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Internet screening for anxiety disorders: Treatment-seeking outcomes in a three-month follow-up study

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ABSTRACT

Although many people use the internet to diagnose mental health problems, little is known about the relationship between internet self-diagnosis and treatment-seeking. The MACSCREEN (a validated, self-report screening tool for anxiety and depression) was posted on our clinic homepage and respondents were invited to take an anxiety test. Three months after completing the MACSREEN and a variety of symptom severity scales, respondents were emailed a follow up questionnaire asking about treatment-seeking behaviours. Of the 770 MACSCREEN respondents, 103 completed the follow-up questionnaire. Of these, 100% met criteria for at least one anxiety or mood disorder diagnosis and 51% sought treatment after completing the MACSCREEN. In the 49% who did not seek treatment, fear of medication (57%), discomfort talking to their doctor about anxiety (28%) and the belief that symptoms were not severe enough (28%) were cited as barriers. Compared to non-seekers, treatment-seekers were significantly more likely to meet screening criteria for Generalized Anxiety Disorder, Obsessive Compulsive Disorder, Posttraumatic Stress Disorder and Depression. Higher Sheehan Disability Scale scores and being married (versus single) significantly increased the odds of treatment-seeking, suggesting that functional impairment and disease burden on the family may be stronger predictors of treatment seeking than overall severity of symptoms.

1. Introduction

The internet has become a powerful tool for finding and exchanging information. Since the year 2000, the percentage of worldwide internet access has increased over 4 fold to upwards of 30%.

Today, 80% of the North Americans and 76% of Europeans have access to the internet (World Bank, 2011; Seybert, 2012). While email and search engines continue to be the most frequent uses for the internet, international surveys indicate that 54–88% of internet users often use the web to find health related information on topics such as alternative or experimental medicines, information about sensitive health topics, medications and information regarding specific doctors or hospitals(Baker et al., 2003; Andreassen et al., 2007; Fox, 2011; Fox and Duggan, 2013). Approximately 55% of those health information seekers search for details pertaining to specific diseases or medical conditions (Fox and Duggan, 2012). According to the Pew Internet and American Life Data (2011), about 56% search for additional information about medical treatments and procedures while 44% search for additional information about doctors and other health professionals (Fox, 2011). Internet health-information users are more likely to be female, married/common-law and have higher education (Baker et al., 2003; Rice, 2006; Fox and Duggan, 2012).

In addition to searching for information regarding physical conditions, many people search for mental health information (10.6–39%) (Powell and Clarke, 2006; Rice, 2006; Fox, 2008). The emergence of web-based mental health screening tools has enabled clinicians and health-information consumers to interact in ways that had not previously been possible. Many self-report questionnaires have demonstrated reliability and validity as web-based versions. To that end, researchers have discovered novel uses for web-based screeners, including general population surveys (Van Ameringen et al., 2010; Leykin et al., 2012), screening of specific populations (i.e. patients of a certain clinic, or individuals with a particular diagnosis) (Andersson et al., 2004; Baer and Minichiello, 2006), screening of disaster victims (DeSalvo et al., 2007; Stefan et al., 2011), soldiers (Lee et al., 2011), and selection of

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study participants (Sanders et al., 2010).

With millions using the Internet, and a large proportion explicitly using it for health-related searches, researchers have attempted to explore the impact of this behaviour. In a 2002 Pew study, one third (31%) of U.S. online health information seekers stated that the information they found on their last search had no impact on care. Approximately 16% said the information had a major impact, while 52% reported a minor impact on their care (Morahan-Martin, 2004). Furthermore, many individuals stated that the information they obtained online had affected their decision about how to treat an illness or condition (44%), led them to ask a doctor new questions or to get a second opinion (38%) and change the way they coped with a chronic condition or managed pain (30%). However only 17% reported that the information they found online affected whether or not they sought treatment.

Although the availability of information may not drive treatment-seeking behaviour alone, many studies suggest that a "lack of perceived need" for treatment, in addition to stigma (Van Voorhees et al., 2005, 2006; Wrigley et al., 2005; Wynaden et al., 2005) and pessimism regarding the effectiveness of treatment (Bayer and Peay, 1997) act as barriers to treatment-seeking. Although structural barriers such as financial costs and lack of available resources often discourage treatment-seeking, attitudinal barriers are reported to be a more prevalent issue (Blumenthal and Endicott, 1996; Kessler et al., 2001; Sareen et al., 2007; Bruwer et al., 2011; Mojtabai et al., 2011).

