g. [2, 8, 12]) has shown that expressing emotions can be beneficial in enhancing wellbeing. In particular, studies [10, 3] suggest that people can improve their wellbeing by doing simple exercises that involve harnessing positive thoughts. However, examples of applications that provide interactive experiences that particularly encourage and communicate predominantly positive emotions to enhance mental wellbeing are scarce. To begin to address this issue and get a better understanding of wellbeing, this research draws from the field of positive psychology [9], which focuses on wellness as distinct from illness, and has vastly contributed to the understanding of positive emotions (e.g. [4]) and the

development of reliable and valid interventions (e.g. [6]). Building on this knowledge, we seek to understand how the role of positive emotions can help in defining the relationship between HCI and mental care. We have therefore investigated the ways in which technologies can support the sharing of positive emotions for mental wellbeing through the development of a set of computer tools known as PosiPost.

PosiPost: positive expressive applications

PosiPost is a family of related prototypes that aim to support positive, social interaction and thereby augmenting mental wellness. An iterative design process and studies have resulted in different editions of PosiPost: I PosiPost (Internet edition, running over a web page), PosiPost Me (Mobile internet edition) and PosiPost Be (Bluetooth edition for mobile phones). In all three systems, users are asked to complete the sentence "Today, I like" to encourage positive message postings which are then randomly distributed to other PosiPost users. The mobile versions of PosiPost allow users to send, receive and reflect on positive thoughts at any time and place they wish to do so: PosiPost Me runs on a smartphone and is an application that uses a 3G connection for the random global distribution of positive thoughts (fig. 1) and the Bluetooth version of PosiPost allows the sharing of positive thoughts with people in close proximity. This reflective interaction provides an opportunity for users to reactivate the positive aspects of the emotional experience [8] and creates an opportunity to re-experience pleasurable moments through social sharing. The design decisions during the development of the mobile versions of PosiPost were informed by prior paper-based and on-line studies, which showed the potential for a prefix-

based elicitation of positive emotions [4]. As the prefix "Today I like" proved most popular, this was incorporated in the mobile versions.
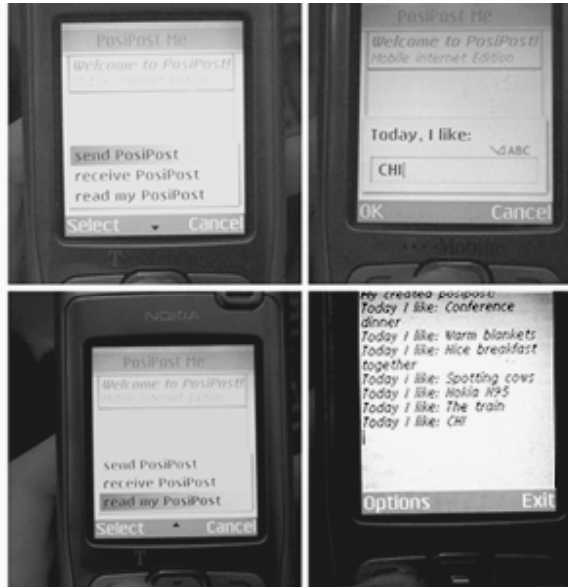
Figure 1: Sending posipostings and reflecting with the *PosiPost Me* application

Data analysis of the postings in previous studies showed that the deployment of this prefix particularly triggered *positive and situated* expressions that are related to what is happening at that particular moment in time [5]. The initial studies resulted in the design for an explicitly mobile tool as these suggested a need to express positive thoughts at any place and any time. Although for some users, a positive expressive

application may be more beneficial than to others (e.g. men, alexithymics, and those high in hostility [12]), other users might be more motivated to use such a technology. Therefore, PosiPost is initially aimed to give any user the opportunity to express and share their different positive emotions in daily life. Also, in this way, users get a chance to encounter and share the widest variety of thoughts. These design decisions underpin the idea of providing low-level and wide immediate access as a key element in designing flexible everyday technologies for mental care.

Discussion and future work

The iterative design process is continuing and new versions of PosiPost, including a Facebook version are in development to integrate PosiPost with other social networking applications. The provision of a range of technological platforms that people can engage with, offers users the opportunity to choose from the technology that best suit their particular needs and preferences. Furthermore, users can embed these expressive technologies in their everyday practices.

This work could lead to a more convenient provision of casual mental health care across different technologies, which as such could become more easily accessible to everyone. These different versions will allow the further investigation of the various ways of sharing positive thoughts via technology. PosiPost could also potentially become a tool for psychology researchers in studying how technology might lower the barriers that prevent people from engaging in traditional psychotherapy and possibly reduce stigma.

The beneficial effects of positive emotions and their disclosure, such as increasing sociability, have been

extensively studied in the positive psychology literature [6,9,10]. Based on these studies, positive expressive technologies such as PosiPost may have a potential beneficial role in mental health interventions. However, in-depth studies and combining skills and knowledge between mental care professionals and HCI experts is crucial [1] and needed to offer and capitalize on the benefits such technologies could potentially bring. The PosiPost applications are a step in this direction.

Acknowledgements

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