Email reminders as a self-management tool in depression: a needs assessment to determine patients' interests and preferences

Daphne C Watkins*, Lisa C Smith*, Kevin Kerber†, Julie Kuebler† and Joseph A Himle*†

*School of Social Work, University of Michigan, Ann Arbor, USA; †Department of Psychiatry, University of Michigan, Ann Arbor, USA

Summary

We conducted a needs assessment to ascertain patients' interests and preferences for using email reminders ('E-minders') to assist in the self-management of their depression. The E-minders would help patients achieve remission by reminding them of their personal strategies for self-management and their personalized sources of support. Once patients had achieved remission, E-minders would be used to remind them of their original symptoms of depression so that they could monitor for recurrence. Results from a focus group with eight patients suggested that patients would be interested in using E-minders. However, they should not be used to replace aspects of treatment but rather to supplement existing depression treatment regimens.

Introduction

Depression is a debilitating disorder that leads to morbidity, mortality and high medical and societal costs.[1,2] It is viewed as a chronic disorder with remissions and relapses.[3] Therefore, long-term management of depression has become a growing concern for both health-care providers and patients. Depression is commonly managed in primary care settings through interactions with general medical practitioners. However, some authors have argued that depression specialists are the best at managing depression,[4] although two major challenges exist. First, specialists who offer consultation for depression often have long waiting lists, which may frustrate primary care practitioners who refer their patients in hopes of them receiving immediate and more specialized care.[5] Second, even when providers and resources are available, patients may not take advantage of these opportunities to seek care due to time, preferences, access barriers, limited resources to supplement health-care expenses, and limited social support, which can adversely affect health outcomes overall.[6]

A number of authors have argued for the use of technology such as the Internet to improve depression treatment and to make treatment more available for those who either cannot or do not seek face-to-face professional consultation.[7–10] Previous work on the self-management of depression has focused primarily on cognitive behaviour therapy (CBT) that is delivered online. For example, Beattie *et al.*[11] found that developing a virtual relationship with the therapist and communicating thoughts and emotions through an online medium were most important to their patients. The patients also reported that accessing therapy from their home computers was an advantage, because it allowed them to fit therapy into their daily routines.

Recently, the use of email has been explored as a depression self-management tool, as a supplement to face-to-face CBT[12] and as a supplement to treatment for forming therapeutic alliances with high-risk youth.[10] An exploratory approach has been used to understand patients' interests and preferences for email as a self-management tool. However, the details about the context in which patients feel they could benefit from this type of intervention are not known. The purpose of the present study was to assess the needs, interests and preferences of patients with depression for email reminders that would deliver customized information as a supplement to traditional face-to-face therapy.

E-minder

The concept considered by patients was an 'E-minder' programme which would remind them about their personal strategies for depression self-management and their personalized sources of support. Once remission was achieved, the system would remind patients of their original

Accepted 27 April 2011
Correspondence: Dr Daphne C Watkins, School of Social Work, University of Michigan, 1080 South University Avenue, Ann Arbor, Michigan 48109-1106, USA (*Fax: +1 734 615 3372; Email: daphnew@umich.edu*)

 DOI: 10.1258/jtt.2011.110105

symptoms of depression so that they could use this information as a prompt to increase self-management activities and/or to re-engage in professionally-led treatment. The programme would include elements to assist with treatment continuity, self-management and support. For example, programme monitoring, self-management goals and specific therapy activities would allow patients to re-visit the items that were discussed during their last therapy session. These features would encourage patients to remain vigilant during their depression and help to maintain the treatment regimen between therapy sessions. E-minders might be sent to the patient monthly, or at predetermined intervals established jointly by the clinician and patient soon after intake and the initial assessment. The E-minder programme would not replace face-to-face therapy but would help to keep patients engaged in treatment goals, in using self-management tools, in symptom monitoring, and keep them engaged in their treatment regimens between therapy sessions to reduce dropout rates.