It is reasonable to suggest that having access to large amounts of health related information online increases the public's knowledge of mental health. As a result, one would expect a heightened level of perceived need for treatment; yet many do not discuss the results of their online searches with their primary care physicians. There is evidence suggesting that many patients avoid discussing health information they have found online (Hay et al., 2008; Bylund et al., 2009; Koch-Weser et al., 2010), likely due to a fear of usurping the physician's role and fearing physician judgment (Imes et al., 2008). On the other hand, physicians have expressed concern related to patient information-seeking as it may lead to patient misinformation, confusion, distress, or an inclination toward harmful self-diagnosis or self-treatment. There is also concern that these influences have added a new subjective role to the clinical responsibilities of physicians (Ahmad et al., 2006). The emergence of validated online screening tools may, therefore, benefit both patients and physicians.

Although a number of validated online screening tools have been explored in the scientific literature, no study has investigated how obtaining a psychiatric diagnosis from a reliable source on the internet affects treatment-seeking behaviour. We posted a self-report screening test for anxiety disorders (MACSCREEN) on the website for our research clinic in Hamilton, Ontario, Canada (www.macanxiety.com). Respondents were contacted 3 months afterward and asked about whether or not they sought treatment and why. We hypothesized that access to reliable and relevant information on the internet would provide an impetus for treatment-seeking.

2. Methods

2.1. Procedures and participants

The MACSCREEN is a self-reported screening tool used to screen for common DSM-IV diagnoses. It screens for panic disorder, agoraphobia, social anxiety disorder, generalized anxiety disorder (GAD), obsessive compulsive disorder (OCD), posttraumatic stress disorder (PTSD) and specific phobia as well as mood disorders, alcohol and substance abuse and psychotic symptoms. During its initial validation in 158 consecutive admissions to an anxiety disorders clinic, the screening tool had a mean sensitivity of 0.82 and a mean specificity of 0.71 when compared to the Structured Clinical Interview for DSM-IV (SCID) (Mancini et al., 2003).

A link to an electronic version of the MACSCREEN was posted on our research clinic homepage (www.macanxiety.com) from July 27, 2010 until March 2, 2012. Members of the general population browsing the website were invited to participate in an anxiety disorders screening test. After clicking on the link, participants were required to agree to a disclaimer before proceeding with the MACSCREEN. This disclaimer stressed that the information presented in the screener was for information purposes only and did not replace a diagnosis by a mental health professional. After agreeing to the disclaimer, participants were invited to provide their email address if they were interested in participating in a short 3 month follow up survey. Providing an email address was optional and did not prevent participants from proceeding to the MACSCREEN.

Prior to completing the MACSCREEN, participants were asked a series of questions regarding basic demographics. They were also asked to indicate the reason or reasons why they were taking the screening test from the following list of options: a) I'm concerned that I may have an anxiety problem, b) I'm just curious, c) I feel uncomfortable talking to my doctor about my anxiety, d) I don't have a doctor to see about my anxiety, e) a family member of mine has anxiety, f) I want to confirm a diagnosis given to me by a health professional, g) it is easier and more convenient than going to get professional help for my anxiety. Participants were also asked to indicate what they would do with the information they obtained from the screening test by selecting one of more of the following: a) seek further assessment from a health professional, b) look for more information online, c) buy a book about anxiety, d) speak to a friend or family member or e) do nothing.

If a participant met criteria for a specific disorder via the MACSCREEN, they were prompted to fill out a corresponding disorder-specific symptom severity scale to assess the level of symptom severity and clinical significance of their self-reported symptoms. Symptom severity scales included: the Panic Disorder Severity Scale-Self Report (PDSS-SR) (Houck et al., 2002), The Social Phobia Inventory (SPIN)(Connor et al., 2000), the GAD−7 (Spitzer et al., 2006), the Yale Brown Obsessive Compulsive Scale, Self-Report (YBOCS−SR) (Steketee et al., 1996), the Davidson Trauma Scale (DTS) (Davidson et al., 1997), PHQ-9 (Kroenke et al., 2001), the Alcohol Use Disorders Identification Test (AUDIT) (Bohn et al., 1995), the Drug Abuse Screening Test (DAST−10) (Skinner, 1982), the SDS (Sheehan, 1983). Following completion of the MACSCREEN and any relevant disorder-specific symptom severity measures. Participants were then shown a list of anxiety disorder diagnoses they would most likely meet DSM-IV criteria for. A potential diagnosis was only displayed if a 1) a participant met screening criteria on the MACSCREEN and 2) if they exceeded a clinical cut-off score on any corresponding symptom severity measure (Van Ameringen et al., 2010). Participants were also given information and a link on how to find a mental health professional in their area. The study was approved by our local Research Ethics Board.

2.2. Follow up survey

Three months after completing the MACSCREEN and symptom severity scales, respondents were sent an email with their previously displayed MACSCREEN results and an invitation to participate in a short 4-question follow up survey. In this survey, participants were asked the following questions: