Technology in Society 44 (2016) 10–14

Contents lists available at ScienceDirect

Technology in Society

journal homepage: www.elsevier.com/locate/techsoc

Mental health professionals' acceptance of online counseling

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ARTICLE INFO

Article history:
Received 1 March 2014
Received in revised form
8 November 2015
Accepted 13 November 2015
Available online 22 November 2015

Keywords:
Online counseling
Technology acceptance
Mental health professionals
Counselors

ABSTRACT

The development of online counseling services has followed the advent on information and communication technologies. The present study assessed mental health professionals' perspectives of online counseling by using an extended version of the technology acceptance model. Participants completed anonymous structured questionnaires assessing technology acceptance-related variables, including perceived usefulness and ease of use, usage intentions, job relevance, social norms, attitudes, computer anxiety, and past experience with online counseling. Linear regression and mediation analyses respectively showed that the model predicted 72.9% of usage intentions, and that perceived usefulness significantly predicted usage intentions and mediated the effect of perceived relevance. Interventions to promote online counseling should consider educating counselors and mental health professionals about the relevance and the expected benefits of online counseling to counseling practice.

The advent of information and communication technologies (ICTs), and especially the Web, has radically changed the way people interact with each other, utilize services, and offer their knowledge or expertise [26]. Currently, more than 32% of the world's population use the Web, and this creates significant opportunities in the delivery of professional services using web technologies. Mental health services, and especially counseling psychology, are among the professions that may benefit from such technological advances [17]. Mallen and Vogel (2005) [18] emphasized the role of web technologies in counseling psychology. With increasingly more people utilizing the web, the online seeking of counseling and professional advice about mental health and lifestyle issues became reality [20,21]. Of course, not all online counseling services abide to the ethical and professional standards followed by the registered practitioner psychologists and clinicians, and there is still debate about the safety and ethics of online provision of psychological help, as well as about the training and supervision required for online counseling [17,19,25]. Nevertheless, as increasingly more clients resort to web-based services, counseling psychologists face the challenge of incorporating online counseling in their daily practice [9,17,24], and several studies support the effectiveness of online counseling treatments [1,2].

So far, related research has assessed clients' beliefs and experiences towards online counseling services, and largely focused on the online counseling experience, the way the counseling relationship develops online, and the dynamics of online counseling interactions [5,7]. Still, other studies have also examined the technological issues and technical difficulties faced while clients tried to connect or interact with others in online counseling environments [12].

While some studies have addressed clients' perspectives of online counseling (e.g. [10]), there is paucity of related research in mental health professionals. The few available studies focus mostly on the professional practice issues and ethical concerns of online counseling services [18,19,25], but neglect other practical issues that may facilitate or hinder the acceptance and utilization of online counseling technologies, such as perceived easiness of using web applications for counseling practice, and expected utility or perceived usefulness of online technologies. These issues have been addressed in a large body of research on technology acceptance.

Specifically, the Technology Acceptance Model (TAM [8]) was developed to assess facilitating and impeding factors in the acceptance and utilization of innovative online systems and software. Stemming from the theory of reasoned action [11], Davis argued that technology acceptance and utilization is a function of behavioral intentions and of a set of core beliefs towards the technology in question, including attitudes, perceived ease of use, and performance expectancies or 'perceived usefulness' (i.e., whether using the technological application is indeed useful in

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http://dx.doi.org/10.1016/j.techsoc.2015.11.002
0160-791X/

improving job performance and effectiveness). Venkatesh and Davis (2000) [29] extended the theory, and introduced TAM2, a revised version of TAM that emphasized the importance of perceived usefulness and ease of use, and elaborated on the variables that determined these constructs. Such variables included internal and external factors, as well as facilitating conditions for technology acceptance, including social norms (e.g., perceived acceptance of the technology by colleagues), job relevance, computer anxiety (e.g., anxiety and unpleasant feelings arising from interactions with computers and information systems), and past experience with the technology in question [27,28,33]. Overall, the TAM has been influential and spawned a large body of empirical studies across professional domains in the last 20 years, ranging from e-commerce and consumer behavior, to enterprise resource planning and logistics (e.g. [14,16,32,33]), and has led to the development of several other models of technology acceptance [13,30].

It is noteworthy that TAM research has been really useful in understanding acceptance and utilization of healthcare services, both among patients and healthcare professionals (for a review see Ref. [13]). To better illustrate the relevance of technology acceptance issues to digitalized healthcare [4], argued that the success of any web-based healthcare application will be eventually decided on the work floor, thus, suggesting that even the most sophisticated online healthcare applications will be doomed to failure unless potential end-users utilize them appropriately. There is no good reason to assume that this assertion is irrelevant to online counseling. Besides, the success of online counseling technologies will be determined by the actual usage of both clients and mental health professionals, and this may not be limited to ethical principles or information security and safety issues, but rather embrace a wider perspective towards technology acceptance, such as the one suggested by the TAM research tradition.

Nevertheless, to date, no empirical studies have addressed technology acceptance issues for online counseling among mental health professionals. The present study aimed to fill in this gap in the international literature by assessing acceptance of online counseling among counseling psychologists and mental health professionals. Given the novelty of the study and the paucity of related research on online counseling, our theoretical framework was based largely on related studies in healthcare, rather than business, commerce, and marketing, as healthcare can be seen as conceptually and practically closer to the provision of mental health services. Holden and Karsh (2010) [13] noted that the original TAM approach should be contextualized in relation to healthcare applications, and take into account theoretically relevant variables not addressed in the standard TAM corpus. For this reason, we used an integrative TAM model, which incorporated variables from both TAM and TAM2, including perceived ease of use (PEOU), perceived usefulness (PU), usage intentions, and variables found to predict these constructs in past research [27,28]. These variables included social norms, job relevance, past experience, computer anxiety, and mental health professionals' attitudes to online counseling. It was expected that the variables of this integrated model of technology acceptance would significantly predict mental health professionals' intentions to utilize online counseling services in their professional practice.

1. Methods

1.1. Participants and procedure

Utilizing an initial pool of six professional and chartered counseling psychologists and psychotherapists, the snowball sampling (chain referral) method was used to further identify potential participants. Eligibility criteria included having completed bachelor studies in psychology or medicine (specializing in psychiatry), postgraduate studies or professional training in counseling psychology and/or psychotherapy, and being involved in the provision of mental health services. A cross-sectional design was used, and structured anonymous online questionnaires were sent with an email link to 100 mental health professionals, namely counseling psychologists, psychotherapists, and psychiatrists practicing counseling and/or psychotherapy. Following a brief phone interaction describing the general purpose of the study, the contacted professionals were asked to provide their email address and complete an anonymous online questionnaire. To ensure completed questionnaires were returned, several email prompts were sent. Overall, 63 participants (63% response rate) returned completed questionnaires. Their mean age was 31.6 years ($SD = 6.77$), and 71.4% ($n = 45$) were females. Ethics approval for this study was granted by the respective committee of the International Faculty of the University of Sheffield, and participants were duly informed with an initial email about the purposes of the study, confidentiality of their responses, as well as their participation rights (e.g., right to withdraw from the study at any point without any negative consequence).

1.2. Measures

A structured questionnaire was developed to assess TAM-related variables. The first page of the questionnaire presented the definition of online counseling by Mallen and Vogel [18], and gave basic information about the survey completion requirements. The TAM-related variables described below were derived from the comprehensive review of TAM in healthcare settings by Holden and Karsh [13] and from related research (i.e., [27–29,33]. The question concerning past experience with online counseling were adopted by Haberstroh et al. [12], and the attitudes items were developed based on the review by Mallen et al. [18,19] on the perspectives of counseling psychologists towards online counseling. Unless otherwise specified in the description of each measure below, response options in all items were coded on a 5-point standard Likert scale (1 = strongly disagree, 5 = strongly agree). An electronic copy of the survey is available by request to the corresponding author.

Perceived usefulness (PU) was measured with the mean of four items reflecting expected improvements and utility of incorporating online counseling technology in professional counseling practice, such as 'Using online counseling will enhance the efficiency of my counseling services,' 'Using online counseling will increase the number of clients I can support,' and 'Overall, I will find online counseling useful.' Higher scores reflected greater expected utility of online counseling technologies and the internal consistency reliability was high (Cronbach's $\alpha = .81$).

Perceived ease of use (PEOU) was assessed with the mean of five items reflecting various beliefs about the easiness of utilizing online counseling technologies, including 'I would find online counseling technology easy to use,' 'Interacting with online counseling technology would be clear and understandable,' 'I would find it easy to deliver counseling services through online technology.' Two items were removed to enhance the internal consistency reliability of the measure. Higher scores reflected greater PEOU, and the reliability of the three-itemed measure was at acceptable levels (Cronbach's $\alpha = .71$).

Job relevance was measured with the mean of two items: 'Online counseling is important for the provision of mental health services,' and 'In my profession, usage of online counseling would be relevant.' Higher scores reflected greater perceived relevance of online counseling to the existing state-of-art of the counseling profession (Cronbach's $\alpha = .77$).