Methods

A qualitative needs assessment was conducted for patients with depression at a university-affiliated depression centre in the US Mid-West. A focus group composed of depression patients was formed. Patients were recruited through posters, flyers and direct person-to-person contact. The posters and flyers indicated that participants would receive a $25 gift card for their participation.

The focus group was facilitated by a trained moderator and an assistant. The responsibilities of the moderator included guiding the focus group discussion, checking the recording equipment for proper functioning and ensuring that all notes and tapes were appropriately labelled at the end of the focus group. The responsibilities of the assistant were to read consent forms to the patients at the beginning of the interviews, to ensure appropriate forms were distributed, signed and collected, and to take notes during the discussion. The focus group was audio-recorded and lasted for 90 min. Ethics permission was not required.

Data collection

A semi-structured, focus group protocol was developed which included 20 questions The present study reports the findings from two questions: (1) Is the E-minder programme something that you think you would be interested in using? and (2) If you were developing this programme for yourself, and could include anything that you wanted in it, what sorts of things would you include?

Data analysis

The focus group discussion was transcribed verbatim. After transcription, the data were entered into a spreadsheet. Spreadsheets have been validated as reliable qualitative software for the management and organization of focus group data.[13–15] Notes by the moderator and assistant were combined with the transcripts.

Data were analysed using methods such as transcript-based analysis, tape-based analysis, note-based analysis and memory-based analysis.[15,16] There were three steps: (1) highlighting key points from the transcript made by the participants, referred to as 'text patterns' and 'narrative threads', (2) 'chunking', or placing the text patterns and narrative threads into meaningful categories and codes, and (3) combining codes, categories and transcript quotes into a single document. Likewise, classical content analysis was used to identify the frequency of codes and to determine which concepts were most cited throughout the data.[17] A classification and data reduction system was developed based on codes derived from text patterns and narrative threads. First, categories were identified based on the sub-headings from the focus group protocol. Second, text patterns and narrative threads of information from these categories were sorted into a spreadsheet and used to identify themes within each category. After the content analysis was completed, a data catalogue was created to organize the results according to the responses about patients' interests and preferences for E-minders.

Results

The focus group consisted of four men and four women, all of whom self-identified as White (see Table 1). The income of patients ranged from under $15,000 to over $80,000. Overall, most patients reported being familiar with computers and used them frequently.

Interest in E-minders

Patients had positive reactions to the idea of an email reminder that would be sent to them as a way of helping them to manage their depression. Several patients felt that the E-minders would be a good way to remind them of their treatment goals and help them manage their symptoms. A male patient thought that the E-minder programme would be a good way to keep up with the information provided by his clinician during his last appointment.

Patients felt that E-minders would be most helpful for problems that arose between appointments with their clinician. One male patient believed that the E-minder would help him feel connected to his clinician between appointments. Another male patient felt that the E-minder programme would be helpful because his time in treatment was limited. However, several of the patients enquired about the motives for introducing an E-minder programme. All patients felt very strongly that meeting with their clinicians face-to-face was fulfilling and that therapy should not be reduced due to time constraints. Many of the patients agreed that if the E-minders were meant to be used instead of face-to-face interaction with their clinicians, then they

Table 1 Characteristics of the focus group participants

Patient	Sex	General health	Age range (years)	Marital status	Education	Diagnosis
1	F	Fair	>55	Divorced	Bachelors degree	Bipolar disorder; chronic physical illness
2	M	Good	35–44	Never been married	Technical school/junior college	Bipolar disorder
3	F	Good	45–54	Never been married	Bachelors degree	Bipolar disorder and other co-morbidities
4	F	Good	35–44	Never been married	Masters degree	Major depressive disorder
5	M	Good	45–54	Divorced	Some college	Major depressive disorder
6	M	Fair	>55	Divorced	Some Graduate School	Major depressive disorder
7	F	Fair	45–54	Never been married	High School/GED equivalent	Bipolar disorder
8	M	Not ascertained	45–54	Divorced	High School/GED equivalent	Bipolar disorder; obsessive compulsive disorder; history of narcotics use

were opposed to them. Despite this, the appeal of E-minders encouraged some patients to consider engaging in the use of technology for future depression self-management.

Patients, overall, received the idea of the E-minder programme, favourably. Some patients were particularly interested because their feelings of isolation often consumed them and they believed that communication from a supportive resource would benefit them during these periods.

E-minder preferences

Patients were asked the question 'If you were developing this program for yourself, and could include anything that you wanted in it, what sorts of things would you include?' After reviewing the mock E-minder provided, there were mixed responses. However, the majority of patients agreed on several points. First, they agreed that the E-minders sent by their clinicians should not be lengthy. Some patients thought that receiving an E-minder twice a week was too frequent, while others thought that receiving one a day would work best for them. They agreed that the frequency of the E-minders would need to be a decision made between the patient and their clinician.

Patients also preferred to have the option of initiating contact with their clinicians via the E-minder programme although this was not the original intention. A number of patients explained that they would appreciate the contact from their individual clinicians that the E-minder would provide. However, if they were in need of assistance, they would like the E-minder to include a feature that allowed them to reply to their clinician with updates, comments and questions instead of just having the option to schedule an appointment. Additional preferences included modifying the language of the E-minder so that it did not sound so 'automated' and excluding the telephone numbers of the individuals listed under 'support and contact information'.

Overall, patients liked the idea of the E-minder programme. However, nearly all of them agreed that it should be customized for each patient and tailored to their specific needs. If the E-minder programme would be implemented by their clinicians directly, patients wanted to help determine the frequency of the E-minders, communicate with their clinicians in-between appointments, and to know that someone was available should they find themselves in need of support and/or care.

Discussion

The purpose of the present study was to assess patients' interests and preferences for an email reminder programme that might assist in the self-management of depression. Previous studies of the use of the Internet for depression management and treatment have suggested that alternative therapy options are accepted by and can have positive effects on patients.[9,11] Although there were mixed feelings about the details of the reminder programme from patients in the present study, overall they felt that it would be valuable in assisting in their self-management of depression. These findings can be viewed in the context of studies that have examined patient expectations and experiences with using the Internet for a depression intervention. For example, studies examining online CBT suggest that patients approach online interventions with various expectations.[11] Similarly, Beattie *et al.* found the online CBT intervention acceptable and helpful for certain sub-groups of patients, such as those who were familiar with computers, and those who felt comfortable with writing their feelings down. Prior studies have reported that the expression of feelings through writing produces positive outcomes.[18–20] Compared to these studies, participants from the present study expressed concern that their participation in the E-minder programme might result in vulnerability, particularly with regard to the lack of visual cues and the immediate response of face-to-face interaction.

Recent studies have highlighted the benefits of online self-management strategies to improve mental health treatment and outcomes. CBT and depression self-management strategies include computerized interventions such as Beating the Blues,[9] MoodGYM[21] and Overcoming Depression on the Internet.[22]

The present study had certain limitations. First, due to the study design and the small sample size, the findings cannot be generalized. Future studies should consider the racial/ethnic differences in patient preferences for online self-management of depression. In general, ethnic minorities have reported cultural variations in their beliefs about the aetiology of depression, the effectiveness of medications and the effectiveness of counselling compared to the ethnic majority.[23] Future studies should also consider patient attitudes and preferences in depression treatment outcomes in both primary care and mental health specialty care settings.

Previous research on using the Internet for depression management and treatment suggests that alternative therapy options are accepted by patients and can have positive effects. The present study suggests that patients would be interested in using the email reminder programme, but that it should serve as a supplement to their current depression treatment regimens.

Acknowledgements: The work was funded in part by the University of Michigan Comprehensive Depression Center 2008 Membership Retreat Innovation Funding Award.

References

1 Goldman LS, Nielsen NH, Champion HC. Awareness, diagnosis, and treatment of depression. *J Gen Intern Med* 1999;**14**:569–80
2 Katon WJ. Clinical and health services relationships between major depression, depressive symptoms, and general medical illness. *Biol Psychiatry* 2003;**54**:216–26
3 Glass RM. Treating depression as a recurrent or chronic disease. *JAMA* 1999;**281**:83–4
4 Ludman E, Von Korff M, Katon W, *et al*. The design, implementation, and acceptance of a primary care-based intervention to prevent depression relapse. *Int J Psychiatry Med* 2000;**30**:229–45
5 Williams C. Use of written cognitive-behavioral therapy self-help materials to treat depression. *Advances in Psychiatric Treatment* 2001;**7**:233–40
6 Wang PS, Beck A, Berglund P, *et al*. Chronic medical conditions and work performance in the health and work performance questionnaire calibration surveys. *J Occup Environ Med* 2003;**45**:1303–11
7 Baker L, Wagner TH, Singer S, Bundorf MK. Use of the Internet and e-mail for health care information: results from a national survey. *JAMA* 2003;**289**:2400–6
8 Horgan A, Sweeney J. Young students' use of the Internet for mental health information and support. *J Psychiatr Ment Health Nurs* 2010;**17**:117–23
9 Proudfoot JG. Computer-based treatment for anxiety and depression: is it feasible? Is it effective? *Neurosci Biobehav Rev* 2004;**28**:353–63
10 Roy H, Gillett T. E-mail: a new technique for forming a therapeutic alliance with high-risk young people failing to engage with mental health services? A case study. *Clin Child Psychol Psychiatry* 2008;**13**:95–103
11 Beattie A, Shaw A, Kaur S, Kessler D. Primary-care patients' expectations and experiences of online cognitive behavioural therapy for depression: a qualitative study. *Health Expect* 2009;**12**:45–59
12 Vernmark K, Lenndin J, Bjärehed J, *et al*. Internet administered guided self-help versus individualized e-mail therapy: A randomized trial of two versions of CBT for major depression. *Behav Res Ther* 2010;**48**:368–76
13 Stockdale MS. Analyzing focus group data with spreadsheets. *Am J Health Stud* 2002;**18**:55–60
14 Swallow V, Newton J, Van Lottum C. How to manage and display qualitative data using "Framework" and Microsoft Excel. *J Clin Nurs* 2003;**12**:610–12
15 Morgan DL, Krueger RA. *The Focus Group Kit*. Thousand Oaks, CA: Sage Publications, 1998
16 Ulin PR, Robinson ET, Tolley EE. *Qualitative Methods in Public Health: A Field Guide for Applied Research*. San Francisco, CA: Jossey-Bass, 2005
17 Leech NL, Onwuegbuzie AJ. Qualitative data analysis: A compendium of techniques and a framework for selection for school psychology research and beyond. *Sch Psychol Q* 2008;**23**:587–604
18 Nixon RDV, Kling LW. Treatment of adult post-traumatic stress disorder using a future-oriented writing therapy approach. *Cognitive Behaviour Therapist* 2009;**2**:243–55
19 Van der Oord S, Lucassen S, Van Emmerik AA, Emmelkamp PM. Treatment of post-traumatic stress disorder in children using cognitive behavioural writing therapy. *Clin Psychol Psychother* 2010;**17**:240–9
20 Wright J. Online counseling: Learning from writing therapy. *Br J Guid Counc* 2002;**30**:285–98
21 Christensen H, Griffiths KM, Jorm AF. Delivering interventions for depression by using the internet: randomised controlled trial. *BMJ* 2004;**328**:265
22 Clarke G, Eubanks D, Reid E, *et al*. Overcoming Depression on the Internet (ODIN) (2): a randomized trial of a self-help depression skills program with reminders. *J Med Internet Res* 2005;**7**:e16
23 Givens JL, Houston TK, Van Voorhees BW, Ford DE, Cooper LA. Ethnicity and preferences for depression treatment. *Gen Hosp Psychiatry* 2007;**29**:182–91