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Mental Health on YouTube: Exploring the potential of interactive media to change knowledge, attitudes and behaviors about mental health

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DEDICATION

To Gracie, Jim and Mom, who struggled through this with me.

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I offer heart-felt thanks to Andrea Tanner, my committee chair and advisor, editor and counselor. She was a role model for me throughout the dissertation process, both as a scholar and as a professional balancing work and family. Thanks, also, to my other committee members, Sei-Hill Kim for the stats tutorial, Brooke Weberling McKeever for the input on using TRA (and for waiting until after I finished to give birth and go on maternity leave), and Daniela Friedman for the public health perspective and detailed edits on the manuscript. Also, thank you to my friend and colleague Lisa Sisk for being a reader and editor on short notice.

ABSTRACT

This dissertation first examines the mental health content on the video-sharing site YouTube as a foundation for exploring the ways the mental health community (members and associates of the National Alliance on Mental Illness) have used, and may use YouTube in the future for information seeking, social support seeking, information providing, and social support providing. Using a content analysis of a systematic sample of YouTube videos produced by the YouTube search engine for the terms "mental health" and "mental illness," this study highlights types, topics and formats of mental health related content, including types of mental illnesses, as well as documenting participation around these videos in the form of views, comments, likes and dislikes. A survey based on the Theory of Reasoned Action and the Uses and Gratifications theory explores the attitudes, norms, past behaviors and intentions to use YouTube for mental health communication (information and support seeking, information and support providing). The study finds that there is a wealth of mental health material on YouTube, including personal stories, public service announcements and general information videos; however, while members of the mental health community have begun to explore YouTube for information and connection with others who share their experiences with mental illness, they are still concerned about credibility of information, as well as potential for being stigmatized for admitting to having a mental illness and loss of privacy.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

List of Abbreviations

CDC ..... Centers for Disease Control and Prevention

MH ..... Mental health

NAMI ..... National Alliance on Mental Illness

NIMH ..... National Institute for Mental Health

UGT ..... Uses and Gratifications Theory

TRA ..... Theory of Reasoned Action

UGC ..... User Generated Content

YT ..... YouTube

CHAPTER 1

INTRODUCTION

Chapter 1 Summary: This chapter introduces the coverage of mental health (MH) issues in the media and outlines ways mainstream media coverage may contribute to misunderstanding among the public and policymakers about mental illness, perpetuating stigma and reducing access to MH care. Next, this chapter discusses online health communication platforms and defines the purpose and significance of this research for both practice and theory-building.

One in four adults in the United States (US) suffers from some form of mental illness—nearly 60 million Americans in any given year (*Agency for Healthcare Research and Quality*, 2009). People with mental illness may suffer from one or more of a number of disorders, including major depression, schizophrenia, bipolar disorder, obsessive compulsive disorder (OCD), panic disorder, post-traumatic stress disorder (PTSD) and borderline personality disorder. According to the National Institute of Mental Health (NIMH), mental illness is a mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) that is diagnosable currently or within the past year, that is of sufficient duration to meet diagnostic criteria specified within the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) that results in serious functional impairment, and which substantially interferes with or limits one or more major life activities (www.nimh.nih.gov/statistics/SMI_AASR.shtml). Four

of the 10 leading causes of disability worldwide (in the US and other developed countries) are mental disorders, and by 2020, major depressive illness will be the leading cause of disability in the world for women and children (World Health Organization, 2008; *Mental Health Atlas*, 2011).

While treatment and recovery from mental illnesses is possible, many who suffer from mental illness do not seek care for fear they will be socially stigmatized for admitting to having a mental disorder (Michaels, Lopez, Rusch, & Corrigan, 2012; Hinshaw & Cicchetti, 2000). Effective mass communication to raise awareness about mental illness and available treatments can counteract the effects of stigma (NAMI.org). In the past decade, however, a series of high-profile shootings have negatively focused the lens of mainstream media on the issue of mental illness. In that time, *The New York Times* published 421 articles covering these tragic and frightening events, including the school shootings at Columbine High School in 1999, the deaths of 32 people at the hands of another shooter in 2007 on the campus of Virginia Polytechnic Institute and State University, the 2011 shooting of US Representative Danielle Gifford and 18 others (six of whom died) on January 8, 2011, near Tucson, the Colorado theater shooting in 2012, and most recently the Sandy Hook Elementary School shooting in Newtown, Connecticut. This exposure highlights mental illness as unpredictable, focusing the national eye on rare and extreme cases (Sieff, 2003; Wilson et al., 1999; Barry et al., 2013). Despite the resulting volume of coverage, members of the public know very little about the complicated science of neurochemistry that lies at the heart of mental illness (Barry et al., 2013). American media have frequently misrepresented or oversimplified the mechanisms, symptoms and prognoses for mental illness (Wahl, 1992; Philo, Secker,

Platt, & Henderson, 1994). Causes of mental illness, however, are multi-faceted and include a combination of biological, psychological, and environmental factors (www.WebMD.com). Symptoms of mental illness are frequently described in the media using metaphors that make mentally ill people look unpredictable, dangerous or hopeless (Wahl, 1992). The impact of these negative stereotypes, which often pair mental illness with the social issues of violence, addiction and homelessness, can cause a stigmatizing effect for those who suffer with mental illness, as well as a continuing negative perception among the public and policymakers toward the mentally ill (Michaels et al., 2012; Hinshaw & Cicchetti, 2000; Barry et al., 2012). Lack of MH care resources and fear of stigma keep people who suffer with mental illness out of treatment, perpetuating the problems and further isolating the mentally ill and their families (Barry et al., 2013).

As demonstrated by the media coverage of the Sandy Hook Elementary School shootings and other like incidents, the media are a primary avenue for the flow of political and social information (Page, 1996; Davis 2010) and can push some issues to the forefront of people's minds and downplay or omit others, guiding the issues that people discuss in the public sphere and the way people perceive these issues (Cobb & Elder, 1971; McCombs & Shaw, 1972). This effect is particularly strong for science and health-related issues that fall outside of the public's experience and expertise, yet have important influences on people's lives (Nisbet, 2009). Researchers have found that portrayal of complicated issues in the media has significant impact on audience attitudes, which ultimately influence the formation of public policy (Lewis & Reese, 2009; Nisbet, 2009). The resulting lack of support for MH services and stigmatization of mental illness have far-reaching impacts both for people with mental illness and for the nation, including the

casting of mental illness as an individual attribute and lack of understanding of the social context of mental illness (Schnittker, 2012; Hiday &Wales, 2012). Left untreated, these disorders impose staggering consequences, on personal and societal levels, including unnecessary disability, unemployment, substance abuse, homelessness, inappropriate incarceration, suicide and wasted lives (Aneshensel, Phelan & Bierman, 2012; NAMI.org). The economic cost of untreated mental illness is more than $100 billion each year in the US (NAMI.org).

Although people often turn to media first for information about unfamiliar issues (Case, 2012) traditional media are inherently limited in the ways they can meet the needs of information-seekers. Normative routines of news production, for example, create deadline pressure that forces reporters to rely on a stable of ready sources and demands a one-to-one kind of balance in reporting that can lead to false dichotomies and misleading inferences (Boyce 2005). Economic considerations cause editors to promote a set of news values that favor unusual or controversial material to secure audience share or readership (Shoemaker & Reese, 1991; Davie & Lee, 1995). Finally, mainstream media companies can serve a gatekeeping function since they hold the tools for news selection and production, may be subject to political influence (Bedingfield, 2012; Foster et al., 2012), and a use primarily one-way, transmission communication model that inherently limits the perspectives that can be heard, provides little or no space for elaboration and little opportunity for discussion or feedback (Bauer et al., 2007; Boyce, 2005). Thus, depictions of mental illness often suffer in the constraints of mainstream media coverage (Wahl, 1992; Glasco 2012). In response to the startling statistics on mental illness and the recent high-profile media coverage connecting mental illness with mass shooters, health

communicators at the National Alliance on Mental Illness (NAMI), the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC), along with other advocacy organizations, are redoubling efforts to raise awareness about prevention and treatment, both among the general public and among the MH community (Fitzpatrick, 2012). For example, improved MH communication is an objective of the CDC's *Healthy People 2020 (Mental Health and Mental Disorders, 2013 on www.HealthyPeople.gov),* which details areas of emphasis and national objectives to improve the health of all Americans. These plans include the implementation of online communication channels to make positive differences in MH communication, including two key components: information seeking and social support. NAMI, for example, provides updates and information about new research on mental illness causes and treatments, as well as contacts for those who need help.

The Douglas Mental Health University Institute in Quebec is another organization that seeks to raise awareness about mental illness and has begun exploring use of new media initiatives, especially the use of interactive community-building tools of Web 2.0 platforms, including the video-sharing site YouTube (*www.douglas.qc.ca*). The Douglas Institute's mission is to change perceptions of mental illness by positioning experts in the public sphere. In a speech to the Association for Healthcare Philanthropy/Health Care Public Relations Association (AHP/HCPRA) National Conference in 2010, Marie-Gabrielle Avouh, web communication manager for the Douglas Institute, said, "Mental illness and stigma. The two always seem to go together. The Douglas Mental Health University Institute is trying to break this pattern through public education."

While these organizations, along with other MH advocates, are making a difference in raising awareness about the impacts of mental illness on society, misunderstanding about mental illness remains among the general population, and members of the MH community still face stigma and isolation. The need for new and better health communication, within and outside of the MH community, persists. Given the limitations of traditional media for this type of communication and the public's evolving Internet-oriented information-seeking strategies, researchers have turned to studying the potential of new media communication channels to improve mental health communication and education (Barak, Klein, & Proudfoot, 2009; Boulos, Hetherington &Wheeler, 2007; Hanson, Thackeray, Barnes, Nelger & McIntyre, 2008; Spallek, O'Donnell, Clayton, Anderson, & Krueger 2010; Fernandez-Luque, 2010; Chou, Prestin, Lyons, & Wen, 2013).

1.1 Internet and Health Communication

According to the Pew Internet and American Life Project (2012), 81% of US adults use the Internet, and 72% of Internet users looked online for health information in the past year. Health information seekers go most often to websites such as WebMD, Medline, and Healthfinder, looking not only for information but also for a more active role in their own health care decisions (Koskan et al., 2012; Bundorf et al., 2006; Mandl & Kohane, 2008; Ybarra & Suman, 2008). At least 35% of U.S. adults say they have gone online specifically to try to figure out what medical condition they or someone else might have (Pew-Health Online, 2013). Along with more control, people go to the Internet for the accessibility and volume of free, fast information and the possibility of tailored content, privacy (i.e., anonymity), reach and immediacy (Fox, 2011; Koskan et

al., 2012; Farr, 2011; Boulos & Wheeler, 2007). Specifically regarding MH information, Fox and Jones (2009) reported that 28% of Internet users search online for information about depression, anxiety, stress, or other MH issues.

Despite the benefits of searching online for health information, scholars also point out that, to date, online health information is provided in a manner that may mimic more traditional media sources, such as newspapers and television. Hu and Sundar (2009) found that health communication on static websites is similar in some important ways to that in traditional media, especially regarding the single producer/sponsor of content. Websites also frequently lack the true multi-way communication that allows users to get and provide not only information but also connection and support (Carroll & Richardson, 2011). It is clear that much of the health information provided on the Internet does not take advantage of the interactive nature of the web, or allow for a more dynamic conversation between the health provider and the health consumer (Tanner, Friedman, Koskan, & Barr, 2009).

1.2 Web 2.0

As online communication evolved during the past decade, new communication platforms featuring multi-way communication have changed the way online users communicate, including communication about health issues.

Web 2.0 is defined as a second-generation of Web based communities and hosted services, including social networking sites, wikis, and blogs that encourage collaboration and sharing (Fox, 2011; Shin & Kim, 2008).

The nature of information on Web 2.0 channels is dynamic and blends audio, video, photos and RSS feed from external sites; additionally, Web 2.0 materials are a mix

of reviewed expert information, information based on opinion and experience, and persuasive communication, such as advertising.

Hundreds of millions of people worldwide use Web 2.0 interactive communication tools to seek and share information and connections with others. The top four Web 2.0 sites generate 1.25 billion unique visitors per month: YouTube—450 million, Wikipedia—350 million, Twitter—200 million, and Craig's List—160 million (ebizMBA, 2013). With regard to health communication, the top four health sites using Web 2.0 technologies generate 78.5 million unique visitors monthly: WebMD—19.5 million, YahooHealth—21.5 million, MedlineNet—10.5 million, MayoClinic—7 million (ebizMBA, 2013). Thus, developing an understanding of Web 2.0 information- and support-seeking is a priority in health communication research (Chou et al., 2009).

Kay and Johnson (2009) found that people turn to these interactive channels to get a variety of viewpoints, check on the accuracy of information provided by mainstream media, let their point of view be heard, to be in contact with like-minded people, and to search for information not provided by the mainstream media. As the top Web 2.0 channel, YouTube (YT) has increasingly been evaluated by communications scholars (Ache & Wallace, 2008; Burgess & Green, 2009; Farr, 2011; Frohlich & Zmyslinski, 2010; Freeman & Chapman, 2007; Hosler & Conroy, 2008).

1.3 Web 2.0: YouTube

Founded in 2005, YouTube (YT) consists of thousands of "communities" formed by millions of users in 25 countries and across 43 languages (YouTube Media page). With more than 3 billion videos viewed each day, YT is the largest video-sharing site on the World Wide Web, though not the only one (YouTube Media Page). YT's own

research has documented a broad user demographic ranging from age 18 to 54 (www.youtube.com/yt/press). Further, YT claims more than 1 billion unique users visit YT each month and more than 4 billion hours of video are watched each month on YT. In 2008, Rainie reported that 48% of Internet users had gone to a video-sharing site such as YT in the past year, almost double that of just one year earlier.

YT is a commercial enterprise and video-sharing site designed to nurture knowledge-sharing among peers and build communities of creativity and communication (Jenkins & Hartley, 2009). Its commercial side presents concerns for researchers studying the medium's potential for free exchange of ideas in the public sphere (Page, 1996; Hindman, 2009). For example, Lang (2007a) cautions users to recognize the "top-down" nature of the platform, given its tools for video sharing are provided by a corporate entity that provides a set of rules for how these tools may be used.

On the contrary, very few guidelines are provided, and the channel is essentially self-policed. Users can flag videos they feel are inappropriate, illegal or insulting, and YT management will review them and decide if the content should be removed. Red flags can be applied to content found offensive for any reason, whether they are removed or not (Burgess & Green, 2011). Also, users who post content can choose one of a set of predetermined categories in which to post their videos. Research suggests that some users purposely miscategorize videos to reach audiences who are not necessarily looking for that type of content (Lange, 2007b; Burgess & Green, 2009).

As a community, YT thrives on collective creativity, and contributors must work within this community culture to build trust through consuming videos, producing videos on their own, producing videos in response to others' content, reposting, or posting

comments, likes or dislikes about others' videos (Burgess & Green, 2009; Lange, 2007a). Building trust generally happens by becoming part of the community, which affords its members measures of "attention capital" through numbers of views (Burgess & Green, 2009). While YT offers individual and corporate entities equal opportunity to reach wide audiences, corporate and government entities seeking to put messages in front of the YT community may be seen by the community as "outsiders," the antithesis of what the medium is about (Lange, 2007b). These entities' challenge for using YT comes with finding a way to work within the culture of YT.

Advertisers have not backed away from these challenges. According to YT's research, 98 of AdAge's top 100 advertisers have run campaigns on YT, and the number of advertisers increases each year (www.youtube.com/yt/press/). The presence of advertising adds complexity to evaluation of the information on this channel (Adams, 2010). This challenge is pushed further by the increasing presence of "stealth marketers," who present products, services or persuasive messages as videos posted for individual purposes (Kim, Paek & Lynn, 2010).

YT, then, can be recognized as a medium with defined cultural parameters. By developing cultural competence, communicators can collect the attention capital they want and communicate effectively.

1.4 *Web 2.0 and Health Communication*

Social science research has already begun exploring some segments of Web 2.0, including YT (Ache & Wallace, 2008; Burgess & Green, 2009; Farr, 2011; Frohlich & Zmyslinski, 2010; Freeman & Chapman, 2007; Hosler & Conroy, 2008), for potential to improve health communication among patients and the public in general (Fox, 2011). Fox

found that Web 2.0 channels are uniquely suited for health communication because of their mass- and interpersonal-communication capacities. They can provide platforms for the social marketing of health messages (Cugelman, Thelwall, & Dawes, 2011) as well as allow for peer-to-peer medical information-seeking and sharing, and support and advice online (Chou et al., 2009). There is also evidence that YT, along with other similar sites offering user-generated content (UGC), provides an ideal platform for health messages because of its dual mass- and interpersonal-communication potential, providing access to information, tools for information production and dissemination, and contact with others (Stratford et al., 2004; Paek, Hove, & Jeong, 2011; Eastin, 2006; Boulos et al., 2006; Metzger & Flanagin, 2011). These trends promise to grow in the near future as use of portable devices such as smart phones and tablets allow mobile access to Web 2.0 sites and increase in importance for information-seeking functions. Wireless users outpace other Internet users on every one of the above activities by significant margins. For example, 37% of wireless users have read about someone else's health experience online, compared with 24% of other Internet users (Fox, 2011).

Few studies, however, have looked specifically at YT for MH communication either as an interpersonal medium shared among the MH community or as a mass communication medium that can reach millions of people worldwide. (Discussion of these studies is included later in this paper in the Literature Review section.) While Pew data show increasing use of YT for health communication, very little data documenting YT use for MH is available. Knowing where and how people receive information is beneficial when crafting targeted information that caters to the needs of users, therefore further study is warranted (Rimer & Kreuter, 2006). More research is also needed to

explore specific MH communicators' goals, messages and audiences to refine and achieve communication and disease-specific objectives and strategies that take advantage of these channels' strengths and heighten awareness of their challenges.

Research has documented benefits and risks of health communication in the anti-establishment culture of YT. As Adams noted, the addition of advertising to the content makes evaluation of content more challenging (2010), especially for health communication. Still, YT's participatory culture promotes a more collaborative physician-patient relationship, arming patients with information to aid in the medical decision-making process (Ache & Wallace, 2008; Chou et al., 2009). Also, it allows the kind of anonymity that people want when they fear they might be stigmatized for things they reveal, as in the case of many medical conditions, including mental illness (Adams, 2010; Corrigan & Shapiro, 2010; Thoite, 2011)

The suitability of YT for health communication is a fertile area for study given the reach and growing appeal of this channel (Moore, 2011), particularly for specific health communication contexts. The current study builds on existing health communication research by examining the use of YT for these functions within the MH community of online users and linking that content data with users' motivations and participation. Making this link will show health communicators, both individuals in need and individuals or organizations who want to reach them, the most effective ways to use the medium and accomplish their goals.

1.5 *Purpose*

The purpose of this research is twofold: to assess Web 2.0, focusing on YT, as a potential medium for communication about complex health topics, such as mental illness,

in the United States and to assess influences on the MH communities' participation and their motivations to participate in use of this medium for MH communication. While this study focuses on the use of YT for communication about MH, its broader purpose is to use this specific example to build on the discussions about using sites that include user-generated content (Web 2.0) to communicate about health issues. A better understanding of the interactive patterns on these sites could help communicators capitalize on the tools these media offer to produce and consume Web 2.0 messaging that can change attitudes, behaviors and knowledge toward mental illness and help achieve the MH goals of *Healthy People 2020*.

Employing both content analysis and survey research, the current study examines MH/mental illness content on YT focusing on types of content, formats, topics, providers (i.e., who producer and/posts the YT content), source expertise included in the YT videos, and users' responses to the videos. Additionally, how the MH community (represented by members of NAMI nationwide) utilizes YT for information seeking and social support seeking/providing is assessed. This multiple methods research helps to answer questions about how MH communicators, both personal and organizational, can best utilize YT for MH communication and education in an effort to attain *Healthy People 2020* communication goals. These specific MH goals targeting of messages, use of community level communication, emphasis on crowd sourcing, improving use of YT for interpersonal communication, strategies to expose people from the general public to MH awareness messages.

1.6 *Theoretical Framework and Implications*

This research is guided by Uses and Gratifications Theory (UGT) (Blumler, 1979;

Ruggiero, 2000) and the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975, 1981). Uses and Gratifications Theory has traditionally been used to explain audiences' uses of emerging media, so it fits the present study's aim to look at motivations to use Web 2.0, including YT (Blumler & Katz, 1974; Chua, Goh, & Lee, 2012; Haridakis, 2013; Katz, Haas, & Gurevitch, 1973; Perse & Dunn, 2009). The TRA, which emerged in the 1970s from the work of social psychologists Martin Fishbein and Icek Ajzen, has been used to predict behavioral outcomes, including behavior change and media use, and has commonly been used in health communication research. TRA has been applied in studying the influence in health communication research looking at variables that explain or predict behavioral outcomes--such as behavior change resulting from health education campaigns (Dutta-Bergman, 2005; Glanz, Rimer & Viswanath, 2008; Hennig & Knowles, 2006; Jemmott, 2012; Jonsson, Baker, Lindberg & Ohrn, 2011). Additionally, TRA has guided studies of use of a media channel for specific purposes like information and support (Kaye, 2007). Other related theoretical frameworks have evolved from the TRA. For example, the Theory of Planned Behavior (Azjen & Fishbein, 1991) added the self efficacy construct to incorporate an individual's perception of volitional control. If the person feels that performing a behavior is out of his control, this would have an impact on his intention to perform that behavior. However, this study focuses on a behavior that is under the individual's control, so the TPB's additional construct was not necessary. The TAM is another related theory but has primarily focused on intention to adopt new technology (Davis, 1985). While the adoption of Web 2.0, and specifically YT, might be considered in that light, the current study considers use of YT for MH communication a media use behavior instead of technology adoption. Thus, because the

behavior is under the control of the individual and it is viewed as a media use behavior, TRA is a more suitable framework for the current study.

The current study adds to TRA literature by applying it in the context of a specific Web 2.0 channel for health communication about a particular health issue. Specifically, this study focuses on use of YT (behavior) for the purposes of information-seeking/providing and social support-seeking/providing related to MH. This author could not locate any studies testing the TRA framework for predicting and explaining Web 2.0 or YT use. However, a few studies have tested relationships between some TRA constructs such as attitude and normative beliefs and intention to use Web 2.0, including some specific Web 2.0 platforms (Bernhardt, Chaney, Chaney & Hall, 3013; Shin, 2008; Sadaf, Newby, & Ertmer, 2012; Shin & Kim, 2008). These constructs were used in the TRA-related Theory of Planned Behavior (Ajzen, 1991) and Technology Acceptance Model (Davis, 1985). One example is Yang, Hsu and Tan's Technology Acceptance Model-based study of the determinants of users' intentions to share videos on YT. They found that ease of use and social influences were strong predictors of YT video sharing behavior. Shin and Kim (2008) conducted a number of early Web 2.0 studies using a TRA-based model to study the acceptance of Web 2.0 in the specific context of Cyworld, a Web community blogging site in Korea. They looked at relationships between attitudes, behavior patterns, and intention to use Cyworld by expanding the TRA model based on the Technology Acceptance Model (Davis, 1985) to replace normative beliefs with a set of predictors related to enjoyment and uses of Cyworld. Shin (2008) also studied purchasing behaviors in a virtual economy using a similar model. Sadaf et. al. used the related Theory of Planned Behavior (Ajzen, 1991) to study teachers' intention to use Web

2.0. Barnhardt et al. (2013) provide a detailed discussion of new media's uses for health education in a number of theoretical contexts that include TRA-related constructs. However, no studies have used the TRA to study intention to use of YT for MH communication, so further study is warranted.

Some researchers have combined variables from expectancy-value traditions, such as UGT, with the TRA variables to better explain and predict media use and behavior (Bagozzi, Wong, Abe, & Bergami, 2000). To provide a more stringent test of the TRA, the current study included past behavior as a predictor of intentions. One of the benefits of doing this is that it provides a fuller explanation of the dependent variables. That is, the effects of past behavior may capture automatic, or habitual, activation of intentions (Eagly & Chaiken, 1993, p. 178).

The conceptual framework for the current research employs a combination of these theoretical frameworks, and seeks to consider some new-media UGT variables within the framework of TRA. This study will contribute to our knowledge of UGT and TRA in examining use of new media for health communications. (*See Appendix E for content analysis and survey data.*.)

1.7 *Implications for Practice*

Along with the characteristics of the media channels (McQuail, 2008), message producers' goals and norms drive the creation of content, including professional health communicators and members of the lay public (Christians et al., 2009). The attention of MH practitioners and advocates at the grassroots and policy levels is currently focused on the need for more and better MH communication. For example, the National Alliance on Mental Illness (NAMI), the largest grassroots MH organization in the U.S., focuses on

improving the lives of people affected by mental illness and their families (Fitzpatrick, 2012), with communication as a large part of the organization's mission. NAMI Executive Director Michael J. Fitzpatrick, in a recent editorial about the decline of MH services, suggested that the MH community must look to other ways of building community support, including the use of social media channels (The *NAMI Advocate*, 2012). National NAMI and state and local chapters already maintain Twitter and Facebook accounts to stay in touch with the support base *(*www.NAMI.org/content), and physicians and other MH practitioners know that health information is available for study and for consumption by the public on YT, the Web's largest video-sharing site (Hayanga & Kaiser, 2008).

Government agencies such as the National Institute for Mental Health (NIMH) and the Centers for Disease Control and Prevention (CDC) also use interactive media with UGC. At the research-focused NIMH, researchers are looking for ways to use new media to disseminate research results to communities of health care providers, who could use them in specific health care contexts (Mental Health Research: News you can use). For example, a number of recent NIMH-funded studies can be found via podcast. As seen at www.nimh.nih.gov/site-info/feed-nimh-radio.atom, Dr. Hector Gonzalez, a researcher working on identifying gaps in treatment for major depression, used a podcast to talk about his findings; and Dr. Elizabeth Lin discussed her research on managing co-existing diabetes and depression.

The CDC tracks diseases, provides information about health issues (for example, MH, H1N1, and healthy aging among many others) and highlights important advances in science on social media. (Social Media at CDC at www.cdc.gov/socialmedia). Both CDC

and NAMI provide social media tool kits to help researchers disseminate information and raise awareness about pertinent health issues, including MH (www.CDC.gov/social media tools).While these entities have begun studying and implementing these online tools for MH communication, their outreach methods are still in development, and they have not included consistent examples from YT. The current study investigates communicators' use of YT as a channel for use in MH communication.

The CDC maintains its online presence, in part, to emphasize and publicize prevention and treatment goals in the *Healthy People 2020* strategic plan (www.HealthyPeople.gov/2020), including objectives aimed at MH status improvement (for example, reducing suicides, reducing adolescent suicide attempts, reducing eating disorders and reducing major depressive episodes); and treatment expansion (for example, more MH screening and treatment in primary care offices, treatment for children, treatment for adults, and employment of people with mental illness). *Healthy People 2020* also stresses the importance of increasing the proportion of quality, health-related websites and the number of health information-seekers who access these sites, individuals' involvement in their health care decision-making, and best practices for health information technology and social marketing in health promotion and disease prevention.

Recent improvements in both prevention and treatment of mental illnesses (Keck, 2010), along with development of new communication patterns and channels on Web 2.0 (Barnhardt et al., 2013), present important avenues for meeting MHMD and HC/HIT goals in the decades to come (*Healthy People 2020*; Fitzpatrick, 2012). More research, however, is needed to explore specific communicators' goals, messages, and audiences to

refine and achieve communication and disease-specific objectives, and how best to use new media and social media to accomplish these goals. The current study will contribute to this emerging body of literature. Additionally, this study explores both the giving and providing of social support on this Web 2.0 platform. Because of Web 2.0's potential for not only individual but also interpersonal and community level communication strategies, the results of this study will inform individual, interpersonal and community-based interventions, as well as targeting societal-level strategies, for improving MH described in *Healthy People 2020*.

This work also provides a foundation for improving the use of YT for information seeking and social support seeking by examining and categorizing the MH content currently available on YT and users' responses to it. Additionally, the survey of the membership of the largest MH grassroots organization in the country describes how and why members of the NAMI organization use YT and whether they find this platform useful for these purposes.

Findings from this study will provide guidance to organizations like NAMI and government agencies such as the CDC in how much effort should be invested in Web 2.0 communication and what type of content specific audiences will use. These findings will also explore the potential impact of YT on communities of people who share MH issues on YT.

CHAPTER 2
LITERATURE REVIEW

Chapter 2 Summary: This chapter provides a review of the literature for the use of Web 2.0, and specifically YouTube, for health communication, including about mental health (MH). It also reviews the Theory of Reasoned Action (TRA) and the Uses and Gratifications Theory (UGT) literature for health communication and describes the reasons these theories were chosen to guide the current study. Finally, this chapter reviews the literature defining the specific Theory of Reasoned Action and Uses and Gratifications Theory variables measured in the current study and provides the questions and hypotheses this study seeks to address.

Web 2.0 and Medicine 2.0

Over the past decade, research has explored the potential for Web 2.0, defined as the second, or "interactive," generation of online communication featuring user-generated or user-manipulated content (i.e., wikis, blogs, podcasts, video-sharing sites, and social networking sites" (Fox, 2011), to provide health information and connections among patients and physicians, and between patients and physicians (Boulos & Wheeler, 2007; Barsky, 2003; Fahy, 2003; Savel, Goldstein, Perencevich & Angood, 2006; E-Health Insider, 2006; Eminovic, Wyatt, Tarpey, Murray, & Ingrams, 2006). The term Medicine 2.0 is used in the Pew Internet and American Life project to describe the use of Web 2.0 channels for health communication (Fox, 2011). E-health is also commonly used (Glanz,

Rimer, & Viswanath, 2008). These interactive platforms extend the online communication tools that health websites like Medline and WebMD had pioneered, allowing users to create content (UGC) in addition to consuming it (Boulos &Wheeler, 2007). For example, common uses for Medicine 2.0 include seeking information about a specific health issue, checking with others about treatment efficacy, and crowd-sourcing physicians' opinions about diagnoses and treatment options. Boulos and Wheeler (2007) explored Medicine 2.0 technologies for health and health care education and found that these technologies held promise. Chou and colleagues (2010) found that the social aspects of Web 2.0 communication have transformed health communication and called for further research to explore the potential impacts of social media communication on population health.

Four themes have been identified regarding the need for future research on the use of Medicine 2.0 (Hughes, 2010). These include research exploring the need for clear Medicine 2.0 definitions, doctors' perception of loss of control over information, safety issues related to information accuracy, and ownership and privacy issues with the growing body of information created by Medicine 2.0. Regarding Hughes' (2010) information quality concerns in the use of Web 2.0 platforms for health communication, analyses have identified some problems, especially with reliability, completeness and credibility (Chesney & Su, 2010; Friedman, Rose, & Koskan, 2011; Hu & Sundar, 2009; Del Guidice, 2010; Gavhani & Mohan, 2008; O'Grady, 2006). Without assurance of reliable sources of health information, message consumers face difficulty assessing the credibility of information (Metzger, 2005). Despite the credibility concerns, 41% of e-patients have read someone else's commentary or experience about health or medical

issues on an online group, website or blog (Rainie, 2007). Hesse and colleagues (2011) found that Web 2.0 channels' ability to create collective intelligence can lead to good, crowd-sourced information or it can lead to a more dangerous and limiting type of "group think." Without careful use, this practice can lead to the perpetuation of medical myths that have been coined the "cult of the amateur" (2011).

Regarding physicians' concerns about use of Web 2.0 for health communication, research has demonstrated that, while people turn first to their physicians about their personal health concerns, a significant number also turn to other sources, including people in their family and social circles (Koskan et al., 2012). According to a recent Pew Internet and American Life survey (2012), 60% of adults received information or support from friends and family and 24% of adults received information or support from others who have the same health condition. The use of interactive web resources for these types of information and support activities is an extension of these common off line health communication activities (Fox, 2011).

Still, medical experts worry that empowering lay publics with this type of unsourced UGC can lead to the generation of poor information, information that is inappropriate for a user's specific situation, and loss of control over treatment decisions by physicians, with less satisfactory outcomes (Hayanga & Kaiser, 2008; Eysenbach, 2009). Also, experts are concerned that users may not be aware that peer information and expert information are presented as equally valuable on Web 2.0 health sites (Adams, 2010). In some cases, their concerns are valid. For example, users consider most online information more credible than not (Eastin, 2008), and report that they often do not confirm Web 2.0 information even when they know they should (Hargittai, Menchen-

Trevino & Thomas, 2010). Indeed, Wang and colleagues (2011) compared credibility of health information on websites (expert) versus discussion groups (peer), and found that UGC provided and verified by many people with similar concerns is considered by users to be as credible, or more credible, than information directly from professional experts. For example, on YT, an individual may post a video about MH, and those seeking MH information may watch the video and comment on the material, along with other viewers.

Another area of study for scholars exploring Medicine 2.0 is participation in online support groups. A number of studies have found this activity is becoming an important source of health information as well as an important connection to others with similar concerns (Dutta-Bergman, 2012; Moore, 2011 Bakardjieva & Smith 2011; Chou et al., 2009). Especially among populations of people who live with chronic or rare illnesses, online channels with UGC, including information and advice from peers, are now key pieces of the interpersonal health communication process (Fox, 2010). McCoy (2013) reported that one in four (23%) of Internet users with diabetes or some other chronic ailment said they have gone online to find others with similar health concerns. Individuals living with mental illness, in particular, benefit from social contact and peer support (Sharma et al., 2013), and Web 2.0 channels provide a safe and anonymous forum for these relationships (Juarascio, Shoaib & Timko, 2010). Therefore, it is crucially important to examine the role web-based MH communication, including YT, plays regarding information seeking and social connections among members of the MH community.

Some research has suggested that peer support has been established as a key component of mental illness management, including the provision of role models for

people coping with mental illness, the countering of stigma and stereotypes and the provision of hope for a better future (Davidson, Chinman, Kloos et al., 1999). Peer support is generally a mutual relationship in which "persons voluntarily come together to help each other address common problems or shared concerns" (Davison, et al., 1999). Davidson et al. also provide several characteristics necessary for the existence of peer support: sharing similar life experiences, having a structured process of social interaction, intentionally participating in standard procedures and having routines for addressing problems participants encounter in daily life. Users of peer support for mental illness are mostly single women (60%) who have been hospitalized for mental health issues (Davidson et al., 1999). While a number of studies have found some measurable benefits of structured peer support--for example, lower hospitalizations (Kurtz, 1988; Galanter, 1988) and larger social networks (Carpinello et al., 1991)--others cite lack of data to determine real benefits. For example, Hunkeler, Meresman, Hargreaves, et al. (2000) found that in a blind trial with half of participants receiving regular peer support along with other treatment for serious depression the peer support group fared no better than those without peer support. Still Davidson et al. found in their review of empirical studies of peer support that there are positive trends and potential measurable health benefits for mentally ill people with peer support (1999). Other research supports those findings (Castelein et al., 2008).

Online peer support may provide the same benefits for people with chronic illnesses, including mental illness. For example Perryman, Hansen and Yellowlees (2009) found that peer support sites were the second most popular health-related site on Second Life, a Web 2.0 platform offering a virtual world in which participants enter as avatars of

themselves. Additionally, they noted that the support on Second Life can translate into real life impacts. Van Uden-Kraan, Drossaert, Taal, Seydel, and van de Laar (2008) also found positive results for participants in online support groups for patients with breast cancer, fibromyalgia, and arthritis, and the benefits—for example, feeling "empowered"—were the same for people who contributed and people who simply read others' messages. Takahashi, Uchida et al. (2009) found that Internet support groups for people with depressive tendencies can provide support that meets users' needs, but users can be susceptible to downward depressive spiral triggered by aggravated psychological burden. Also, the potential for negative comments can provide additional psychological stress. While numerous researchers have examined online health-related support groups, no researcher has studied support provided to mental health sufferers on YT. See Eysenbach, Powell, Englesakis, Rizo and Stern (2004) for a review of the literature relating to virtual communities and support groups; and Goodwin, Leszcz, and Ennis, et al., (2000) and Bender, Jimenez-Marroquin, Ferris, Katz, and Jadad (2012) for breast cancer and support groups.

2.1 YouTube and Health Communication

Health communicators' concerns, as well as their beliefs about potential for Med 2.0, carry over to specific Web 2.0 channels, including YT, one example of a Web 2.0 platform offering "medicine 2.0" content. In recent years, researchers have analyzed topics on YT and found an increase in informational videos (Fordis, et al., 2011; Metzger & Flanagin, 2011; Keenan et al., 2007; Hughes & Wareham, 2008; Linkletter et al., 2010), including content about an array of health issues. For example, Pandey, and colleagues (2010) found YT contained significantly more useful information about H1N1

than misleading information. Hosler & Conroy (2008) found that while most videos on YT portrayed tanning positively and appealed to appearance, opportunities exist for using YT to convey the risks of tanning beds. Other research has found a wide variety of information about human papilloma virus (HPV) on YT, pointing to the need for professionals to be aware of the potential for false information acquisition and the potential of the medium for conveying official and valuable information (Ache and Wallace, 2008). Turner and colleagues (2011) contend that physicians and other experts who use YT could increase the impact of their expertise.

Along with information-seeking and -providing potential on YT, media and health communication researchers have also discovered the connectivity potential among people within specific health communities on YT (Thong et al., 2007; Tian, 2010; Frohlich & Zmyslinski-Seelig, 2012; Powell & Clarke, 2006; Heaney & Israel, 2008; Kuehn, 2011). While some researchers studying YT support groups for people with breast cancer found mixed results in terms of utility for participants, other research has demonstrated the efficacy of peer-to-peer MH services (Doughty & Tse, 2011). Chung and Kim (2008) found that interaction among cancer patients using Web 2.0 tools provided multiple positive outcomes, including emotion-management and information-sharing. Yom-Tov (2012) and others found strong ties among YT users dealing with anorexia nervosa, and Powell found that personal cancer stories on YT provided authentic and emotionally engaging content and could contribute to development of support communities in the future (2011). Individuals with diabetes and depression also turn to Web-based support groups, including on YT (Fernandez-Luque, Karlsen, & Melton, 2011; Powell, 2009). Frohlich and Seelig examined YT social support messages about inflammatory bowel

disease and ostomies (2012). The current study builds on those positive findings to explore YT and MH communication.

No consensus among medical professionals exists, however, in the evaluation of YT for health communication. An editorial in JAMA in March 2008 stated "We are concerned that the application of a formal appraisal to a freeware Web site (sic) that is unregulated, uncensored, and designed more for entertainment than the dissemination of evidence-based medical advice may lend false gravitas to an unstructured, unvalidated online rating system, as well as medical credence to a conduit of popular culture" (Hayanga & Kaiser, 2008). Experts continue to express concern and see YT content as more damaging than helpful. For example, Linkletter and colleagues (2010) wrote about the potential for YT videos to normalize dangerous behaviors, such as the "choking game" (p. 274).

Still, these studies have begun the exploration of medical content on YT, and many recognize the potential for interventions there, including for MH. While some research has explored the use of the Internet overall to communicate about MH (Powell & Clarke, 2006), despite a substantial presence of the MH community on YT (a search for "mental illness" produced between 38,000 and 73, 000 hits over a two day period), specific examination of mental illness on YT has not been conducted.

2.2 YouTube and Mental Health

In 2011, the Pew Internet and American Life survey added a new question about use of video-sharing sites for health (Pew Research Center, 2011). The survey found that health professionals were still the first place people go for medical information, but

online social tools also are a significant source: 25% of Internet users report having watched an online video about health or medical issues (Fox, 2011).

Structurally, YT has a number of characteristics that facilitate MH communication online. First, it is built around communities of interest, groups of people with similar interests who post video content and interact around that content by posting comments and indicating whether they "like" or "dislike" the content (Burgess & Green, 2009). Eysenbach (2007) found that community-building based on the personal and social needs of the user helps address the problem of targeting health messages to a specific group.

Within a safe community, which can arguably be provided through the anonymity of providing or seeking YT video content, people with MH questions or concerns consult friends, check on treatment efficacy or double check a physician's advice in the same ways they have been doing, but within a wider group of people interested in the same health issues online (Fox, 2010). YT's emphasis on community-building makes it a good fit for studying MH because of the importance of social support and connectivity among individuals impacted by mental illness (Sharma et al., 2013). Because no study, to date, has examined YT content that is focused on MH information, it is important to examine the MH video content provided and the social support associated with this content (i.e., number of views, comments posted and "likes" and "dislikes"). Based on the existing YT and health communication literature on Medicine 2.0, the following research questions were developed:

> RQ1a. How is YT being used for communication about MH (specifically in terms of type, topic, format and expertise)?

RQ1b. Is there a relationship between participation (based on number of views, likes/dislikes, comments) and YT video content (type, topic, format)?

RQ1c. Is there a relationship between participation on YT and type of expertise (provider affiliation, speaker in video)?

2.3 YT Participation in the Context of Mental Health – Motivations and Influences

This research goes beyond studying the MH content on YT and also assesses what influences and motivates the MH community to participate in YT for MH communication. This study is guided by the Theory of Reasoned Action (TRA), a model that is often utilized in public health research to predict behavioral intention (Azjen et al., 2007), with the addition of several constructs from the Uses and Gratifications Theory tradition (UGT), a communications-oriented theoretical approach to understanding why and how people actively seek out specific media to satisfy specific needs (Blumler, 1979).

Specifically, as posited by the TRA, the best predictor of outcome is intention, and the current study evaluates the attitudes, perceptions of credibility, concerns related to stigma and loss of privacy, and normative beliefs that directly influence an individual's intention to participate in YT for MH communication.

From UGT, this study explores the direct effect of motive on the use of YT for MH communication and the effect of past behavior (past uses of Web 2.0 and YT) on the intention to use YT. The two motive variables (from UGT)--information seeking/providing and social support seeking/providing—were also explored in the content analysis section of this study.

These two multi-dimensional constructs (information-seeking and social support seeking/providing) are the "past behavior" UGT variables examined in the current study,

and they also define the "outcome" or behavior predicted in the TRA portion of the study. Key components of these constructs that influence an individual's likelihood to use a new media channel for information seeking and social support seeking, including credibility, stigma and privacy, are also explored. The researcher included a theoretical model incorporating constructs from the TRA and UGT to predict likelihood of using a new media channel for information seeking and social support seeking in *Figure 2.1*.

2.4 Uses and Gratifications Theory

Among the common approaches to studying the use of media, including the adoption of new media, the UGT framework operates on the assumption that the audience is "active" and participates in media decisions based on needs (Katz, 1974; Blumler, 1979). Previous literature in the UGT tradition has looked at uses of new and emerging media and outlined sets of motivations for use of these media (Ruggiero, 2000; Klapper, 1963; Lin, 1999). For example, early UGT researchers identified emerging radio and television audiences' needs for information, social interaction, entertainment, and personal identity (McQuail, 1983; Ruggiero, 2000). Specifically, Blumler and Katz's 1974 research, *The Uses of Mass Communication*, into audiences' uses of the mass media and the gratifications received from those uses provided the groundwork for more than a decade of productive audience-based media studies.

During the 1980s, the UGT research framework fell out of use as a theoretically grounded research paradigm (Palmgreen, 1983). Critics dismissed UGT research as purely descriptive with no contribution to theory development in mass communication studies (Palmgreen, 1983). However, since the rise of the Internet in the 1990s, some media scholars have resumed UG theory-based research in exploring connections

between motives, expectations and media behaviors (Palmgreen, 1983). While some scholars questioned the use of UGT for new media and called for further exploration of combinations of theoretical frameworks (LaRose & Eastin, 2004), others began building on traditional UGT scholarship, creating typologies for new media audiences and motives for use of new media (Rains, 2007).

With regard to Internet use, the basic motivations are similar to traditional media audiences' needs for information, convenience, entertainment, self-expression, and social status (Ko et al., 2005; Papacharissi & Rubin, 2000; Kay, 1998; Stafford, Stafford & Schkade, 2004; Boulos & Wheeler, 2007). Stafford and colleagues (2004) classified Internet gratifications into process and content dimensions, which are shared with traditional media, as well as a new social interactivity dimension not associated with traditional media.

These social dimensions form an important part of new research developing additional sets of needs for the evolving use of Internet social media for special situations. For example, a renewed interest in UGT scholarship has developed around the evolving use of online media for health communication. For example, Anderson (2011) took a UGT approach to study how online care pages help people during a health event. His research identified four primary benefits of using care pages for health events: providing information, receiving encouragement, convenience and psychological support.

The increase in popularity of Web 2.0, or interactive communication platforms that provide almost complete user control of media selection, requires additional UGT research to explore audiences, channels, and interactive components of these channels. UGT studies commonly include information and social support components among uses

of Web 2.0 (Rives, 2009, Dutta-Bergman, 2004). For example, Kim and Chung (2008) found cancer patients who blogged reported four types of gratification in this activity: prevention and care, problem-solving, emotion management, and information-sharing. Of these, emotion management and information sharing were most important. Pew Research findings on health communication online confirm that 71% of people look for health information online, and 23% of Internet users with chronic conditions such as high blood pressure, diabetes, heart conditions, lung conditions, cancer, or some other chronic ailment say they have gone online to find others with similar health concerns (Rainie, 2011).

Other UGT studies focus specifically on uses of UGC. Shao studied the appeal of UGC on Web 2.0 platforms such as YT, MySpace and Wikipedia and found a range of reasons why people use UGC. He reported that information, entertainment and mood management, as well as self-expression and self-actualization, are important gratifications users achieve through participating in social connections and communities (2009). Hanson and Haridakis (2008) focused specifically on uses of YT for watching and sharing the news. They found that different motives predicted watching and sharing different types of news content, including information, entertainment and sharing. They also noted that users' had different motives for watching than for sharing. To date, few studies have examined the use of specific Web 2.0 channels for specific health communication contexts (Tian, 2010).

2.5 *Health Information Seeking*

Information can be understood as "data" or "knowledge" in specific contexts and can come from an external environment or a (psychologically) internal one (Case, 2012,

pg. 46-47). Applying that definition to health information, this study defines health information seeking as the pursuit of knowledge in relation to the immediate health issue. Information seeking takes place on mass and interpersonal communication levels and can be characterized by searchers' attempts to sort relevant information from volumes of irrelevant content to reach a state of satisfaction or decision (Case, 2012). Information seeking can be undertaken for others or for self-interest, and commonly uses a mixture of sources, including formal (printed or electronic sources) and informal (opinions of friends and families) (Case, 2012). Literature has documented that health information seekers rely on both formal and informal sources, both of which can be found on Web 2.0 platforms (Case, 2012). For example, some research has focused on the abundance of information and sources, including the "wisdom of the crowd" and "experts like me" concepts (Song et al., 2004; Del Guidice, 2010; Hesse et al., 2011). Others have addressed the problems with information seeking in the context of UGC. For example, Adams (2010) found that while Web 2.0 platforms offer new opportunities for reaching patients, researchers must study these carefully and be aware of ongoing concerns about reliability of information. Hu and Sundar's (2009) study of health information blogs found that users were less likely to take action based on a user-generated content site because of questions about sourcing. Still, most studies have found that use of user-generated sites for health information is considered beneficial and information there is considered more credible than not (Boulos et al., 2011; Carroll & Richardson, 2011; Eysenbach, 2007; Kaye & Johnson, 2009).

In fact, health information seeking online has become the norm (Cline & Haynes, 2001; Percheski & Hargittai, 2011). According to the Pew Survey of Internet and

American Life (2012), health information seeking is the third most popular online activity, after emailing and general information searching through the use of a search engine (i.e., Google). Pew reports that almost 60% of the adult US population uses the Internet to look for health information.

Early information-seeking studies focused on gathering of information in a number of contexts, including for retail purchases (Kiel & Layton, 1981), for choosing among political candidates, and for scientists' keeping abreast of scholarly research (Case, 2012). Most information-seeking research has focused on those areas in which people seek information in high stakes situations, including information seeking in the role of "patient" (Case, 2012; Atkin, 1972), but this activity has since been studied in other contexts. For example, the mainstream use of the Internet has launched a new information-seeking paradigm: 35% of US adults have gone online to figure out a medical condition, including topics such as weight loss (27%), insurance issues (25%) and food safety (19%). With regard to health information seeking, Lemire and colleagues (2008) described types of health information-seeking activity online including: 1) to better understand a health problem or an illness; 2) to obtain alternative points of view than from those available through mainstream medicine; and, 3) to find a solution to a particular health problem. Other types of health information seeking in that study included illness prevention and helping a sick friend or family member.

New media have altered the communication landscape, including communication in health contexts (Guse, Levine, Martins, & Lira, et al., 2012) and changed the way people relate to information (Fox, 2010). Now 41% of e-patients have participated in interactive communication on Web 2.0 channels by reading commentary or personal

experiences about medical issues posted by others (Fox & Jones, 2009). Fox and Duggan (2013) found that 16% of Internet users went online to find others who share their health concerns. Of current Internet users, 8% had posted a health related question (19%) or shared their own health experiences (40%) in an interactive online forum. Overwhelmingly, the purpose of online health information seeking was to get feedback from friends or others (78%). Only 11% sought feedback from a health professional online.

Information seeking is an important concept in UGT studies in new media. Early Internet studies identified information seeking as a top motivator for online users, including those seeking health information (Stafford et al., 2004). A number of studies have looked at information-seeking motivations for the Internet (Tuskin, 2010). However, research addressing the Internet as a whole is inadequate in addressing the specific information-seeking considerations of those using Web 2.0 platforms because each channel has specific characteristics that impact how users approach information seeking and evaluating (Hu & Sundar, 2009).

While these studies show promise for health communication on the Web 2.0 platforms, more research is needed to describe specific health communication topics in the context of Web 2.0, and on specific Web 2.0 channels. New analyses of Web 2.0 communication content should also link content data with users' motivations and participation. The current study aims to make this link and begin describing the most effective ways to use YT to accomplish specific health communication goals, including information seeking as well as social support seeking/providing.

2.6 Social networks/Social support

Social support is an important concept in health communication, new media, and UGT scholarship. In health communication literature, social support is the content of relationships that includes emotional support, instrumental support, informational support, and appraisal support (House, 1981). House and others have defined emotional support as providing empathy, love, trust and caring; instrumental support involves providing help in the form of tangible aid and services to directly assist a needy person; informational support means giving advice and information the person in need can use to correct problems; and appraisal support involves helping the person in need by providing constructive feedback and affirmation (Heaney & Israel, 2008; Fox, 2011).

Going online for social support is becoming common (Juarascio, Shoalb, & Timko, 2010). Research suggests that people who share the same issues can find and provide support for each other through online groups or communities, a process that is well suited for the interactive nature of web 2.0 (Boulos et al, 2011). DeAndrea and Anthony (2013) studied help seeking for depression and other MH problems on peer social support groups. Using a new independent national sample of US adults each year between 2004 and 2010 (n=264-431), they found that just 3 in 1000 adults in the general population seek online peer support. However, of importance to the current study, among those who reported online support seeking, people with MH issues were significantly over-represented.

Usefulness of social support depends, in part, on source of the support (Sharma, Atri, & Branseum, 2013). Research shows that, for the person in need, people with similar experiences can provide the most effective support (Thoits, 1995). Social support

is known to have important impacts on health by providing companionship, intimacy, sense of belonging and self- worth; and support from a social network can also increase individual coping (Heaney & Israel, 2008; Barnett & Gotlib, 1988). Especially for chronic disease management, social networks are associated with more positive outcomes (Gallant, 2003; Cohen & Willis, 1985; Larocco, House & French, 1980). On the other hand, loneliness is associated with poor MH (Cohen-Mansfield, Shmotkin, & Goldberg, 2009).

MH programs can aim at reducing loneliness among people through building social networks and social support (Sharma, Atri, & Branseum, 2013). Health educators can craft MH interventions using social networks but must decide who provides what support and when (Sharma et al., 2013). The current study focuses primarily on the "who," or the source of information, which can determine the usefulness of social support.

New media studies have addressed social support (emotional, instrumental, informational and appraisal) as a function of interactivity among users provided by Web 2.0 platforms (Zhou, 2011; Park et al., 2009, Fox, 2011; Juarascio, Shoalb, & Timko, 2010; Yeshua-Katz & Martins, 2012). For example, Boulos et al. (2011) studied the usefulness of Web 2.0 health information and found that cultivation of shared trust among a group of users allows collective intelligence to trump expert's input. The current study focuses on the emotional, informational, and appraisal portions of social support, as well as characteristics of the support providers that determine the extent to which it can be useful. Powell (2009) reviewed the literature on Internet support groups for depression and found 13 papers analyzing the nature of the support group posts, describing the site

usage, and defining user characteristics. The most prevalent types of social support were emotional, informational and social companionship.

While a body of scholarship is developing around use of Web 2.0 for strategic health communication, fewer studies focus on the use of a single Web 2.0 channel for specific communication purposes (Carroll & Richardson, 2011). To help adapt health communication strategies for Web 2.0, and to take advantage of the characteristics of these platforms, the current study addresses this gap in the literature by focusing on health communication on the Web 2.0 channel YouTube (YT), the most popular video-sharing site on the Internet (eBizMBA: www.ebizmba.com).

The current study adds to the existing UGT literature for health communication on Web 2.0 by looking at use of a specific Web 2.0 platform for a specific type of health communication: use of YT for MH information and social support. This study focuses on information seeking, defined as searching formal and informal channels for knowledge relevant to the current health issue (Case, 2012) and social support seeking, here limited to two of the three dimensions of social support described by House (1981): informational/advice and emotional.

No research, however, has studied the motivations and intentions of the MH community for using YT. Thus, this study asks the following questions:

> RQ2. What are the behavioral intentions of the members of the mental health community toward use of YT for mental health information seeking, support seeking, information providing, and support providing?

2.7 Theory of Reasoned Action

TRA is used to help researchers understand behaviors within specific contexts (Ajzen, 1991) by exploring the impacts of attitudes and norms, along with background

characteristics, on intention to perform a behavior. According to TRA, a behavioral intention of performing a particular behavior is determined by personal and social factors (Fishbein & Ajzen, 1975). This theoretical framework has commonly informed research in both health and media consumption behaviors, has informed interventions through identifying and targeting attitudes and norms toward the behavior, and consistently predicted health and media use behaviors (Shin, 2008; Ajzen, Albarracin & Hornik, 2007; Albarracin et al., 2005). For example, TRA has served in the developing and testing of health interventions in areas such as condom use (Kasprzyk, Montano, & Fishbein, 1998), child obesity (Andrews, Silk & Eneli, 2010), genetically modified food use (Silk, Weiner & Parrott, 2012), and breast cancer prevention (Friedman, Nelson, Webb, Hoffman, & Baer, 1994)

With regard to the relationships between attitudes and intentions, and norms and intentions, research has also showed strong correlations in both relationships. For example, Norman and Hoyle (2004) found significant positive correlations between attitude toward self breast examination and intention to perform this behavior; this research also confirmed the correlation between norms and performing self-breast exams. Kim, Reicks & Sjoberg (2003) confirmed these strong positive relationships, finding clear links between attitude toward consuming dairy products, normative beliefs toward this behavior, and intentions to do this behavior.

Additionally, most TRA research has noted that attitude is formed based on behavioral beliefs about the behavior, and norms are most often influenced by family and close friends (Downs & Hausenblas, 2005). For example, Albarracin et al. looked at HIV prevention interventions over time and reconfirmed these assumptions. Behavioral beliefs

can also be influenced by past behaviors or experience (Ouellette & Wood, 1998).

While a number of theoretical extensions to the TRA have answered additional considerations in explaining and predicting behavior change (for example, Theory of Planned Behavior -Ajzen, 1991, and Technology Adoption Model-Venkatesh & Davis, 2000), the TRA model is still commonly used for formative research in health and media behavior interventions. For example, in the CDC's Community Demonstration Projects targeting high-risk HIV populations, TRA-based messages were found to change attitudes and ultimately change behaviors (Replicating Effective Programs, 2013). The result was a series of Replicating Effective Programs (REP) for multiple health issues, including commercial sex workers, counseling, drug use, and others (www.cdc.gove/hiv/prevention/research/rep/packages*).* Additionally, in conjunction with the originators of TRA and others, researchers at The National Institutes of Mental Health developed a theoretical framework modeled on TRA for predicting MH behavior change (Fishbein, 1991; Azjen & Fishbein, 1991). Finally, TRA has also been used in media studies to predict use of a specific medium. For example, Peslak, Ceccucci, & Sendall (2011) used this model to predict use of social networking sites among college students.

A fuller discussion of the attitude, norms, and past behaviors constructs are provided in the next section.

2.7-1 Attitude

According to TRA, people's intention to do a behavior is based on their attitude toward that behavior, (for example, a positive attitude is reported when one believes the behavior will have a positive outcome), their subjective norms (for example, what one

believes others think about doing that behavior), and past experiences with doing this behavior (for example, positive experiences have positive influences).

The current study explores members of the MH community's attitudes toward using YT as a source of information and social support. According to the clearly established relationships in the TRA model, members of the MH community will intend to use YT based, in part, on their attitude toward using YT. This attitude is derived from perceived benefits and the risks resulting from this behavior (Cheng, Lam, & Hsu, 2006). Benefits, in this case, relate to the perception that YT will provide good, credible health information and/or access to others with similar interests or concerns. Risks are defined in terms of the possibility of an adverse outcome, along with uncertainty over when or how damaging that outcome will be (Covello & Merkhofer, 1994). For the current study, the risk of adverse outcomes of stigma and loss of privacy in use of YT for MH information is set in relation to perceived threats to familiar social relationships and practices (Vlek & Stallen, 1981). Therefore, for the current study, attitude is based on perceived credibility of information and perceived risks related to fear of stigma and loss of privacy. The following research question and hypotheses were developed:

RQ3. What is the attitude of members of the mental health community toward participation on YT for mental health information seeking, support seeking, information providing and social support providing?

H1: Attitude will be a significant predictor of intention to seek MH information on YT.
H2: Attitude will be a significant predictor of intention to seek support for MH issues on YT.

2.7-2 Norms

The TRA hypothesizes that subjective norms provide a second determinant of behavioral intention. Ajzen (1991) defined subjective norm as "the perceived social pressure to perform or not to perform the behavior" (p. 188). In terms of use of online

resources, Hsu and Lu (2007) defined social norm as how much users perceive that others approve of participating in the online community. Compliance with norms happens when individuals behave in accordance with the expectations of others who are important to them, for purposes of building and strengthening relationships with them (Shin, 2007).

The influence of an individual's normative beliefs is a combination of the beliefs about what others think of the behavior and his or her motivation to comply with others' beliefs (Ajzen, 1985; Fishbein & Ajzen, 1975). The important role of subjective norm as a determinant of behavioral intention is well documented (Park, Klein, Smith & Martell, 2009; Andrews & Silk, 2010; Baker et al., 2007, Cheng et al., 2006; Laroche et al., 2001 and Lee, 2005) and suggests that the opinions and actions of others who are important to an individual have measurable influence on that person's actions.

Thus, in the current study, subjective norms are the perceived opinions of significant others who are close/important to an individual and who influence his/her decision whether to use YT for MH communication, along with the individual's motivation to comply with these opinions. From the literature described above, the following research question and hypotheses were developed:

> RQ4. What are the normative beliefs of the mental health community toward use of YT for information seeking and support seeking among the mental health community?
>
> H11: Normative beliefs will be a significant predictor of intention to seek MH information on YT.
>
> H12: Normative beliefs will be a significant predictor of intention to seek support for MH issues on YT.

2.8 Credibility

Because credibility is such an important part of health information seeking (Rains & Karmikel, 2009), the current study evaluates use of YT for MH communication as it

relates to information seeking, in part, by measuring credibility. As detailed below, credibility is a multidimensional construct defined by communication scholars in different ways for different contexts. The current study is focused on trustworthiness of message based on type of expertise of source (Del Guidice, 2010; O'Grady, 2006).

Credibility of online information has been documented as low (Omar et al., 2011), and the interactive features of new media further complicate the assessment of credibility (O'Grady et al., 2009). In fact, researchers have had little success in defining one universal framework for measuring credibility (Hilligoss & Rieh, 2008; Metzger, 2007; Eysenbach, 2007; Eastin, 2008). Over time, scholars have conducted empirical studies involving credibility issues in traditional media, characterized by print and broadcast outlets (Gaziano & McGrath, 1988); Internet, characterized by professionally produced and sourced Web pages (Hargittai et al., 2010; Lim & Simon, 2011; Eastin, 2008; Wathen & Burkell, 2002; Turner et al., 2011; Ye, 2010); and Web 2.0, characterized by UGC (Boulos, 2007; Paek et al., 2010; Thorson et al, 2010; Carroll & Richardson, 2011; Fordis et al., 2011). The large number and variety of credibility studies in the past decade parallels the ongoing decline in perceptions of the credibility of traditional media (Carroll & Richardson, 2011). Researchers have linked this steady decline to slipping newspaper readership and, in part, blamed growth in readers' awareness of the power of corporate owned media to set agendas (Carroll & Richardson, 2011).

For the current study, the researcher examined the definitions and measurements of credibility in mass communications research based on message source. While these categories are linked to those in traditional media, they align with current research on evaluation of Web 2.0 information credibility. For example, following in the traditional

sender, message, channel and receiver model of mediated communication, O'Grady and colleagues (2009) described the website producer sending "content of the website" (content/message), through the "technology of the web" (medium) to the "people affected by the website" (receiver).

In the 1990s, scholars added new dimensions of credibility to traditional credibility measures created by Gaziano and McGrath (1988) to incorporate the Internet's unique characteristics, and they began to examine the push and pull of interactivity as a factor in credibility on sites with user-generated content (UGC). Not surprisingly, scholars first found that "source" has significant impact on assessment of credibility of online health information, including the likelihood to act on it (Hu & Sundar, 2009; Wathan & Burkell; 2002; Eastin, 2008). However, on Web 2.0 channels, Carroll and Richardson (2011) found that interactivity, not just source, was important in the assessment of credibility, with regards to both peer and expert advice. Thus, not source alone, but source as part of a crowd of others (Del Guidice, 2010; Omar et al., 2011), as well as specific source characteristics (Ye, 2010), play parts in assessing credibility of health information on interactive media sites.

In interactive contexts, community building--or collaboration--links credibility to the "wisdom of the crowd," idea (Boulos et al., 2007). This concept also features the importance of leaving out the "middle man," who might have a specific agenda, in favor of users' own choices of what to read and believe, essentially turning the "receiver" into the "producer," as well. Community intelligence is especially important in health contexts. Hesse and colleagues (2011) found that sites that outperform others are those that use data from the crowd carefully to improve quality of information on the site.

Interactive communication among patients online provides a means of discussing credibility of information and of providing social support (O'Grady, 2006). On the other hand, Del Guidice's (2010) study of the way feedback affects perceptions of credibility showed little impact of an interactive audience on likelihood to use health information. These contrary findings suggest more research is needed regarding credibility, new media and UGC.

2.8-1 Source credibility on Web 2.0

Source credibility measures have changed in a number of ways since the arrival of Web 2.0. With interactive media, sourcing presents a challenge, as users don't always recognize the source of the content. Hu and Sundar (2009) used an established typology of online sources to examine the impact of different types of sources (lay or expert) on the perceptions of credibility of health information. The typology included original sources (person or entity originating content), selecting sources (venue or vehicle identified as gatekeeper), visible sources (seen by the receiver to be delivering the content) and technical sources (technical interfaces seen by user as originators of content), among others. They found that sourcing on health information sites has significant impacts on users, and that respondents were more likely to take action based on information from a website than from a blog. Other online research has recognized the important role of experiential experts as sources as compared with professional experts (Paek, Hove, Jeong & Kim, 2011). For example, Dunlop and colleagues (2010) defined experiential communication pathways as emotional and self-referencing and found that media messages with experiential speakers were more persuasive in promoting health

behavior change than those with simply cognitive approaches. Eysenbach (2007) noted that in healthcare, similarity of experience adds to perceptions of credibility.

Evaluation of source credibility on Web 2.0 means possibly refining some of the basic components of credibility as traditionally defined. Expertise, most often listed as a component of credibility (though some researchers define credibility as a component of expertise) becomes a more complicated concept in interactive media. Boyce (2006) explored the concept of expertise in journalism, noting the decline in the trust of experts just as our society becomes so technologically specialized and complex and suggests that an increase in trust in the expertise of the lay person may accompany the decrease in trust in more traditional experts. These dimensions of expertise play well in the dynamic environment of new media (Wang et al., 2011).

Boulos and colleagues (2007) looked at the impact of social communication tools on health communication, with credibility (here, also called "trust," though many scholars differentiate the two terms) mediating that relationship. Source credibility becomes less important, as participants redefine expertise by participating in the creation of content through collaboration. In fact, some new media research has found that assessment of message credibility becomes more important in interactive health communication because users often do not know who the source is (Kim, 2010).

The current research adopts the three-part expertise model of Collins and Evans (2002), which divides sources into contributory (contributing professional), interactional (lay person with some contributory ability through experience and interaction with contributory experts), and none (source with no perceivable expertise on the topic).

H3: Perceived credibility will be a significant positive predictor of intention to seek information about MH on YT.

H4: Perceived credibility will be a significant positive predictor of intention to seek support for MH issues on YT.

H5: Perceived credibility will be a significant predictor of intention to provide MH information on YT.

H6: Perceived credibility will be a direct significant predictor of intention to provide MH support on YT.

2.9 Privacy and fear of stigma

Two additional variables were included in the model to further assess attitudes toward use of YT and to increase predictive power. First, concerns about personal privacy were considered. Privacy concerns have been found to reduce likelihood to use Internet resources (Cranor, Reagle & Ackerman, 2000) for health communication. Cranor et al. (2000) studied the ways Internet users perceive privacy and found that despite efforts to self-regulate around privacy issues, such as the WWW Consortium for privacy preferences (P3P) specification and self-regulatory efforts such as TRUSTe and BBBOnline, no research had defined a universal understanding of users' privacy concerns. They found that concern about privacy varied across different contexts and, not surprisingly, privacy concerns about personal health issues were ranked among the top categories (along with personal financial and Social Security information): only 18% said they were always or almost always very comfortable providing information related to their health.

While other studies have noted that "privacy" in Web 2.0 health forums can be a motivating factor for using the site (Rainie, 2001), researchers studying Internet sites with UGC have noted a range of concerns related to protection of personal information. For example, Fernandez-Luque and colleagues (2009) evaluated multiple sclerosis (MS) patients' risk from revealing personal health information in the comments section of YT

and found that providing personal information could be discovered by external sources and result in discrimination or denial of health insurance. The difference between the privacy in the positive sense and privacy in the negative sense can be resolved in the definition of the word: studies focusing on "privacy" as a motivator for use of Web 2.0 resources use the word synonymously with "anonymity"; "privacy" studies define the word in terms of protection of personal information.

For example, Adams (2010) endorsed the use of Web 2.0 platforms for health communication, including lay information creation, sharing and retrieval, but she noted that users who share personal health information and experiences on interactive media sites are often unaware of "negative network externalities," or "harm that can emerge when personal information is indexed and made searchable" on social networks (p. 395). For her study, one potential harm was loss of privacy. Thus, in the current study, privacy is defined based on Adams' work as the need to keep personal medical information out of the reach of individuals and entities that might use this information for harm. Concerns among the MH community about discrimination because of the general negative perceptions about mental illness increase the relevance of privacy concerns. Therefore, the current study looks at the impact of users' concerns about privacy on behavioral intention.

Second, and related to concerns about privacy, this study includes fear of stigma as a potential influence on intention to use YT for health communication because of the specific relevance of this concern to the current study's population. Corrigan and Shapiro (2012) separate stigma into self-stigma and public stigma, and note that public stigma, such as might arise from loss of privacy about MH issues, has negative effects on quality

of life of people with mental illness, including their opportunities to work. Thoits (2011) describes stigma toward the mentally ill as social devaluing, rejection and discrimination against people with mental illness based on stereotypical understandings of the ways in which "crazy people" behave (pg. 7). The current study adopts this understanding of stigma, and explores the impact that fear of stigma could have on use of YT for MH communication.

Based on the literature on stigma and privacy, as related to risk of using YT for mental health communication, the following hypotheses were developed:

H7: Concern about stigma and privacy will be a significant, negative predictor of intention to seek MH information on YT.

H8: Concern about stigma and privacy will be a significant negative predictor of intention to seek support for MH issues on YT.

H9: Concern about stigma and privacy will be a significant negative predictor of intention to provide MH information on YT.

H10: Concern about stigma and privacy will be a significant negative predictor of intention to provide support for MH issues on YT.

2.10 TRA and UGT – combining models for predictive power

Numerous studies have shown that, together, attitudes and subjective norms predict intentions to engage in a behavior and that intentions are good predictors of actual behavior (Cohen, Ajzen and Albarracin, 2010). However, in the converged media landscape, scholars are adapting multiple theoretical perspectives to examine use variables, including taking a value-expectancy approach to the use of the TRA (Papathassopolous, 2011). With regard to the current study, scholars have found that the TRA model (and other intention-based frameworks) is more powerful in combination

with other frameworks that include a motive or gratification measure. For example, Papazfeiropoulou and Al-Lozi (2012) discussed the need for combining an intention-based model with motives for use to predict use of specific information systems. Von Pape and Karnowski (2011) included a "symbolic dimension," answering the question of how and why the user actually uses the technology, in their TRA-based model studying mobile television appropriation. Their study found that social participation and playfulness, among other dimensions, both influenced the likelihood that users would watch television on a mobile device. Other research has produced similar findings (Ramayah, Rouibah, Gopi, and Rangel, 2009; Thorbjornsen, Pedersen, and Nysveen, 2007). Pedersen and Nysveen (2007) found enjoyment and expressiveness increased the power of intention-based models such as TRA.

Scholars have found that TRA predictive power is improved by adding motive constructs from the value-expectancy framework of uses and gratifications to the TRA model (Fishbein, 1970; Ajzen, 1991; Wang, 2009). UGT and TRA share a number of assumptions: both assume a desired outcome for a behavior, both assume behavior is goal-driven, and both have been used to explain media-consumption behaviors (Fishbein, 1970; Ruggiero, 2000). Examining the link between needs and attitude or behavior is also an integral component of the UGT research (Katz et al., 1974). Additionally, a small number of studies have specifically combined UGT and TRA theoretical frameworks to explore user motivations and uses of new media. For example, Nysveen (2005) and Dickinger, Arami and Meyer (2008) found that social norms combined with intrinsic motives such as enjoyment are important in determining intention to use mobile phone chat services for specific populations.

Further, along with attitudes and norms, TRA studies often include past experience with a behavior to develop a positive or negative assessment of that behavior (Kerkorian, 2003: Glanz, Rimer, & Viswanath, 2008). Pelling and White (2009) also found that past behaviors are important in predicting social media use. Anderson (2011) identified that health-related antecedents of media use affect media use behaviors and gratifications. Additionally, Bagozzi, Wong, Abe & Bergami (2000) noted in their TRA-based study of predictors of intention and behavior related to fast food restaurant consumption was strengthened by controlling for the influence of past behaviors in the regression model. Therefore, past behaviors have been added to the current model (*See Figure 2.1 for conceptual model.)* among influences on intention (Perry, Wasslis, & McKawl, et al., 2012) because it is likely that members of the MH community who have used Web 2.0 or YT in the past for health communication with positive results and are more likely to use YT for MH communication.

Accordingly, the current study used constructs from both the TRA and UGT perspectives, to develop the following research question and hypotheses:

> RQ5. What are the past behaviors of members of the mental health community toward use of YT for mental health information seeking, information providing, support seeking and support providing ?
>
> H13: Past behavior in use of Web 2.0 for information seeking will be a significant predictor of intention to use YT for MH information seeking.
>
> H14: Past behavior in use of Web 2.0 for support seeking will be a significant predictor of intention to use YT for support seeking for MH issues.
>
> H15: Past behavior in use of Web 2.0 for support providing will be a significant predictor of intention to use YT for providing information for MH issues on YT.

2.11 Chapter 2 Conclusions

The current study seeks to address a gap in the literature regarding the use of UGC for health communication purposes, particularly for the issue of MH. Through a content analysis of MH content on YT, the first part of this research examines the MH video content provided on YT and the social support associated with this content (i.e., number of views, comments posted and "likes" and "dislikes"). The researcher sought to quantify the type of MH content available through the multi-way communication tools provided by YT, including content in the form of original videos, and responses to others' postings on the site (Burgess and Green, 2009).

The following research questions were developed:

RQ1a. How is YT being used for communication about MH (specifically in terms of type, topic, format and expertise)?

RQ1b. Is there a relationship between participation (based on number of views, likes/dislikes, comments) and YT video content (type, topic, format)?

RQ1c. Is there a relationship between participation on YT and type of expertise (provider affiliation, speaker in video)?

Because of the complexity of the spectrum of conditions associated with MH and the stigma often attached to mental illness, MH communication is different from many other health communication efforts. Through a survey of the MH community, the current study also seeks to address what influences and motivates the MH community to participate in YT for MH communication. The following research questions and hypotheses were developed:

RQ2: What are the behavioral intentions of the members of the mental health community toward use of YT for mental health information seeking, information providing, support seeking and support providing?

RQ3: What are the attitudes of the members of the mental health community toward use of YT for mental health information seeking, information providing, support seeking and support providing?

RQ4: What are the normative beliefs of the members of the mental health community toward use of YT for mental health information seeking and MH support seeking?

RQ5. What are the past behaviors of members of the mental health community toward use of YT for mental health information seeking, information providing, support seeking and support providing ?

H1: Attitude will be a significant predictor of intention to seek MH information on YT.

H2: Attitude will be a significant predictor of intention to seek support for MH issues on YT.

H3: Perceived credibility will be a significant, positive predictor of intention to seek information about MH on YT.

H4: Perceived credibility will be a significant positive predictor of intention to seek support for MH issues on YT.

H5: Perceived credibility will be a significant positive predictor of intention to provide MH information on YT.

H6: Perceived credibility will be a significant predictor of intention to provide MH support on YT.

H7: Concern about stigma and privacy will be a significant negative predictor of intention to seek MH information on YT.

H8: Concern about stigma and privacy will be a significant negative predictor of intention to seek support for MH issues on YT.

H9: Concern about stigma and privacy will be a significant negative predictor of intention to provide MH information on YT.

H10: Concern about stigma and privacy will be a significant negative predictor of intention to provide support for MH issues on YT.

H11: Normative beliefs will be a significant predictor of intention to seek MH information on YT.

H12: Normative beliefs will be a significant predictor of intention to seek support for MH issues on YT.

H13: Past behavior in use of Web 2.0 for information seeking will be a significant predictor of intention to use YT for MH information seeking.

H14: Past behavior in use of Web 2.0 for support seeking will be a significant predictor of intention to use YT for support seeking for MH issues.

H15: Past behavior in use of Web 2.0 for support providing will be a significant predictor of intention to use YT for providing information for MH issues on YT.

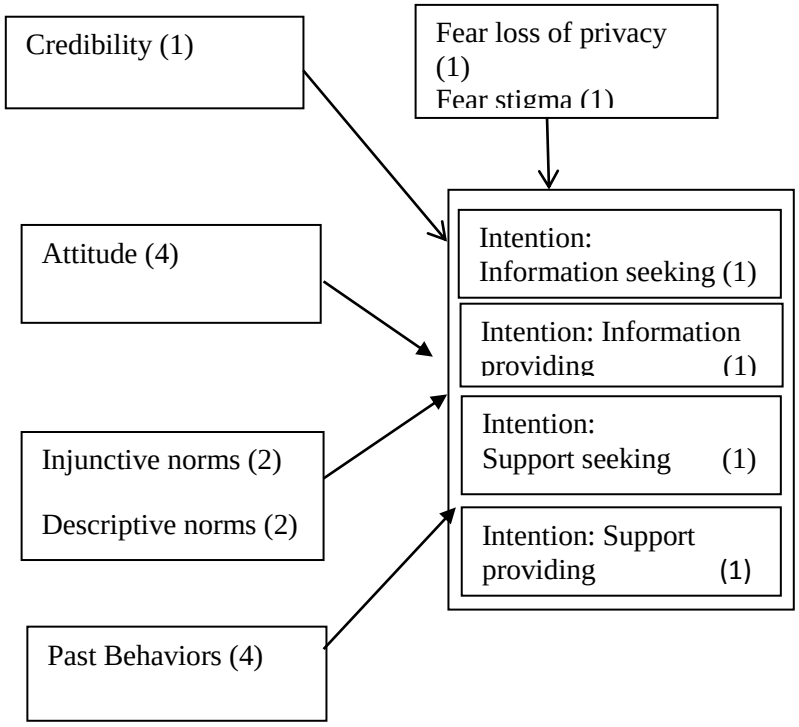

Figure 2.1. Model showing relationships between TRA and UGT variables
*Credibility, attitude and norms are from TRA and past behaviors are from UGT.

CHAPTER 3

METHODS

Chapter 3 Summary: This chapter describes the methods used in the current study, including content analysis and online survey research. Specifically, it provides a detailed description of the content analysis design, codebook, variables, and sampling strategy, and a list of analyses for each research question addressed in the content analysis section of the study. Finally, this chapter provides a detailed description of the survey design, questionnaire development and sampling strategies, and a list of analyses for each research question and hypothesis addressed in the survey section of this study.

To answer the research questions and hypotheses outlines in Chapter 2, this research employs a mixed methods approach to: 1) describe, using content analysis, MH content on YT, the largest video sharing site on the Internet; and 2) measure, using an online survey, past and current motivations, attitudes, beliefs and intentions of the members and friends of the National Alliance on Mental Illness toward using YT. Research questions and hypotheses were developed to measure variables associated with the literature related to information-seeking, Uses and Gratifications Theory (UGT) and the Theory of Reasoned Action (TRA). Before describing the current content analysis and survey, I first discuss each method and its appropriateness for this study.

3.1 Content Analysis

Content analysis allows researchers to quantify communication content, including text, visuals and others communication components in a systematic and replicable process (Stroud & Higgins, 2009; Krippendorff, 2004). By deconstructing a message and assigning numbers to specific pieces or features, researchers can see meanings within the messages more clearly than when the message was whole. This method, formalized by media researchers Walter Lippmann, Harold Lasswell, and George Gerbner, and later Krippendorff (2004) and others, has traditionally been used to describe content in print media. It has also been adapted to describe video content (Dimitrova et al., 2002), and in the past decade has become popular with researchers studying text, audio and video combinations of new media (Yoo & Kim, 2012, Keenan et al., 2007;Tian, 2010; Kim, Paek & Lynn; Herring, 2004).

This method fits the current study because researchers have established that it can effectively provide descriptions of communication messages and attributes, assess images of people or topics in the media, and make inferences about message producers, audiences and effects, especially when paired with other data (Stroud & Higgins, 2009; Riffe, Lacy & Fico, 1998). Researchers have used content analysis to answer questions about message producers, audiences and effects by integrating information about the context or the audience with the content analysis data (Neuendorf, 2004; Kim, Paek & Lynn, 2010).

Content analysis has occasionally been used to examine health communication messages on YT. This method allows researchers to examine type of content available, including content in the form of original messages and responses to others' postings on

the site (Burgess & Green, 2009). For example, Tian studied framing of organ-donation in YT videos as well as comments about them and found users' comments indicated support for organ donation (2010). Paired with user data from a survey of online MH community members, the current content analysis will also provide insight into the uses of online communication messages.

3.1-2 Sampling

A sample of YT videos was produced during the spring and summer of 2012 by using the site's search engine with the terms "mental health" and "mental illness." The number of hits for each search term varied daily, from about 60,000 to more than 120,000. The site is designed to provide the first 1,000 videos from the search results ranked by an algorithm from most relevant to least[1]. For that reason, I included the first 250 videos from each search, for a total of 500 videos for coding (Kim, Paek, & Lynn, 2010).

Variables coded for this study were adapted from UGT variables discussed in the literature review above, especially as these relate to information seeking/providing and social support seeking/providing. Additionally, the coding sheet included some standard descriptive variables that were provided by YT: category, title, length (in minutes and seconds), time since posted (in months), and user participation variables, including viewing, posting, liking, disliking, and commenting).

In relation to information-seeking and social-support motives for use, I coded for variables that previous studies (Del Guidice, 2010; Boulos et al., 2006) have found to have an impact on those activities, including expertise (poster affiliation, speaker

[1] I searched online for a description of YT's process for sorting searches by relevance with no success.

characteristics), topic (illness, focus of video) and format. (See Appendix A for complete coding sheet.)

3.1-3 Coding

YT videos were coded by two coders who were paid through funding provided by the University of South Carolina Science and Health Communication Research Group. The first 40 videos were coded as part of coder training and development of coding book for coders' reference. Information about the remaining 480 was typed into an Excel spreadsheet, including date captured and title. This list was used to provide videos to coders in playlists of 50 videos at a time. Some videos were repeats and a small number of videos were excluded because they were not in English (in Chinese or sign language, for example). Excluding these left a total of 360 videos for coding. Approximately 30% (n=100) of videos were double coded initially to test intercoder reliability, and another 5% (n=18) were double coded later to check for consistent reliability, for a total of 35%. Krippendorff's alphas for variables averaged .82, with a low of .64 and a high of 1.0. (*See Table 3.1 for reliability numbers*.) A small number of variables included in the initial coding were altered or dropped because of failure to achieve acceptable reliability.

The unit of analysis was the whole video (coding was cut off after the first 4 minutes). Variables coded include expertise (measured in two ways: poster affiliation and speaker characteristics), format, topic, type, and descriptives, including title, length, time since posting, and category. YT category is included with each video and is chosen by the person or entity posting the video. Therefore, it sometimes is not an accurate description of the video.[2] Descriptive variables coded for this study included video title, length, and

[2] Burgess and Green (2009) note that miscategorizing a video could be a purposeful act on the part of the poster to put the video in front of a different audience from that expected to be drawn to it.

time since posting. Time since posting was coded in months, and was also explicitly provided by YT. This information was collected to calculate participation (views, comments, likes, dislikes) per month to allow comparisons. No intercoder evaluations were calculated for these variables.

Poster affiliation identifies the entity represented by the posted video. Categories for this variable were media outlet, nonprofit, for profit, government, medical inst., military, academic inst., and unaffiliated lay person. These were later recoded to combine media outlet and for-profit into "for profit," (not including medical institutions or academic institutions), nonprofit (including nonprofit media such as university and public radio), military and government to "nonprofit"), with remaining variables (medical institution, academic institutions (not including university hospitals), and lay person unchanged.

Video format was coded in lecture, personal vlog, news story (with anchor or reporter, posted from media outlet), PSA, general information about MH, event or function (such as a fundraiser or event to honor someone), and other. These were later recoded to combine lecture and event or function as "event or function," press conference—from other—and news story as "news story," and remaining other and general information as "general information," with the remaining variables (personal vlog and PSA) left unchanged.

Speaker characteristics were coded as presence or absence of at least one human speaker (not a cartoon or voiceover); type of expertise featured in the video was coded as the presence or absence (based on the first speaker if more than one), of experiential expertise (a person with personal experience in MH issues, someone who might have

something to contribute to the knowledge in the field as a result of experience and/or interaction with credentialed experts over time, such as a person with mental illness or a close friend or family member of a person with mental illness), academic/research/professional expertise (a person with top level expertise in the field of MH, someone who has academic or other professional credentials and who could contribute to the knowledge in the field), both personal and professional, don't know/can't tell, no particular expertise (such as a reporter or actor) (Collins and Evans, 2002). Additionally, speakers were coded for presence of absence of celebrity (would be recognized by face or name by most Americans, including movie or TV actor, politician or athlete); gender, race, and age group (based on coders' estimates of "child," "teen/young adult (13 through 24)," "adult," "no speaker," "can't tell age group"; and position (MD, researcher academic, other medical expert (such as nurses or licensed counselor), advocate (a person who is not affiliated with a medical or academic research institution, not a person with mental illness or friend/family member of a person with mental illness—likely a spokesperson for a cause), reporter or anchor, other. These were later recoded to combine MD, researcher academic, and other medical expert as "medical expert," leaving the remaining categories (advocate, reporter/anchor, and other) unchanged.

Type was coded as inform/educate (communicate information about MH with no call to action), connect with others (code this only if the video contains a personal story, if it's about personal struggles, if it's clearly reaching out to others who might share MH issues and/or experiences), persuade or recruit (to a cause or point of view—must have a call to action, such as give money, volunteer, make a difference, stamp out stigma, take

part, spread the word). Later, this was recoded to informational (inform/educate+persuade/recruite) versus supportive (connect with others).

Video topic was coded based on the coders' determination of the overall topic of the video since videos could have more than one topic. Topics were coded as causes, treatments, laws and policies (such as funding for care, insurance coverage, legal protection and discrimination), personal struggles (personal or family life with MH issues, living with mental illness), social stigma (disparities, discrimination, fighting stigma, describing stigma, acknowledging stigma), impacts on society (including suicide rates, economic impacts, other). These were later recoded to combine causes and treatments into "causes/treatments," with the remaining variables (laws and policies, personal struggles (not including stigma if no personal examples are provided), social stigma, and impacts on society.

Specific illness was coded as the presence or absence of one or more of the most prominent mental disorders, including bipolar, PTSD, ADHD, depression, eating disorders, anxiety disorders, schizophrenia, no specific illness mentioned, other *(See table 4.1 for list of illnesses coded)*.

Finally, this research described not only the content being posted but also the audience responses to this content. The participation variable was used to analyze user responses to specific types of content, formats, types, posting entities, and expertise featured in video (divided into contributing (professional), interactional (experiential), and no expertise, based on Collins and Evans' (2002) framework for types of expertise). Participation is defined by views, likes/dislikes, and number of comments. Number of views and likes/dislikes were provided by YT, and coders were able to count comments

included with the video at the time of coding. The participation variable was used to analyze user responses to specific types of content, posting entities, and expertise featured in video.

3.1-4 Data analysis for content analysis

Data analysis was conducted using Statistical Package for the Social Sciences. Because this research was primarily exploratory, data analysis relied on frequencies and some basic statistical tests for comparisons of means. Research question one was analyzed with frequencies, while research questions two and three used independent sample t-tests and one-way anovas.

(See Appendix A for coding sheet.)

3.2 Survey Research

This dissertation also explored influences on use of YT for MH communication through use of an online survey, created and delivered via Qualtrics survey software. Online surveys have a number of distinct advantages over standard survey methods such as mail, telephone and in-person (door to door) methods. These include reduced costs and time (Weible & Wallace, 1998; Fowler, 2009; Evans & Mathur, 2005; Bhutta, 2012), and increased ease of access and anonymity for some types of respondents (Shropshire et al., 2009; Fowler, 2009). Anonymity has been touted as both a boon and a bust for Internet health communication overall (Del Guidice, 2010) and, for survey research, some studies have suggested it can reduce the pressure of providing socially desirable responses to surveys (Chang & Kroskick, 2009).

Deutskens and colleagues (2006) looked at differences in cost and response quality among mail, phone and Internet surveys and found that online surveys are now

just as good as mail surveys, most likely because more and more people are comfortable using the Internet. Other advantages of online surveys include speed, cost, ease, geographic reach, ability to use images and graphics, and access to unique populations. Also, researchers can take advantage of online survey tools to create streamlined questionnaires that encourage respondents who are accustomed to moving quickly and skipping around online to complete the survey (Manfreda & Vehovar, 2008; Fowler, 2009). Especially for the current study, which targets an Internet friendly population specifically, online surveys are efficacious.

Disadvantages of online surveys generally include low response rates, limited access to some populations, inability to generalize results to the general population, and possible problems with software and/or technology (Wright, 2005; Converse et al., 2008; Green Speizer & Wiitala, 2008). Other concerns with online surveys relate to access: potential respondents with easy access could respond repeatedly (Smith & Leigh, 1997), and those without access to the Internet may be underrepresented (Couper et al., 2007). This often results in undersampling of poor, racial minorities, and members of low socioeconomic groups (Bhutta, 2012).

Use of an online survey for the current study allowed me to capitalize on the benefits of online survey research, while noting its pitfalls. For the current study, an online survey was developed quickly and made accessible to members of the target population (members of NAMI and associates who use social media) with a small time investment and no financial cost by distributing the survey link via e-mail, Facebook and Twitter. Members of the target population are likely wary of the stigma associated with mental illness and respond more readily to the level of anonymity offered by online

research (Fowler, 2009). Advances in survey software in which the URL of each respondent is captured prevented multiple responses from any single respondent.

The current study aims to add to existing findings in Internet survey research by focusing on a specific Internet-savvy population (as opposed to the general public) and using not only online survey tools but also online sampling and recruiting tools (Facebook, Twitter, LinkedIn, Organizational Web pages).

3.2-1 Population and sample

The target population for the survey was members of the National Alliance on Mental Illness (NAMI) nationwide, along with people and entities affiliated with NAMI. (NAMI has a fluctuating membership that includes people with mental illness and their families, advocates and MH professionals, with more than 1,200 chapters at state, regional and local levels nationwide.

For this study, I focused on the portion of this population that uses social media, recruiting specifically among NAMI members and others who visit NAMI social media sites, including Facebook, Twitter, and YT. This focus is justified because the survey is seeking to understand an online communication dynamic. Essentially a snowball sampling technique, this method has been explored by other scholars and found to produce acceptable results for segments of the population who use social media. (Browne, 2007; Bhutta, 2012).

While it makes sense to sample only from NAMI members and friends who use Web 2.0 platforms, I also attempted to validate the sample by taking only the NAMI members' surveys and comparing demographic characteristics with the national NAMI characteristics. As these data were not available (after numerous emails with NAMI

leadership and assurances that some demographic data would be provided), no description of this population can be produced, so comparisons and true response rate will be impossible to calculate. However, many open (self-selecting) surveys operate in this way (Walsh, Kiesler, Sproull & Hesse, 1992).

The sampling process was conducted systematically, beginning with the national NAMI organization, then proceeding to state and local chapters. NAMI maintains a presence on the social media sites Facebook and Twitter. In February 2011, the Facebook page had more than 10,000 "likes" and the Twitter page had more than 20,000 "followers." The national NAMI director of communications reported that the survey link was posted to both sites during the open survey period. At each level, members and friends of members were contacted by "friending" or Facebook messaging, with an explanation and request to take the online survey. (*See Appendix B for sample solicitation emails and example of typical email correspondence.*)

Specifically, the survey link was first "tweeted" by NAMI's national office of communication and posted on NAMI's Facebook page and website (with help from the organization's director of communications). Next, I sent the link out in an email blast to directors of statewide NAMI chapters for each US state, asking for help with disseminating the survey link and explanation, which were both provided in the messages. The state NAMI chapters and directors' names and email addresses are available online on the national NAMI site. The initial e-mail was sent to purposively selected directors of NAMI chapters nationwide. A total of 17 recipients responded to me directly (mostly agreeing to help—only one NAMI director flatly refused to participate in

any way), and no emails were returned as undeliverable. Reminder e-mails were sent after one week.

Many NAMI directors who received the initial email that included the survey link and explanation posted the link and explanation on their local Facebook pages, as well as "retweeted" the link on Twitter. Additionally, some suggested messaging their "friends lists" with the link and explanation. As these contacts posted links on NAMI Facebook and Twitter accounts, I followed these postings and followed up by retweeting, reposting on Facebook, and messaging individuals using FB messaging. For a period of three weeks, I pushed the survey out to Facebook friends of those who were initially contacted. Many of those sent the link to friends or tweeted it; however, at that point there was no way to know how the sample was recruited.

Sampling continued using Facebook messaging to contact friends listed on each site that granted permission to do so. Some of those contacted in this way also agreed to tweet and post the link on Facebook pages, and organizations such as BringChangetoMind, a national anti-stigma campaign founded by Glenn Close with the International Mental Health Research Organization (IMHRO), and others posted the link on their websites. Some also agreed to send the link to their friends or gave me permission to push the link out to their lists. During this two-week process, dozens of FB messages and tweets were reposted and retweeted.

For follow-ups, I continued to post on the National Facebook page and that of state and local NAMI chapters whose directors had given me permission to do so. I also retweeted every tweet containing the survey link during the open survey period. Use of FaceBook for this purpose can run afoul of the site's harassment rules, which prohibit

sending friend requests to large numbers of people who are strangers. However, using the instant messaging tool on FaceBook for this purpose is allowed. Given that each person I contacted was affiliated with NAMI in some way, either directly or through another contact, most contacts reacted positively to my friend invitations and/or instant messages. Negative responses were usually expressing reasons why they would not answer the survey, for example, "I don't know you," "I don't like doing surveys," "I think this will not be anonymous." As noted by Manfreda and Vehovar (2008), ethical data handling and storage for data gathered online should be observed, and indeed, concerns about privacy (what would be done with the data and whether I could actually connect their answers with those using the survey), was the top reasons for nonresponse. Data for this project were stored in a password protected Qualtrics file and downloaded to a password protected SPSS file. Additionally, the computer containing the files was password protected.

Also to increase response and completion rates, I offered a $100 gift card to any respondent who provided an email contact at the end of the survey.

The number of surveys started during the open survey period was 754. The total number of completed surveys was 550, including surveys with at least 60% complete, which is considered acceptable for online surveys (American Association for Public Opinion Research, 2013).

While nonprobability samples, including snowball samples in which one contact recruits another and so forth, are not ideal in survey research because results cannot be generalized to the larger population, in certain cases they can produce important information (Luther, 2009). Snowball samples are often used when people with specific

characteristics are hard to find or reach (Bhutta, 2012; Luther, 2009; Martin & Dean, 1990; Browne, 2005). Because mental illness carries a stigma in the United States and around the world, people with mental illness and the organizations with which they affiliate carefully protect their identities and thus are hard to find. Therefore, a snowball sample is appropriate in the case of the current research.

Other researchers have used snowball sampling techniques to reach hard to reach populations via social media such as Facebook and reported successfully recruiting large numbers of respondents over a short timeframe and with very little expense (Bhutta, 2012). With 845 million users worldwide, including individuals and interest groups, Facebook is a useful medium for this purpose (Bhutta, 2012). Concerns of researchers considering snowball samples include the problem of relying on participants to understand the parameters of the desired sample (Biernacki & Waldorf, 1981), documenting the direction, number and pattern of recruitment efforts, and the impossibility of calculating response rates (Bhutta, 2012). However, this method is acceptable in specially targeted social science research, and new social media sampling research has identified methods to overcome these problems. For example, the problem of sample bias, can be addressed somewhat by comparing characteristics of the sample with known characteristics of the population (Bhutta, 2012). Further, Facebook and Twitter both provide advantages and disadvantages for sampling. For example, researchers have studied Facebook as a subject of research and as a tool of research and found that for specific, interested audiences, social media provide acceptable snowball samples (Bhutta, 2012).

Because the survey was conducted online and respondents were self-selected, the final sample should be considered a purposive convenience sample, and responses may not be generalizable to the entire NAMI membership/friends populations. Self-selection of respondents, whether online or in other survey modes, in a general sample is known to bias the sample in a number of ways (Fowler, 2009). However, Chou (2009) found that social media use penetrates the Internet user population regardless of education, race or health care status, and researchers have found that online surveys work well for specific, tech-savvy populations (Beck, et al., 2009; Chang & Krosnick, 2009; Sills, 2002).

Therefore, the sample for the current research was chosen because the target population was members of the mental health community (i.e., members of NAMI) who participate in online social networks. Responses from this population are therefore relevant for fulfilling the current study's purpose.

3.2-2 Survey Development and Pilot Testing

The questionnaire used in this study was composed of 4 question blocks: the first block of questions included items designed to assess predictor constructs (attitude, subjective norm), the second contained questions related to intention measures, the third contained questions relating to motives and past uses of YT, and the fourth contained questions for demographic information.

The measurement items for attitudes and referents were developed from a formative study and a review of literature. Ajzen and Fishbein (1980) indicated that new sets of attitudes and referents should be discovered for each new context and population. Thus, as an elicitation method, an open-ended survey was used (Cheng et al., 2006, Lam & Hsu, 2004 and Lee, 2005). The survey population consisted of members of the MH

community, including people with mental illness, their families and friends, and MH providers and advocates reached during an annual fundraising event for the South Carolina Midlands chapter of NAMI. Survey respondents provided thoughts and beliefs about use of YT, in general, and for MH communication, as well as information about important people whose opinions influenced their own (referents). These data contributed to a new set of items for attitude constructs. The initial questionnaire that contains multiple items for attitude, subjective norms, past behaviors and behavioral intentions, along with items for evaluative of these components, was developed based on this process and the literature review. The referents were MH care providers and family/relatives, and friends. The refinement of the questionnaire was made through a pretest and interviews with 10 members of the population. A subsequent pilot test with 60 undergraduate students revealed the instrument was worded clearly and took approximately 20 minutes to complete. Minor revisions of the questionnaire, including tweaking of question wording, were made based on these tests.

3.2-3 Survey Design

Using this formative research as a guide, the survey instrument was developed to measure variables from the Theory of Reasoned Action (Fishbein, 1991; Azjen & Fishbein, 1991) and Uses and Gratifications Theory (Blumler, 1974). The survey measurement items for each construct are presented in . The measures in this survey were adapted from previous research on TRA (Pelling & White, 2009; Bleakley, Hennessy & Fishbein, 2010; Wang, 2009) and UGT (Chung & Kim, 2008; Stafford, Stafford & Schkade, 2004), particularly where these frameworks have been used in the study of health communication and new media. This study first assessed the variables involved in

TRA, including attitudes, subjective norms, and behavioral intention to participate in the use of YT for MH communication (information seeking, support seeking, information providing, support providing). Attitudes toward use of YT for seeking MH information, seeking emotional support or advice, providing information, and providing emotional support or advice were measured with four questions each. Questions were worded such that those without experience on YT could still provide their attitudes toward using this channel for these purposes. The attitude questions were followed by questions measuring norms (and questions measuring motivation to comply with norms) and intention for each of these actions. (*See Appendix C for survey instrument)*. The questions were adapted for the current purpose of assessing YT and MH.

The TRA portion of the survey also focused on the intention variables information seeking, support seeking, information providing, and social support. While most TRA outcomes relate to behavior change, some scholars have used this theory to predict use of Internet or other mediated sources (Pelling & White, 2009; Peslak, Ceccucci, & Sendall, 2011). *(See Figure 2.1 for conceptual model.)*

3.2-4 Measurement

Items were formulated to assess each of the theory's major constructs: attitude (32 questions), perceived norm (12 questions), and intention (20 questions). Seventeen items were formulated to assess motivations and past behaviors. For "seeking MH information," respondents were asked how they felt about getting information about MH on YT, as well as how they felt about credibility of this information and how important types of credibility are to them. Credibility here is limited to perceptions of source credibility. Source credibility is measured as affiliation of source of information and the

affiliation and credential of speaker in video. For this study, source credibility is measured based on Collins and Evans (2002) Contributory, Interactional, None (CIN) theory of expertise.

Respondents were asked to complete the statement, "Using YT to look for information about MH issues by searching videos and/or comments would likely be…." Responses were based on the following scaled options: 1=useless, 7=useful; 1=inefficient, 7=efficient; 1=risky, 2=safe; 1=difficult, 2=easy. An additional three related questions, using a 7-point Likert scale, from very unlikely to very likely, assessed attitude toward credibility of MH information on YT: "If I use YT for MH information, I will… have to spend time checking other sources to see if the information I found is accurate; feel confident in the information I get from people who post videos on YT based on their own experiences with mental illness; feel confident in the information I get from people who post videos on YT based on professional or academic credentials." These were followed by three questions measuring how much the respondent values information credibility and types of expert sources. On a 7-point Likert scale from "extremely unimportant" through "extremely important," respondents were asked to complete the following statements: " Spending time checking multiple sources is…getting MH information from others' own experiences with MH issues is…getting MH information from others who have professional or academic credentials is…."

Additionally, another set of three questions (included later in the survey) followed up on the importance of types of information sources. Each is based on a 7-point Likert scale anchored by "not at all important" and "extremely important." One question asked, "Again, thinking about health information in general, how important to you is it to know

who created and/or posted the health-related content you find online?" Another asked, "How important to you is it for the source of the health information you find online to have personal experience with the health issues discussed in the content?" The third in this set asked, "How important is it to you for the source of the health information you find online to have professional or academic credentials (for example, a doctor, nurse, medical researcher, or professional licensed therapist)?"

For "seeking" and "providing" emotional support or advice, respondents were asked to complete the statements, "Viewing videos or reading comments on YT to get emotional support or advice from other people who are affected by MH issues would likely be…" and "Posting videos or comments on YT to give emotional support or advice to people who are affected by mental illness would likely be…." Responses were based on the following scales: 1=not rewarding, 7=rewarding; 1=frustrating, 7=satisfying; 1=troubling, 7=uplifting; 1=not helpful to me, 7= helpful to me.

Seeking emotional support or advice questions were followed by questions measuring how respondents feel about getting emotional support or advice on YT. Based on a 7-point Likert scale from "very unlikely" to "very likely," respondents were asked to complete the following statements: "If I get emotional support or advice about MH issues from other YT users by viewing videos or reading comments, I will…have to give them something in return; feel better knowing others understand the MH issues I am facing; feel thankful that I don't have to burden my friends and family with my problems." And these were followed by an assessment of the importance of those feelings. On a 7-point scale from "not at all important" through "extremely important," respondents completed the following statements: "Giving something in return for online support or advice from

others who know about MH issues is…knowing others understand my MH issues (or those of someone I care about) is…personal friends and family feeling less burdened by my MH issues is…."

Giving emotional support questions were followed by questions measuring how respondents feel about giving emotional support or advice on YT. Based on a 7-point Likert scale from "very unlikely" to "very likely," respondents were asked "If I give emotional support or advice about MH issues to others dealing with MH issues by posting videos or posting comments in response to their videos, I will get something in return." This question was followed by one measuring the importance of that feeling. On a scale from "not at all important" through "extremely important," respondents were asked to complete the following statement: "Getting something in return for helping others is…."

The next section of questions measured normative beliefs about use of YT for MH communication. Four questions were used for the getting/giving information construct; four additional questions were used for the getting/giving social support construct. Each question used the same 7-point Likert scale, anchored by "strongly disagree" and "strongly agree." The following questions measured normative beliefs about "getting MH information," on YT: "Most people like me would agree that watching YT videos and reading other users' comments about the videos is a good way to get information about MH issues"; "People who are important to me think I should look for information about MH issues by viewing videos or reading comments about videos on YT"; "MH care providers would approve of seeking information about MH issues on YT"; "Other people who care about MH issues look for information about MH on YT."

These were followed by questions measuring the importance of these beliefs on a 7-point Likert scale, where 1=”not at all important” and 7=”extremely important.” For importance of others’ approval of where they get MH information, the following two statements were provided: “For me, MH care providers’ approval of where I get my MH information is…” and “For me, doing what other people who face MH issues do to get more information about these issues is….”

For seeking/providing social support (connection with others), the survey asked, “Most people like me would agree that watching YT videos and reading others’ comments about the videos is a good way to connect with others for emotional support or advice about MH issues”; “Most people who are important to me think I should connect with others on YT, where people affected by mental illness can communicate about these issues by viewing or posting videos and reading and/or writing comments”; “MH care providers would approve of seeking connections on YT with others affected by MH issues by posting or viewing videos or commenting or reading comments posted by others”; “Other people who care about MH issues use YT to look for connections with others affected by similar concerns.”

These were followed by questions measuring the importance of these beliefs on a 7-point Likert scale, where 1=”not at all important” and 7=”extremely important.” For importance of others’ approval of sources of social support or advice, the following two statements were provided: “For me, MH care providers’ approval of where I get support about MH issues is…” and “When it comes to getting emotional support or advice, approval of people like me is….”

Behavioral intention was measured with a series of questions that asked about respondents' likely or intended uses of YT for these activities. The behavioral intention questions focused on likelihood to use YT for specific purposes and reasons not to use YT. On a 7-point scale from "strongly disagree" to "strongly agree," this set of questions first asks, "In general, I would most likely use YT for…information seeking, information providing, being a part of a community of people who share my interests, seeing what others think about issues I care about, sharing my thoughts about issues I care about." Using the same scale, the next set of questions asks about motivations to post videos on YT in the future: "In the future, I would post videos on YT about MH issues to …help others who might benefit from my story, raise awareness or correct misinformation about MH issues, add knowledge or information to the conversation, change the way people think or talk about MH issues. Regarding motivations to post comments on YT in response to MH related videos: In the future, I would post comments in response to MH related videos on YT to…help others who might benefit from my story, raise awareness or correct misinformation about MH issues, add knowledge or information to the conversation, change the way people think or talk about MH issues." Regarding motivations to read comments posted by others about MH videos on YT: "In the future, I would read comments posted by others about MH videos on YT to…learn from the experience of others, see if I want to contribute to the conversation, find information about MH issues, learn how I can help with MH issues in the policy arena." Regarding motivations to view, "In the future, I would view video content posted by other users about video content to … learn from the experience of others, see if I want to contribute to the conversation, find information about MH issues, learn how I can help with MH

issues in the policy arena." The next set of questions measures perceived barriers to use of YT for MH communication: "I would not post videos or comments about MH issues on YT because…I am concerned about my privacy, I am concerned about stigma, I don't think posting on YT is useful for improving MH communication, I'm not sure how to post videos or comments."

The next set of questions related to use of YT is another measure of intention: "I will likely use YT in the next six months to …get information about MH issues, provide information about MH issues, get emotional support or advice if I need it, provide emotional support or advice to others if I can when someone is in need, some other use."

The next set of questions uses seven point Likert scales (anchored by Never and Multiple times per day) to measure how often respondents have used each type of social media for information-seeking and social support-seeking activity for any kind of health communication on any social media site, including YT. For the YT responses, the questions were designed to measure the specific type of "use," including viewing, posting videos, posting comments, and "liking, disliking or forwarding." an introductory page in which respondents are provided with an overview of the research and …..examine members of the MH community's motivations and intention to use YT for MH information and social support to explain current uses of YT and predict future use of YT for these purposes.

Common demographics measures were also included in the survey, including gender, race/ethnicity, age, and education level. The survey also asked about respondents' MH status, work status if in a mental health-related field, and membership in NAMI. The resulting questionnaire includes 7-point semantic differential scales and

Likert scales to measure attitudes (behavioral beliefs and evaluations of behavioral outcomes), and subjective norms (normative beliefs and subjective beliefs). The survey instrument also contained items exploring motivations for use of YT for communicating about MH issues, and descriptions of past use, with focus on information seeking/providing and social support seeking/providing.

3.2-5 Questionnaire Administration

The online survey questionnaire was designed using Qualtrics survey software. Qualtrics allows researchers to design an online survey and send a link to a population via e-mail, Facebook, Twitter, or other social media (see Appendix A for introductory e-mails and social media messages). Respondents' first click took them to a welcome screen that described the purpose of the survey. They were provided with information about voluntary participation in the study and asked for consent before they began the survey (*see Appendix B*). The consent screen also informed them that they could quit the survey at any time.

If respondents agreed to participate, they were advanced to the first block of survey questions. Respondents were guided through the survey by instructions for each question block and prompts that moved them from one section to the next with a single click. They could also stop and return to the questionnaire at a more convenient time; however, those who completed the survey were not able to return to the survey and take it again.

Additionally, seven-point semantic differential scales were used to capture the maximum amount of response variance while not overwhelming participants with options. Research has shown that survey scales using five to ten points can be successful

(Osteras, Gulbrandsen,Garratt, Benth, Dahl, Natvig, & Brage, 2008), and one resource on health-related measurement scales suggested that seven-point scales are more reliable than five-point scales (Streiner & Norman, 2003). Specific survey measures are described below.

Upon approval from the Institutional Review Board (IRB), the full survey was launched on December 16, 2012. (*See Appendix D for IRB approval notice*).

3.2-6 Response Rate

The questionnaire was open for three weeks during recruitment period, and a total of 756 people followed the link to the survey page. Surveys with 60% completion were counted as "partials" and those with more than 80% were counted as "completes" (AAPOR, 2009). Using partials and completes, a total of 550 usable surveys was collected. Completion rates per question averaged 66% percent, with high being 84.7% and low being 64.06%. A total of 486 participants completed at least 90% of the questionnaire.

Dropouts from Internet surveys average about 30%, and can be a problem for internet survey research (Galesic, 2006). Respondents who stay commonly have high interest in the survey topic and feel the results will help them in some way (Sharp & Frankel, 1983). Sexton, Miller and Dietsch (2011) found that compared with traditional phone or pen and paper survey methods, online survey respondents exhibited less burden and dropout because of the tools that allow online survey creators to streamline the instrument. Galesic (2006) examined factors affecting dropouts on Internet surveys, including survey design and respondents' demographics, as well as interest in the subject, length and type of incentives. Participants with an interest in the subject were 40% less

likely to drop out than those without interest or former knowledge; announced length was associated with higher dropouts: compared with the group who got the 10 minute questionnaire, drop out was 20% higher for those taking the 20-minute questionnaire and 40% higher for those taking the 30-minute questionnaire; and type of incentive had little or no effect. The current survey posted a completion time of 20 minutes on the introduction page. About 23.3% dropped out without doing any questions. From the first question to the last, the per-question completion rate went consistently down from 84.47% on question one to 64.06%. Overall, including those who opened the survey and completed 0% (23.3%), the mean completion rate for this survey was 66%. However, excluding those who completed 0%, the mean completion rate increased to 76.77%. According to the literature this is better than average and likely results from the population's engagement and passion about the topic.

To encourage completion, Couper and colleagues (1998) found that including a progress indicator increased completion rates; therefore, I included a measurement of percent complete on each page of the questionnaire.

3.2-7 Survey Data Analysis

Survey data were analyzed using SPSS with the goal of clarifying how the population has used YT for MH communication (information seeking, support seeking, information providing, support providing), as well as likelihood to do so in the future. For each of the five research questions, I used means derived from survey items to describe respondents' attitudes and normative beliefs about use of YT for each of the four MH communication variables (information seeking, support seeking, information providing, support providing), as well as the past health communication uses of Web 2.0 and YT

specifically. Additionally, I used means to describe the behavioral intention of respondents toward use of YT for these purposes. Each research question is listed here, along with the type of analysis used for answering it.

> RQ2. What are the behavioral intentions of the mental health community for using YT for mental health information seeking, support seeking, information providing, and support providing? Means/SD
>
> RQ3: What are the attitudes of the members of the mental health community toward use of YT for mental health information seeking, information providing, support seeking and support providing? Means/SD
>
> RQ4. What are the normative beliefs of the members of the mental health community toward use of YT for mental health information seeking and MH support seeking? Means/SD
>
> RQ5. What are the past behaviors of members of the mental health community toward use YT for mental health information seeking, information providing, support seeking and support providing? Means/SD

To test the hypotheses drawn from TRA, regressions were performed in which the scales for attitude, credibility, fear of stigma and fear of loss of privacy, normative beliefs, and past behaviors, along with demographic variables, were regressed onto intentions to engage in information seeking and providing and social support seeking and providing. Preliminary analyses were conducted to ensure there were no violations of the assumptions of normality. The Scatter Plot revealed no outliers.

Table 3.1. Intercoder reliability

Variable	K's Alpha	Variable	K's Alpha
Poster affiliation	.89	Speaker ID	.84
Format	.75	Frame I	.76
Contact information	.80	Frame II	.75
Speaker ID	.84	Frame III	.80
Expert professional	.90	Video hold attention	.83
Expert experience	.75	Target I	.74
Expert none	.82	Target II	1.0
Celebrity	.71	Target III	.89
Speaker general pop	.98	Purpose	.77
Speaker race	.94	Topic	.80
Speaker age	.90	Illness	.76
Mentions addiction	.88	Mentions military	1.0
Mentions suicide	.79	Mentions MH	.82
Mentions MI	.67	Tone of comments	.64

CHAPTER 4

CONTENT ANALYSIS AND SURVEY RESEARCH FINDINGS

Chapter Summary: This chapter first outlines descriptive findings from the YT content analysis before answering RQs 1a, 1b, and 1c, which relate to these findings. This chapter then begins reporting the survey findings with the demographic and other information revealed about respondents through the survey questions. Following general information about the sample, findings related to each research question and hypothesis are reported.

4.1 YouTube Content Analysis Findings

Of the 449 YT mental health videos analyzed, most were categorized by the poster as Education 14.8% (n=66), followed by Nonprofits and Activism (13.9, n=62), How-to and Style (11%, n=49), People and Blogs (9.9%, n=44), and News and Politics (9.7%, n=43). The average length of time videos were posted on YT was 18.26 months (SD=10.74), and the average length of videos was 10.34 minutes (SD=16.94). Participation (views, comments, likes, dislikes) varied widely, with average views per video reported at 18,875 (SD=55,902). This number, however, is troublesome because of a wide spread based on a few outliers (from a minimum of 0 to a maximum of 723602), as were other participation averages, including likes (98.9, SD=474.3), dislikes (7.67, SD=51.87), and comments (55.8, SD=226.9). Therefore, we report these in views per month (950.1, SD=2576.8), likes per month (6.26, SD=35.56), dislikes per month (6.62, SD=2.78), and comments per month (3.39, SD=17). Mean views calculated without the outliers was 14,643 (SD=31,457), with 777.9 views per month (SD=1700).

No specific mental illness was mentioned in four of ten videos (41% n=179). When a specific illness was mentioned (58.4% of videos, n=262), it was most often depression (31.3%, n=82), followed by bipolar (17.2%, n=45), other (16.4%, n=43), schizophrenia (15%, n=41) and anxiety disorders (13%, n=34). *(See Table 4.1 for a full list of illnesses).*

RQ1 assessed the ways YT is being used for MH communication in terms of type (purpose), topic, format, and types of expertise. Of the videos analyzed for this study, the purpose of most videos was to inform and educate (67%, n=296), connect with others (15.9%, n=70), persuade or recruit (12.9%, n=57), and other (4.1%, n=18). Regarding topics of videos, the highest number of videos focused on personal struggles (35.1%, n=155), followed by MI causes and treatments (28.3%, n=125), social stigma (13.4%, n=59), laws and policies (11.8%, n=52), impacts on society (8.6%, n=38), and other (2.7%, n=12).

The most common formats for MH videos were those created around events such as press conferences and fundraisers (20.7%, n=92), public service announcements (PSAs) (18.4%, n=82), personal video logs (vlogs) (17.1%, n=76), news stories (15.7%, n=70), general information providing (13.5%, n=60), academic lectures (7.6%, n= 34), art/entertainment (4.7%, 21), and other (1.1%, n=10). Most videos were posted by for-profits (36.2%, n=161), nonprofits (31.7%, n=144), and lay persons (27.4%, n=122), with just 4.6% of videos posted by academic institutions (4%, n=18), other (.4%, n=2), and medical institutions (.2%, n=1).

Just 35.5% (n=157) of videos featured professional expertise; 64.5% (n=285) did not. Similarly, 34.2% (n=151) of videos featured experiential expertise; 65.8% (n=291) did not. And 22.2% (n=98) featured no expertise related to MH; 77.8% (n=344) did not. Most videos with speakers featured speakers who were MD/researcher/academics (37.3%, n=141), persons with MI (25.9%, n=98), and MH advocates (16.9%, n=64). Less often, news reporter/anchors (9.8%, n=44), and friend/family of person with MI (6.9%, n=31) .

RQ1b examined the associations between participation (number of views/month, likes/month, dislikes/month, and comments/month) and video content (topic, purpose, and format). *(See Table 4.2 for a list of means for all variables x views/mo., comments/mo., likes/m., and dislikes/mo.)* For number of views/month by topic, there was a statistically significant difference between groups as determined by one-way ANOVA (F = 5.034, df=5, p = .000). A Tukey post-hoc test revealed the mean number of views/month for videos about causes and treatments (m=1375.7, sd=2142.7, n=120) is significantly higher than mean views/month for each of the following topics: laws and policies (m=268.9, sd=410.4, n=52; p=.001); personal struggles (m=746.2, sd=1932.7, n=143, p=.030); social stigma (m=416.5, sd=727, n=57; p= .005); impacts on society (m=412.6, sd=951.9, p=.031).

For number of views/month by the purpose of the video content, there was a statistically significant difference between groups as determined by a one-way ANOVA (F = 4.152, df=3, p = .006). A Tukey post- hoc test revealed the engage/entertain category was significantly higher in mean number of views/month (m=3268.7, SD=6528.1) than the mean views/month for videos designed to inform/educate

(m=952.8, sd=2420.9, p=.003), connect with others (m=572.3, sd=1024.9, p=.001), and persuade or recruit (m=794.7, sd=2632.2, p=.004).

For number of views/month by format, there was a statistically significant difference between groups as determined by a one-way ANOVA (F=7.566, df=8, p=.000). A Tukey post-hoc test revealed several significant differences between specific groups. General information videos (m=1898.7, sd=2706.9) had a significantly higher number of views/month than lecture (m=624.9, sd=1167.5, n=34, p=.009), vlog (m=368.2, sd=850.1, n=71, p=.000), news (m=782.85, sd=1242.4, n=70, p=.004), PSA (m=521.4, sd=814.9, , n=76, p=.000), and event (m=294.1, sd=637.4, n=89, p=.000). General info videos views were not significantly different from art/entertainment (m=2106.5, sd=4458.1, n=17, p=1.0), and advertisements (m=2207.4, sd=1972.2, n=5, p=1.0).

Additionally, arts/entertainment videos had significantly higher mean views/month (m=2106.5, sd=4458.1) than lecture videos (m=624.9, sd=1167.5, p=.052), videos categorized as vlogs (m=368.2, sd=850.2, p=.002), videos categorized as PSAs (m=521.4, sd=814.9, p=.008), and videos categorized as events (m=294.1, sd=637.4, p=.001). Arts/entertainment videos were not significantly different from general information (m=1898.7, sd=2706.9, p=1.0), other (m=2015.7, sd=3596.2, p=1.0) or advertisements (m=2207.3, sd=1972.2, p=1.0).

RQ1c looked at the relationship between participation (views/month, likes/month, dislikes/month and comments/month) and type of expertise (poster affiliation, speaker occupation, speaker expertise). For mean views/month by poster affiliation, there was a significant difference between groups as determined by a one-way ANOVA (F=7.877,

df=4, p=.000). A Tukey post-hoc test revealed the mean number of views for videos posted by for-profit entities (m=1213.9, sd=1901) was significantly higher than mean views/month for videos posted by nonprofits (m=351, sd=804.8, p=.000) and academic institutions (m=87.1, sd=45.2, p=.060). Videos categorized as "other" poster affiliation (m=4163.1, sd=5807.9, n=2) were significantly higher in mean views than nonprofit videos (m=351, sd=804.8, p=.014), academic videos (m=87.1, sd=45.2, p=.009), and lay persons (m=724.2, sd=2015.8, n=111, p=.030).

Regarding mean views/month by speaker occupation, there was a significant difference between groups as determined by a one-way ANOVA (F=4.780, df=4, p=.001). A Tukey post-hoc test revealed the mean number of views/month for videos with a MH advocate as a speaker (m=1913, sd=4533.8, n=14) was significantly lower than mean number of views/month for videos featuring a reporter (688, SD=1459) and videos featuring a MD/researcher/academic (M=1058, SD=1645). Views per month for videos with MH advocates as speakers (M=464, SD=1812) were not significantly different from those with persons with MI (M=614, SD=1249) and those with friend/family members of persons with MI (M=835, SD=1383), and a reporter.

For impact of professional expertise featured in videos on mean views/month (t=1.275, df=353, p=.203), comments/month (t=1.231, df=346.6, p=.219), likes/month (t=1.203, df=312.8, p=.118), and dislikes/month (t=.954, df=322, p=.341), independent samples t-tests found no significant differences between videos with professional expertise and those without professional expertise.

For impact of experiential expertise featured in videos on mean views/month, independent sample T-tests found significant difference (t=2.78, df=415, p=.006)

between videos with experiential experts (m=516.2, sd=1068.9, n=141) and videos without them (m=924.9, sd=1943.2, n=279). Videos categorized as *not* having experiential experts had higher mean views/month.

One way ANOVAs found no significant differences between views, comments or likes/dislikes based on video content (comments/month (F=.606, df=5, p=.696); likes/month (F=.304, df=5, p=.910) or dislikes/month (F=.217, df=5, p=.955); video purpose (comments/month (F=.421, df=3, p=.738); likes/month (F=1.838, df=3, p=.140); dislikes/month (F=1.169, df=3, p=.321); video format (comments/month (F=1.633, df=8, p=.133); likes/month (F=1.321, df=8, p=.231); dislikes/month (F=.554, df=8, p=.815); poster affiliation (comments/month (F=.977, df=5, p=.431); likes/month (F=.508, df=5, p=.770); dislikes/month (F=.691, df=5, p=.631); speaker occupation (comments/month (F=.398, df=7, p=.904); likes/month (F=1.134, df=7, p=.134); and dislikes/month (F=.617, df=7, p=.742).

Additionally, the t-test failed to reveal a reliable effect of experiential expertise on number of comments/month (t=1.133, df=375.8, p=.258); likes/month (t=1.352, sd=319.1, p=.177); and dislikes/month (t=1.57, sd=293.7, p=.118).

4.2 Survey Research Findings

Of the 449 survey respondents, 74.2% were female and 16.6% were male. Respondents were surprisingly evenly distributed across age groups, with the lowest numbers in the oldest (65+) age category (4.9% n=19) and the youngest (18-24) category (11.7% n=45). The largest category was the 55-64 age group (22% n=85), followed by ages 45-54 (21.5% n=83), ages 35-44 (21% n=81), and ages 25-34 (18.9% n=73). The respondents were fairly well-educated, with 29.1% (130) holding a graduate or

professional degree, 25.1% (112) holding a bachelor's degree, 36.5% having completed an associate's degree or some college, and only 9.4% having completed high school or less. *(See Table 4.3 for full list of demographics for survey respondents.)*

In terms of ethnicity, 80.1% (358) were white, followed by small percentages reporting being other race not listed (4.7%, n=21), Hispanic/Latino (4%, n=18), and African American (3.4%, n=15); remaining respondents reporting Asian, American Indian, and Hawaiian ethnicities totaled only 7.8%, n=35).

With regard to respondents' mental health status, 16.1% (71) reported that, while they don't have a mental illness diagnosis, they or a close friend or family member struggles with mental health issues; 5.2% (23) said they themselves struggle with undiagnosed mental illness, and 41.2% (182) said a close friend or family member does. Among the respondents, 29% (130) have been diagnosed with a mental illness, and 28.6% (128) have a close friend or family member who has a diagnosed mental illness; 25% reported that they themselves and a close friend or family member both struggle with diagnosed mental illness.

A large percentage of respondents reported that their work relates to mental health issues, with 12.1% (54) working in a government agency with MH within its realm of responsibility, 17.3% (77) working in a nonprofit focused on mental health issues, and 27% (124) categorizing themselves as mental health professionals. A small number of respondents (8.9% n=39) reported working as a mental health advocate with no personal affiliation with mental illness, and 43.5% (193) reported membership in the National Alliance on Mental Illness.

4.2-1 Research Questions and Hypotheses Results

The TRA and UGT variables were first explored in terms of means and standard deviations (organized by research question). Summed indices were then used for further analysis to test the hypotheses. (*Table 4.4 shows means and standard deviations for the multiple items that made up the variables that comprise theory of reasoned action (behavioral intentions, attitudes, subjective norms), as well as items for credibility, risk and past behavior scales; Table 7 also includes scale reliability numbers).* Most scales achieved satisfactory levels of reliability. The one scale with reliability of .63 is close to the generally accepted standard of .70 or greater and is likely sufficient for research purposes (Nunnally, 1978). (See Table 7.)

The first research question for the survey portion of this study **(RQ2)** asked, "What are the behavioral intentions of the mental health community for using YT for mental health information seeking, support seeking, information providing, and support providing?" To assess behavioral intentions to use YT for information seeking, respondents were asked eight questions on a 7-point scale, from strongly disagree to strongly agree. Respondents reported intention to view videos to learn from others' experiences (M=5.11, SD=1.71); view videos to find information about MH issues (M=4.71, 1.81); view videos to learn how to help with MH policy (M=4.67, 1.88); use YT for information seeking (M=3.58, SD=2.04); read YT comments to learn from others' experiences (M=4.87, SD=1.81); read YT comments to find information about MH issues (M=4.49, SD=1.88); read YT comments to learn how to help with MH policy (M=4.47, 1.96); and use YT to get information about MH issues (M=3.65, SD=1.94). Regarding intentions to use YT for support seeking, respondents were asked two questions using a

7-point scale from strongly disagree to strongly agree. Respondents reported intentions to use YT to be a part of a community of shared interests (M=3.46, SD=1.95) and intentions to get emotional support from others on YT (M=3.22, SD=1.92).

Regarding intentions to use YT for information providing, respondents were asked six questions using a 7-point scale from strongly disagree to strongly agree. Respondents reported intentions to post videos to raise awareness or correct misinformation about MH issues on YT (M=4.51, SD=2.30); post videos to add knowledge or information to the conversation on YT (M=4.32, SD=2.32); post videos to change the way people think about MH on YT (M=4.50, SD=2.30); post comments to raise awareness or correct misinformation about MH issues on YT (M=5.15, SD=1.83); post comments to add knowledge or information to the conversation (M=5.08, SD=1.82); and post comments to change the way people think about MH (M=4.84, SD=2.0).

Regarding intentions to use YT for support providing, respondents were asked four questions on a 7-point scale from strongly disagree to strongly agree. Respondents reported intentions to post videos to help others (M=4.17, SD=2.25); post comments to help others (M=4.81, SD=1.99); sharing thoughts about MH issues (M=2.89; SD=1.91); provide emotional support to others (M=3.31, SD=1.97).

The second survey-related research question (**RQ3)** asked, "What are the attitudes of the members of the mental health community toward use of YT for mental health information seeking, support seeking and support providing, and information providing?" Multiple questions were used to assess respondents' attitudes toward using YT for these purposes. First, respondents were asked about their attitude toward using YT for MH information seeking using four 7-point semantic differential scales: useless-useful,

inefficient-efficient, risky-safe, easy-difficult. Respondents reported that using YT for information seeking is more useful than useless (M=4.47, SD=1.83); more slightly more efficient than not efficient (M=4.14, SD=1.87); slightly more risky than safe (M=3.64, SD=1.93); and much more easy than difficult (M=5.15, SD=1.85).

Respondents were also asked about their attitude toward using YT for MH support seeking. Respondents were asked to report using four 7-point semantic differential scales: not rewarding-rewarding, frustrating-satisfying, troubling-uplifting, not helpful to me-helpful to me. Respondents reported that using YT for MH support seeking is slightly more rewarding than not rewarding (M=4.25, SD=1.92); slightly more satisfying than frustrating (M=4.27, SD=1.73); slightly more uplifting than troubling (M=4.27; SD=1.75); and very slightly more helpful to me than not helpful to me (M=4.08, SD=1.97).

The next attitude measure assessed respondents' attitude toward using YT for MH support providing using a third set of 7-point semantic differential scales. Based on the same response pairs as the previous question, respondents said that using YT for MH support providing is slightly more rewarding than not rewarding (4.34, SD=1.99); more satisfying than frustrating (M=4.50, SD=1.92); uplifting than troubling (M=4.53, SD=1.89); and slightly more NOT helpful to me than helpful to me (M=3.99; SD=2.0).

RQ4 asked, "What are the normative beliefs of the members of the mental health community toward use of YT for mental health information seeking and MH support seeking?" To assess normative beliefs toward MH information seeking, respondents were asked two questions. Using a 7-point scale from strongly disagree to strongly agree, respondents said "people like me" would agree with this activity on YT (M=4.42,

SD=1.73); "people who are important to me" think I should seek information on YT (M=3.10, SD=1.7); mental health care providers would approve of information seeking on YT (M=4.27, SD=3.99); and other people with MH issues seek MH information on YT (M=5.35, SD=3.89).

Regarding normative beliefs toward use of YT for support seeking, respondents were asked four questions. Using the same 7-point scale as for the information seeking part of RQ4 (above), respondents said, "people like me" would agree with support seeking on YT (M=3.99, SD=1.76); people who are important to me think I should connect with others for MH support on YT (M=3.10, SD=1.7); mental health care providers would approve of seeking connections on YT (M=5.02, SD=4.31); other people who care about MH issues look for connections on YT (M=4.34; SD=1.48)

RQ5 asked, "What are the past behaviors of members of the mental health community toward use of Web 2.0 platforms (including YT) for health information seeking, health support seeking, health information providing and health support providing." All of the past behavior questions were phrased to assess the community's general health information and support activities, not just the past behavior related to mental health communication.

To assess past health communication behaviors on Web 2.0 overall, respondents were asked four questions for information seeking/providing and four questions for support seeking/providing. For past health information-seeking and -providing behaviors on Web 2.0 in general, respondents were asked to indicate (on a 7-point scale from never to multiple times per day) how often they have used each Web 2.0 platform for health information seeking or providing: wiki (M=2.77, SD=1.67); blog (M=2,83, SD=1.78);

Facebook (M=3.64, SD=2.24); and Twitter (M=2.13, SD=1.90). Again, for past health support-seeking and -providing behaviors on Web 2.0 in general, respondents were asked to indicate (on the same 7-point scale from never to multiple times per day) how often they have used each Web 2.0 platform for health support seeking or providing: wiki (M=2.20, SD=1.82); blog (M=2.62, SD=1.93); Facebook (M=3.56, 2.16); and Twitter (M=2.16, SD=2.90).

The questions that focused specifically on YT were phrased to assess the community's use of YT for general health information seeking, support seeking, information providing, and support providing. To assess past information-seeking behaviors for YT specifically, respondents were asked to use the same scale to indicate how often they have viewed YT videos for information seeking (M=2.46, SD=1.67). To assess past support-seeking behaviors for YT specifically, respondents were asked how often they have viewed YT videos for support seeking (M=2.09, SD=1.5).

For past health information-providing behaviors specifically for YT, three items on the survey asked respondents how often they had posted videos on YT (M=1.58, SD=1.29); posted comments (M=1.73, SD=1.38); and liked/disliked a YT video (M=2.12, SD=1.68) to provide information. And Finally, for past health support-providing, three items asked respondents how often they had posted videos on YT (M=1.33, SD=.960); posted comments on YT (M=1.51, SD=1.30); and liked/disliked YT video (M=1.74, SD=1.72) to provide support.

4.2-1 Testing the empirical model

The hypotheses for this study were based on previous research from the TRA literature and applied in the context of MH information and support on YT. All

hypotheses were tested in one of four regression models in which each of the dependent variables was regressed onto relevant independent variables. *(Tables 4.5 and 4.6 show the standardized regression coefficients.)*

For model 1, intentions to seek MH information on YT was regressed onto mental health status, credibility perceptions of using YT, stigma/privacy perceptions of using YT, and the TRA and UGT constructs. Demographic variables were also entered into the model.

Demographic variables (*gender, age, education*) were entered into the model first, followed by measures of mental health status (*membership in NAMI, MH diagnosis*), credibility, and stigma/privacy. Finally, the TRA and UGT constructs were entered (*attitude, subjective norms and past behaviors).*

Among demographic variables, age was significant (β=.095, $p < .05$); both credibility (β=.324, $p < .001$) and privacy/stigma (β=-.113, $p < .001$) were significant; all TRA/UGT variables were significant: norms (β=.319, p <.001=.000), attitudes (β=.191, $p < .05$), past behaviors (β=.163, $p < .05$). Overall, credibility of source contributes the most to the dependent variable information seeking, followed by normative beliefs, attitude and past behaviors. Mental health status variables were not significant in this model. The incr. R^2 change explained by the information-seeking model was 17% (p=.000).

For model 2, the dependent variable of support seeking was regressed onto mental health status, credibility perceptions of using YT, stigma/privacy perceptions of using YT, and the TRA and UGT constructs. Demographic variables were also entered into the model.

Again, demographic variables (*gender, age, education*) were entered into the model first, followed by measures of mental health status (*membership in NAMI, MH diagnosis*), credibility, and stigma/privacy. Finally, the TRA and UGT constructs were entered (*attitude, subjective norms and past behaviors).*

Among demographic variables, education was significant (β=-.106, $p < .05$). All TRA/UGT variables were significant: norms (β=.306, $p < .001$), attitudes (β=.343, $p < .001$), past behaviors (β=.139, $p < .05$). Overall, attitude contributed the most to predicting the dependent variable of support seeking, followed by normative beliefs and past behavior. No mental health status, credibility or stigma/privacy variables were significant in this model. The incr. R^2 change explained by the support-seeking model was 31% (p=.000).

For model 3, MH information providing was regressed onto mental health status, work status, credibility, stigma/privacy, and past behaviors. Demographic variables were also entered into the model.

In this model, demographic variables (*gender, age, education*) were entered into the model first, followed by measures of mental health status (*membership in NAMI, MH diagnosis*), work status (*government MH employee, nonprofit MH employee, MH profession*), credibility, and privacy/stigma. Finally, the past behaviors index for information providing was entered.

Both credibility (β=.273, p =.000) and privacy/stigma (β=-.191, p=.000) were significant, as was the past behaviors variable (β=.257, p=.000). No demographic, mental health status or work status variables were significant. The incr. R^2 change explained by the information providing model was 15% (p=.000).

For model 4, MH support providing was regressed onto mental health status, work status, credibility, and stigma/privacy. Demographic variables were also entered into the model.

Again, demographic variables (*gender, age, education*) were entered into the model first, followed by measures of mental health status (*membership in NAMI, MH diagnosis*), work status (*government MH employee, nonprofit MH employee, MH profession*), credibility, and privacy/stigma.

Credibility was a significant positive predictor of intentions to provide MH support on YT (β=.262, p=.000). Stigma/privacy was also significant (β=-.267, p<.000). Additionally, one work status variable (government MH employee) was significant (β=-.110, p<.05), and one demographic variable (education) was significant (β=-.148, p<.05). Overall, stigma/privacy contributed the most to the dependent variable. No demographic, mental health status or work status variables were significant. The incr. R^2 change explained by the information providing model was 11% (p=.000).

4.2-2 Results for Specific Hypotheses

The first set of hypotheses relates to the relationships between the independent variable of attitude and the dependent variables intentions to seek MH information using YT and intentions to seek MH support using YT:

> H1: Attitude will be a significant positive predictor of intentions to seek MH information on YT.
>
> H2: Attitude will be a significant positive predictor of intentions to seek support for MH issues on YT.

For H1, regression 1 shows that, among other variables, attitude is a significant predictor of intentions to seek MH information on YT (β=.191, p < .05).

Thus, in keeping with the predicted relationships of the TRA, H1 was supported.

For H2, regression 2 shows that, among other variables, attitude is a significant predictor of intentions to seek MH support on YT (β=.343, $p < .001$). Overall, attitude contributed the most to predicting the dependent variable of support seeking.
Thus, H2 was supported.

The second set of hypotheses relates to the relationships between the independent variable credibility and the dependent variables intentions to seek MH information using YT, intentions to seek MH support using YT, intentions to provide MH information on YT, and intentions to provide MH support on YT:

> H3 Perceived credibility will be a significant positive predictor of intentions to seek information on YT.
>
> H4: Perceived credibility will be a significant positive predictor of intentions to seek support for MH Issues on YT.
>
> H5: Perceived credibility will be a significant positive predictor of intentions to provide MH information on YT.
>
> H6: Perceived credibility will be significant positive predictor of intentions to provide MH support on YT.

For H3, model 1 shows that credibility is a significant predictor of intentions to seek MH information on YT (β=.324, $p < .001$). Overall, credibility contributes the most to the dependent variable information seeking. Therefore, H3 was supported.

For H4, model 2 shows that credibility is not a significant predictor of intentions to seek MH support on YT (β=-.027, p=.588). Thus, H4 was not supported

H5 was tested in model 3, which shows that credibility is significant in predicting intentions to use YT to provide information about mental health issues (β=.273, p =.000).

Overall, perceived credibility contributed the most to the dependent variable. Thus, H5 was supported.

For H6, model 4 showed that credibility is a significant predictor of intentions to provide MH support on YT (β=.262, p =.000). Thus, H6 was supported.

The next set of hypotheses relates to the relationships between concerns about stigma and privacy and intentions toward information seeking, support seeking, information providing and support providing.

> H7: Concern about stigma/privacy will be a significant negative predictor of intentions to seek MH information on YT.
>
> H8: Concern about stigma/privacy will be a significant negative predictor of intentions to seek MH support on YT.
>
> H9: Concern about stigma/privacy will be a significant negative predictor of intentions to provide MH information on YT.
>
> H10: Concern about stigma/privacy will be a significant negative predictor of intentions to provide MH support on YT.

For H7, model 1 shows privacy/stigma is a significant negative predictor of intentions to seek MH information on YT (β=-.113, p < .001). Thus H7 was supported.

For H8, model 2 shows that stigma/privacy is a significant negative predictor of intentions to seek MH support on YT (β=-.267, p= .000). Overall, concerns about stigma/privacy contributed the most to the dependent variable. Thus H8 was supported.

For H9, model 3 shows that stigma/privacy is a significant negative predictor of intentions to use YT for information providing (β=-.191, p=.000). Thus, H9 was supported.

For H10 model 4 showed that privacy/stigma was a significant negative predictor of

intentions to use YT for support providing (β=-.267, p<.05). Thus H10 was supported.

The next set of hypotheses relates to the relationships between normative beliefs and the dependent variables of information seeking and support seeking.

H11: Normative beliefs will be a significant predictor of intentions to seek MH information on YT.

H12: Normative beliefs will be a significant predictor of intentions to seek MH support on YT.

For H11, model 1 shows that normative beliefs are a significant predictor of intentions to seek MH information on YT (β=.319, p=.000). Thus, H11 is supported.

For H12, model 2 shows that normative beliefs are a significant predictor of intentions to seek MH support on YT (β=3.43, p=.000). Overall, normative beliefs contributed the most to the dependent variable. Thus, H12 is supported.

The final set of hypotheses relates to the relationships between past behavior using Web 2.0 in general for health communication and the dependent variables of intentions to seek MH information using YT, intentions to seek MH support using YT, and intentions to provide MH information on YT.

H13: Past behavior in use of Web 2.0 for information seeking will be a significant predictor of intentions to use YT for MH information seeking.

H14: Past behavior in use of Web 2.0 for support seeking will be a significant predictor of intentions to use YT for MH support seeking.

H15: Past behavior in use of Web 2.0 for information providing will be a significant predictor of intentions to use YT for MH information providing.

For H13, model 1 shows that past behavior is a significant predictor of intentions to seek MH information on YT (β=.168, p=.000). Thus, H13 is supported.

For H14, model 2 shows that past behavior is a significant predictor of intentions to seek MH support on YT (β=.139, p=.001). Thus, H14 is supported.

For H15, model 3 shows that past behavior is a significant predictor of intentions to provide MH information on YT (β=.257, p=.000). Thus, H15 is supported.

Table 4.1. Mental illnesses on YouTube

Bipolar	17.2% (n=45)
PTSD	1.5% (n=4)
ADHD	.8% (n=2)
Depression	31.3% (n=82)
Eating disorder	4.2% (n=11)
Anxiety disorder	13% (n=34)
Schizophrenia	15.6% (n=41)
Other*	16.4% (n=43)

*drug addiction, hoarding, autism, dementia, personality disorders, cross dressing, multiple concussions, obsessive compulsive disorder, phobia, abuse, video game addiction

Table 4.2. Views, comments, likes, and dislikes per month by topic, type, format, poster affiliation, expertise and speaker ID

Variable	**Views/mo**		**Comments/mo**		**Likes/mo**		**Dislikes/mo**	
Topic	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Causes/treatments	138	214	5.19	28.9	7.68	53.9	.350	1.04
Laws/policies	269	410	1.34	3.47	.989	1.70	.139	.394
Personal struggles	746	933	2.64	8.96	5.57	28.4	.509	4.52
Social stigma	417	727	2.48	5.99	4.64	12.2	.195	.535
Impacts on society	413	952	1.57	5.39	3.99	16.1	.255	.794
Other	393	891	1.9	3.25	4.70	10.4	.174	.396
Total	785	1712	3.08	16.7	5.34	33.9	.346	2.72
Type								
Inform/educate	827	1648	3.14	19.3	5.11	36.2	.244	.793
Connect with others	573	1025	3.33	8.87	4.54	10.3	.9045	6.57
Persuade/recruit	458	830	1.37	3.57	1.81	3.50	.1791	.5251
Other	2111	4764	6.56	19.6	23.5	80.3	.3221	.7506
Total	784.5	1712	3.08	16.7	5.33	34.0	.346	2.72
Format								
Lecture	625	1168	2.01	5.50	3.83	16.7	.1998	.5700
Vlog	368	850	3.58	8.56	4.70	10.0	.1936	.4495
News	783	1243	2.80	6.03	4.66	12.3	.2441	.6073
PSA	521	815	.932	2.45	1.48	3.12	.8146	6.27
Gen. Info.	1899	2707	9.67	42.2	14.6	78.9	.6364	1.48
Event	294	638	.597	1.56	1.37	3.26	.0537	.1578
Art/entertain	2107	4458	5.54	18.0	20.0	74.14	.2798	.6974
Advert	2207	1972	.067	.0599	.394	.3598	.0000	.000

Other	2016	3596	2.92	4.95	3.76	5.70	.5044	.8266		
Total	783	1750	3.08	16.72	5.33	33.9	.346	2.72		
Poster affiliation										
For Profit	1221	1905	4.85	25.9	7.5	48.4	.356	1.01		
Nonprofit	351	805	.855	3.0	2.07	9.0	.074	.304		
Medical Inst.	129	000	.1667	000	.417	000	.000	000		
Academic Inst.	88.0	45.2	.1210	.148	.250	.210	.0104	.028		
Lay person	724	2016	3.65	10.13	6.83	31.4	.687	5.02		
Other	4163	5808	6.24	8.74	10.7	15.02	.301	.426		
Total	783	1705	3.08	16.73	5.34	34.0	.346	2.72		
Expertise										
Expert Prof.										
Yes	923	1571	2.04	6.12	2.71	8.67	.216	.773		
No	710	1784	3.68	20.4	6.82	41.9	.274	.419		
Expert Exper.										
Yes	516	1069	2.10	6.51	3.07	7.78	.138	.363		
No	925	1943	3.60	20.1	6.51	41.4	.454	3.34		
Expert None										
Yes	839	1996	6.13	32.6	10.32	61.6	.313	.900		
No	773	1621	2.21	7.34	3.90	19.8	.356	3.06		
Total	---	---		---	---		---	---	---	---
SpeakerID										
MD/research	1058	1645	2.33	6.50	3.01	9.19	.245	.804		
Friend/family	835	1383	1.32	4.0	2.35	4.4	.081	.172		
Advocate	464	1812	4.67	35.3	8.7	66.4	.865	6.12		
PersonMI	614	1249	3.22	8.0	4.40	9.42	.173	.433		
Reporter	688	1459	1.93	5.07	4.38	12.9	.158	.458		
Layperson	118	15.0	.671	.911	1.17	1.60	.079	.199		
No speaker	1913	4534	7.41	21.5	27.5	88.0	.741	1.17		
Other	560	709	4.7	7.5	27.5	5.46	.342	.640		
Total	786	1708	3.08	16.7	5.46	34.0	.346	2.72		

Table 4.3. Descriptive Statistics for Respondents

Key Categorical Variables		
1. Gender:	Female	71.6% (368)
	Male	28.4%(146)
2. Age		
	18-24	11.7% (45
	25-34	18.9% (73)
	35-44	21% (81)
	45-54	21.5% (83)
	55-64	22% (85)
	65+	4.9% (19)
3. Race/Ethnicity: White		80.1% (358)
	Pacific Islander	2.9% (13)
	Black or African American	3.4% (15)
	Latino or Hispanic	4.0% (18)
	Native American or American Indian	2.7% (12)
	Asian	2.2% (10)
	Other	4.7% (21)
4. Education:	No school	1.6% (7)
	Grade school (k-8)	1.8% (8)
	High school or GED (12^{th})	6.0% (27)
	Some college	23.7 (106)
	Associate's degree	12.8% (57)
	Bachelor's degree	25.1% (112)
	Graduate or professional degree	29.1% (130)
5. Mental Health Status:		
NAMI member		8.9% (39)
MH diagnosis self:		29% (130)

MH diagnosis friend/family	28.6 (128)
MH diagnosis both self and friend/family	25.2% (113)
NO personal experience with MH diagnoses	11.6%(52)
MH struggle self-no diagnoses	5.2% (23)
MH struggle friend/family-no diagnoses	41.2 (182)
MH struggle self and friend/family-no diagnoses	16.1% (71)
MH No struggles with diagnoses	32.6% (144)
6. Professional Affiliation: work for MH focused nonprofit	
I work for a govt agency with MH responsibility	12.1% (54)
I work in mental health profession	27.8% (124)
I work for a MH focused nonprofit	17.3% (77)
I am an unaffiliated MH advocate	8.9% (39)

Table 4.4. Descriptive Statistics for TRA variables: Attitude (AT); Subjective Norms (SN); and Behavioral Intentions (BI)

1.Attitude-information seeking (a=.838, M=17.4, SD=6.11)	Descriptive Statistic
2.1 Seek information about MH issues (*1=useless-7=useful*)	M=4.48 SD=1.83
2.2 Seek information about MH issues (*1=inefficient-7=efficient*)	M=4.14 SD=1.86
2-3 Seek information about MH issues (*1=risky-7=safe)*	M=3.65 SD=1.92
2.4 Seeking information about MH issues (*1=difficult-7=easy*)	M=5.16 SD=1.84
2. Credibility (a=.814, M=36.3, SD=27.8)	
(1=strongly disagree-7=Strongly agree)	
63-1 Check other sources for accuracy	M=5.77 SD=1.59
63-2 Feel confident in info from others' experience	M=4.08 SD=1.65
63-3 Feel confident in info from professional knowledge	M=3.88 SD=2.09
3. Evaluation of importance of credibility	
(1=not at all important-7=extremely important)	
6 Checking multiple sources	M=5.64 SD=1.54
7 Getting information from others' own experience	M=5.52 SD=1.42
61Getting information from professionals	M=5.51 SD=1.95
4. Attitude-social support seeking (a=.951, M=16.81, SD=6.88)	
9-1 YT to get emotional support from others (*1=not reward-7=reward*)	M=4.25 SD=1.92
9-2 YT to get emotional support from others (*1=frustrating-7=satisfying*)	M=4.27 SD=1.73
9-3 YT to get emotional support from others (*1=troubling-7=uplifting*)	M=4.27 SD=1.75
9-4 YT to get emotional support from others (*1=not helpful-7=helpful*)	M=4.08 SD=2.0
5. Attitude-evaluation support seeking	
(*1=very unlikely-7=very likely)*	

15 Will have to give in return M=14.7 SD=1.67

16 Will feel better knowing others understand M=16.0 SD=3.84

17 Will feel thankful I don't have to burden friends/family M=14.9 SD=3.7

6. Attitude-social support providing (a=.819, M=19.7, SD=10.24)

10-1 YT to give emotional support to others (*1=not reward-7=reward*) M=4.34 SD=1.99

10-2 YT to give emotional support to others *(1=frustrating-7=satisfying)* M=4.50 SD=1.91

10-3 YT to give emotional support to others *(1=troubling-7=uplifting*) M=5.53 SD=1.89

10-4 YT to give emotional support to others *(1=not helpful-7=helpful)* M=3.99 SD=2.0

7. Attitude Evaluation-of support seeking on YT

(*1=not at all important-7=extremely important)*

15 Giving something in return M=4.19 SD=1.67

16 Knowing others understand M=5.63 SD=1.33

17 Personal friends/family feeling less burdened M=5.20 SD=1.46

8. Attitude Evaluation-of support-providing on YT

(1=not at all important-7=extr. important)

18 Getting something in return M=3.05 SD=1.77

9. Attitude-Evaluation-poster affiliation-credibility YT (a=.829, M=15.83, SD=4.49)

(1=not at all important-7=extremely important)

33 To know who created health content online M=5.71 SD=1.68

34 Source of health information online to have personal experience M=5.0 SD=1.72

35 Source of health information online to have professional credentials M=5.10 SD=1.8

10. Stigma/privacy (a=.692, M=13.05, SD=6.24)

(1=strongly disagree-7=strongly agree)

I'm concerned about privacy 41-1 M=4.93 SD=1.92

I am concerned about stigma 41-2 M=3.99 SD=2.09

I don't think it is useful for improving MH communication 41-3 M=4.13 SD=1.88

I'm not sure how 41-4 (Not Included) M=3.33 SD=2.10

11. Norms-MH information seeking on YT (a=.820, M=12.74, SD=8.40)

(*1=strongly disagree-7=strongly agree)*

19 People like me would agree *(*Not Included) M=4.42 SD=1.73

21 People who are important to me think I should M=3.10 SD=1.7

23 MH care providers would approve M=4.27 SD=3.99

25 Other people who care about MH issues do M=5.35 SD=3.89

12. Norms- MH support seeking on YT (a=.730, M=11.86, SD=7.34)

(1=strongly disagree-7=strongly agree)

20 Most people would agree M=3.99 SD=1.76*

22 Most people who are important to me think I should M=3.10 SD=1.7

24 Mental health care providers would approve (Not included) M=5.01 SD=4.3

26 Other people who care about MH issues do M=4.34 SD=1.48

13. Norms-evaluation of MH info seeking on YT

(1=not at all important-7=extremely important)

27 Mental health care providers' approval M=4.58 SD=1.67

29 What others in the MH community do M=4.44 SD=1.48

14. Norms-evaluation of support seeking YT

(1=not at all important-7=extremely important)

28 Mental health care providers' approval M=4.64 SD=1.68

30 Approval of people like me M=4.44 SD=1.62

15. Past behavior-health info seeking YT

(1=never-7=multiple x per day)

31-5 Use YT (viewing) for health information M=2.46 SD=1.67

16. Past behavior-health info providing YT (a=.901, M=5.42, SD=3.99)

(1=never-7=multiple x per day)

31-6 Use YT (posting videos) for providing health information M=1.58 SD=1.29

31-7 Use YT (posting comments) for providing health information M=1.73 SD=1.38

31-8 Use YT (like/dislike) for providing health information M=2.12 SD=1.68

17. Past behavior-health info seeking web 2.0 (a=.668, M=13.76, SD-6.05)

(1=never-7=multiple x per day)

31-1 Use wiki for health information seeking M=2.77 SD=1.67

31-2 Use blog for health information seeking M=2.83 SD=1.78

31-3 Use FB for health information seeking M=3.64 SD=2.24

31-4 Use Twitter for health information seeking M=2.13 SD=1.90

18. Past behavior-health support-seeking YT

(1-never-7=multiple x per day)

32-5 Use YT (viewing) for support M=2.09 SD=1.5

19. Past behavior-health support seeking/providing Web 2.0 (a=.751, M=12.57, SD=6.65)

(1-never-7=multiple x per day)

32-1 Use wiki for health support seeking/providing M=2.20 SD=1.82

32-2 Use Blog for health support seeking/providing M=2.62 SD=1.93

32-3 Use FB for health support seeking/providing M=3.56 SD=2.16

32-4 Use Twitter for health support seeking/providing M=2.16 SD=2.90

20. Past Behavior-MH support-providing YT (a=.837, M=4.58, SD=10.4)

(1=never-7=multiple x per day)

32-6 Use YT (posting videos) to provide support M=1.33 SD=.960

32-7 Use YT (posting comments) to provide support M=1.51 SD=1.30

32-8 Use YT (Liking/disliking) to provide support M=1.74 SD=1.72

21. Behavioral Intentions-Would use YT for MH support providing

(a=.784, M=15.17, SD=6.32)

(1=strongly disagree-7=strongly agree)

37-1 Post videos to help others M=4.17 SD=2.25

38-1 Post comments to help others M=4.81 SD=1.99

36-16 Sharing my thoughts about issues I care about M=2.89 SD=1.91

42-4 Provide emotional support to others M=3.31 SD=1.97

22. Behavioral Intentions-Would use YT for MH support seeking

(a=.634, M=6.66, SD=10.96)

(*1=strongly disagree-7=strongly agree)*

36-14 For being part of a community of shared interests M=3.46 SD=1.95

42-3 Get emotional support from others M=3.22 SD=1.92

23. Behavioral Intentions-Would use YT for MH info providing (a=.929, M=28.4, SD=10.7)

(1=strongly disagree-7=strongly agree)

37-2 Post videos to raise awareness or correct misinformation about MH M=4.51 SD=2.30

37-3 Post videos to add knowledge or info to the conversation M=4.32 SD=2.32

37-4 Post videos to change the way people think about MH M=4.50 SD=2.30

38-2 Post comments to raise awareness/correct misinformation about MH M=5.15 SD=1.83

38-3 Post comments to add knowledge or info to the conversation M=5.08 SD=1.82

38-4 Post comments to change the way people think about MH M=4.84 SD=2.0

24. Behavioral Intentions-Would use YT for MH information seeking

(a=.903, M=35.66, SD=11.52)

(1=strongly disagree-7=strongly agree)

40-1 View videos to learn from others' experiences M=5.11 SD=1 71

40-3 View videos to find information about MH issues M=4.71 SD=1.81

40-4 View videos to learn how I can help with MH policy M=4.67 SD=1.88

36-12 Use YT for information seeking M=3.58 SD=2.04

39-1 Read comments to learn from others' experiences M=4.87 SD=1.81

39-3 Read comments to find information about MH issues M=4.49 SD=1.88

39-4 Read comments to learn how I can help with MH policy M=4.47 SD=1.96

42-1 Use YT to get information about MH issues M=3.65 SD=1.94

25. Behavioral Intentions-Will use YT in next six months (a=.915, M=13.22, SD=6.9)

(1=strongly disagree-7=strongly agree)

42-1 To get MH information about MH issues M=3.65 SD=1.95

42-2 To provide MH information about MH issues M=3.04 SD=1.87

42-3 To get MH support for MH issues M=3.22 SD=1.92

42-4 To provide MH support for MH issues M=3.31 SD=1.96

42-5 For other purposes M=5.34 SD=1.75

Table 4.5. Summary of Standard Multiple regression of variables predicting intention to use YT for MH communication

Independent Variables	Information Seeking (Regr. 1)	Support Seeking (Regr. 2)
Demographics		
Gender	-.062	-.055
Age	.095*	.021
Education	-.032	-.106*
Incr. R^2	**.027***	**.048****
Mental Health Status		
Member of NAMI	-.018	-.023
Mental Health diagnosis	-.006	-.032
Incr. R^2	**.006**	**.001**
Credibility	.324**	-.027
Privacy/stigma	-.113*	-.064
Incr. R^2	**.163****	**.091****
TRA and UGT		
Normative beliefs	.319**	.306**
Attitude	.191**	.343**
Past behavior	.163**	.139*
Incr. R^2	**.168****	**.313****

*p≤.05 **p≤.001

Table 4.6 Summary of Standard Multiple Regression of variables predicting intention to use YT for MH communication

Independent Variables	Information Providing (Regr. 3)	Support Providing (Regr. 4)
Demographics		
Gender	.001	-.024
Age	-.052	-.097
Education	.048	-.148*
Incr. R^2	**.006**	**.035***
Mental Health Status		
MH advocate	-.006	-.057
Member of NAMI	-.061	-.058
MH diagnosis	-.048	-.038
Incr. R^2	**.017**	**.014**
Work Status		
Government MH focus	-.027	-.110*
Nonprofit MH focus	-.010	-.055
MH profession	-.008	.020
Incr. R^2	**.004**	**.017**
Credibility	.273**	.262**
Privacy/Stigma	-.191**	-.267*
Past behaviors	.257**	-------
Incr. R^2	**.150****	**.114****

*p≤.05 **p≤.000

CHAPTER 5

DISCUSSION

Using the context of mental health communication, this study examined health communication on the interactive communication platform YouTube (YT), along with intentions of the mental health (MH) community to perform four specific behaviors on that platform: information seeking, support seeking, information providing, and support providing. Attitudes, social norms, perceptions of credibility, fear of stigma and loss of privacy, and past behaviors were considered as potential predictors of intentions to perform these four behaviors.

5-1 Content Analysis Research—Key Findings

Findings from the analysis of YT content indicated that mental health information is widely available on YT and focuses on information providing and interpersonal connections. In keeping with research showing an increase in informational videos on YT, including health information (Linkletter et al., 2010), the current study also found that the most common category of videos was those intending to "inform and educate" (67%, n=296). Some of this communication targets the general public and some is intended for (and often produced by) specific user groups. Results showing the largest categories of specific illnesses are depression and bipolar disorder align with epidemiological data from NIMH showing that major depressive disorder is among the top most prevalent disorders in the US (7% of the population) and bipolar is the mental disorder with the highest proportion of disabling 12-month cases (89% of disorders)

(Questions and Answers about the National Comorbidity Survey Replication (NCSR) Study, NIMH).

Results also concur with existing literature suggesting that physicians have noticed the increase in medical information on YT and have used the channel to disseminate their own help information or advice or to correct inaccurate information or medical myths (Ache & Wallace, 2008; Pandey et al., 2010). Given that only 36% of those with disorders receive treatment, interactive websites may provide a vehicle for MH professionals to convey helpful information about treatment options (Wang, Lane, Olfson, Pincus, Wells, and Kessler). Therefore, a key finding from the YT content analysis is that the Web 2.0 platform functions as an information providing vehicle with regard to MH issues.

After information providing, the second largest category of MH videos aims to "connect with others" facing mental health issues (15.9%, n=76). This finding justifies the current emphasis on research exploring the interactive nature of YT and other Web 2.0 platforms to provide e-health solutions, including doctor-patient interaction (Fox, 2010) as well as social support (Fox, 2010; O'Grady, 2006). In fact, the most common topic for videos coded in this study was "personal struggles" (35.1%).

It is interesting to note that while the videos focused most commonly on personal struggles, "personal vlog" was not the most common video format. Most videos were categorized as "press conferences and fundraisers" (20.7%) or "PSAs" (18.4%), while personal vlog format was coded in 17.1% of videos. One possible explanation for this finding is that issues were framed in press conferences and PSAs episodically, focusing on individual stories to highlight the personal struggles as a way of bringing larger

societal issues into focus (Kim et al., 2010). Future research should explore how mental illness is framed in YT videos.

Findings also show that videos most commonly rely on professional expertise (35.5%) and experiential expertise (34.2%) almost equally, and feature a primary speaker who is an "MD/academic/researcher" (37.3%) or a "person with mental illness" (25.9%). Again, these numbers fit well with the top two aims of information providing, in which a professional expert would be more common, and social support, in which a person with personal experience with MH issues would be more common.

In terms of user interaction with YT videos, this study finds that viewing is by far the most common form of participation. The average views per month overall was 950 (SD=2576), while the average number of likes was 6.3 (SD=35) and average number of comments was even lower, at 3.39 (SD=17). This fits with research across interactive Internet sites, which shows that the largest percent of visitors to these sites are "lurkers," or those who view only, and do not actively participate (Uden-Kraan, et al., 2008). This low percent of interactivity around YT videos suggests that opportunities exist for more active viewer engagement with both information and social connection videos.

A body of literature suggests that video providers who wish to make an impact, on YT in particular, and also on the broader array of Web 2.0 platforms, can do so by integrating themselves into the culture of the platform (Burgess, 2011; Lang, 2007; Burgess & Green, 2009). Posting materials with no response to user comments, for example, is failing to take advantage of the opportunities offered by these platforms (Hesse et al., 2011). In fact, results from this study show that most organizations that post videos do little or no follow-up to users' responses, wasting the opportunity to leverage

the impact of the material offered. It is clear that practitioners who use these interactive platforms need better understanding, and perhaps training, regarding how best to engage with their online audience.

Findings from the content analysis also indicate some significant differences across video purpose, topic, format and expertise with regard the to number of views per month, but no significant differences were found for any other type of participation across these categories. Average views of videos providing information about "causes and treatments" of mental illnesses were significantly higher than for other topics of videos.

Another key finding is that videos intended to "engage and entertain" had more views than videos designed for other purposes. This finding can be explained by research suggesting that the top motive for media use, including interactive media, is entertainment (McQuail, 2008). Therefore, this research suggests that video providers such as nonprofits who hope to use interactive media to disseminate MH information or provide support to those in the MH community may increase their impact if they use formats that engage, and even entertain, potential viewers. For example, Amad and colleagues (2011) demonstrated a connection between health communication user engagement and design elements. The production tools provided by YT (i.e., use of music, animation, and other production elements) allow packaging of messages to increase impact.

In terms of the number of views by poster affiliation, there was a significant difference between average views per month for videos posted by for profit entities and views per month for other types of poster affiliations. This finding may be explained by

the fact that broadcast media were coded in the for-profit category, and these well-known institutions likely draw information seekers in from search engines, such as Google. Also, their video-based format and professional production values fit well with YT's video based content and may provide more viewer engagement, increasing the number of views. Finally, for profit entities, in general, have more resources to hire web communicators who can ensure their names fall high in the search offerings provided by search engines such as Google.

Additionally, views for videos featuring MH advocates, such as PSAs and individual vlogs, were significantly lower than views per month for other videos, including videos featuring reporters and videos featuring an medical doctors (MDs)/researchers. Thinking about the large difference between for profit posted videos and others, the high average views for those featuring reporters makes sense. Further, given viewers' preferences for professional experts in videos providing information, the comparatively larger number of views for videos with MD/researchers as speakers (over MH advocates) validates the current findings.

While it seems logical that the most highly viewed videos would have the largest number of comments per month, there were no significant differences across categories for number of comments or likes/dislikes. A possible explanation for this finding is that the numbers for these analyses were too low and too widely dispersed for reliable analysis. Future research should look for other ways to explore relationships between content and number of comments, likes and dislikes.

It is interesting to note that most mental illnesses begin in childhood or young adulthood, and research shows the prime time to begin addressing these issues is

during those years. A large quantity of MH content on YT targets teens, including videos focused on eating disorders, particularly anorexia, as well as other MH issues such as self harm. These disorders are highly prevalent: Roughly half the population meets criteria for one or more such disorders in their lifetimes, and roughly one fourth of the population meets criteria in any given year (WHO, 2008). Most people with a history of mental disorder had first onsets in childhood or adolescence, and most seriously impairing and persistent adult mental disorders are associated with child-adolescent onsets and high comorbidity (Kesser & Wang, 2008). Increased efforts are needed to study the public health implications of early detection and treatment of initially mild and currently largely untreated child-adolescent disorders (Kessler and Wang, 2008). Given that a substantial portion of YT users are adolescents, YT is a potential channel for future study.

In summary, the majority of MH content on YT features professional experts in information providing videos. Another large segment of content is produced by people with mental illness and features personal struggles in an effort to connect with others who are experiencing the same things. YT users prefer content that is entertaining and engaging, based on the number of views recorded for videos coded as engaging/entertaining compared with other types of content. This finding relates to previous Uses and Gratifications Theory (UGT) research suggesting that entertainment is a primary reason for using a medium.

5-2 Survey Research—Key Findings

This study also examined intentions of the mental health community to use YT to perform four specific behaviors on that platform: information seeking, support seeking,

information providing, and support providing. Attitudes, social norms, perceptions of credibility, fear of stigma and loss of privacy, and past behaviors were considered as potential predictors of intentions to perform these four behaviors.

First, because this study is the first to examine members of the MH community who participate in Web 2.0, a description of those who responded to the online survey deserves attention. Among survey respondents, 29% have a diagnosed mental illness and 28.6% have a close friend or family member who has a diagnosed mental illness. An additional 25% reported that they themselves *and* a family member had a diagnosed mental illness. Further, more than 16% reported that they often struggle with mental health issues without a diagnosis, and 41% said they believe a close friend or family member struggles with MH issues without a diagnosis. The sample also contains a significant portion of people working in a mental health related field, either for government, nonprofit or private business. Finally, another important descriptor of the sample is membership in the advocacy group, the National Alliance on Mental Illness. Each of these characteristics has significant impact on media users' use of online interactive communication channels for MH issues. These findings are important to consider when designing Web 2.0 material, and also useful in interpreting the data collected for the current study. Although future research should compare responses by subcategory to examine potential differences, for this initial report the author considers these details as evidence that the respondents are intimately involved in mental health issues, actively use the Internet and Web 2.0 applications for information seeking, and can provide thoughts on MH communication that have relevance for the current study.

Overall, respondents report slightly more intentions to use the information seeking and providing potential for MH on YT than the support providing and seeking potential. Thus, information providers seeking to use YT for MH communication can feel some confidence that, aside from other influencing factors, people concerned with MH issues intend to seek information on YT. While support seeking intention is reported less, the mean response for that activity was just below the midpoint of the scale (1-7). Existing research on the efficacy of online support groups suggests this is a growing use of interactive web sites that shows potential (Dutta-Bergman, 2012). Interestingly, when looked at individually, *information seeking* and *support providing* were the top two reasons respondents said they used YT for MH. Future research, including more exploration of the current data, should examine these uses by demographics to gain more insight into the ways subgroups of members of the MH community use YT.

Consistent with the Theory of Reasoned Action (TRA), findings indicate that normative beliefs and attitude are predictors of intention, which in the current study focus on seeking MH information and social support on YT. In terms of intentions to participate in information seeking on YT, viewing videos and reading comments to learn from others' experiences were the most common information-seeking uses of MH videos. Interestingly, the average responses for simply finding MH information (not necessarily from the experience of others) on YT were much lower (i.e., use YT for information seeking and use YT to get information about MH issues). Information-seeking intentions, then, seem clearly tied to finding out what others know about the issue instead of just learning information about the issue in general.

This finding is interesting in connection with respondents' reported attitudes toward use of YT for MH information seeking, which was generally positive for usefulness, ease of use and efficiency, but less positive for safety. Some clarification of the concept of "usefulness" might provide a clearer understanding of this finding. Because respondents seem to be looking for experiential information (e.g., what they find "useful" about the information resources available on YT), the lower safety/higher risk response may be an acknowledgment of the uncertain credibility of this type of information. Still there seems to be a general acceptance of this uncertainty among respondents' attitudes toward use of YT for information seeking, as attitude was found to be a significant positive predictor of use of YT for seeking MH information.

Regarding attitudes toward support seeking and support providing on YT, respondents found these behaviors appealing. In fact, both support providing and support seeking on YT were considered to produce more positive feelings than negative ones. Also, support providing ranked higher than support seeking (or getting support) from others on YT. This finding fits with previous research showing participants in social support groups get as much satisfaction from helping others as they do from getting help from others (Winerman, 2005). The support potential of YT is particularly relevant for the current study's population, which is composed of people who are already in a community that is formed around a shared concern. They are part of a culture of sharing and aware of the need for better MH communication at every level. Further, interpersonal communication is already a strong tradition in MH. Talk therapy is a proven boon to people challenged by MH issues (Medina and Montgomery, 2011), and research also shows that interpersonal support is particularly effective for members of this community

(Haskell, 3013). There are, therefore, opportunities on YT for outreach on the interpersonal level.

Hypothesis four posited that credibility would be a significant predictor of intention to seek support. This relationship was not supported, perhaps because, as House (1981) suggested, there are different types of support, including emotional and informational. It is possible that respondents' interpretation of support seeking focused on support in the emotional sense rather than the informational sense, reducing the relevance of the credibility. Credibility was, however, a significant predictor of information seeking (H5), which makes sense because of the importance of reliable and correct information, especially for health information (Del Guidice, 2010). For the provision of emotional support, it is possible that respondents do not feel as strongly about the need for credibility.

The benefits of using YT for support-related communication may also be particularly useful for this population because of the desire for anonymity due to fear of stigma associated with mental illness. It is relevant, however, to note that findings suggest more concern about loss of privacy than about fear of stigma. Mental health research has identified consequences of stigma as an ever-present concern for people suffering with mental illness (Thoits, 2011). Yet, while stigma is rated almost at the midpoint of the 7-point scale (1 equates with no concern and 7 with serious concern), privacy is rated higher. In fact, more respondents said they wouldn't use YT for MH communication because they felt it wasn't the right kind of forum for improving MH communication than said they wouldn't because of stigma. This may be a true difference, or it may be an overlapping of the concepts of loss of privacy and stigmatization. In terms

of looking at YT for potential for mental health messaging, these are important distinctions. Further study is needed to determine this. Additionally, research shows that personal stigma can be countered and individuals empowered by support from online communities (Uden-Kraan et al., 2008). Online interventions on a personal level likely have great potential for this population, despite uncertainty about the efficacy of online support groups.

Other key findings focused on the relationship between normative beliefs and intentions to seek and provide information and support on YT. Along with attitudes, others' perceptions of using YT for information seeking and support seeking influenced respondents' intentions to do these activities, confirming the established TRA relationship. Respondents' beliefs about what others would say were a positive predictor of intention to use YT for information seeking, perhaps because of the perceived level of agreement that mental health care providers would approve of this and that other people with MH issues do use YT for this purpose already.

It is relevant to note that respondents indicated the perception that people who are important to them were the least approving of MH information seeking on YT. In terms of information seeking by someone struggling with mental illness, this could be explained by the patients' desire to explore options based on others' experiences before seeking help, or the patients' perceptions that loved ones would prefer they seek from professionals. In any case, these findings suggest a separation between acceptance of YT for MH information seeking for people who have mental illness and people who love people with mental illness. This is a meaningful finding in that it may help information providers craft appropriate messages addressing concerns of both sides.

In keeping with the current study's findings that suggest information seeking often focuses on experiential information gleaned from other people who have MH issues, respondents reported feeling more confident in information provided from others' experiences than in information from professional knowledge. Respondents' awareness of sources of information and confidence in that information based on source is at odds with some research that suggests information seekers look for professional knowledge more than experiential (Metzer & Flanagin, 2011), and other research suggesting that people pay little attention to sources of online information (Hargittai, 2010). Respondents for the current study reported that knowing who created the health content they find online is important to them, and they liked the idea that the source of that information should have personal experience as well as professional experience.

It is also not surprising that, despite respondents' stated intentions to use YT to learn from others' experiences, they also intend to check other sources to ensure accuracy. This fits with the intention toward crowd-sourcing of information that new media researchers have described in studies of interactive communication platforms, especially related to health communication (Boulos et al., 2007). The finding that YT info seekers go to the platform to view videos and read comments for information based on others' experiences suggests that a strategy for disseminating MH information there is to provide professional sourced information via non professional speakers—people who relate easily with the population but who are also informed.

Respondents' beliefs about others' perceptions of using YT for support seeking resembled their beliefs about what others think about using YT for information seeking. Again, these measures showed a divide between the way respondents believe most people

and people who care about MH issues, including MH care providers, perceive this activity as opposed to people who are "important to me."

In keeping with the UGT, examining uses and motives can explain use of a specific medium for a specific purpose (McQuail, 2008). The addition of the past behavior construct to the TRA model consistently contributed to predictive power of the model for each of the communication variables considered in the current study. Findings here show that the MH community's past use of YT for MH communication of any kind is rather lower than for some other interactive media sites, but according to the Pew Project on the Internet and American Life, this is changing (Fox, 2010). Respondents report using YT to seek information by viewing videos, while they use blogs more often and Facebook even more. This is true for each of the other types of MH communication considered for this study: support seeking by viewing YT videos versus blogs and Facebook; information providing by posting videos and by posting comments versus blogs and FB; support providing by posting videos and by posting comments versus blogs and Facebook. Future research should further examine past behaviors of the MH community on Web 2.0, including on YT, to determine the characteristics of interactive channels that encourage use by this population.

5.3 *Practical Implications*

This study, which is the first to assess the mental health content on YT, also examines, through survey research, a set of well-documented relationships between attitudes, norms and behavioral intentions from the TRA paradigm and breaks new ground in applying these relationships to a new communication context. The study also builds on the TRA by adding an additional set of potential influences on intention from

the UGT framework. Further, while the specific context of this study is mental health communication on YT, this study adds to the growing literature on use of Web 2.0 interactive platforms for any type of health communication. While the author acknowledges that the use of YT for health communication is less popular than use of some other interactive sites, such as Facebook, it is hoped that the larger lessons of the findings can be applied to other Web 2.0 contexts.

The combination of the content analysis and survey findings provides health communicators some insight into the opportunities and missed opportunities for MH communication on YT. For example, the content analysis highlights the large quantity of videos aiming to provide MH information and to connect with others with similar health concerns, while the survey confirms the community's intentions to use YT for these purposes. On the other hand, survey respondents indicated that an important part of information seeking on YT involves reading others' comments as well as viewing video content. In this sense, those seeking to provide information are not fully meeting the users' needs, and an opportunity to expand the impact of content posted in videos exists.

The combined findings also highlight the mismatch between the community's preferences for experiential experts and the dominance of professional experts in YT videos. This highlights another opportunity for information providers in YT to produce content more in keeping with the needs of the target community by providing information via experts with personal experience with MH issues.

These studies together provide a foundation for the further study of interactive websites as interpersonal, community, and societal level health communication platforms. As individuals with specific health concerns continue to explore the interpersonal and

community aspects of communication on Web 2.0, and organizations such as NIMH, CDC, and nonprofits such as NAMI and BringChangeToMind, continue to examine these platforms' potential for health education and promotion, studies such as this may provide guidance in maximizing their potential when applying Web 2.0 to health communication-related initiatives.

5.4 Theoretical Implications

While some researchers have combined variables from expectancy-value traditions, such as UGT, with the TRA variables to better explain and predict media use and behavior (Bagozzi, Wong, Abe, & Bergami, 2000), the current study builds theory by testing specific UGT variables in a specific health and new media context alongside traditional attitudes and normative beliefs. This research explores the use of past behaviors (from the UGT framework) combined with the TRA variables to provide a more stringent test of the TRA. One of the benefits of doing this is that it provides a fuller explanation of the dependent variables. That is, the effects of past behavior may capture automatic, or habitual, activation of intentions (Eagly & Chaiken, 1993, p. 178).

The conceptual framework for the current research employs a combination of the two research paradigms and contributes to knowledge of UGT and TRA in examining use of new media for health communications.

5-5 *Study Limitations*

It is, however, important to keep in mind several limitations of the current study. First, content analysis is a purely descriptive method, and it often misses nuances in content in exchange for intercoder reliability (Krippendorff, 2013). This was the case for the current study, as a number of coding categories were collapsed to improve reliability.

Some variables were eliminated completely for lack of reliable data, including tone of comments (an important concept in Internet forums, where negative comments, or "flaming" is common) and video valence. Further, although YT provides a useful search engine for locating content for specified topics, the data collection process yielded a large number of duplicate videos. Future research should explore the best manner in which to collect video content.

The current study partially addresses some of the shortcomings of the content analysis method by pairing the content analysis with survey data from the user population. However, additional limitations should be considered for this portion of the study. For example, use of an online survey has been shown to have some general weaknesses, including the issue of self-selection bias and the exclusion of portions of the population who are not Internet savvy or have no access to the Internet (Chou et al. 2009). Further, the total number of responses per question on the survey varied considerably since the survey was presented in an online format where participants could "skip" questions or "quit" the survey at any time. Predictably, questions asked later in the survey had higher item-nonresponse rates (Couper, Traugott, & Lamias, 2001; Galesic & Bosnjak, 2009).

While these are acknowledged weaknesses, in this research it makes sense to study the online population of the mental health community because that is the population individuals and organizations would try to reach with messages through online channels.

The snowball sample used in this study is also problematic. This sampling method can result in recruitment of individuals who are not in the designated population and

therefore damage the quality of data collected for analysis. This is particularly true for snowball samples using social media, where the researcher has no way to ensure representativeness of the sample. Because this is the case for the current research, the results cannot be generalized to the larger population of people concerned with mental health issues. Further, no population data from the target population were available, so verification of the validity of the sample was not possible.

Additional limitations relate to the content of the survey questionnaire. Careful consideration of the question wording on the survey questionnaire should be given in terms of past behavior variables, as it is possible that the wording used may have measured current use as much as past use. If so, this would explain a disproportionate percentage of the intentions variable, since respondents would be reporting intentions to do something they are currently doing. Finally, because the survey instrument was attempting to measure impacts on four different dependent variables (information seeking, social support seeking, information providing and social support providing), modeling the survey instrument on the established TRA questionnaire format resulted in a lengthy product. Efforts to shorten the questionnaire to reduce dropout resulted in elimination of measures of attitudes and normative beliefs for two dependent variables (information providing and support providing). Rather than eliminate this analysis completely, the author analyzed the data using several other relevant independent variables in separate analyses. Future research should evaluate the predictive power of these two variables on intentions to do those behaviors by separating them into a separate study with a shorter questionnaire.

5.6 Areas for Future Research

Despite these shortcomings, and in some cases, because of these shortcomings, this study sets up a robust research stream for future exploration of the YT channel and for health information using interactive channels in general. In addition to further study of information providing and support providing, as mentioned above, other research should begin testing remaining relationships in the TRA model, including antecedents of attitude and subjective norms, as well as the relationship between intentions and behavior. Additionally, more research focused on each dependent variable (information seeking, support seeking, information providing, and support providing) would build on the current research and further inform health communicators' efforts to maximize the impacts of their efforts in each of these areas. A full exploration of the social marketing literature in connection with health information providing would likely produce an compelling set of research questions related to information providing on Web 2.0, including YT. The social marketing research would benefit from pairing with epidemiological data justifying the targeting of specific groups. These data would also provide some description of the target population that was not fully utilized in the current research. Finally, much work remains to be done on the issues of credibility and privacy on Web 2.0, especially with regard to health communication

REFERENCES

Abram, S. (2005). Web 2.0—huh? Library 2.0, librarian 2.0. *Information Outlook*, 9, 44-

Ache, K. and Wallace, L.S. (2008). Human Papillomavirus vaccination coverage on YouTube. *American Journal of Preventive Medicine*, 35(4), 389-392.

Ahmad, R., Komlodi, A., Wang, J. and Hercegfi, K. (2011). The impact of user experience on levels of web credibility judgments. *Proceedings of the American Society for Information Science and Technology*, 47(1), 1-4.

Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.

Ajzen, I..,Albarracin, D., and Hornik, R. (2007). Preface. *Prediction and change of health behavior: applying the Reasoned Action Approach.* Psychology Press.

Ajzen, I and Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888-918.

Albarracin, D., Rothman, A., Di Clemente, R., del Rio, C. (2010). Wanted: A Theoretical Roadmap to Research and Practice Across Individual, Interpersonal, and Structural Levels of Analysis. *AIDS Behav*, 14, S185-S188.

Albarracin, D., Gillette, J., Earl, A., Glasman, L.R., Durantini, M.R. and Ho, M.H. (2005) A test of major assumptions about behavior change: a comprehensive look at HIV prevention interventions since the beginning of the epidemic. *Psychological Bulletin*, 131, 856-897.

Al-Lozi, E. and Papazafeiropoulou, A. (2012). Intention-based models: The theory of

planned behavior within the context of IS. *Information Systems Theory: Integrated Series in Information Systems,* 29, 219-239.

American Association for Public Opinion Research (2013). *Standard definitions: final dispositions of case codes and outcome rates for surveys*. Pp. 1-50.

Aneshensel, C., Phelan, J.C., and Bierman, A. (2012). Preface. *Handbook of the Sociology of Mental Health,* C. Aneshensel, J.C. Phelan, and A. Bierman (eds). Springer: NY,p. ix.

Atkin, C.K. (1972). Anticipated communication and mass media information-seeking. *Public Opinion Quarterly*, 36(2), 188-199.

Bagozzi, R., Wong, N. Abe, S., and Bergami, M. (2000). Cultural and situational contingencies and the Theory of Reasoned Action: Application to Fast Food Restaurant Consumption. *Journal of Consumer Psychology*, 9(2), 97-106.

Bakardjieva, M. and Smith, R. (2001). The Internet in everyday life-computer networking from the standpoint of the domestic user. *New Media and Society*, 3(1), 67-83.

Barak, A., Klein, B., and Proudfoot, J. (?). Defining Internet-supported therapeutic interventions. *Annual Behavioral Medicine,* 38, 4-17.

Barnhardt, J., Chaney, D., Chaney, B., Hall, A.K. (2013) New media for health education: a revolution in progress. *Health Education and Behavior*, 40(2), 129-132.

Barry, C., McGinty, E., Vernick, J.S., and Webster, D. (2013). After Newtown — Public Opinion on Gun Policy and Mental Illness. *N Engl J Med,* 368:1077-1081.

Barsky, E.(2006). Introducing Web 2.0: RSS trends for health librarians. *Journal of Canadian Health Library Association* 2006, 27, 7–8.

Bender, J. Jimenez-Marroquin, M.C., Ferris, L.E., Katz, J., and Jadad, A. (2012) Online communities for breast cancer survivors: a review and analysis of their characteristics and levels of use. *Support Care Cancer*. Retrieved on May 10, 2013 from http://link.springer.com/article/10.1007/s00520-012-1655-9#page-2

Berlo, D. K. (1960). *The Process of Communication*. New York, New York: Holt, Rinehart, andWinston.

Bhutta, C.B. (2012). Not by the book: facebook as a sampling frame. Sociological Methods and Research, 41(1), 57-88.

Biernacki, P. and Waldorf, D. (1981). Snowball sampling: problems and techniques of chain referral sampling. Sociological methods and research, 10, 141-163.

Blumler, J.G. (1979). The role of theory in Uses and Gratifications studies. *Communication Research*. 6(1), 9-36.

Boulos, M.N., Hetherington, L. and Wheeler, S. (2007). Second life: an overview of the potential of 3-K virtual worlds in medical and health education. *Health information and libraries Journal*, 24(4), 233-245.

Boulos, M.N., Maramba, I., and Wheeler, S. (2006). Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and education. *BMC Medical Education* 6(41), 6-41.

Boulos, M.N. and Wheeler, S. (2007). The emerging Web 2.0 social software: an enabling suite of sociable technologies in health and health care education. *Health Information and Libraries Journal*, 24(1), 2–23.

Browne, K. (2005). Snowball sampling: using social networks to research

nonheterosexual women. *International Journal of Social Research methodology*, 8(1), 47-60.

Bundorf, M.K., Wagner, T.H., Singer, S.J. and Baker L.C. (2006). Who Searches the Internet for Health Information? *Health Services Research*, 41(3p1), 819–836.

Burgess, J. (2011). User-created content and everyday cultural practice: lessons from YouTube. In Bennett, James and Strange, Niki (Eds.) *Television as Digital Media.* Duke University Press, Durham, NC, 311-331.

Burgess, J. and Green, Joshua. (2009). *YouTube: digital media and Society series*. Polity Press: Cambridge.

Carroll, B. and Richardson, R. (2011). Identification, transparency, interactivity: A new paradigm for credibility for single-voice blogs. *International Journal of Interactive Communication Systems and Technologies*, 1(1), 19---35.

Case, Donald. (2012). (ed.). Looking for Information: a survey of research on information seeking, needs and behavior. 3rd edition. Emerald Group Publishing, Howard House, Wagon Lane, Bingley, UK.

Castelein, S., Bruggeman, R., van Busschbach, J.T., van der Gaag, M. ,Stant, A.D., Knegtering, H. and Wiersma, D. (2008). The effectiveness of peer support groups in psychosis: a randomized controlled trial. *Acta Psychiatrica Scandinavica*, 118(1), 64-72.

Centers for Disease Control and Prevention. *Public Health Action Plan to Integrate Mental Health Promotion and Mental Illness Prevention with Chronic Disease Prevention, 2011–2015*. Atlanta: U.S. Department of Health and Human Services; 2011.

Chang, L. and Krosnick, J.A. (2009). National surveys via RDD telephone interviewing versus the Internet: comparing sample representativeness and response quality. *Public Opinion Quarterly*, 73, 641-678.

Chesney, T. and Su, D.K. (2010). The impact of anonymity on Weblog credibility. *Int. Journal of Human-Computer Studies*, 68, 710-718.

Chou,W.J., Prestin, A., Lyons, C., and Wen, K-Y (2013). Web 2.0 for Health Promotion: Reviewing the Current Evidence. *American Journal of Public Health*, 103(1), e9-e18.

Christians, C.G., Glasser, T.L., McQuail, D., Nordenstreng, K., and White, R.A. (2009). *Normative Theories of the Media: Journalism in democratic societies*. University of Illinois Press: Urbana and Chicago.

Chua, A.Y.K., Goh, D. H-L., Lee, C.S. (2012). Mobile content contribution and retrieval: an exploratory study using the uses and gratifications paradigm. *Information Processing and Management*, 48(1), 13-22.

Chung, D. and Kim, S. (2007). Blogging activity among cancer patients and their companions: uses, gratifications, and predictors of outcomes. *Journal of the American Society for Information Science and Technology*, 59(2), 297-306.

Cohen, J., Ajzen, I. Albarracin, D. (2010). In Memoriam. *Iournal of Consumer Research*, 36(5), 899-1098.

Cohen, S. and Willis, T. (1985). Stress, social support and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.

Cohen-Mansfield, J. Shmotkin, D. and Goldberg, S. (2009). Loneliness in old age:

longitudinal changes and their determinants in an Israeli sample. *International Psychogeriatrics*, 21(6), 1160-1170.

Collins, H. and Evans, R. (2002). The third wave of science studies: studies of expertise and experiences. *Social Studies of Science*, 32(2), 235-296.

Converse, P., Wolfe, E., Huang, X, and Oswalk, F. ((2008). Response rates for mixed mode surveys using mail and e-mail/web. American Journal of Evaluation, 29, 99-107.

Corrigan, P., Morris, S., Michaels, P., Rafacz, J., and Rusch, N. (2012). Challenging the public stigma of mental illness: a metaanalysis of outcome studies. Psychiatric Services, 63(10),

Couper, Mick P., Traugott, Michael W., Lamias, Mark J. (2001). Web survey design and administration. *Public Opinion Quarterly*, 65, 230-253.

Covello VT and Merkhofer MW (1994). *Risk Assessment Methods*. Plenum Press, New York. 319.

Cranor, L.F., Reagle, J. and Ackerman, M.S. 2000). Beyond Concern: understanding Net Users'Attitudes about Online Privacy. In *Internet upheaval: raising questions*, Vogelsang, Ingo and Compaine, Benjamin (eds.) MIT Press.

Cugelman, B., Thelwall, M., and Dawes, P. (2011). Online Interventions for Social Marketing Health behavior change campaigns: a meta-analysis of psychological architectures and adherence factors. *Journal of Medical Internet Research*, 13(1), e17.

Davidson, L., Chinman, M., Kloos, B., Weingarten, R., Stayner, D., and Tebes, J.K.

(1999). Peer Support among individuals with severe mental illness: A review of the evidence. *Clinical Psychology Science and Practice*, 6(2), 165-187.

Davie, W.R. and Lee, J-S. (1995). Sex, violence, and consonance/differentiation: an analysis of local TV news values. *Journalism and Mass Communication Quarterly*, 72(1), 128-138.

Davis, A. (2010). Politics, journalism and new Media: virtual iron cages in the new culture of capitalism. In *New Media, Old News: Journalism and Democracy in the Digital Age*. Ch.7. N. Fenton, ed. Sage: Thousand Oaks, CA.

Davis, F.D. (1985). A technology acceptance model for empirically testing new end-user information systems: theory and results. PhD Thesis retrieved on May 10, 2013 from *http://hdl.handle.net/1721.1/15192*

Del Guidice, K. (2010). Crowd-sourcing credibility: the impact of audience feedback on Web page credibility. *ASIST*, Oct. 22-27.

Dickinger, A., Arami, M. and Meyer, D. (2008). The role of perceived enjoyment and social norm in the adoption of technology with network externalities. *European Journal of Information Systems*, 17, 4-11.

Downes, F. J. and McMillan, S.J. (2000). Defining interactivity: a qualitative identification of key dimensions. *New Media and Society*. 2(2), 157-79.

Dutta-Bergman, M. (2012). Primary sources of health information: comparisons in the domain of health attitudes, health cognitions, and health behaviors. *Health Communication*, 16(3), 273-288.

Eastin, M. (2006). Credibility assessments of online health information: the effects of

source expertise and knowledge of content. *Journal of Computer-Mediated Communication*, 6(4), 1-6.

E-Health Insider. (2006). YouTube Used for Children's Anti- smoking Campaign. Available from www.e-health-insider.com/news/item.cfm?ID=2248.

Eminovic, N., Wyatt, J. C., Tarpey, A. M., Murray, G. and Ingrams, G. J. (2006). First evaluation of the NHS direct online clinical enquiry service: a nurse-led web chat triage service for the public. *Journal of Medical Internet Research* 2004, 6, e17.

Eminovic, N., Wyatt, J. C., Tarpey, A. M., Murray, G. and Ingrams, G. J. (2006). A proposed semantic framework for diabetes education content management, customisation and delivery within the M2DM project. *Computer Methods Programs Biomedicine*, 83, 188–97.

Eysenbach, G. (2007). From intermediation to disintermediation and apomediation: new Models for consumers to access and assess the credibility of health information in the age of Web 2.0. In *MEDINFO 2007,* K. Kuhn et al. (eds.). IOS Press.

Eysenbach, G., Powell, J., Englesakis, M., Rizo, C., and Stern, A. (2004). Health related virtual communities and electronic support groups: systematic review of the effects of online peer to peer interactions. *BMJ*, 328, 1-6.

Fahy, P. J. Indicators of support in online interaction. *International Review of Research in Open and Distance Learning* 2003, 4. Available from *www.irrodl.org/index.php/irrodl/article/view/129/600*

Farr, M. (2011). Framing Han-Uyghur relations on YouTube. Dissertation. ProQuest.

Fernandez-Luque, L. Elahi, N., Grajales, F.J. (2009). In *Medical Informatics in a United and Healthy Europe*. K.P. Adlassnig et al. (eds.), IOS Press.

http://gateway.proquest.com/.

Fernandez-Luque, L., Karlsen, R., and Melton, Genevieve (2011). HealthTrust: trust -based retrieval of you tube's diabetes channels. Proceedings of the 20th ACM international conference on Information and Knowledge Management, New York, NY, 1917-1920.

Fernandez-Luque (2012). Personalized health applications in the Web 2.0: The emergence of a new approach in: Engineering in Medicine and Biology Society (EMBC), 2010 Annual International Conference of the IEEE Date of Conference: Aug. 31 2010-Sept. 4 2010 Author(s): Fernandez-Luque, L. Northern Res. Inst. Tromso, Tromso, Norway Karlsen, R.; Krogstad, T.; Burkow, T.M.; Vognild, L.K. Page(s): 1053 - 1056

Fishbein, M. and Ajzen, A. (2010) Appendix. In *Predicting and Changing Behavior: the Reasoned Action Approach* (2010). New York: Psychology Press. (questions adapted from).

Fitzpatrick, M.J. (2012). What's at stake? *NAMI Advocate*. Fall issue.

Fordis, M., Street, R.L., Volk, R.J., and Smith, Q. (2011). The prospects for Web 2.0 technologies for engagement, communication, and dissemination in the era of patient-centered outcomes research: selected articles developed from the Eisenberg Conference Series 2010 Meeting, *Journal of Health Communication*, 16(1), 3-9.

Fowler, F.J. (2009). *Survey Research Methods*, 4th ed. Sage: Thousand Oaks, CA.

Fox, S. (2011). Medicine 2.0: peer to peer health care. In *Report: Health, Social*

Networking. Retrieved from www.pewinternet.org/reports/2011/medicine-20.aspx.

Fox, S. (2011). The social life of health information, 2011: social media in context. www.pewinternet.org.

Fox, S. and Jones, S. (2009). The social life of health information. www.PewInternet.org.

Freeman, B. and Chapman, S. (2007). Is *YouTube* telling or selling you something? Tobacco content on the *YouTube* video-sharing Website. *Tobacco Control*. 16, 207-210.

Friedman, D.B., Rose, I. and Koskan, A. (2011) . Pilot assessment of an experiential disaster communication curriculum. *Disaster Prevention and Management*, 20(3), 2011.

Frohlich, D. and Zmyslinski-Seelig, A. (2010). The presence of social support messages on YouTube videos about inflammatory bowel disease and ostomies. *Health Communication*, 27(5), 421-428.

Galanter, M. (1988). Zealous self-help groups as adjuncts to psychiatric treatment: a study of Recovery, Inc. *Am J Psychiatry*, 145(10), 1248-53.

Galesic, Mirta and Bosnjak, Michael (2009). Effects of questionnaire length on participation and indicators of response quality in a web survey. *Public Opinion Quarterly*, 73(2), 349-360.

Gallant, M.P. (2003). The influence of social support on chronic illness self-management: a review and directions for research. *Health Education and Behavior*, 30(2), 170-195.

Generations 2010 (Pew Internet Project: December 16, 2010). Retrieved from

pewinternet.org/Reports/2010/Generations-2010.aspx on April 27, 2012.

Glasco, K. (2012). Deadliest mass shootings worldwide, carnage from 1966 to present. Retrieved on March 27, 2013 from *www.examiner.com*.

Goodwin, P. Leszcz, M., Ennis, M. Koopmans, J. et al. (2001). The effect of group psychosocial support on survival in metastatic breast cancer. *The New England Journal of Medicine*, 345, 1719-1726.

Greene, J. Speizer, H. and Wiitala, W. (2008). Telephone and web: mixed-mode challenge. *Health Services Research*, 43, 230-248.

Guse, K., Levine, D., Martins, S., Lira, A., Gaarde, J., Westmorland, W., and Gilliam, M. (2012). Interventions using new digital media to improve adolescent sexual health: a systematic review. *Journal of Adolescent Health*???

Ham, C-D and Lee, J.L. (). Why Share in the Social Media Sphere: an integration of Uses and Gratifications and TRA. Journal.

Hanson, C., Thackeray, R., Barnes, M. NElger, B. and McIntyre, E. (2008). Integrating Web 2.0 in health education and preparation. *American Journal of Health Education*, 39(3), 157-166.

Hargittai, E., Fullerton, L., Menchen-Trevino, E., Thomas, K.Y. (2010). Trust Online: young adults' evaluation of Web content. *International Journal of Communication*, 4, 468-494.

Haridakis, P. (2013). Uses and Gratifications: a social and psychological perspective of media use and effects. In *The International Encyclopedia of Media Studies*. Published Online at www.wiley.com/doi10.1002/9781444361506.wbiems111.

Hayanga, A. and Kaiser, H. (2008). Medical Information on YouTube. *JAMA*, 299(12).

Retrieved from *JAMA*.com on May 14, 2010.

Healthy People 2020. Retrieved Sept. 10, 2012 from www.*HealthyPeople*.gov/2020/ topicsobjectives2020 /default.aspx.

Heaney, C.A. and Israel, B.A. (2008). Social Networks and Social Support, 189-210, Ch. 9 in Glanz, K., Rimer, B., Viswanath, K., eds. *Health Education and Promotion*, 4th ed., Jossey-Bass: San Francisco.

Hennig, P. and Knowles, A. (2006). Factors influencing women over 40 years to take precautions against cervical cancer. *Journal of Applied Social Psychology*, 20(19), 1612-1621.

Hesse, B.W., O'Connell, M., Augustson, E.M., Chou, W.S., Shaikh, A.R. and Rutten, L.J. (2011). Realizing the promise of Web 2.0: engaging community intelligence. *Journal of Health Communication,* 16(sup1), 10-31.

Hiday, V.A. and Wales, H. (2012). Mental illness and the law. Ch. 27, *Handbook of the Sociology of Mental Health*, C. Aneshensel, J.C. Phelan, and A. Bierman (eds). Springer: NY, pp 563-584.

Hindman, M. (2009). *The Myth of Digital Democracy*. Princeton University Press: Princeton.

Hinshaw, S., Cicchetti, Dante (2000). "Stigma and mental disorder: conceptions of illness, public attitudes, personal disclosure, and social policy. *Dev Psychopathol.*, 12(4), 555-98.

Hosler, E.W. and Conroy, M.P. (2008). YouTube as a source of information on tanning bed use. *Arch Dermatol*, 144(10), 1,935-1,936.

House, J.S. (1981). *Work stress and social support*. Addison-Wesley: Reading,

Massachusetts.

Hovland, C.I. and Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15(4), 635-650.

Hu, Y. and Sundar, S. (2009). Effects of online health sources on credibility and behavioral intentions. *Communication Research*, 37(1), 105-132.

Hughes, B., Joshi, I., and Wareham, (2008). "Health 2.0 and Medicine 2.0: Tensions and Controversies in the Field." *Journal of Medical Internet Research* 10(3).

Hunkeler, E., Meresman, J.F., Hargreaves, W., Fireman, B., Berman, W.H., Kirsch, A. Groebe, J., Hurt, S., Braden, P., Getzell, M. Feigenbaum, P. Peng, T., and Salzer, M. (2000). Efficacy of nurse telehealth care and peer support in augmenting treatment of depression in primary care. *Archives of Family Medicine*, 9(8), 100-708.

Jemmott, J.B., (2012). The Reasoned Action approach in HIV risk-reduction strategies for adolescents. The Annals of the American Academy of Political and Social Science, (640(1), 150-172.

Jenkins and Hartley, 2009

Johnson, T.J. and Kaye, B.K. (2009). In blog we trust? Deciphering credibility of components of the Internet among politically interested Internet users. *Computers in Human Behavior*, 25(1), 175-182.

Jonsson, B. , Baker, S.R., Lindberg, P. , Oscarson, N. and Ohrn, K. (2011). Factors influencing oral hygiene behavior and gingival outcomes 3 and 12 monts after initial periodontal treatment: an exploratory test on an extended Theory of Reasoned Action. *Journal of Clinical Periodontology*, 39(2), 138-144.

Juarascio, A., Shoalb, A., and Timko, A. (2010). Pro-eating disorder communities on social networking sites: a content analysis. *Eating Disorders: the Journal of Treatment and Prevention*, 18(5), 393-407.

Jung, J., Olmsted, S. Park, B. and Kim, Y. (2012). Factors affecting e-book reader awareness, interest and intention to use. *New Media and Society*, 14(2) , 204-224

Katz, E., Haas, H., and Gurevitch, M., (1973). On the use of the mass media for important things. *American Sociological Review*, 38(2)164-181

Katz, E., Blumler, J.G., and Gurevitch, M. (1973). Uses and Gratifications Research. *The Public Opinion Quarterly*, 37(4), 509-523.

Kay, B. (2007). Blog use motications: an exploratory study. In *Blogging, Citizenship and the Future of Media.* M. Tremayne, ed. Routledge.

Kaye, and Johnson, B.(2004).

Keenan, J., Pavri-Garcia, V., Tomlinson, G. et al. (2007). YouTube as a source of information on Immunization: A Content Analysis. *JAMA*. 298(21), 2482-2484.

Keck, P.E. (2009). Reasons for HOPE: Advances in Mental Health Care. Presentation from Lindner Center of Hope. Retrieved from *www.nami.org/Content/ Microsites343/NAMI_Hamilton_County/Home340/Library9/Paul_Keck_NAMI_Presentation_11_10_10.pd*

Keil, G.C. and Layton, R.A. (1981). Dimensions of consumer information seeking behavior. *Journal of Marketing Research*, 18(2), 223.

Kessler, R. and Wang, P. (2008). The Descriptive Epidemiology of Commonly Occurring Mental Disorders in the United States. *Annual Review of Public Health,* 29, 115-129.

Kim, S. (2010). Questioners' credibility judgments of answers in a social question and answer site. *Information Research,* 15(1), 1-24.

Kim, K. Paek, H-J and Lynn, Jordan (2010). A content analysis of smoking fetish videos on YouTube: regulatory implications for tobacco control. *Health Communication,* 25(2), 97-106.

Kim, S-H, Carvalho, J.P, and Davis, A. (2010). Talking about poverty: news framing of who is responsible for causing and fixing the problem. *Journalism and Mass Communication Quarterly*, 87(3-4), 563-581.

Kiousis, S. (2002). Interactivity: a concept of explication. *Mass Media and Society*, 4(4), 381-403.

Klapper, J. T. *(*1963*).* Mass communication research: An old road resurveyed*. Public Opinion Quarterly,* 27, 515–527.

Koskan, A., Foster, C., Karlis, J., Rose, I., and Tanner, A. (2012) Characteristics and influences of H1N1 communication on college students, *Disaster Prevention and Management*, 21(4), 418 – 432.

Krippendorff, K. (2013). *Content Analysis: an introduction to its methodology* (3rd Ed.). Thousand Oaks: Sage.

Kuehn, B. (2011). Patients Go Online Seeking Support, Practical Advice on Health Conditions. *JAMA*, 305(16), 1644-1645.

Kurtz, L.F., Chambon, A. (1987) Comparison of self-help groups for mental health.

Health Soc Work,12(4), 275-83.

Lange, P. (2007a). Commenting on comments: investigating responses to antagonism on YouTube. Paper presented at society for applied anthropology conference, Tampa, Fl.

Lange, P. (2007b). The vulnerable video blogger: promoting social change through intimacy. *The Scholar and Feminist Online*, 5(2). Available at www.barnard.edu/sfonline/blogs/lange.

LaRocco, J., House, J. and French, J.R. (1980). Social support, occupational stress, and health. *Journal of Health and Social Behavior*, 21(3), 202-218.

Lemire, M., Pare, G., Sicotte, C., and Harvey, C. (2008). Determinants of Internet use as a preferred source of information on personal health. *International Journal of Medical Informatics*, 77, 723-734.

Lim, S. and Simon, C. (2011). Credibility judgment and verification behavior of college students concerning Wikipedia. *FirstMonday*, 16(4), 1-25.

Lin, C. (1999). Online service adoption likelihood. *Journal of Advertising Research*, 39, 79-89.

Linkletter, M., Gordon, K. and Dooley, J. (2010). The choking game and YouTube: a dangerous combination. *Clinical Pediatrics*, 49(3), 274-279.

Medina, L. and Montgomery, M. (2011). Touch therapy combined with talk therapy: the Rubenfeld Synergy Method. *Body, Movement and Dance in Psychotherapy: International Journal for Theory, Research and Practice*, 7(1), 71-79.

Mandl, K.D. and Kohane, I.S. (2008). Tectonic Shifts in the Health Information Economy. *N Engl J Med*, 358, 1732-1737.

Martin, J.L., and Dean, L. (1990). Developing a community sample of gay men for an epidemiologic study of AIDS. *American Behavioral Scientist*. 33, 546-561.

Mental Health and Mental Disorders (2013). Mental Health Status Improvement. Retrieved onMay 15 2013 from *www.Healthypeople.gov.*

Mental Health Atlas (2011). Retrieved on April 2, 2012 from www.WHO.org.

Mental Health Research: News you can use! (2013), 2(1), p 1. www.archive. Constantcontact.com/fs127/1104240616640/archive/1112687319464.html

Metzger, M.J. and Flanagin, A.J. (2011). Using Web 2.0 technologies to enhance evidence-based medical information. *Journal of Health Communication*, 16(sup1), 45-58.

Michaels, P., Lopez, M. , Rusch, N., and Corrigan, P. (2012). Constructs and concepts comprising the stigma of mental illness. *Psychology, Society, and Education*, 4(2), 183-194.

Moore, K. (2011). Seventy-one percent of online Americans use YouTube. Retrieved on April 27 from Pew Internet and American Life Project at www.pewinternet.org.

Nairn, R. (1999). Does the use of psychiatrists as sources of information improve media depictions of mental illness. *Aust N Z J Psychiatry*, 33(4):583-9.

National Institute for Mental Health Statistics (2009). Retrieved on May 10, 2013 from www.NIMH.gov/statistics/SMI_AASR.shtml.

Nysveen, H., Pedersen, P. and Helge, T. (2005). Explaining intention to use mobile chat services: moderating effects of gender. *Journal of Consumer Marketing*, 22(5), 247-256.

O'Grady, L. (2006). Future directions for depicting credibility in health care Web sites.

International Journal of Medical Informatics, 75, 58-65.

O'Grady, L., Witteman, H., Bender, J., Urowitz, S., Wiljer, D., and Jadad, A.R. (2009). Measuring the impact of a moving target: towards a dynamic framework for evaluating collaborative adaptive interactive technologies. *Journal of Medical Internet Research*, 11(2), 1-14.

Omar, W.M., Saini, D.K., and Hasan, M. (2011). In *Software Tools and Algorithms for Biological Systems.* H.R. Aradnia and Q.-N. Tran (eds.), *Springer Science and Business Media,* page 717-724.

Ouellette, J. A. and Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, 124(1), 54-74.

Paek, H.-J., Hove, T., and Jeong, H. (2011). Peer or expert? The persuasive impact of YouTube public service announcement producers. *International Journal of Advertising*, 30(1), 161-188.

Pandey, A. Patni, N., Singh, M., Sood, A., and Singh, G. (2010). YouTube as a source of information on the H1N1 influenza pandemic. *American Journal of Preventive Medicine.*

Papathanassopoulos, S. (2011). *Media Perspectives for the 21st Century*. Routledge, NY.

Park, H.S., Klein, K., Smith, S., and Martell, D. (2009). Separating subjective norms, University descriptive and injunctive norms, and U.S. descriptive and injunctive norms for drinking behavior intentions. *Health Communication*, 24(8), 746-751.

Park, N., Kee, K., Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, Uses and Gratifications, and social outcomes.

Cyberpsychology and Behavior, 12(16), 729-733.

Pelling, E. and White, K. (2009). The Theory of Planned Behavior applied to young people's use of social networking websites. *Cyberpsychology and Behavior*. 12, 755-759.

Percheski, C. and Hargittai, E. Health Information-seeking in the digital age. *Journal of American College Health*, 59(5), 379-386.

Perse, E. and Dunn, D. (2009). The utility of home computers and media use: implications of multimedia and connectivity. *Journal of Broadcasting and Electronic Media*, 42(4), 435-456.

Peslak, A., Ceccucci, W. and Sendall, P. (2011). An empirical study of social networking behavior using Theory of Reasoned Action. CONISAR Proceedings, 4(n1807), 1-13.

Philo, Greg (1997). Changing media representations of mental health. *The Psychiatrist*, 21, 171 -172.

Philo, G., Secker, J., Platt, S., Henderson, L. (1994). "The impact of the mass media on public images of mental illness: media content and audience belief." *Health Education*.

Powell, J. and Clarke, A. (2006). Internet information-seeking in mental health: Population survey. *Psychiatry*, 189, 273-277.

Prevalence of Serious Mental Illness Among U.S. Adults by Age, Sex, and Race (2012). National Institute for Mental Illness Statistics. Retrieved from *www.nimh.nih.gov/statistics/SMI_AASR.shtml.*

Rainie, L. (2001). Testimony to the National Committee on vital health statistics. Pew Internet and American Life Project. Retrieved on March, 27, 2013 from www.pewinternet.org.

Rainie, L. (2011). The rise of the e-patient: understanding social networks and online health information seeking. Institute for Healthcare Advancement. Retrieved on April 2, 2013 from www.pewinternet.org.

Rainie, L., Estabrook, L., and Witt, E. (2007). Information searches that solve problems. Pew Internet and American Life Project. www.pewinternet.org.

Rains, S.A. (2007). Perceptions of traditional information sources and the use of the World Wide Web to seek health information: findings from the Health Information National Trends Survey. *Journal of Health Communication: International Perspectives*, 12(7), 667-680.

Replicating Effective Programs (2013). Community Promise: peers reaching out and modeling interventions strategies for community level HIV/AIDS Risk Reduction retrieved from *www.cdc.gove/hiv/prevention/research/rep/packages.*

Richardson, K.P. (2003). Health risks on the Internet: establishing credibility on line. *Health, Risk and Society*, 5(2), 171-184.

Rimer, B. K. and Kreuter, M. W. (2006) Advancing tailored health communication: a persuasion and message effects perspective. *Journal of Communication*, 56(sup. S1), s184-a201.

Rives, C. (2009). Uses and adoption of Web 2.0: a study of the next generation of the Internet. Master's Thesis. Paper 3658. Retrieved from ScholarWorks.sjsu.edu/etd_theses/3658.

Ryan, T. (1998). Perceived risks associated with mental illnesses: beyond homicide and suicide. *Social Science and Medicine*. 46(2), 287-297.

Ruggiero, T. (2000): Uses and Gratifications Theory in the 21st Century, *Mass Communication and Society*, (3)1, 3-37.

Sadaf, A., Newby, T., and Ertmer, P. (2012). Exploring pre-service teachers' beliefs about using Web 2.0 technologies in k-12 classroom. *Computers and Education*, 59(3), 937-945.

Savel, R. H., Goldstein, E. B., Perencevich, E. N. and Angood, P. B. (2006). The Critical care podcast: a novel medium for critical care communication and education. *Journal of the American Medical Informatics Association, ??.*

Schnittker, J. (2012). Public beliefs about mental illness. Ch. 5, *Handbook of the Sociology of Mental Health*, C. Aneshensel, J.C. Phelan, and A. Bierman (eds). Springer: NY, pp 75-94.

Sexton, Natalie R., Miller, Holly M. and Dietch, Alia M. (2011). Appropriate uses and considerations for online surveying in human dimensions research. *Human Dimensions of Wildlife: An International Journal*, 16(3), 154-163.

Shannon, C. E., and Weaver, W. (1949). *The mathematical theory of communication*. Urbana, Illinois: University of Illinois Press.

Sharma, M., Atri, A. and Branseum, P. (2013). Foundations of Mental Health Promotion. Jones and Bartlett: Burlington, MA.

Sharp, D. (2006). Smart Internet 2010—social networks. Melbourne, Australia:

Swinburn University of Technology/Smart Internet Technology CRC Pty Ltd. March 2006. Available from http://smartinternet.com.au/ articleDocuments/121/ Social-networks-2010.pdf.aspx.

Sharp, Laure M. and Frankel, Joanne (1983). Respondent burden: a test of some common assumptions. *Public Opinion Quarterly*, 47, 36-53.

Shin, D. (2008) Understanding purchasing behaviors in a virtual economy. *Interacting with Computers*, Volume 20, Issues 4–5, September 2008, Pages 433–446

Shin, D.-H. and Kim, W-Y, (2008). Applying the technology acceptance model and flow theory to Cyworld user behavior: implication of the Web 2.0 user acceptance. *CyberPsychology and Behavior*, 11(3), 380-382.

Sieff, E. (2003). Media frames of mental illnesses: The potential impact of negative frames. *Journal of Mental Health*, (12)3, 259-269.

Silk, K, Weiner, J., and Parrott, R. (2012). Gene Cuisine or Frankenfood? The TRA as an audience segmentation strategies for messages about genetically modified food. *Journal of Health Communication: International Perspectives*., 10(8), 751-767.

Social Media at CDC. Retrieved on October 11, 2012 from *www.cdc.gov/socialmedia*.

Song, I., Larose, R., Easton, M., Lin, C. (2004). Internet gratifications and Internet addictions: on the uses and abuses of new media. *Cyberpsychology and Behavior*, 7(4), 384-394.

Stafford, T.F., Stafford, M. R., Schkade, L.L., (2004). Determining uses and gratifications for the Internet. *Decision Sciences*, 35(2), 259-288.

Street, R. and Epstein, R. (2008). In Key interpersonal functions and health

outcomes: lessons from theory and research on clinician-patient communication. Ch. 11 In Glanz, K., Rimer, B., Viswanath, K., eds. *Health Education and Promotion*, 4th ed., Jossey-Bass: San Francisco. pp 237-263.

Syed-Abdul, S., Fernandez-Luque, L. Jian, W-S. et al. (2013). Misleading health-related information promoted through video based social media: anorexia on YouTube. *Journal of Med. Internet Research,* 15(2), 30.

Takahasi, Y., Uchida, C., Miyaki, K., Sakai, M., Shimbo, T., Nakayama, T. (2009). Potential benefits and harms of a peer support social network service on the internet for people with depressive tendencies: qualitative content analysis and social network analysis. *Journal of Medical Internet Research*, 11(3), e29.

Tanner, A., Friedman, D.B., Koskan, A. and Barr, D. (2009). Disaster Communication on the Internet: A focus on Mobilizing Information. *Health Communication,* 14(8), 741-755.

Tartakovsky, Margarita (2009). Media's Damaging Depictions of Mental Illness. Retrieved from *PsychCentral.com* on February 20, 2011.

Thoits, P.A. (1995). Stress, coping and social support processes: Where are we? What next? *Journal of Health and Social Behavior*, Spec. No., 53-79.

Thompson, R., Dancy, B., Wiley, T.R.A., Najdowski, C., Perry, S., Wallis, J. McKawl, Y. and Knall, K. (2012). AA families' expectations and intentions for MH services. Adm. Policy Ment Health, DOI 10.1007/s10488-012-0429.5.

Thong, M. and others (2007). Social support predicts survival in dialysis patients. *Nephrology Dialysis Transplantation*, 22, 845-850.

Thorbjornsen, , H., Pedersen, P. and Nysveen, H. (2007). "This is who I am": Identity

expressiveness and the Theory of Planned Behavior." Psychology and Marketing, 24(9), 763-785.

Thorson, K., Vraga, E. and Ekdale, B. (2010). Credibility in context: how uncivil online commentary affects news credibility. *Mass Communication and Society*, 13, 289-313.

Tian, Yan. (2010). Organ Donation on Web 2.0: Content and Audience Analysis of Organ Donation Videos on YouTube. *Health Communication,* 25(3), 238-246.

Turner, A., Kabashi, A., Guthrie, H., Burket, R., and Turner, P. (2011). Use and value of information sources by parents of child psychiatric patients. *Health Information and Libraries Journal*, 28, 101-109.

Glanz, K., Rimer, B. and Viswanath, eds. (2008). *Health Behavior and Health Education*, 4th ed. Wiley: San Francisco.

Van Uden-Kraan, C.F., Drossaert, C.H.C., Taal, E., Seydel, E.R., van de Laar, M. (2008). Self-reported differences in empowerment between lurkers and posters in online patient support groups. *Journal of Medical Internet Research*, 10(2), e18.

Vlek, C.J.H. and Stallen, P.J.M. (1981) Judging risks and bene. ts in the small and in the large, *Organizational Behaviour and Human Performance* 28, 235–71.

Von Pape, T. and Karnowski, V. (2011). Which place for mobile television in everyday life? Evidence from a panel study. In C. Martin and T. von Pape (eds.) *Images in Mobile Communication: New Content, New Uses, New Perspectives*, pp 101-120.

Wahl, O. (1992). Mass media images of mental illness: a review of the literature. *Journal of Community Psychology*, 20, 343-352.

Walsh, J.P., Kiesler, S., Sproull, L.S., and Hesse, B.W. (1992). Self-selected and

randomly selected respondents in computer network survey. *The Public Opinion Quarterly*. 56(2), 241-244.

Wang, Z., Walther, B., Pingree, S. and Hawkins, R.P. (2008). Health information, credibility, homophily, and influence via the Internet: Web sites versus discussion groups. *Health Communication*, 23(4), 358-368.

Wathen, C.N. and Burkell, J. (2002). Believe it or not: factors influencing credibility on the Web. *Journal of the American Society for Information Science and Technology*, 53(2), 134-144.

What is Mental Illness: Mental Illness Facts. Retrieved on April 2, 2012 from NAMI.org

Wilson, C., Nairn, R., Coverdale, J., Panapa, A. (1999). Constructing mental illness as dangerous: A pilot study. *Aust N Z J Psychiatry*, 33(2), 240-247.

Winerman, L (2005). Giving social support appears to bolster women's health. *American Psychological Association In Brief*, 36(9), 18.

The World Health Organization. The global burden of disease: 2004 updates, Table A2: Burden of disease in DALYs by cause, sex and income group in WHO regions, estimates for 2004, Geneva, Switzerland: WHO, 2008.

Wynne, B. (1991). Knowledges in Context. *Science, Technology, and Human Values*, 16(1), 111-121.

Yaari, E., Baruchson-Arbib, S. and Bar-llan, J. (2011). Information quality assessment of community generated content: a user study of Wikipedia. *Journal of Information Science*, 37(5), 487-498.

Ybarra M. and Suman, M. (2008). Reasons, assessments and actions taken: sex and

age differences in uses of Internet health information. *Health Educ. Res*. 23(3), 512-521.

Ye, Y. (2010). Correlates of consumer trust in online health information: findings from the health information national trends survey. *Journal of Health Communication*, 16(1), 34-49.

Yeshua-Katz, D. and Martins, N. (2012). Communicating Stigma: the pro-ana paradox. *Health Communication*, 1-10.

Yom-Tov, E., Luque, L.F., Weber, I., and Crain, S. (2012) Pro-anorexia and pro-recovery photo sharing: a tale of two warring tribes. *Journal of Med. Internet Research*, 14(6), 151.

Yoo, J.H. and Kim, J. (2012). Obesity in the New Media: A Content Analysis of Obesity Videos on YouTube. *Health Communication*, 27(1), 86-97.

Zhou, T. (2012). Understanding online community user participation: a social influence perspective. *Internet Research*. 21(1), 67-81.

Appendix A – Content Analysis Code Book

Basic information (demographics and attention measures)

1. Video title (string)_____
2. Date posted (date)_____
3. Number of views (on date of capture _____
4. Video length (minutes: seconds)_____
5. YouTube Category (string) _____
6. Channel/playlist (string) _____
7. Videos on channel/playlist (number) _____
8. Tags: (first five) (string) _____

Posted by (click channel for description of poster)

9. Posted by (name) _____
10. Poster identity or affiliation (choose one)

_____1= For profit (include for profit media outlets)

_____2= Nonprofit (governments, foundations, others)

_____3= Medical inst. (medical professionals; university and military hospitals)

_____4= Academic inst. (academic researchers, not university hospitals)

_____5= Unaffiliated lay person

_____6=Other_____

Video Type (overall, what type of video is this? Choose one)

11. The format of this video is:

_____1= Lecture academic/research report/panel discussion

_____2= Personal Vlog or personal one-time posting (lay person, either scripted or not)

_____3= News story (with anchor or reporter; on media outlet)

_____4= PSA (public service announcement; to raise awareness)

_____5= General information video relating to mental health/illness (not produced by a nonprofit; ex: illumistream; pscychetruth; Dr. of Mind)

_____6= Event or function (like a fundraiser or event to honor someone or raise awareness)

7= other_____(string)

12. Does video contain a website for more information (on page or embedded?) Y N
13. Does video contain a phone number and/or physical addresss for more information (on page or embedded? Y N

_____

Speaker

14. Is there at least one person speaking in the video (not a cartoon or talking animal)? Y N
15. I would consider the speaker as a person with top level expertise in the field of mental health, someone who has academic or other professional credentials and who could contribute to the knowledge in the field. Y N
16. I would consider the speaker as a person with PERSONAL experience in mental health issues, someone who might have something to contribute to the knowledge in the field as a result of experience and interaction with experts over time (ie. A person with mental illness or a close friend of family member of a person with mental illness) Y N

17. I would consider the speaker as a person with no particular expertise in the field of mental health, neither professional nor experiential. Y N
18. Does the video use at least one celebrity spokesperson? (Is at least one speaker an identifiable person (celebrity or politician, athlete, other)? Y N
19. Gender of speaker: 1. Female 2. Male 3 . No speaker 4. Don't know/can't tell
20. Race of speaker: 1. African American 2. White 3. Hispanic/Latino 4. Asian 5. Other 6. No speaker 7. Speaker, but can't tell race
21. Age group of speaker: 1. Child 2. Teen (12-24) 3. Adult 4. No speaker 5.Can't tell age group

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Source/speaker: choose one

22. Speaker is a:
    1. _____Medical doctor/researcher/academic/other mental health expert
    2. _____Friend/family of person with mental illness (also neighbors)
    3. _____Advocate (someone who is not affiliated with a medical or academic research institution; also not a person with MI or friend/family member; likely a spokesperson for a "cause"
    4. _____Person with mental illness (vlogging or posting a single video)
    5. _____Reporter or anchor
    6. _____Other _____

Content and Purpose (one choice for each question)

1. Video content focuses on 1._____ stats and facts 2._____ Personal story or narrative _____ 3. Both

2. Video content highlights 1. individual situations 2. social situations

23. Video makes an effort to grab and hold attention (this means animation, music, set, dramatic lead) Y N

24. Video targets:

    1. _____People with MI; family and friends of people with MI (or those who believe they may have mental illness)

    2. _____General population (raising awareness)

    3. _____Teens/young adults (talking to them, not about them)

    4. _____Other _____

25. Video explicitly targets 1. Males 2. Females 3. Both/either

26. Video explicitly targets 1. African Americans 2. Whites 3. Hispanics 5. Asians 6. All/or race isn't a factor.

---

27. Purpose of video is to:

    1. _____Inform/educate (communicate without any call to action)

    2. _____Connect with others (code this only if the video is a personal story; about personal struggles; reaching out to others who might share mental health issues/experiences)

    3. _____Persuade or recruit to a cause of POV (MUST have a call to action (give money; volunteer; make a difference; stamp out stigma; video might ask viewers to take part, spread the word, do something. If it doesn't, don't code this.)

    4. _____Other _____

---

28. Topic (choose one)

    1. _____ Causes and/or treatments (if the video is about art therapy, for example, then it's coded as treatment.

2. _____Laws and policies about mental illness (funding for care, insurance coverage, legal protection against discrimination)

3. _____Personal struggles (personal or family life with MI; living with mental illness)

4. _____Social stigma, disparities/discrimination (fighting, describing, acknowledging)

5. _____Impacts on society (including suicide rates; economic impacts)

6. Other_____

---

29. Specific illnesses discussed/mentioned in the video:

1. Bipolar 2. PTSD 3. ADHD 4. Depression 5. Eating disorder (bulimia; anorexia) 6. Anxiety disorders 7. Schizophrenia 8. No specific illness is mentioned (it's just about mental illness in general) 9. Other illness mentioned in video

_____

Mentions (circle all that apply. The video only has to mention)

30. _____Addiction
31. _____Military (PTSD; military mental health services; war, combat, deployment)
32. _____Science (of mental illness; neurology)
33. _____Suicide
34. _____List of symptoms
35. _____Prevention (prevents, prevented, prevent, preventive, etc)
36. _____Treatment (treat, treats, treatments, treated, in treatment, get treatment)
37. _____Mental health
38. _____Mental illness

Comments

39. Number of comments (on date of capture)_____

40. Date coded _____

42. Number of likes _____

43. Number of dislikes_____

44. Poster responded at least once to one or more comments Y N

45. Commenter(s) responded to other commenters? Y N

46. Have other videos been posted in response to this? Y N

47. Comments Tone: tone toward content and or speaker/provider (use first 5 relevant comments; label positive or negative (neutral comments go to positive). Choose the option that includes the majority. Totally off-topic comments are counted in total comments, but not used for calculating tone.) 0. _____negative 1. _____positive

48. Video Valence: (is the video overage positive or negative)? Neutral goes to positive.

0. _____negative 1. _____

APPENDIX B-Sample solicitation letter and example of typical response (read from the bottom)

Absolutely. If you do those things that would be helpful. Could you encourage people to complete the survey and pass along the link?

This is part of my dissertation. I will be glad to share the findings with Nami chapters.

Sent from my iPhone

On Dec 16, 2012, at 3:05 PM, "rcagan@namikansas.org" <rcagan@namikansas.org> wrote:

I can send it out to our leadership list if that will work for you. I can also post to our Facebook page. Please advise.

Rick Cagan

Executive Director

National Alliance on Mental Illness- NAMI Kansas

rcagan@namikansas.org

www.namikansas.org

Subscribe to our e-mail list and stay in touch with us about upcoming events.

You can raise money for NAMI Kansas by searching the Internet with GoodSearch.com (powered by Yahoo) at no cost to you. See www.GoodSearch.com and select NAMI Kansas as your designated charitable organization.

From: cfoster1225@aol.com [mailto:cfoster1225@aol.com] Sent: Sunday, December 16, 2012 2:02 PM To: rcagan@namikansas.org Subject: Re: Research to help improve online mental health communication--can you help?

Hi Rick. I'm trying to get the link to to survey to NAMI members. What can you do to put it out to your members that is in the parameters of what is allowed by NAMI?

Thank you so much for your willingness to help!

Caroline Foster Sent from my iPhone

On Dec 16, 2012, at 2:19 PM, "rcagan@namikansas.org" <rcagan@namikansas.org> wrote:

Caroline

We're happy to work with you. How would you like to proceed?

Rick Cagan

Executive Director

National Alliance on Mental Illness- NAMI Kansas

From: cfoster1225@aol.com [mailto:cfoster1225@aol.com] Sent: Sunday, December 16, 2012 12:19 PM To: rcagan@namikansas.org Subject: Research to help improve online mental health communication--can you help?

Dear Mr. Brennen:

The most recent issue of the NAMI Advocate called for more mental health research, and according to CDC, NIMH and others, that includes research designed to improve the ways we communicate within the national mental health community and among the general population about mental health issues.

I'm a Ph.D. student at the University of South Carolina and a member of NAMI. My research is designed to examine mental health communication on the Internet, especially on sites where users post content and interact with each other; also I'm studying what people interested in mental health issues think of using these sites to communicate about these issues. To make this project most helpful to the mental health community, I need to hear from its members, and that's where I need your help!

My primary study population is members of NAMI, but as you know we are a protected population. If I can work with state and local NAMI chapters to have their administrators post the survey link to their Facebook pages and/or send it out to a member email list, then members' identification will be protected and they can still help explore new channels for improving information, awareness, and social support for people with mental health concerns.

The federal government has laws that protect research participants' confidentiality. That's why responses will never be connected to participants' personal information. The online survey software used for this project, called Qualtrics, will not capture personal information and any server information captured as part of the connection process will be deleted as soon as all data are gathered. My advisor, Dr. Andrea Tanner, and I are the only ones with access to the survey site or data, which are protected by password.

Additionally, this study design has been evaluated by the University of South Carolina's Institutional Review Board, which ensures all research with human subjects is conducted ethically. The approval letter from IRB is attached.

If you have questions concerning participants' rights as research subjects, you may direct them to Thomas Coggins, Director of USC Office of Research Compliance (803-777-7095, tcoggins@mailbox.sc.edu).

At the end of the survey questionnaire, participants who choose to supply an email address in the space provided will be entered in a drawing for a $100 gift card. This drawing will

be done in the first part of the new year when the online survey is closed (between January 10 and January 31, depending on response).

Please let me know if you can help me distribute this questionnaire to your members by emailing cfoster1225@aol.com.

Click here to help improve mental health communication

or click https://usccmcis.qualtrics.com/SE/?SID=SV_2m1hb66TGXYG3Nb

Thank you!

Caroline Foster

Ph.D. Candidate

School of Journalism and Mass Communication

University of South Carolina

Appendix C – survey questionnaire

Improving Mental Health Communication Through Online Channels

Q1 Hi! My name is Caroline Foster. I'm a PhD student at the University of South Carolina's School of Journalism and Mass Communications. I'm conducting this survey for part of my dissertation. This survey may be of interest to you because its purpose is to learn how and why people use the Internet for health issues, especially for mental health. I am particularly interested in communication about mental health on sites that feature content posted by the people who visit the site (user-generated content). Some examples of this type of site are Wikipedia, blogs, Facebook, Twitter, and video-sharing sites like YouTube. The results of this study will help improve online communication about mental health and mental illness among the general public and among the mental health community. Your participation is essential in achieving these goals. Completing this survey should take about 20 minutes. You will click through 14 pages, but some pages have only one or two questions and some have more. Please stick with it! You are making a difference in changing the way people talk about and think about mental illness! The federal government has laws that protect research participants' confidentiality. That's why your responses will never be connected to your name, and any connection to your email address available through this survey hosting site (Qualtrics) will be deleted as soon as all data have been collected. By proceeding, you are indicating that you have read this statement and agree to participate in this study. Your participation is voluntary. If at any time during this study you decide you do want to continue, you may stop. If you feel uncomfortable answering a particular question, you may simply skip it and move on to the next one. Some repetition in the questions helps me assess your answers accurately. There are NO trick questions here. You don't have to be an experienced Internet user to contribute your thoughts for this project! If you have questions

concerning your rights as a research subject, you may direct them to Thomas Coggins, Director of USC Office of Research Compliance (803-777-7095, tcoggins@mailbox.sc.edu).(56 Questions) At the end of the study, you will be asked again to verify that you consent to allow your responses to be tabulated. At that time, you may enter an email address in the space provided to be entered in a drawing for a $100 gift card. If you don't want to provide an email address, you don't have to. Thank you for your willingness to commit this time to improving mental health communication!

Q2 YouTube is a video-sharing site that features videos posted by different types of people, including people concerned with medical issues such as mental illness. Some people who post about mental health issues are experts like doctors or licensed therapists from government, private industry or nonprofits. Others who post are not experts, but individuals who might have personal experience with a medical issue such as mental illness. Researchers have found that some people use YouTube as a source of health information and social support. Thinking about getting information about mental health issues on YouTube, (whether you have done this or not), please use the scales below to indicate how you feel about using the online video-sharing site YouTube to get information about mental health issues. Using YouTube to look for information about mental health issues by searching videos and/or comments would likely be

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Useless:Useful (1)	❍	❍	❍	❍	❍	❍	❍
Inefficient:Efficient 2)	❍	❍	❍	❍	❍	❍	❍
Risky:Safe (3)	❍	❍	❍	❍	❍	❍	❍
Difficult:Easy (4)	❍	❍	❍	❍	❍	❍	❍

Q63 If I use YouTube for mental health information, I will

Have to spend time checking other sources to see if the information I found is accurate. 1)	❍	❍	❍	❍	❍	❍	❍
Feel confident in the information I get from people who post videos on YouTube based on their own experiences with mental illness. (2)	❍	❍	❍	❍	❍	❍	❍
Feel confident in the information I get from people who post videos on YouTube based on professional or	❍	❍	❍	❍	❍	❍	❍

academic credentials. (3)							

Q6 Thinking about yourself right now, please indicate how unimportant or important the following items are to you.For me, spending time checking multiple sources is

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Extremely Unimportant: Extremely Important (1)	❍	❍	❍	❍	❍	❍	❍

Q7 For me, getting mental health information from others' own experiences with mental health issues is

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Extremely UnImportant: Extremely Important (1)	❍	❍	❍	❍	❍	❍	❍

Q61 For me, getting mental health information from others who have professional or academic credentials is

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Extremely Unimportant: Extremely Important (1)	❍	❍	❍	❍	❍	❍	❍

Q9 Please use the scales below to indicate your perceptions of using YouTube for emotional support or advice. If you haven't used YouTube for these purposes, just indicate how you think connections with others on YouTube would be. Viewing videos or reading comments on YouTube to GET emotional support or advice from other people who are affected my mental health issues would likely be

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Not Rewarding: Rewarding (1)	❍	❍	❍	❍	❍	❍	❍
Frustrating:Satisfying (2)	❍	❍	❍	❍	❍	❍	❍
Troubling:Uplifting (3)	❍	❍	❍	❍	❍	❍	❍
Not helpful to me: Helpful to me (4)	❍	❍	❍	❍	❍	❍	❍

Q10 Posting videos or comments on YouTube to GIVE emotional support or advice to people who are affected by mental illness would likely be

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Not Rewarding: Rewarding (1)	❍	❍	❍	❍	❍	❍	❍
Frustrating:Satisfying (2)	❍	❍	❍	❍	❍	❍	❍
Troubling:Uplifting (3)	❍	❍	❍	❍	❍	❍	❍
Not Helpful to me: Helpful to me (4)	❍	❍	❍	❍	❍	❍	❍

Q62 If I GET emotional support or advice about mental health issues from other YouTube users by viewing videos or reading comments, I will

Have to give them something in return. (1)	❍	❍	❍	❍	❍	❍	❍
Feel better knowing others understand the mental health	❍	❍	❍	❍	❍	❍	❍

issues I am facing. (2) Feel thankful that I don't have to burden my friends and family with my problems. (3)	❍	❍	❍	❍	❍	❍	❍

Q12 If I GIVE emotional support or advice to others dealing with mental health issues by posting videos on YouTube or posting comments in response to their videos, I will get something in return.

- ❍ Very Unlikely (1)
- ❍ Unlikely (2)
- ❍ Somewhat Unlikely (3)
- ❍ Undecided (4)
- ❍ Somewhat Likely (5)
- ❍ Likely (6)
- ❍ Very Likely (7)

Q15 For me, giving something in return for online support or advice from others who know about mental health issues is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)

- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q16 For me, knowing others understand my mental health issues (or those of someone I care about) is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q17 For me, personal friends and family feeling less burdened by my mental health issues is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q18 For me, getting something in return for helping others is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q19 Please answer the following questions about what you think others would say about using YouTube for mental health information or support using a 7-point scale from Strongly Disagree to Strongly Agree. Most people like me would agree that watching YouTube videos and reading other users'; comments about the videos is a good way to GET information about mental health issues.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q20 Most people like me would agree that watching YouTube videos and reading others' comments about the videos is a good way to connect with others for emotional support and advice about mental health issues.

- ❍ Strongly Disagree (1)

- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q21 People who are important to me think I should look for information about mental health issues by viewing videos or reading comments about videos on YouTube.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q22 Most people who are important to me think I should connect with others on YouTube, where people affected by mental illness can communicate about these issues by viewing or posting videos and reading and/or writing comments.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)

- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q23 Mental health care providers would approve of seeking information about mental health issues on YouTube.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q24 Mental health care providers would approve of seeking connections on YouTube with others affected by mental health issues by posting or viewing videos or commenting or reading comments posted by others.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q25 Other people who care about mental health issues look for information about mental health on YouTube.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q26 Other people who care about mental health issues use YouTube to look for connections with others affected by similar concerns.

- ❍ Strongly Disagree (1)
- ❍ Disagree (2)
- ❍ Somewhat Disagree (3)
- ❍ Neither Agree nor Disagree (4)
- ❍ Somewhat Agree (5)
- ❍ Agree (6)
- ❍ Strongly Agree (7)

Q27 For me, mental health care providers' approval of where I get my mental health information is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)

- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q28 For me, mental health care providers' approval of where I get support about mental health issues is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q29 For me, doing what other people who face mental health issues do to get more information about these issues is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q30 For me, when it comes to getting emotional support or advice, approval of people like me is

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q31 Research shows that some people look for health information online, including on sites where users can post information, such as wikis, blogs, Facebook, Twitter, and YouTube.In this set of questions, please answer how often you have used each of these sites for any kind of health-related information on a 7-point scale, from Never through Multiple times each day.

	Never (1)	A few times (2)	About once in the past six months (3)	About once in the past month (4)	One or more times per week (5)	Once per day (6)	Multiple times each day (7)
Wiki (1)	❍	❍	❍	❍	❍	❍	❍
Blog (2)	❍	❍	❍	❍	❍	❍	❍
Facebook (3)	❍	❍	❍	❍	❍	❍	❍
Twitter (4)	❍	❍	❍	❍	❍	❍	❍

YouTube (viewing videos) (5)	❍	❍	❍	❍	❍	❍	❍
YouTube (posting videos) (6)	❍	❍	❍	❍	❍	❍	❍
YouTube (posting comments) (7)	❍	❍	❍	❍	❍	❍	❍
YouTube (liking, disliking, forwarding) (8)	❍	❍	❍	❍	❍	❍	❍

Q32 Research also shows that some people get and provide support or advice for health issues online, including on sites where users can post information, such as wikis, blogs, Facebook, Twitter, and YouTube. In this set of questions, please answer how often you have used each of these sites to get or provide support or advice about any kind of health issue on a 7-point scale, from Never to Multiple times each day.

	Never (1)	A few times (2)	About once in	About once	Once or more	Once each day	Multiple times

			the past six months (3)	inthe past month (4)	times per week (5)	(6)	each day (7)
Wiki (1)	❍	❍	❍	❍	❍	❍	❍
Blog (2)	❍	❍	❍	❍	❍	❍	❍
Facebook (3)	❍	❍	❍	❍	❍	❍	❍
Twitter (4)	❍	❍	❍	❍	❍	❍	❍
YouTube (viewing videos) (5)	❍	❍	❍	❍	❍	❍	❍
YouTube (posting videos (6)	❍	❍	❍	❍	❍	❍	❍
YouTube (posting comments) (7)	❍	❍	❍	❍	❍	❍	❍
YouTube (liking, disliking, forwarding)	❍	❍	❍	❍	❍	❍	❍

(8)							

Q33 Again, thinking about health information in general, how important to you is it to know who created and/or posted the health-related content you find online?

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q34 How important to you is it for the source of the health information you find online to have personal experience with the health issue discussed in the content?

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q35 How important to you is it for the source of the health information you find online to have professional or academic credentials (for example a doctor, nurse, medical researcher, professional licensed therapist)?

- ❍ Not at all Important (1)
- ❍ Very Unimportant (2)
- ❍ Somewhat Unimportant (3)
- ❍ Neither Important nor Unimportant (4)
- ❍ Somewhat Important (5)
- ❍ Very Important (6)
- ❍ Extremely Important (7)

Q36 Please indicate how much you disagree or agree with each statement using a 7-point scale, from Strongly Disagree to Strongly Agree. In general, I would most likely use YouTube for

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Information seeking (12)	❍	❍	❍	❍	❍	❍	❍
Information providing (13)	❍	❍	❍	❍	❍	❍	❍

Being a part of a community of people who share my interests (14)	❍	❍	❍	❍	❍	❍	❍
Seeing what others think about issues I care about (15)	❍	❍	❍	❍	❍	❍	❍
Sharing my thoughts about issues I care about. (16)	❍	❍	❍	❍	❍	❍	❍

Q37 If I were to use YouTube for mental health communication in the future, I would post videos on YouTube about mental health issues to

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Help others who might benefit from my story (1)	❍	❍	❍	❍	❍	❍	❍
Raise Awareness or correct misinformation about mental health issues. (2)	❍	❍	❍	❍	❍	❍	❍
Add knowledge or information to the conversation. (3)	❍	❍	❍	❍	❍	❍	❍
Change the way people	❍	❍	❍	❍	❍	❍	❍

think about or talk about mental health issues. (4)							

Q38 If I were to use YouTube for mental health communication in the future, I would post comments in response to mental health related videos on YouTube to

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Help others who might benefit from my story (1)	❍	❍	❍	❍	❍	❍	❍
Raise Awareness or correct misinformation about mental health information (2)	❍	❍	❍	❍	❍	❍	❍

Add knowledge or information to the conversation (3)	❍	❍	❍	❍	❍	❍	❍
Change the way people think about or talk about mental health issues. (4)	❍	❍	❍	❍	❍	❍	❍

Q39 If I were to use YouTube for mental health communication in the future, I would read comments posted by other users about mental health videos to

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Learn from the experience of others (1)	❍	❍	❍	❍	❍	❍	❍

See if I want to contribute to the conversation (2)	❍	❍	❍	❍	❍	❍	❍
Find information about mental health issues (3)	❍	❍	❍	❍	❍	❍	❍
Learn how I can help with mental health issues in the policy arena (4)	❍	❍	❍	❍	❍	❍	❍

Q40 If I were to use YouTube for mental health communication in the future, I would view video content posted by other users about mental health videos to

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)

Learn from the experience of others (1)	❍	❍	❍	❍	❍	❍	❍
See if I wanted to contribute to the conversation (2)	❍	❍	❍	❍	❍	❍	❍
Find information about mental health issues (3)	❍	❍	❍	❍	❍	❍	❍
Learn how I can help with mental health issues in the policy arena. (4)	❍	❍	❍	❍	❍	❍	❍

Q41 I would NOT post videos or comments about mental health issues on YouTube because

	Strongly Disagre	Disagree (2)	Somewhat Disagree	Neither Agree	Somewhat Agree (5)	Agree (6)	Strongly Agree

	e (1)		(3)	nor Disagree (4)			(7)
I am concerned about privacy (1)	❍	❍	❍	❍	❍	❍	❍
I am concerned about stigma (2)	❍	❍	❍	❍	❍	❍	❍
I don't think posting on YouTube is useful for improving mental health communication (3)	❍	❍	❍	❍	❍	❍	❍
I'm not sure how to post videos or comments. (4)	❍	❍	❍	❍	❍	❍	❍

Q42 I will likely use YouTube in the next six months to

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Get information about mental health issues (1)	❍	❍	❍	❍	❍	❍	❍
Provide information about mental health issues (2)	❍	❍	❍	❍	❍	❍	❍
Get emotional support or advice if I need it (3)	❍	❍	❍	❍	❍	❍	❍
Provide emotional support or advice to others if I can when	❍	❍	❍	❍	❍	❍	❍

someone is in need. (4) Some other use (5)	❍	❍	❍	❍	❍	❍	❍

Q43 This final set of questions is just some basic information about you to help me analyze the data. Remember your answers will never be associated with you and will only be used together with all others' answers to give me a clear understanding of the group who responded to this survey. What is your gender?

- ❍ Male (1)
- ❍ Female (2)
- ❍ Other (3)

Q44 What is your age (in years)?

Q45 What is the highest degree or level of schooling you have completed?

- ❍ No Schooling Completed (1)
- ❍ Grade School (k-8) (2)
- ❍ High School or GED (12th grade) (3)
- ❍ Some College (4)
- ❍ Associate's Degree (5)
- ❍ Bachelor's Degree (6)
- ❍ Graduate or Professional Degree (7)

Q46 What is your race?

- ❍ Black or African American (1)
- ❍ White (not Hispanic) (2)
- ❍ Hispanic, Latino or Spanish origin (3)
- ❍ Asian (4)
- ❍ American Indian or Alaska Native (5)
- ❍ Hawaiian or other Pacific Islander (6)
- ❍ Other race not listed here (7)

Q48 Do you think that you or a close friend or family member might be struggling with mental health issues without an official diagnosis?

- ❍ Yes, sometimes I feel that I could have an undiagnosed mental health issue (1)
- ❍ Yes, sometimes I feel that a close friend or family member might have and undiagnosed mental health issue (2)
- ❍ Yes, sometimes I feel that I and a close friend or family member might have an undiagnosed mental health issue (3)
- ❍ No, neither me nor my close friends or family members are struggling with undiagnosed mental health issues now (4)

Q47 Have you or a close friend or family member been diagnosed with a mental illness by a doctor?

- ❍ Yes, I have a mental illness diagnosis (1)
- ❍ Yes, a close friend or family member has a mental illness diagnosis (2)
- ❍ Yes, both I and a close friend or family member have a mental illness diagnosis (3)

❍ No, neither I nor a close friend or family member has a mental illness diagnosis (4)

Q49 I am employed by a government agency that has mental health within its realm of responsibility.

❍ Yes (1)

❍ No (2)

Q50 I work in a mental health profession.

❍ Yes (1)

❍ No (2)

Q51 I am employed by a nonprofit focused on mental health issues.

❍ Yes (1)

❍ No (2)

Q52 I am a mental health advocate but I am not personally affected by mental illness, either in myself or in a close friend or family member.

❍ Yes (1)

❍ No (2)

Q53 I am a member of the National Alliance on Mental Illness (NAMI).

❍ Yes (1)

❍ No (2)

Q54 I have at least one computer that I can use in my home.

- ❍ Yes (1)
- ❍ No (2)

Q55 I have something else I would like to add to the topic of improving mental health communication. (Please use the space below to type your comments.)

Q64 Please write the name of the state where you live now.

APPENDIX D-IRB Approval Letter

December 14, 20/12

Ms. Caroline Foster

Mass Communications and Information Studies

School of Journalism and Mass Communications

Carolina Coliseum

Columbia, SC 29208

Re: Pro00017899 Study Title: *Youtube and the Next Generation of Mental Health Messaging: Exploring the Potential of Interactive Media to Change Communication About Mental Health*

FYI: University of South Carolina Assurance number: FWA 00000404 / IRB Registration number: 00000240

Dear Ms. Foster:

In accordance with 45 CFR 46.101(b)(2), the referenced study received an exemption from Human Research Subject Regulations on 12/12/2012. No further action or Institutional Review Board (IRB) oversight is required, as long as the project remains the same. However, you must inform this office of any changes in procedures involving human subjects. Changes to the current research protocol could result in a reclassification of the study and further review by the IRB.

Because this project was determined to be exempt from further IRB oversight, consent document(s), if applicable, are not stamped with an expiration date.

Research related records should be retained for a minimum of three years after termination of the study.

The Office of Research Compliance is an administrative office that supports the USC Institutional Review Board. If you have questions, please contact Arlene McWhorter at arlenem@sc.edu or (803) 777-7095.

Sincerely,

Lisa M. Johnson IRB Manager

cc: Andrea Tanner

Appendix E- Theoretical constructs and measures for YT Content Analysis and Survey

Theoretical constructs	RQ	Variable Category	Variables	Variable Operationalization
Collected based on published content analyses		General characteristics	Video Title	String: *
			Length	Length: minutes:seconds*
			Time posted	Time: months*
			Category	Ie: How-to and Style, Education, Entertainment, etc*
MH Content on YT	RQ1a, b	MH content	Type	inform/educate, support, persuade
			Format	Lecture, vlog, news, PSA, gen.info, event
			Topic	causes/treatments, laws/policies, personal story, social stigma, impacts on society
			Illness	schizo, bi-polar, depression, eating, anxiety, PTSD, ADHD, anxiety disorder, no specific illness
Expertise	RQ1c	Speaker characteristics	Speaker ID	(MD/Researcher/academic, friend/family of MI person, MH advocate not other, person with MI, reporter)
			Speaker credentials:	MD/researcher/academic, friend/family of person with MI, advocate, person with MI, reporter or anchor
			Professional	Yes/No

		Source/video provider	Experiential	Yes/No
			None	Yes/No
			Affiliation	For profit (not medical inst.), non-profit, medical institution, academic institution
Participation	RQ1b, c	Ways people use YT content	Views*	Count: provided by channel
			Likes/dislikes*	Counts: provided by channel
			Comments*	Count: provided by channel

*provided by YouTube

Theoretical constructs and measures for Survey

Theoretical Construct	RQ/H	Variable Category	Variables	Variable Operationalization
Behavioral intentions toward use of YT for MH communication	RQ2, H1-H15	Intentions	Information seeking Information providing Support seeking Support providing	I Would use…I will likely use YT for MH info seeking/providing and support seeking/providing: 7-pt. Likert scale: strongly disagree-strongly agree
Attitudes toward behavior (participation on YT for MH communication)	RQ3, H1, H2	Behavioral beliefs	Information seeking Support seeking	Using YT for info seeking is…7-point semantic differential: use-less-useful, inefficient-efficient, risky-safe, difficult-easy Using YT for support seeking is… 7-pt. semantic differential: Not-rewarding-

				rewarding, frustrating-satisfying, Troubling-uplifting, not helpful-helpful	
Credibility	H3-H6	Behavioral beliefs	Information seeking Information providing Support seeking Support providing	7-pt. Likert: strongly disagree-strongly agree Check sources, Confidence in nonprof experts Confidence in prof experts	
Stigma/privacy	H7-H10	Behavioral beliefs	Information seeking Information providing Support seeking Support providing	I would not use YT …Risk of stigma as outcome of use… …Risk loss of privacy as outcome of use… 7-pt. Likert: Strongly disagree-strongly agree	
Subjective Norms	RQ4, H11-H12	Normative beliefs: Injunctive beliefs based on referents' opinions Descriptive beliefs based on referents' behaviors	Information seeking Support seeking	People like me agree..Others important to me think I should…mental health care providers approve.. Others who care about MH do… 7-pt. Likert: strongly disagree-strongly agree	
Past behaviors	RQ5, H13-H15	Past behaviors info seeking/providing	Use wiki Use blog Use FB Use Twitter Use YT Viewing videos Use YT reading comments Use YT posting videos Use YT like.dislike		How often… 7-pt. Likert: never-multiple times per day.

		Past behaviors support seeking/providing	Use wiki Use blog Use FB Use Twitter Use YT Viewing videos Use YT reading comments Use YT posting videos Use YT like.dislike	How often… 7-pt. Likert: never-multiple times per day.