TO E- OR NOT TO E-: AN ANALOGUE STUDY OF DISCLOSURE RATES IN E-COUNSELING

DISSESSATION

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By

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Online counseling services are rapidly becoming a common means of therapy. In fact, a panel consisting of 67 psychotherapy experts predicted that online counseling services will be the second fastest increasing service area in the first decade of the 21st century (Norcross, Hedges, & Prochaska, 2002; Stamm, 1998). Despite the rapid emergence of this modality of treatment, however, many counseling psychologists are not involved in the provision of these services (VandenBos & Williams, 2000) or the empirical investigation of the viability of these services. Accordingly, the purpose of the present study was to empirically investigate one aspect of online counseling: whether disclosure rates of participants differ when they are online versus face-to-face. Specifically, the study sought to examine any differences in participants’ disclosure patterns between online and face-to-face conditions to explore how the internet may play a role in willingness to disclose. In addition, to the extent possible, the study attempted to determine whether gender or ethnic differences in response rates would emerge.

A battery consisting of six demographic questions, a social desirability measure, and a set of personal questions was administered to 121 undergraduate students enrolled in an introductory psychology course at a large, Midwestern university. A preliminary study was conducted to determine the “intimacy categories” of the personal questions. Participants had the option of enrolling in either a face-to-face modality or an online
modality. The primary hypotheses were as follows: (1) participants in the online modality will disclose at higher rates than participants in the face-to-face modality, and (2) the gap in disclosure rates between modalities will increase as intimacy ratings of the personal questions increase.

As expected, participants in the online modality disclosed at a higher rate than participants in the face-to-face modality. With regard to the second hypothesis, there was no significant difference between response rates in the online versus the face-to-face setting for low intimacy questions, nor was there a significant difference between response rates for high intimacy questions. The only subset of questions that produced a statistically significant difference in disclosure rates was the set of moderate intimacy questions. Thus, while the trend from low to moderate supported the author’s hypothesis that differences in response rates between the two modalities would increase as the questions became more intimate, this trend appeared to reverse itself when the high intimacy questions were considered. Explanations for the aforementioned findings are offered as are implications for research and practice.
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CHAPTER 1

INTRODUCTION

1.1 Background

It is increasingly common for individuals with a need for psychological counseling to turn to the Internet for psychotherapy (Manahl-Baugus, 2001; Reimer-Reiss, 2000; Suler, 2004). Whether motivated by discomfort with the traditional patient-therapist setting, a desire to avoid the hassle of traveling to an appointment, a debilitating disorder that prevents public travel, or a fear of being seen entering a therapist’s office by an acquaintance, or any other reason, the use of web-based therapy is spreading rapidly (Manhal-Baugus, 2001). As e-therapy continues to grow, it becomes vital for counseling psychologists to examine its virtues and vices so as to arrive at a proper model for dealing with this phenomenon.

The rise of e-counseling raises numerous issues for professionals in the field. For instance, in traditional therapeutic settings, it is highly uncommon for a client in one state to travel to see a therapist in another state. On the Internet, however, it is likely commonplace that a patient on one side of the country would be interacting with a therapist on the opposite coast. Should licensing requirements dictate that therapists be licensed in the state in which they reside, the state in which the patient resides, or both?
Will web-based therapy provide the impetus for a transition away from state licensure toward national mental health licensing? What safeguards must be in place to prevent the defrauding of patients by "therapists" who do not have the education or training they claim to possess? Is the risk of such fraudulent practice in fact any greater on the Internet than in traditional settings? What non-Internet-based options must be made available to patients to account for the possibility of a computer freezing or a web server crashing? Is this concern any greater than the risk that a car will get a flat tire, or a snowstorm would prevent travel to the therapist's office?

Whether the proper model requires advocating the absolute prohibition, the unabashed embracing, or the highly regulated and begrudging acceptance of e-therapy - or anywhere in between - is a question that involves many layers of analysis. This study will seek to address one piece of one layer of this analysis. This layer, however, is integral to the development of this field: The efficacy of e-counseling.

Establishing the effectiveness of e-counseling, of course, is critical to any stance on this issue regarding whether, or how, e-counseling should be endorsed. If research finds that e-therapy is ineffective, then clearly it can be shunned by the profession, and likely prohibited by the state boards of psychology. If e-therapy is demonstrated to be helpful to patients, but less effective than the traditional model, the rationale for e-therapy would likely have to be compelling to garner an endorsement, and perhaps may be applicable only to fairly specific instances. If, however, e-counseling is shown to be as effective as, or more effective than, face-to-face therapy, then it should be recognized as an appropriate counseling tool, unless there are compelling ethical reasons to oppose it. Accordingly, the actual ability of counseling psychologists to effectively treat patients in
web-based relationships is central to the critical question of how counseling psychologists should deal with the existence of e-counseling.

1.2 Objectives of Study

Despite the need for research in the area of web-based counseling services, a dearth of information remains in the literature regarding the effectiveness of this modality of counseling. Accordingly, the purpose of this present study was to examine the difference between disclosure rates of participants in an online modality and participants in a face-to-face modality.

The present study examined the willingness of 121 undergraduate psychology students to answer intimate, personal questions. The study participants, students required to participate in research study for course credit, were divided into two groups, one of which was presented with the questions in a face-to-face setting, and the other of which was presented with the questions in an online format. Before being provided with these questions, a preliminary study was conducted surveying a number of students from the same population in which the students were asked only to review the personal questions to determine the degree of intimacy of each question. On this basis, the fifty personal questions were each assigned an intimacy rating. The primary hypotheses were as follows: (1) participants in the online modality will disclose at higher rates than participants in the face-to-face modality, and (2) disclosure rates will decrease as intimacy ratings of the personal questions increase.

The import of this research is based on the simple premise that a greater willingness to disclose leads to more effective and more efficient treatment of clinical
issues. Therefore, if the hypotheses outlined above are answered in the affirmative, this study would provide empirical support for a specific benefit of web-based counseling.
2.1 Overview

In recent years, following the advent and growth of the Internet, a cottage industry of web-based counselors has blossomed across the World Wide Web. This new trend has been accompanied by significant debate within the field of counseling psychology concerning whether such counseling should be permitted and how it should be regulated.

A review of the extant literature revealed that web-based services are subject to various definitions. According to the National Board for Certified Counselors (NBCC), "WebCounseling" is defined as the practice of professional counseling and information delivery that occurs when clients are in separate or remote locations and utilize electronic means to communicate in a simultaneous (synchronous) or time-delayed (asynchronous) manner over the Internet (Manhal-Baugus, 2001). The literature cites five major methods of conducting e-therapy; (a) e-mail, (b) secure web-based messaging systems, (c) real-time text exchange (chat), (d) videoconferencing, and (e) voice over Internet Protocol (VoIP; Manhal-Baugus, 2001). It should be noted that, for the purpose of the present literature review and study, the terms counselors and therapists will be used
 interchangeably and intend to encompass all professionals that perform psychotherapy, whether they hold a M.A., M.S., Psy.D., or Ph.D.

Recent research indicates that more than 14% of American adults with Internet access seek mental health services and information online (Cook & Doyle, 2002). Although some counselors are hesitant to embrace the idea of expanding their mode of service delivery, others argue that this seemingly inevitable transformation of mental health service delivery demands that psychologists, professional organizations, licensing boards, and legislatures engage in dialogue to establish ethical and legal codes of conduct in order to protect both providers and recipients.

Just as the rate of Internet usage by individuals seeking mental health services is on the rise, so too is the list of practitioners who are incorporating Internet dimensions to their practice. Although accurate estimates of the number of e-therapy sites are difficult to obtain, current evidence suggests that there are several thousand mental health professionals with some web-based dimension to their practice (Bloom & Walz, 2000; Grohol, 1998, as cited in Heinlen et al., 2003). According to Manhal-Baugus (2001), the number of individual counselors and counseling companies who provide counseling solely via the Internet has drastically increased over the years in order to meet the demand for such services by consumers. One researcher noted that, in 1996, there were 12 online mental health sites, and by 2001, there were over 250 websites and over 400 therapists who offered online counseling (Manhal-Baugus, 2001). Furthermore, Alleman (2003) noted that online therapy resources have now exceeded 300 private practice web sites as well as a number of online clinics through which another 500 professional therapists can be contacted.
The potential advantages and disadvantages to e-counseling continue to be vigorously debated and discussed. While proponents of e-therapy agree that an appropriate regard for the potential disadvantages of providing interactive text-based intervention is ethically mandated, they argue that the potential risks should be evaluated within the context of the potential benefits and opportunities afforded by web-based counseling (Manhal-Baugus, 2001).

2.2 Disadvantages of e-Therapy

There are several inherent risks to online counseling. While many of the pros and cons of this modality are fairly obvious, the following section will highlight some of the significant challenges that have been cited in the literature.

2.2.1 Lack of Non-Verbal Communication

One drawback to e-therapy, for instance, is that psychologists are much more limited in the tools of communication at their disposal. Over the Internet, people lose their ability to convey meaning through facial reactions and hand signals, or through voice inflection and volume. Online, everyone speaks in monotone. The restriction on a counselor's ability to assess the client by interpreting the patient's non-verbal conduct may serve as a barrier. In traditional practice, counselors are able to take cues from the fact that their patients are being fidgety or appear embarrassed or refuse to look them in the eye. Over the web, no such judgments can be made. As a result, psychologists have fewer ways to absorb meaning from their clients, and, it is likely, are correspondingly less able to diagnose and treat various psychological disorders (Manhal-Baugus, 2001).

The ability to read visual clues such as voice tone, facial cues, and body language is a hallmark of traditional face-to-face counseling that is forgone when web-based
services are used (Manhal-Baugus, 2001). One of the primary clinical concerns is the possible difficulty, or inability, for therapists and clients to establish a strong therapeutic relationship in the absence of nonverbal cues (Cook & Doyle, 2002).

2.2.2 **Anonymity**

Anonymity of the client may also pose severe ethical and legal issues regarding the treatments of minors and in addressing crisis issues such as suicidal ideation, homicidal intent, and child abuse (Manhal-Baugus, 2001; Riemer-Reiss, 2000). In addition to the anonymity of the client, counselors’ identities may also be concealed, which can create a barrier in confirming counselors’ credentials (Riemer-Reiss, 2000).

Indeed, it seems possible that interaction on the Internet hinders the ability of psychologists to form the intimate bond with patients that is so often necessary to effective treatment. While those who have found their future spouses in online chat rooms may disagree, it seems at least arguable that such bonding is far more difficult over the Internet than in person. That being said, at least one commentator has hypothesized that intimacy develops more rapidly in online text relationships than in face-to-face relationships (Suler, 2000). Suler (2003) notes that parenthetical expressions, which are behaviors or internal thoughts described as “asides” parentheses, in online communications can be as expressive as, or even more expressive than, traditional face-to-face cues. Suler noted in the online article, “Email Communication and Relationships,” that:

> Thoughts and feelings placed in parentheses or brackets are a kind of subvocal muttering to oneself - as if one is thinking outloud, tipping one's hand, allowing the other to peek inside one's head. There's an honest or even vulnerable quality to this parenthetical expression because you're letting the other person in on something that otherwise could be kept hidden. Actions placed in parentheses
indicate body language - an attempt to convey some of the face-to-face cues that are missing in typed text encounters. Options range from a simple standard grin to more complex, personally tailored descriptions. Of course, people have much more conscious control over these parenthetical actions than they do over body language in the in-person world. Sometimes it's an intentional effort to convey some subtle mood or state of mind. In a way, one almost implicitly is saying, "Hey, if there is something hidden or unconscious going on inside me, this is what it probably is!" (Suler, 2004, pg. 9)

2.2.3 Confidentiality

Potential lack of client confidentiality is another concern cited against e-counseling (Riemer-Reiss, 2001), and e-therapy creates new issues regarding how confidentiality is to be maintained. Electronic records create the potential for broader accessibility than paper records as they can be intercepted during delivery, examined while on the mail server, or accessed directly by anyone with access to the database or online network (Rosik, 2001). To minimize breaches in confidentiality, counselors are encouraged to offer increasing levels of security on their websites for protection (Manhal-Baugus, 2001) and to adopt and utilize encryption techniques (Riemer-Reiss, 2000).

2.2.4 Technical Difficulties

Technical difficulties that can occur with electronic communication are yet another challenge that needs to be taken into consideration (Riemer-Reiss, 2000). Heinlen et al. (2003) surveyed 136 web sites offering counseling and found a widespread inattention to, or misunderstanding of, the technical limitations of Internet communication. Counselors are encouraged to make preemptive arrangements for alternate plans of service delivery in the event of technical failures, as this could cause potential misunderstandings between client and counselor that could interfere with the therapeutic alliance.
2.2.5 Licensure

Licensure is another issue complicated by the trans-boundary nature of WebCounseling. Although licensing laws determine the state in which a therapist can legally practice psychotherapy, they do not address the issue of e-therapy (Manhal-Baugus, 2001) and such laws become questionable when practicing over the Internet across state and national boundaries. Although navigating the uncertainties surrounding jurisdiction issues seems to be a daunting task, therapists are encouraged to limit legal and ethical constraints on the services they provide by either contacting their state licensing board to determine the formal position of the state or holding a professional license in the state or jurisdiction in which the client resides (Riemer-Reiss, 2000). Alternatively, therapists can follow the example set forth by the California Telemedicine Act, which mandates that mental health services provided online to a resident of California can be administered only by a clinical psychologist or medical doctor licensed in that state (Manhal-Baugus, 2001).

2.2.6 Clinical Competence

The issue of competence in providing web-based mental health services presents additional challenges to this treatment modality. The rapid advancements in the technology underlying web-based services have also surpassed implementation of training and continuing education in providing treatment over the Internet (Rosik, 2001). This lack of training has raised serious questions regarding the obligation to practice within the boundaries of professional competence and “do not harm” (APA ethical standards 1.04 and 1.14). Until standards for determining competence to practice
WebCounseling are established, therapists who provide electronic services are encouraged to seek out specialized training (Rosik, 2001).

2.3 Advantages of e-Therapy

Despite the potential drawbacks to e-counseling articulated above, a number of potential compelling benefits to e-therapy exist as well.

2.3.1 Accessibility

Many people across the country and globe live in fairly rural settings that prevent easy access to therapists. For individuals who are hours away from the nearest licensed counselor, a trip through cyberspace may be the only journey that is practical. E-therapy's potential to reach individuals who would otherwise be precluded from therapy by their isolated locale is among the most substantial reasons to support web-based counseling in one form or another.

The literature confirms that one of the primary advantages of using web-based services is that they increase access to professional service for people in remote areas, underserved populations, and individuals whose medical or physical conditions make traditional face-to-face contact with a professional difficult (Heinlen et al., 2003; Riemer-Reiss, 2000). The need for alternate pathways for all types of health care can be illustrated by an analysis conducted by APA in the late 1990’s in which the state of Idaho was found to have fewer than 12 psychologists for every 100,000 people, which was less than half of the national average during that time (Benson, 2003). The shortage in this particular state is further exacerbated by low population density and difficult terrain,
which was found to force some residents to drive for hours to reach the nearest medical
or mental health specialist.

2.3.2 Cost-effectiveness

Additionally, e-counseling has the potential to be significantly more cost-effective
than traditional therapy. Historically, therapists have had to run practices that often
involved leasing office space, hiring a receptionist or secretary, decorating walls and
waiting rooms, and paying for office phone lines and computers. The elimination of the
need for such overhead may enable web-based counselors to charge cheaper rates,
thereby making therapy more affordable.

The extant research supports this hypothesis. Reimer-Reiss (2000) reported that
web-based services are often cost-effective. Manhal-Baugus (2001) reported that online
therapists were charging a range of approximately $15-50 for an e-mail response and
$26-65 for a 60-minute chat session. Similarly, Osgood-Haynes (1998) as cited by
Riemer-Reiss (2000), reported that distance technology improves access to effective
psychological treatment at a reasonable cost.

2.3.3 Convenience

Another benefit to e-therapy is the ability to more easily accommodate demanding
work or life schedules that make it difficult to maintain weekly appointments. Web-
based counseling has the potential to be non-contemporaneous. For instance, instead of
meeting face-to-face for an hour each week, counselor and client could write emails to
one another sporadically throughout the week, thus enabling busy patients to find the
time to get treatment.
WebCounseling has been found to be more time efficient than traditional counseling methods (Alimandi, Andrich, & Porquedduu, 1995). Alimandi et al. (1995) stated that the actual counseling process occurred faster at a distance than in person and eliminates the travel time, thus minimizing idle time.

2.3.4 Anonymity and Disorder-Specific Benefits

One of online counseling’s disadvantages also happens to be one of this modality’s advantages. The increased perception of anonymity is one of the most influential factors contributing to the popularity of online counseling and even to the ability to form an alliance with the therapist (Grohol, 1997). Proponents of this modality posit that the perception of anonymity eases the discomfort and potentially embarrassing and stigmatizing disclosure of behaviors and thoughts; in turn, clients are able to discuss deep, personal issues in a therapeutic relationship online more quickly than in face-to-face interactions (Grohol, 1997; Finfgeld, 1999; Manhal-Baugus, 2001).

Online counseling may also serve as a gateway to assist individuals who might not otherwise seek counseling and may increase consumers’ self-confidence as new opportunities are opened for them (Heinlen et al., 2003; Riemer-Reiss, 2000). For example, individuals with chronic mental illness may lack the energy and initiative necessary to travel to mental health agencies (Riemer-Reiss, 2000) and the presence of a specific mental illness, such as panic disorder with agoraphobia, can cause individuals to become totally housebound. Furthermore, individuals who experience social anxiety or prefer the relative anonymity of a relationship via the Internet are able to connect with others in a safe, controlled environment (Cook & Doyle, 2002). Suler (2000) suggests
that people struggling to deal with social anxiety or with issues about shame or guilt may be drawn to online relationships in which they cannot be "seen."

2.3.5 Transcription of Sessions

The ease with which email correspondence can be saved, archived, and retrieved renders sessions between client and counselor readily accessible and can generate a printed version of correspondence in the form of transcripts. Some therapists view the availability of the transcript of the sessions as another benefit of WebCounseling to both the client and the counselor. According to Murphy and Mitchell (1998), clients can re-read the transcripts of sessions and witness progress firsthand and revisit transcripts to see how they may have approached a particular problem if it arises again (Robson & Robson, 2000). Additionally, the ease with which transcripts of sessions are accessible may force counselors to operate at a higher ethical standard knowing that their transcripts of sessions are accessible to clients (Robson & Robson, 2000).

2.4 Efficacy of e-Counseling

The lack of any theoretical models for practice and the absence of a coherent body of research that affirms the efficacy of online counseling also present another challenge to the enthusiastic acceptance of web-based counseling services. To date, most studies on this modality of treatment have focused on client and provider satisfaction with the technology rather than the effectiveness of the technology in delivering services. Examination of the literature reveals that the online counseling field is still in its infancy and that systematic research on the nature, scope, and outcomes of online counseling has been scarce, only yielding a handful of outcome studies in the professional literature.
In a study by Cohen and Kerr (1998), twenty-four undergraduate students were assigned to either one semistructured session of face-to-face (F2F) counseling or one semistructured session of computer-mediated communication (CMC) delivered through synchronous chat by a counseling psychology graduate student. Both modes of treatment were shown to significantly reduce participants’ levels of anxiety, as measured by the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970). While these results indicate initial support for the use of CMC in delivering mental health services, it should be noted that individuals with severe presenting concerns were screened out of this study, and, thus, CMC counseling may not have been as effective as traditional F2F counseling for more severe clients. Additionally, the small sample size may have also limited the ability of the researchers to find significant differences.

Another study by Day and Schneider (2002) sought to control for these limitations and randomly assigned 80 clients to three modes of psychotherapy: F2F, videoconference, and two-way audio. Participants volunteered through numerous media and referral sources and presented with a variety of issues, the most common of which included body image or weight, family relationships, other relationships, and work or school. In addition, the researchers used a wait-list group as a control condition. Prior to treatment, clients in each condition had similar averages on the Global Assessment of Functioning (GAF), with each group averaging a mean GAF of either 69 or 70. Sixteen counseling psychology doctoral students received training in cognitive-behavioral therapy but were also granted the flexibility to reproduce conditions similar to traditional FtF-therapy relationships. Outcomes were measured by the Brief Symptom Inventory (Derogatis & Coons, 1993), GAF, Target Complaints method (Battle et al., 1996; Mintz
& Kiesler, 1982), and modified versions of the Client and Therapist Satisfaction Scales
(Tracey & Dundon, 1998.) Results of a MANOVA that compared the treatment groups
to the control groups on outcome measures demonstrated the effectiveness of treatment
over the control condition (i.e. clients in the treatment groups reported less severe target
complaints and were assessed as having a higher GAF than those in the control condition
after completing five sessions.) Additionally, possible differences among treatment
conditions were explored using a MANOVA on the set of outcome measures and found
no significant differences among the three treatment groups. Instead, the authors stated
that “the similarities among the three treatment groups – face-to-face, video
teleconference, and audio conference – came through more strongly than any differences”

Selmi, Klein, Greist, Sorrell, & Erdman (1990) analyzed the efficacy of distance
counseling by evaluating a computer cognitive-behavioral treatment (CBT) program
given to 36 volunteer patients who met diagnostic criteria for major or minor depressive
disorder. Participants were randomly assigned to a computer-administered CBT
treatment program, a counselor-administered CBT treatment program, or a waiting-list
control condition. Results demonstrated that, after six weeks of treatment, both treatment
groups had improved significantly over the control group in their scores on the Beck
Depression Inventory, SCL-90 (Revised) depression and global scales, Hamilton Rating
Scale for Depression, and Automatic Thoughts Questionnaire. Furthermore, results
demonstrated that the treatment groups did not differ from one another, thus supporting
the notion that the computer treatment program was as effective as the counselor.
A study by King (1994), as cited by Heinlen, et al. (2003), found a positive correlation between compliance with recovery programs and participation in an electronic support group among recovering addicts. Anecdotal evidence about outcomes of WebCounseling has also appeared in two reports of practicing WebCounselors who claimed that they had evidence of the effectiveness of their services from their own research (Heinlen et al., 2003). Similarly, a client who participated in WebCounseling expressed satisfaction with the experience in a published interview (Bloom, 2000, as cited by Heinlen et al., 2003). It is precisely this type of anecdotal testimony that currently litters the literature, and which the present study seeks, in part, to assess empirically.

Collectively, the findings from these studies generally report significant client improvement and provide preliminary evidence that online modes of counseling can be efficacious in reducing clients’ presenting concerns. As a result, the findings of these studies provide the foundation for future research and demonstrate the dire need to determine whether online counseling is an effective treatment modality for counseling psychologists and their clients. This proposed study of disclosure rates over the Internet is one potential piece to that puzzle. Researchers in this area have put forward the hypothesis that online text communication disinhibits people, thereby encouraging them to be more open and honest than in face-to-face settings (Suler, 2000). This study will seek to provide empirical support for this hypothesis. It is hoped that this study will make an important contribution to furthering the debate concerning the efficacy and propriety of e-counseling.
This study does not attempt to answer the broader question of whether e-counseling can be as effective as traditionally therapy, or even whether it can be effective at all, though some of the research noted above indicates that it can be both. The extant research indicating that e-therapy can be highly effective seeks to answer the question of whether e-counseling can be effective, as opposed to why it can be. In addition, to date, authors who discuss the potential benefits and drawbacks of e-counseling have generally done so in the abstract, suggesting that certain benefits may exist without any empirical validation of those assertions. The present study seeks to fill this gap, and empirically assess the validity of one possible reason why e-therapy can be effective, that is, a possible increased willingness to disclose.

2.5 Self Disclosure

2.5.1 Benefits of Disclosure

The mere act of disclosure is a powerful therapeutic agent that may account for a substantial percentage of the variance in the healing process. Confronting and discussing deeply personal issues has been found to promote physical health, subjective well-being, and selective adaptive behaviors (Pennebaker, 1997). For decades, psychologists and laypersons alike have maintained that keeping personal secrets is problematic and stressful, while unburdening oneself of such secrets offers emotional relief and physiological benefits (Kelly, 1999).

In order to account for the effectiveness of disclosure, some researchers have attempted to identify the underlying physiological mechanisms to explain the benefits of disclosure and the consequences of inhibition. One researcher suggested a theory, which served as the springboard for studies examining the benefits of writing, positing that not
talking about important psychological phenomena was a form of inhibition, and that this active inhibition is in fact a form of physiological work (Pennebaker, 1989). Such inhibitory work, which is reflected in autonomic and central nervous system activity, could then be considered a long-term low-level stressor (Selye, 1976). This stress, in turn, has the potential to cause or exacerbate psychosomatic processes, thereby increasing the risk of illness and other stress-related disturbances.

A review of the literature reveals several experimental studies demonstrating that, on average, people who tend to conceal personal information have more physical problems such as headaches, nausea, and back pains, and are more anxious, shy, and depressed than people who do not tend to conceal personal information (Kelley, 1999). For example, a survey of spouses of suicide and accidental death victims revealed fewer health problems among participants who had talked about the loss of their spouses with family and friends than among those who chose not to disclose their thoughts and feelings (Pennebaker & O’Heeron, 1994).

Other research has demonstrated that gay men who tend to conceal their sexual orientation from others are at greater risk for cancers and infectious diseases than those who do not conceal their orientation (Cole, Kemeny, Taylor, & Visscher, 1996; Kelley, 1999). A series of in-the-field and laboratory experiments produced particularly compelling evidence concerning the benefits of disclosure. Speigel, Bloom, Kraemer, and Gottheil (1989) demonstrated that advanced breast cancer patients who were randomly assigned to a group that encouraged them to talk about their emotions survived twice as long as patients assigned to a routine oncological-care group.
In addition to the health benefits of disclosure, Pennebaker (1990; 1997) posited that disclosing traumatic, personal information enables the revealer to gain new insights into the trauma by freeing up the cognitive and emotional resources that were once being expended to actively conceal the trauma and, instead, use this energy for psychological growth. Kelly, Klausas, von Weiss, and Kenny (1999) examined the effects of gaining catharsis with the effects of gaining new insights into one’s troubling secrets and revealed that they key to recovery from troubling secrets is gaining new insights. It appeared that participants who were randomly assigned to write about their secrets, as opposed to participants who were randomly assigned to either write to gain catharsis or write about their previous day, were better able to come to terms with their secrets. These findings substantiate previous writing-about-trauma studies, demonstrating that the increased usage of words associated with insightful and causal thinking leads individuals to experience improved physical health (Pennebaker, Mayne, & Francis, 1997).

2.5.2 Benefits of Writing

During the course of typical e-therapy, clients will be commutating to their counselors in writing. This is important, in part, because, of the aforementioned research that supports the increased health benefits of talking about private traumatic or personal experiences. Additionally, an increasing number of studies have demonstrated that, when individuals write about emotional experiences, significant physical and mental health improvements follow. These include improved immunological functioning, increased antibody response to viruses, and short-term changes in autonomic and muscular activity, and such benefits have been found to be associated with significant drops in physician visits (Kelley, 1999; Pennebaker, 1997). Wright and Chung (2001) noted the benefits of
therapeutic writing for individuals who perceive themselves to be powerless, who are not using their first language in traditional face-to-face therapy, who are silenced by shame or other inhibiting emotions, who need to disclose traumatic or stressful events, and who are at particular stages of life (e.g., adolescents, hospice-care patients) associated with experiencing strong feelings.

Petrie, Booth, Pennebaker, Davison, and Thomas (1995) conducted an experiment in which medical students were randomly assigned to write about either private traumatic events or control topics for four consecutive days and then were vaccinated against hepatitis B. Results demonstrated that the group that wrote about traumatic events had significantly higher antibody levels against hepatitis B at the 4- and 6-month follow-ups than did the control group, thus, lending support for the improved immunological benefits of emotional expression.

Additional research by Lange, van de Ven, Schriken, and Emmelkamp (2001) also demonstrated the therapeutic benefits of writing. Twenty-five undergraduate students who were experiencing symptoms of post-traumatic stress disorder (PTSD) were randomly assigned to either a computer-based treatment group or to a wait-list control condition. The computer-mediated treatment was composed of 45-minute, biweekly writing sessions over a ten week period. One of seven supervised clinical psychology graduate students, who received special training in applying writing assignments in the treatment of PTSD and pathological grief, responded to participants’ writing half-way through the 45-minute session to provide feedback about their progress and instructions about how to proceed. Results indicated that participants in the computer-mediated group showed a greater remittance of post-traumatic stress symptoms than did control
participants, as measured by the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979); the anxiety, depression, somatization, and sleeping problems subscales of the Symptom Checklist-90 (SCL-90; Derogatis, 1977); and the Profile of Mood States (Wald & Mellenbergh, 1990.) It should be noted that participants were college students who received extra credit for their participation, and, as a result, the findings may not be generalizable to general or clinical populations. Additionally, although a six-week follow-up indicated that participants’ symptoms were still stable after the conclusion of treatment, future research should evaluate the effects of online counseling over a longer period of time to determine the long-term effects.

2.5.3 “On Keeping Secrets in Private Places” - What is Not Disclosed in Therapy?

Psychotherapy is a process within which clients have the opportunity, and even the responsibility, to express thoughts and feelings that are not easily articulated elsewhere (Farber & Hall, 2002). Yet, research reveals that clients do not always disclose what they are thinking and feeling in therapy, that is, they “keep secrets in private places” (Suler, 2004).

Several studies have demonstrated that a significant portion of clients conceal some significant information. Approximately two thirds of long-term psychotherapy patients acknowledge leaving something unsaid during sessions, and almost half admit having secrets (Kelly, 1998). Similarly, according to Farber (2003), approximately 50% of therapy patients keep secrets from their therapists. Given that these findings demonstrate that a significant portion of clients conceal some significant information, coupled with the fact that healing process is inextricably related to the contents revealed...
within the therapeutic relationship, it becomes critical to identify those issues that are typically withheld from therapy.

A review of the research on what is not disclosed among clients in therapy revealed scant findings. Yalom (1970) and Norton, Feldman, and Tafoya (1974) found sexual secrets and feelings of either inadequacy or alienation to be the areas most likely withheld among participants in encounter groups. Weiner and Shuman (1984) investigated disclosure in therapy by surveying 121 evening adult education students (median age 24 years) and 79 psychiatric outpatients. The student participants were asked whether they would ever consider seeking help from a psychiatrist, and, if so, whether they would disclose information about certain topics. Psychiatric participants were asked whether they had withheld information from their psychiatrists, and, if so, what the withheld information involved. Overall, results revealed that 42% of participants had either withheld information from their psychiatrist or would withhold information from their psychiatrist in one of eight categories: violent thoughts, violent acts, sexual thoughts, sexual acts, financial issues, possible crimes, drugs or medications taken, and “other” idiosyncratic topics. In addition to illuminating difficult issues to discuss in therapy, results also indicated gender differences, with women more frequently withholding discussion of sexual thoughts and sexual acts and men more often withholding thoughts of violence.

Farber and Hall (2002) conducted a study to investigate what is not disclosed in therapy and revealed similar findings. Participants consisted of 147 current psychotherapy patients (45 male, 102 female) who ranged in age from 17 to 62 with a mean age of 36. Participants were mailed a packet that contained The Working Alliance
Inventory-Short Form, The Test of Self-Conscious Affect, and The Disclosure-to-Therapist Inventory-Revised (DTI-R), the latter of which is an 80-item measure that was specifically developed to assess the extent of patients’ disclosure of a wide range of highly intimate material within therapy. Results revealed that the most difficult issues to discuss and explore in therapy were primarily sexual in nature (e.g., sexual fantasies; fears about sexual performance; sexual experiences; masturbation), and procreative (e.g., feelings about birth control; desire for children; feelings about menstruation.) Additionally, Farber and Hall (2002) did not find a difference in overall disclosure between men and women.

Additional research provided more support for the notion that sexual issues, including sexual fantasies and loss of virginity (Hall & Farber, 2001), and body-oriented experiences (Farber, 2003) are especially difficult to address in therapy. Farber (2003) also found the following items to have the lowest mean disclosure scores: feelings toward or sexual fantasies about therapist, interest in pornographic materials, bathroom habits, and experiences of or feelings about masturbation. Themes of violence and abuse, such as “my experience of beating and raping someone,” and “my experience of sexually abusing my children or children entrusted to my care,” have also been found to be prominent among commonly withheld issues in therapy (Norton, Feldman, & Tafoya, 1974; Weiner & Shuman, 1984).

2.5.4 Reasons for Non-Disclosure

Although disparate circumstances may contribute to client failure to disclose in therapy, this phenomenon has been attributed to conscious inhibition on the part of the client (Farber, 2003). Shame, guilt, fear, and apprehension are frequent affective
accompaniments of failure to disclose in therapy (Farber, 2003; Hill, Thompson, Cogar, & Denman 1993; Kelly, 1998). Additionally, it is believed that the problem with revealing personal, undesirable information is that revealers may come to see themselves in undesirable ways if others know their stigmatizing secrets (Kelly, 1999).

2.5.5 “The Online Disinhibition Effect”

In the article "The Online Disinhibition Effect," Suler (2004) suggests a series of factors that might account for a willingness of individuals to express themselves more openly in online settings, some of which merit mention here. Among others, Suler suggests (1) dissociative anonymity, (2) invisibility, (3) asynchronicity, and (4) dissociative imagination as possible factors accounting for the potential increase in disclosure rates.

Suler defines dissociative anonymity as the awareness that, in online communication, the people you encounter generally cannot tell who you are. When people have the opportunity to separate their actions from their real-world identities, they tend to feel less vulnerable, and are therefore more willing to be open (Suler, 2004). While this particular factor may play a significant role in the general willingness of online communicators to share what they otherwise would not, its applicability to the present study is minimal because the online respondents will in fact be identifiable. Thus, although confidentiality will be assured, the communication cannot be said to be truly anonymous.

Suler refers to invisibility, as one might expect, as the simple fact that the person with whom individuals are communicating cannot see them. "Invisibility gives people the courage to go places and do things they otherwise wouldn't" (Suler, 2004, p. 322).
Furthermore, this invisibility factor cuts both ways - not only can the online patient not be seen by the therapist, the therapist cannot be seen by the online patient. Seeing physical reactions such as frowns, shaking heads, sighs, and looks of boredom can minimize what people are willing to express (Suler, 2004). As applied to the present study, the invisibility factor may be a component of the expected increased disclosure rates of online respondents.

Asynchronicity is a reference to the fact that people are not reacting to one another in real time. According to Suler (2004), not having to deal with someone's immediate reaction can be disinhibiting. Immediate feedback from others tends to have a powerful effect on the continuing flow of how much people reveal about themselves (Suler, 2004). Again, as applied to the present study, the lack of temporal immediacy in the communications with Internet respondents may be a contributing factor to a difference in disclosure rates.

A final factor put forth by Suler that may contribute to decreased inhibition online is dissociative imagination - the feeling that one's online persona exists in a make-believe dimension, separate and apart from the demands and responsibilities of the real world (Suler, 2004). While intriguing, this theory likely has more application to online settings other than e-therapy, where it is likely that the online clients, because they will tend to be confronting deeply personal issues, will be feeling very much like their real selves.

2.5.6 Gender Differences in Disclosure

Research that has examined differences in client disclosure by gender has yielded disparate findings. For example, Hill et al. (1993) conducted a study that specifically examined therapists’ and clients’ reports of their own and each others’ covert processes
in therapy. Twenty-six ongoing therapy clients served as participants and were asked to complete several inventories about their experiences in therapy; one of which was the Things Left Unsaid Inventory that is an open-ended paper and pencil measure in which clients are asked to reveal thoughts or feelings not shared with their therapist and reasons for withholding. Results revealed that 46% of participants had secrets that were often sexual in nature, and the study also indicated that there were no meaningful differences between men and women with regard to disclosure. However, it should be noted that the small sample size in this study greatly reduces the generalizability of the findings.

Along the same lines as the Hill et al. study (1993), Farber and Hall (2003) found that, on an overall basis, men and women disclose to the same extent and share many of the same concerns. An item-comparison of gender differences revealed only three items on an 80-item inventory on which women had significantly higher disclosure scores: (a) desire for children and fear of infertility and/or not finding a mate; (b) nature of sexual experiences; and (c) feelings about menstruation, including premenstrual syndrome. The single item on which men’s disclosure scores significantly exceeded women was interest in pornographic books, magazines, movies, or videos.

Conversely, Jourard’s early work (1971) found that, in general, women disclose more than men and attributed these differences to the inhibition effect of the male sex role in male self-disclosure. In contrast, Weiner and Shuman (1984) found that women disclose less than men. They also noted that women most often withhold discussion of sexual material whereas men are more reluctant to discuss issues related to violence. More recently, a meta-analysis was conducted to determine whether there were sex
differences in self-disclosure across 205 studies and found that women tended to disclose slightly more than men in both same-sex and cross-sex dyads (Dindia & Allen, 1992).

2.5.7 **Ethnic Difference in Disclosure**

A review of the literature makes clear the dearth of research on cultural issues in studies of client disclosure. A study, cited by Farber, conducted over 30 years ago, demonstrated that Black outpatients were less disclosing than White outpatients (Farber, 2003). Other studies have found that highly mistrustful African American clients tend to disclose less to Caucasian therapists than racially similar therapists (Thompson, Worthington, & Atkinson, 1994).

Similarly, just as there is a lack of research exploring overall client disclosure among ethnic minorities, further review of the literature regarding online mental health services reveals a lack of research on ethnic-based online disclosure rates. One study by Fogel, Albert, Schnabel, Ditkoff, and Neugut (2003) investigated the potential psychological benefits of Internet use and how it varied as a function of ethnicity among African American, European American, and Hispanic American breast cancer patients who sought medical information online. Although Fogel et al. (2003) found the use of the Internet for information on breast health issues was associated with greater social support for all of the women with breast cancer, minority women had much greater increases in social support associated with Internet use for breast health issues.

This finding has particular clinical relevance as previous research has demonstrated that emotional support plays an important role in survival rates among breast cancer patients (Reynolds, Hurley, Jackson, Boyd, & Chen, 2000), while other research reveals that African Americans have less perceived social support than European
Americans (Fogel et al., 2003). Furthermore, racial differences exist with regard to survival from breast cancer, with African Americans and Hispanic Americans having lower survival rates than European Americans (Joslyn & West, 2000). Clearly, Internet use for breast health issues may have clinical relevance for improved survival rates among ethnic minority women and future research in this area could illuminate other ways in which ethnic minorities can benefit from online health services. The present study will also attempt to detect differences in disclosure rates based on ethnicity.

2.6 Purpose of Study, Hypotheses, and Research Questions

It is hoped that this study will further the intellectual dialogue surrounding e-counseling. Many therapists are uncomfortable with e-therapy, and while there are likely many legitimate and rational reasons for this discomfort, it may also be the case that such therapists have a tendency to reject e-therapy processes based largely on a visceral reaction to this foreign concept. However, to the degree that individuals in the field resist the endorsement of e-counseling out of inertia rather than reasoned disagreement, such resistance should be discouraged. Accordingly, one desired result of this research is to encourage individuals in the field of counseling psychology to fight the temptation to discredit e-therapy out of intuitive or xenophobic conservatism, and to advocate an assessment of the merits of e-therapy as the scientists that they are and base decisions on empirical evidence.

More specifically, the primary purpose of this study is to evaluate whether non-client individuals in a face-to-face setting, analogous to the setting of traditional counseling sessions, are less inclined to disclose personal information than individuals whose communications take place over the Internet. For the purpose of the present study,
disclosure will be measured by the raw number of questions participants choose to answer. Based on the aforementioned research in support of the disinhibiting effects of the Internet (Suler, 2004), the following are hypotheses of the present study:

Hypothesis 1: It is hypothesized that online participants will disclose at higher rates than face-to-face participants.

Hypothesis 2: It is hypothesized that the difference in disclosure rates between face-to-face and online groups will increase as the questions become more intimate, with online participants choosing to disclose more than face-to-face participants.

Hypothesis 3: It is hypothesized that social desirable responding (SDR) ratings will be either equal across both modalities, in which case they will not skew the response rate data, or, that the SDR rating of the face-to-face participants will be higher. That is, face-to-face participants will demonstrate increased socially desirable responding.

If it is demonstrated that rates of disclosure are higher among online respondents, then it would appear that increased rate of disclosure would be a legitimate argument in favor of e-counseling. This is not to say, of course, that any such finding would demonstrate conclusively that e-therapy is justified, or that members of the field of counseling psychology should be compelled to support web-based counseling. Indeed, there are many more issues - beyond disclosure rates - that would be involved in determining whether the benefits of e-counseling might outweigh the drawbacks. This research will attempt to draw attention to, but not answer, this broader question. Rather,
strong evidence that disclosure rates are higher over the Internet would simply support one possible benefit of web therapy.

If, on the other hand, the opposite is true, and rates of disclosure are not demonstrated to be substantially higher during the online interactions, then this particular potential argument in favor of e-therapy would be brought into question. Again, with regard to the broader question, such a finding would not necessarily require the conclusion that e-counseling should be prohibited. It would, however, demonstrate that the "disclosure argument" in favor of e-therapy is not particularly persuasive.

A secondary aim of this study is to investigate the effects of two specific factors, gender and ethnicity, on disclosure rates between face-to-face and online participants. Because the area of web-based counseling is relatively new and a great deal of prior research has not been conducted, the present study will seek to examine whether gender and/or ethnicity impact disclosure rates in either modality.
CHAPTER 3

METHOD

3.1 Participants

Participants were 121 (57 males; 64 females) undergraduate students enrolled in an introductory psychology course at a large Midwestern university. Participation was voluntary in the sense that students could choose from a variety of studies and receive course credit as compensation or write a paper in lieu of study participation. All participants received credit toward their research requirement and were assured of the anonymity of their responses. Participant recruitment solicitations were conducted via a designated web site depicting the location, time, and general nature of the study. Interested participants had the option of signing up for one of two modalities in which to complete the study: online or face-to-face. There were 65 participants in the online modality (24 males; 41 females) and 56 participants in the face-to-face modality (33 males; 23 females). Because REP does not permit investigators to select participants based on gender or ethnicity, the study was not able to maintain equal gender numbers within each modality. Participants attended one of several scheduled individual testing sessions or completed the study online, during which time they read and signed, either in writing or electronically, informed consent forms, and then completed a survey packet containing the measures described below. Each participant completed a questionnaire.

32
packet containing the assessment battery and a demographic questionnaire. A complete summary of all demographic information compiled from the participants are presented in Tables 3.1, 3.2, and 3.3, with the modal participant being between 18 and 22 years of age (n=118), a first-year student (n=78), Caucasian (n= 95), and heterosexual (n=120).

<table>
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<th>Racial/Ethnic Identity</th>
<th>Frequency</th>
<th>Percentage of Sample</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total¹</td>
<td>F2F²</td>
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<td>African/African-American</td>
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</tr>
<tr>
<td>Appalachian</td>
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<td>1</td>
</tr>
<tr>
<td>Multiracial</td>
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<td>1</td>
</tr>
<tr>
<td>Other</td>
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<td>3</td>
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</tbody>
</table>

¹N = 121
²n = 56
³n = 65

Note. F2F = Face-to-face

Table 3.1

Racial/Ethnic Identification of Participants

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<th>Age Range</th>
<th>Frequency</th>
<th>Percentage of Sample</th>
</tr>
</thead>
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<td></td>
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</tr>
<tr>
<td>26-30</td>
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</table>

¹N = 121
²n = 56
³n = 65

Table 3.2

Age Representation of Participants
<table>
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<th>Class Standing</th>
<th>Frequency</th>
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<td>F2F&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>First-Year</td>
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<tr>
<td>Sophomore</td>
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</tr>
<tr>
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<td>8</td>
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<tr>
<td>Senior</td>
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<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 121
<sup>b</sup> n = 56
<sup>c</sup> n = 65

Table 3.3

Class Standing of Participants

3.2 Instruments

The measures that were employed in the present study included the following:
Demographic Questionnaire, The Balanced Inventory of Desirable Responding (BIDR), and a set of 50 personal questions. The measures appeared in a fixed order in each of the modalities to approximate the experience of an intake session by initially completing a demographic and social desirability questionnaire.

3.2.1 Demographic Questionnaire

This questionnaire gathered background information on participants’ age, gender, ethnic identity, class standing, and sexual orientation (see Appendix A).

3.2.2 Balanced Inventory of Desirable Responding

There is an inherent risk in self-report assessment that participants may tailor responses for the purpose of looking good, which has come to be defined as socially
desirable responding (SDR) (Bernreuter, 1933). According to Paulhus (1991), SDR poses a threat to the validity of self-report data. In order to assess and control for SDR in the present investigation, the Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1984) was included in the questionnaire packet. The BIDR is a 40-item self-report inventory that measures an individual's tendency to give socially desirable responses on self-report instruments. A major feature of the BIDR is that it identifies two principal and relatively independent subscales of desirable responding: Self-Deceptive Enhancement (SDE) and Impression Management (IM).

According to Paulhus (1984, 1988), it is often critical to identify which of these two subscales is responsible for a correlation observed between SDR and some other variable. SDE intends to capture the tendency to give honest but inflated self-descriptions reflecting a lack of insight and an unconscious bias toward favorable self-portrayal, whereas IM involves conscious use of inflated self-descriptions, faking, or lying, and is thought to indicate hypersensitivity to situational self-presentation demands (Paulhus & Reid, 1991). Additionally, the IM scale is particularly responsive to demands for impression management and has been found to show the largest increase from private to public conditions (Paulhus, 1984). Based on this finding, the present study used both subscales in order to allow a more precise explanatory theory regarding the anticipated difference in disclosure rates. That is to say, it will be more helpful if the study is able to pinpoint the differences in IM as a narrow basis for the differences in disclosure rates than to attribute these differences to the broader concept of SDR.

Items on the BIDR are stated as propositions, and participants rate their agreement with each statement on a 7-point Likert scale, ranging from not true (1) to very
true (7). Total scores on SDE and IM can range from 0 to 20, with high scores suggestive of exaggeratedly desirable responding. Examples of items include, “I never swear,” and “I have never dropped litter on the street.” The scoring key is balanced to reverse negatively keyed items, with higher scores indicating exaggerated desirable responses. Previous studies have reported alpha coefficients ranging from .69 to .80 for the SDE and from .75 to .86 for the IM scale, with an overall alpha of .83 when all 40 items are summed (Paulhus, 1988).

It was hypothesized that SDR ratings would be either equal across both modalities, in which case they will not skew the response rate data, or, that the SDR rating of the face-to-face participants will be higher. That is, face-to-face participants will demonstrate increased socially desirable responding. If that is the case, then the SDR factor will only serve to underscore the results if the data shows the anticipated higher disclosure rate for online participants. In other words, if face-to-face participants were more likely to lie, they will be more likely to give a false answer to a personal question rather than simply passing. So the effect of this increased propensity to lie will be increased disclosure rates for face-to-face participants, thus, “artificially” narrowing the gap between online disclosure rates and face-to-face disclosure rates.

In addition to assessing the degree to which participants are responding truthfully, the BIDR was also used as a dependent measure. The BIDR data was analyzed to determine whether modality (face-to-face or online) impacts participants’ truthfulness.
3.2.3 **Personal Questions**

A set of fifty “intimate” questions was created. It was hypothesized that participants in this study would occasionally elect to “pass” rather than answer some of these intimate questions (see Appendix B). The types of questions were based on the aforementioned research (Farber, 2003; Hall & Farber, 2001; Norton, Feldman, & Tafoya, 1974; Weiner & Shuman, 1984; Yalom, 1970) that illuminated specific topics that were not disclosed in therapy. In order to emulate a counseling relationship where trust and intimacy develop over time, questions were asked in order of least intimate to most intimate.

3.3 **Preliminary Test**

In order to determine the intimacy level of the questions, a group of 15 first-year undergraduate students was given a list of the personal questions. This group consisted of 8 females (5 Caucasian, 2 African American, and 1 biracial) and 7 males (5 Caucasian, 1 African American, and 1 Asian American). Rather than answering those questions, this group was asked to rank, using a 7-point Likert scale, how intimate each question was. The mean score of each question was then calculated and this “intimacy rating” (IR) was used to categorize the questions according to three intimacy categories; low, medium, and high. Questions with a mean rating of 1.8 to 3.4 were categorized as having a “low IR,” questions with a mean rating from 3.5 to 5.1 were categorized as having a “medium IR,” and questions with a mean rating from 5.2 to 6.8 were categorized as having a “high IR” (see Appendix B). Because the lowest IR was 1.8 and the highest IR was 6.8, the three delineated categories each encompassed a range of 1.6 points. Once the IR for each question was determined, items appeared in the order of least intimate to most intimate.
Additionally, the intimacy rating provided an opportunity to compare disclosure rates for questions of differing levels of intimacy. In other words, disclosure disparities between the two modalities were hypothesized to increase as degrees of intimacy increased. In addition, these participants were also asked to rate the questions for clarity or “readability,” using a 7-point Likert scale. All of the questions received a clarity score of 6 or higher, and, therefore, none of the questions were revised. It should also be noted that no gender differences were found with regard to intimacy ratings of questions.

3.4 Primary Test

The primary analysis was a comparison of the overall rates at which each group was willing to disclose. This was calculated by recording the frequency counts of responses that participants from each modality was willing to answer. Because the purpose of this study was to compare disclosure rates between face-to-face and online participants, the content of their responses was not analyzed. It was anticipated that the vast majority of participants would respond in such a way that the interviewer would be able to accurately assess whether the response was a “pass” or a legitimate response. However, if a participant provided a non-responsive or nonsensical statement, it was counted as a “pass” because the participant was electing not to disclose. Examples of non-responsive or nonsensical statements included, “I don’t know,” “Are you serious?” or participants making a joke. The investigator did not formally record or tally the number of non-responsive or nonsensical questions in either modality but the frequency of such responses was minimal – certainly fewer than five occasions total.
3.5  **Procedures**

Participants were recruited through the Research Experience Program (REP), a component of the general introduction to psychology course. Participants were able to sign up for experiments via the REP website which depicted the location, time, amount of course credit participants would receive, and the general nature of the study. In addition, participants had the option of choosing to sign up for either the face-to-face modality or the online modality.

3.5.1  **Face-to-Face Participant Procedures**

Fifty-six participants (33 males; 23 females) completed the present study in the face-to-face modality. Participants who signed up for the face-to-face modality read a set of instructions on the REP website that depicted the location, time, amount of course credit participants would receive, and the general nature of the study. One 30-minute time slot was allocated per participant. Participants were instructed to report to the main counseling center at the university, to have a seat in a certain section of the waiting area, and to wait to be approached by the experimenter. Shortly after participants arrived, the experimenter greeted them with a pen and clipboard that first contained a document explaining the general purpose of the present study, followed by a consent-for-participation form (see Appendices C and D), then the demographic questionnaire, and lastly the BIDR. Participants were asked to complete the packet of questionnaires in their entirety in the waiting room and were informed that they would be escorted to a separate office to complete the personal set of questions once this initial portion of the study was complete. Completion of the first portion of the study took 10 minutes and participants
were then escorted to a private office within the counseling center to be asked the personal set of questions by the primary investigator of the study. Under normal experimental conditions, participants’ identifying information is generally not linked to their data. However, in order to approximate a counseling session as closely as possible, participants were informed that their identifying information would not be separated from their responses, though they were assured that their identifying information would be kept in confidence.

Prior to being asked for responses, participants were read a set of instructions (see Appendix E) that asked them to imagine that they were seeking counseling and were encouraged to act and respond to questions accordingly. Additionally, participants were told that, in order for the study to be effective, it was critical that they answered truthfully the personal questions to which they chose to respond. However, for every question asked, respondents were informed that they were free to simply pass (with no adverse consequences or questions asked) and would then proceed to the next question. This portion of the experiment was timed by the primary investigator and completion time ranged from 15 – 20 minutes. The variation in completion time among participants was attributed to the number of questions to which participants chose to respond and also to the depth with which they responded to questions.

Upon completion of the set of personal questions, face-to-face participants were provided with a debriefing statement (see Appendix I) that detailed the nature and purpose of the study and provided referral information for student counseling services if desired.
3.5.2 **Online Participant Procedures**

Sixty-five participants (24 males; 41 females) completed the study in the online modality. Participants were informed on the REP website that they would receive an email that contained an Internet link that would direct them to the study and were asked to respond to the same set of questions given to the face-to-face respondents via an online survey, which included the same two measures and set of personal questions. The study was hosted online by *SurveyMonkey*, an Internet survey software company. *SurveyMonkey* provides the URL and server space for the data to be stored temporarily until administration is completed.

Prior to completing the surveys, an informed consent form that explained security limitations of Internet data collection appeared before participants (see Appendices F and G). Participants were also informed that the security of the data would be guaranteed once the researcher had received it. As recommended by Schmidt (1997), a separate consent screen appeared before the participant could access the survey and required participants to indicate that they had read and understood the consent form and agreed to participate in the present study by clicking the “Yes” button before they were permitted to move forward into the questionnaire.

Online data collection can result in erroneous data (Schmidt, 1997). Therefore, several methods of error detection were incorporated to avoid erroneous results. In order to minimize the problem of several people completing the survey several times, e-mail addresses were carefully screened to ensure that the same individual did not submit the survey more than once. Additionally, surveys were screened by examining the date, time, and origin of submission or Internet protocol (IP) address and to enable the
exclusion of any duplicate surveys (Dillon & Worthington, 2003; Granello & Wheaton, 2004; Schmidt, 1997). In order to control for intentional submission of inaccurate information, inattentiveness, and random responding, several items were included as a validity check. For instance, items were placed throughout the survey that instructed the participants to choose a specific response choice (e.g. “Please choose ‘Not True’ for this question.”) Only one participant was excluded from the online data pool as a result of not selecting the proper responses to items imbedded to detect random responding.

The same instructions explaining the scope and general purpose of participation in this study that were read to participants in the face-to-face modality appeared in a typed format adjusted accordingly for online participants (see Appendix H). Online participants were also informed that they could participate in the study from any location, just as an online client could engage in therapy anywhere they choose. The length of time it took for online participants to complete the study was beyond the control of the investigator and was not measured.

The order in which instruments appeared to online participants was the same as for face-to-face participants. Demographic information items appeared first, followed by the social desirability measure, which was then followed by the set of personal questions. Prior to the completion of the set of the BIDR and personal questions, online participants read a script (see Appendix H) that asked them to imagine that they were seeking online counseling and encouraged participants to respond to questions accordingly. Additionally, participants read that, in order for the study to be effective, it was critical that they answer truthfully the personal questions to which they choose to respond. However, for every question asked, respondents were informed that they were free to
simply pass (with no adverse consequences) by typing the word “pass” and then moving on to the next question.

Upon completion of the set of personal questions, online respondents were instructed to email the primary investigator in order to receive credit for their participation. In addition, participants were directed to a detailed debriefing statement that elaborated on the purposes of the study and provided contact information of the primary investigator as well as referral information for counseling services if desired (see Appendix I). Just as with the face-to-face participants, in order to approximate a counseling session as closely as possible, participants’ identifying information was not separated from their responses, though they were assured that their identifying information would be kept in confidence. While it was important that participants were under the impression that their names were associated with their responses, their identifying information was in fact separated upon completion of the study. This procedure was explained to participants in the debriefing information sheet that appeared on the screen upon completion of the study.
CHAPTER 4

RESULTS

4.1 Instrument Correlations and Reliabilities

The interscale correlations for total response scores for the measures administered are displayed in Table 4.1. According to Walsh & Betz (2001), only $r$ values at or above .20 are considered practically significant. As expected, the SDE and IM subscales of the BIDR revealed a significant positively correlation with one another ($r = .28, p < .01$) but neither subscale was shown to be correlated with the set of personal questions ($r = .05, ns$) and ($r = .08, ns$), respectively.

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SDE</td>
<td>-----</td>
<td>.28**</td>
<td>.05</td>
</tr>
<tr>
<td>2. IM</td>
<td>-----</td>
<td></td>
<td>.08</td>
</tr>
<tr>
<td>3. TOTP</td>
<td></td>
<td></td>
<td>-----</td>
</tr>
</tbody>
</table>

*Note. N = 121. SDE = Self Deceptive Enhancement; IM = Impression Management; TOTP = the total number of passes for personal questions. 
**$p < .01$

Table 4.1
Correlations for Subscales of Balanced Inventory of Desirable Responding and Level of Disclosure
Internal consistency reliability was measured for the instruments administered to assess for impression management and level of self-disclosure. These results appear in Table 4.2. Reliability was measured using Cronbach’s alpha, and each instrument was shown to be as psychometrically robust as would be expected based on previous research by Paulhus (1994) validating the BIDR Version 6. As shown in the table, alpha coefficients for the two subscales of the BIDR, as well as the alpha coefficient for the full 40-item instrument, have been reported. Reliabilities greater than .70, indicating 70% consistency in the scores produced by a particular instrument, are considered minimum for research purposes (Walsh & Betz, 2001).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Number of Items</th>
<th>Alpha Coefficient</th>
<th>Prior Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced Inventory of Desirable Responding</td>
<td>40</td>
<td>.78</td>
<td>.81&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Self-Deceptive Enhancement</td>
<td>20</td>
<td>.70</td>
<td>.65-.75&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Impression Management</td>
<td>20</td>
<td>.79</td>
<td>.75-.80&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Personal Questions</td>
<td>50</td>
<td>.84</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<sup>Note. N</sup> ranged from 119 to 121 due to incomplete item response by some participants.<br><sup>a</sup> Alpha levels reported by Paulhus (1994) during the validation of the Balanced Inventory of Desirable Responding <i>Version 6</i>.<br><sup>b</sup> Alpha levels reported by Paulhus (1994) during the validation of the Balanced Inventory of Desirable Responding <i>Version 6</i>.<br><sup>c</sup> Alpha levels reported by Paulhus (1994) during the validation of the Balanced Inventory of Desirable Responding <i>Version 6</i>.

Table 4.2<br><i>Values of Coefficient Alpha Reliability for Balanced Inventory of Desirable Responding and Personal Questions.</i>
4.2 Descriptive Statistics

Means and standard deviations for the examined variables are presented in Table 4.3. It should also be noted that, while ethnicity of participants was initially intended to be examined as an isolated factor in disclosure rates, meaningful comparisons could not be made as a result of insufficient ethnic diversity among the volunteer participants.

Total scores on the SDE and IM subscales of the BIDR can range from 0 to 20 as a result of the one point addition for extreme responses (i.e. 6 or 7), which ensures that high scores are attained only by participants who give exaggeratedly desirable responses (Paulhus, 1984, 1988). The mean score for the SDE subscale of the BIDR for face-to-face participants ($M = 4.64; SD = .60$) was nonsignificantly higher than the mean score for the SDE subscale of the BIDR for online participants ($M = 4.50; SD = .57$). However, independent sample $t$-tests revealed a significant difference for the IM subscale of the BIDR between the face-to-face modality ($M = 3.95; SD = .86$) and the online modality with face-to-face participants ($M = 3.61; SD = .75$) receiving a higher total score for IM, $t(118) = -2.67, p < .05$. This suggests that face-to-face participants consciously overreported desirable behaviors and underreported undesirable behaviors when answering personal questions. Mean and standard deviation comparisons for this difference are illustrated in Table 4.1.

To determine whether males and females within each modality scored differently on the BIDR subscales, the SDE and IM scores were submitted to $t$ tests for independent samples. No significant differences were found between online males’ and females’ scores on the SDE subscale $t(62) = .41, ns$ or the IM subscale, $t(62) = -1.37, ns$, respectively. Additionally, the SDE and IM scores were submitted to $t$ tests for
independent samples to determine if there were gender differences in each modality. A significant difference was found between the scores of face-to-face males and females on the SDE subscale and the IM subscale, with males scoring higher on the SDE subscale \( (M = 4.76; SD = .52) \) than females \( (M = 4.43; SD = .66) \), \( t(53) = 2.15, p < .05 \), and females scoring higher on the IM subscale \( (M = 3.71; SD = .75) \) than males \( (M = 3.45; SD = .74) \), \( t(54) = -2.11, p < .05 \) (see Table 4.3). These results suggest that males in the face-to-face modality were giving honest but unconscious inflated self-descriptions whereas females were consciously inflating their responses more than males.

Participants in the online modality disclosed significantly more than participants in the face-to-face modality (see Table 4.3). Participants in the face-to-face modality \( (M = 2.80; SD = 3.09) \) passed with greater frequency than participants in the online modality \( (M = 1.38; SD = 2.83) \), \( t(119) = -2.64, p < .05 \), at the .05 alpha level (see Figure 4.1). No overall gender differences were found with regard to disclosure, \( t(119) = 1.12, ns. \)
4.3 Analysis of Variance

The analysis of variance (ANOVA) design provided a variety of comparisons not only of the main effects but also of the interaction between effects. Social desirability was not found to have a statistically significant impact on disclosure rates as it accounted for only .9% of the variance, and, therefore, was not parcelled out of the data.

A 2 X 2 ANOVA (modality: face-to-face and online; gender: male and female) was conducted. The results revealed a nonsignificant interaction effect of modality x gender, $F (1,117) = .132, ns$ (see Figure 4.2.) However, the main effect of modality was significant, $F (1,117) = 5.84, p < .05$ (see Table 4.4.), indicating that face-to-face participants passed with greater frequency than online participants. The main effect of gender was not significant, $p > .05$, but, a significant difference was found between females in the face-to-face and online modalities, with females in the face-to-face
modality ($M = 2.74; SD = 2.68$) passing with greater frequency than females in the online modality ($M = 1.20; SD = 2.27$), $t(62) = -2.44, p < .05$ (see Table 4.3). There was no significant difference between males in the online modality and males in the face-to-face modality.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modality (M)</td>
<td>1</td>
<td>51.52</td>
<td>5.84</td>
<td>.02*</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>2.77</td>
<td>.31</td>
<td>.58</td>
</tr>
<tr>
<td>M X G</td>
<td>1</td>
<td>1.12</td>
<td>.13</td>
<td>.72</td>
</tr>
<tr>
<td>Error</td>
<td>117</td>
<td>8.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05.

Table 4.4
Analysis of Variance for the Association between Modality and Number of Passes for Personal Questions
A 2 X 3 ANOVA (modality: face-to-face and online; intimacy category: high, moderate, and low) was conducted to examine the interaction of these variables on the number of passes. Results revealed a significant interaction for modality x intimacy category, $F(2,238) = 6.15, p < .05$ (see Figure 4.2). Further examination of this interaction revealed no significant differences between the low intimacy category or high intimacy category for modality, $t(119) = 1.32, ns$, and $t(119) = -1.69, ns$, respectively. However, a significant simple main effect was found between modalities for the moderate intimacy category with face-to-face participants passing on questions in this category with greater frequency ($M = 1.43; SD = 2.16$) than online participants ($M = .45; SD = 1.32$), $t(119) = -3.06, p < .05$ (see Table 4.5).
A similar analysis was conducted to observe the interaction effects of gender and intimacy category on number of passes. A 2 X 3 ANOVA (gender: male and female; intimacy category: high, moderate, and low) revealed a nonsignificant interaction for gender x intimacy category, $F(1, 119) = 1.45, ns$. Further examination of the main effect for gender revealed no significant differences for number of passes between males of each modality for the three intimacy categories. However, a significant difference was found for the number of passes between females of each modality for the moderate intimacy category, with females in the online modality disclosing more than females in the face-to-face modality, $t(62) = -2.09, p < .05$. Table 4.5 displays the means and standard deviations of modality and gender for each of the intimacy categories. Table 4.6
displays the means and deviations of modality and female participants for questions in the moderate intimacy category.

<table>
<thead>
<tr>
<th>Intimacy Category</th>
<th>F2F</th>
<th>Online</th>
<th>F2F</th>
<th>Online</th>
<th>F2F</th>
<th>Online</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 56 )</td>
<td>( n = 65 )</td>
<td>( n = 56 )</td>
<td>( n = 65 )</td>
<td>( n = 56 )</td>
<td>( n = 65 )</td>
</tr>
<tr>
<td>Low</td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td></td>
<td>.00</td>
<td>.00</td>
<td>.03</td>
<td>.17</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Moderate</td>
<td>1.43</td>
<td>2.16</td>
<td>.45</td>
<td>1.32</td>
<td>1.43</td>
<td>.41</td>
</tr>
<tr>
<td>High</td>
<td>1.38</td>
<td>1.40</td>
<td>.91</td>
<td>1.61</td>
<td>1.30</td>
<td>.70</td>
</tr>
</tbody>
</table>

\( ^a \)Females  
\( ^b \)Males  

Table 4.5

*Mean Number of Passes and Standard Deviations for Personal Questions for Intimacy Categories of Personal Questions for Modality and Gender.*

Independent sample \( t \) tests with Bonferroni’s adjustments were used to analyze the specific type(s) of personal questions that were passed on with the greatest frequency among each of the modalities. Results revealed one question in the moderate intimacy category (i.e., *How can your life be more meaningful?*) and one question in the high intimacy category (i.e., *What is your most embarrassing sexual fantasy?*) were passed on with greater frequency among face-to-face participants than online participants, \( t (119) = -3.22, p < .05 \), and \( t (119) = -6622, p < .05 \), respectively.

52
<table>
<thead>
<tr>
<th>Moderate Intimacy Question</th>
<th>Mode</th>
<th>( M )</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do different members of your family express anger?</td>
<td>f2f</td>
<td>.04</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What types of things make you feel important?</td>
<td>f2f</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What are your feelings about death?</td>
<td>f2f</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>How can your life be more meaningful?</td>
<td>f2f</td>
<td>.17</td>
<td>.39</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td>What types of illegal substances do you use?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td>How would you describe your relationship with your parents?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>How much do you weigh?</td>
<td>f2f</td>
<td>.13</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.02</td>
<td>.16</td>
</tr>
<tr>
<td>What did you get on your ACT and SAT?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What did you say to the last person whom you heard make a racist remark?</td>
<td>f2f</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.02</td>
<td>.16</td>
</tr>
<tr>
<td>On a scale of 1 to 10, 10 the highest, how attractive do you consider yourself?</td>
<td>f2f</td>
<td>.17</td>
<td>.39</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>For whom did you vote or for whom would you have voted in the last election?</td>
<td>f2f</td>
<td>.04</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td>What is your current GPA?</td>
<td>f2f</td>
<td>.04</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What part of your body would you change if you could?</td>
<td>f2f</td>
<td>.04</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What is your worst fear?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.02</td>
<td>.16</td>
</tr>
<tr>
<td>What would someone who is close to you describe as your most annoying habit?</td>
<td>f2f</td>
<td>.17</td>
<td>.39</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.07</td>
<td>.26</td>
</tr>
<tr>
<td>What is your sexual orientation?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>What is your worst habit?</td>
<td>f2f</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.05</td>
<td>.22</td>
</tr>
<tr>
<td>What is more important to you, making a lot of money or donating to charities?</td>
<td>f2f</td>
<td>.09</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>If you could change something about yourself, what would it be?</td>
<td>f2f</td>
<td>.13</td>
<td>.34</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>How intelligent do you consider yourself to be?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>How many times have you asked someone out on a date and been rejected?</td>
<td>f2f</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>How would you describe your spending/saving habits?</td>
<td>f2f</td>
<td>.04</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>online</td>
<td>.00</td>
<td>.00</td>
</tr>
</tbody>
</table>

Table 4.6

*Mean Number of Passes and Standard Deviations for Moderate Intimacy Category of Personal Questions for Female Participants.*
CHAPTER 5

DISCUSSION

5.1 Review of the objectives

The primary aim of this study was to empirically investigate one aspect of online counseling: whether disclosure rates of participants differ when they are online versus face-to-face. Specifically, the study sought to examine any differences in participants’ disclosure patterns between online and face-to-face conditions to explore how the internet may play a role in willingness to disclose. In addition, to the extent possible, the study attempted to determine whether gender or ethnic differences in response rates would emerge.

5.2 Summary of the results

The present study, as noted previously, originally intended to isolate ethnicity as a factor in disclosure rates. However, the sample population that volunteered for the study did not provide sufficient ethnic diversity to permit for any such analyses.

These results support the author’s hypothesis that online participants would disclose at higher rates than face-to-face participants. As noted above, online participants passed on an average of 1.38 questions, whereas the mean face-to-face participant passed on average of 2.80 questions. Thus, this study provides confirmatory support that an
online setting can encourage increased disclosure. Not only did online participants disclose with greater frequency, the result of the BIDR indicate that the online participants also responded with greater veracity, particularly with respect to impression management. Participants in the face-to-face modality scored higher on the IM subscale of the BIDR than participants in the online modality. Higher scores on the IM are thought to indicate hypersensitivity to situational self-presentation demands (Paulhus & Reid, 1991). Additionally, the IM scale is particularly responsive to demands for impression management and has been found to show the largest increase from private to public conditions (Paulhus, 1984). In light of this research about the IM subscale, the findings of the present study are particularly noteworthy given that face-to-face participants were in more of a public setting while online participants remained relatively anonymous. Based on these results, it can be stated that online participants not only disclosed more information, they also did so more honestly.

Disclosure rates between modalities were also compared within categories of intimacy level. Interestingly, there was neither a significant difference between response rates in the online versus the face-to-face setting for low intimacy questions, nor was there a significant difference between response rates for high intimacy questions. The only subset of questions that produced a statistically significant difference in disclosure rates was the set of moderate intimacy questions. Thus, while the trend from low to moderate supported the author’s hypothesis that differences in response rates between the two modalities would increase as the questions became more intimate, this trend appeared to reverse itself when the high intimacy questions were considered.
The potential reasons for this finding are numerous. First, there is, admittedly, a certain arbitrariness to the assignment of intimacy ranking. As noted previously, the highest intimacy ranking any question received was a 6.8, and the lowest ranking was a 1.8. Thus, questions were arbitrarily divided into three categories – low, medium, and high – with three equal ranges encompassing 1.6 points. The categories could have been defined differently, for instance, the 1/3 of questions with the lowest intimacy ranking considered “low,” the 1/3 of questions with the highest intimacy ranking considered, “high,” and the 1/3 of the questions in the middle ranking “moderate.” Perhaps a different manner of categorizing questions could have resulted in different statistical results.

Second, in this study, online participants did in fact respond to more questions than face-to-face participants with regard to high intimacy questions (see Figure 4.2.) This difference, however, was not found to be statistically significant. It is certainly possible, therefore, that the study’s sample size was simply insufficient to reveal the differences within the high intimacy level.

A third possibility is that students in the face-to-face modality had greater difficulty articulating responses to questions that required a level of depth or personal insight. It is important to note that the majority of questions that required such level of depth or had the potential of being difficult to articulate fell into the category of moderate intimacy level. Participants who responded online had the potential benefits of unlimited time to answer, and being able to answer in writing rather than orally. According to theories of student development (Chickering, 1969; Erikson, 1980; Kohlberg, 1971; Perry 1970) many first-year college students have not yet developed the skills necessary to
think abstractly or may have never contemplated existential issues (i.e., death, meaning of life) which could have impacted their ability to answer these types of questions in the immediacy of the moment in which they were asked. As a result, participants may have passed, not out of embarrassment or discomfort, but, instead, because they lacked the ability to think abstractly and the expressive skills necessary to articulate their thoughts, beliefs, or feelings about the topics asked.

Though the present study sought only quantitative differences, it quickly became clear to the primary investigator that a sharp qualitative contrast existed between the depth of the online and face-to-face responses. Many of the questions did not permit any depth to a response; they simply elicited a yes or a no, or a particular number. Other questions, however, required thoughtful and introspective responses, and permitted great detail if the respondent so desired. As to these questions, online participants appeared to give substantially more information and provide much greater depth to their answers. At least on its surface, this phenomenon provides additional support for the theory that the online setting is conducive to broader or greater disclosure. These questions, of course, were not empirically quantified, but, instead, anecdotally assessed for depth.

There are at least two possible explanations for this qualitative difference in the quality of responses to the questions that permitted a formulated response. First, the online participants had more time to ponder the questions, articulate thoughtful responses, and even make changes to their answers. Thus, it is possible that the apparent qualitative difference in responses resulted simply from a greater opportunity to provide significant detail. Second, it may simply be the case that online respondents were more willing to share their feelings in depth. And it may be that this willingness to be more
open and honest in their responses was reflected in the depth and thoughtfulness of their answers. Future research is necessary to empirically determine whether these two explanations contributed to the qualitative differences found between the responses of online and face-to-face participants.

As to gender differences, results indicated that, on an overall basis, men and women disclosed to the same extent, which is consistent with previous research (Farber & Hall, 2003; Hill et al., 1993). However, results of the present study did find differences between females in the different modalities when it came to answering questions in the moderate intimacy category, with females from the face-to-face modality opting to pass with greater frequency than females in the online modality.

It should be noted that some of these questions, of course, may be received differently by participants of different genders. In the preliminary study, intimacy rankings were calculated based on the mean scores provided by all participants. That is, the intimacy rankings provided by females were not separated from the intimacy rankings provided by males. As a result, it was possible that female respondents considered certain questions to be highly intimate and difficult to openly discuss and that the differences between females of the different modalities was based on gender sensitivity to some of the questions (i.e., *How much do you weigh?*, *What part of your body would you change if you could?*). However, it did not appear that this was in fact the case as none of the questions in and of themselves showed a statistically significant difference from one modality to the other. The significant difference was a result of the cumulative impact of differences between questions. Moreover, the individual questions that approached most closely the level of statistical significance, thereby contributing more to the cumulative
significant difference, actually tended not to be questions that one would assume are gender sensitive. For instance, while the question, *On a scale of 1 to 10, with 10 being the highest, how attractive do you consider yourself?*, was one of these questions that “approached” significance, the other such questions consisted of, *What types of things make you feel important?*, *What are your feelings about death?*, *What is more important to you, making a lot of money or donating to charities?*, and *If you could change something about yourself, what would it be?*.

5.3 *Limitations of the study*

The study’s findings should be considered in light of several possible limitations. The most important limitation of the present study is that participants were not real clients and were not in psychological distress at the time of their participation. As such, real clients who are actually seeking counseling may be more likely to disclose personal information sooner in order to experience symptomatic reduction earlier in treatment. Conversely, the very psychological distress that causes real clients to seek counseling could inhibit them from being willing to fully and openly disclose. Future research using actual clients as participants could shed important light on whether the psychological distress of real-life clients alters their disclosure rates in any material way.

Second, future research should come closer to approximating a typical counseling environment. The online and face-to-face settings for this study did not seek to put the participants at ease in any way, and disclosure was neither encouraged nor discouraged. In contrast, in a typical therapeutic setting, the counselor makes great efforts to make the client comfortable and willing to speak openly. A setting more analogous to a counseling
setting may provide more pronounced differences or similarities between face-to-face and online conditions.

Further, the study was limited by the demographics of the participant pool. The sample consisted of mostly first-year college students (64.5%), which limits the generalizability to individuals of other age groups and education levels. Additionally, the sample was 78.5% Caucasian, and different cultural backgrounds may lead to differences in disclosure rates. Until the present findings can be replicated with diverse samples, they should be applied cautiously.

Relatedly, and as previously noted, the investigator was not able to maintain an equal gender balance between modalities as a result of REP regulation. This gender imbalance presents another confound that could potentially be avoided with equal numbers of male and female participants in each modality.

Another limitation to note is that the primary investigator conducted all of the face-to-face questioning of participants. This results in three distinct limitations. First, only one investigator was used. Future studies may wish to enlist the assistance of multiple investigators to eliminate any effects traceable to any single investigator. Second, it was the primary investigator – with full knowledge of the study’s hypotheses – asking the questions. It is possible that the investigator’s knowledge of the study’s aims impacted the manner in which the questions were asked. Future studies may wish to withhold the purpose of the study from face-to-face investigators in order to minimize experimenter bias. Finally, the primary investigator, was a young, Caucasian female. Future studies may wish to utilize multiple investigators of various ages, races, and
genders in order to minimize the impact of the stimulus value associated with these characteristics.

It should also be noted that the instruments appeared in fixed order and participants completed the BIDR prior to answering the personal set of intimate questions. Due to the sensitive and intimate nature of several questions on the BIDR, it is possible that participants may have been primed to answer the set of personal questions in a socially desirable manner. Accordingly, future studies may wish to counterbalance the instruments to minimize this potential confound.

Lastly, the study was nonrandomized in the sense that participants were allowed to choose either the face-to-face or online modality. As such, it may be that participants who selected the online modality were somehow different from those who chose the face-to-face modality. It should be noted, however, that demographic variables demonstrated rather homogeneous groups.

5.4 **Implications for future research**

When it comes to the provision of online services, the future is now. Although not all mental health clinicians will choose to provide online counseling services, it is vital that this emerging modality of mental health services is critically evaluated and empirically examined. Mental health professionals must remain aware of their obligation to remain abreast of the current literature in order to best serve the interests of their clients. As a result of its rapid emergence, additional outcome research that studies the efficacy of online counseling is necessary. While several of the aforementioned studies appear to have demonstrated that online counseling is as effective as traditional face-to-face therapy, the scope of those studies was limited. For example, participants with
severe presenting concerns were screened out of the study conducted by Cohen and Kerr (1998), and participants in the study conducted by Selmi, Klein, Greist, Sorrell, & Erdman (1990) met criteria only for either a minor or major depressive disorder. Although actual clients were used in the study conducted by Day and Schneider (2002), these clients averaged a GAF score of 69 or 70 at the beginning of the study and presented most commonly with issues surrounding body image or weight, family and/or other relationships, and work or school. It may well be the case that online counseling is only appropriate for certain diagnoses or certain presenting concerns, and additional research is needed to determine the type of clients and types of diagnoses that are appropriate and most effectively treated in an online modality.

Though well outside the scope of the present study, as previously mentioned, there appeared to be a clear qualitative difference in the responses to questions that permitted thoughtful answers. This could perhaps be attributed to the research outlined above indicating a general inability among first-year college students to articulate abstract thoughts and emotions. Whether due to having more time to contemplate the questions and formulate detailed responses, or due to an increased willingness to share more intimate thoughts over the anonymity of the Internet, it may be the case that young college students in particular may benefit from any advantages that an online counseling setting provides. A possible avenue of future research would therefore be to assess whether age is a factor in the willingness of clients to increase their disclosure rates within the online setting. More broadly, future research may focus on whether certain populations – based on race, age, gender, sexual orientation, presenting concerns, or any other factor – are more likely to benefit from online counseling than others.
As previously described, disclosure was measured by the number of responses participants chose to answer. Certainly, disclosure could have been measured in a number of ways. For instance, a qualitative analysis of the responses could have been undertaken. Based on the structure of the study, however, wherein approximately half of the participants answered questions in a face-to-face setting, coding responses for a qualitative analysis would have presented substantial logistical problems.

The field of counseling psychology has several goals, but critically important among them is the need to reach out to disenfranchised groups (Pearson, 2003). Several studies have examined how online counseling could benefit clients from populations that underutilize clinical services. For example, several studies have established that, when compared to European American clients, Asian Americans underutilize mental health services (Matsuoka, Breaux, & Ryujin, 1997; S.Sue, Fujino, Hu, Takeuchi, & Zane, 1991), have an increased likelihood of ending therapy before their symptoms remit or their presenting concerns are resolved (O’Sullivan, Peterson, Cox, & Kirkeby, 1989), and are less likely to discuss emotion-laden topics (Tracey, Leong, & Glidden, 1986).

In addition, other populations that have been underserved by traditional mental health services are Latinos and African Americans. Both of these populations are overrepresented among the poor and have high rates of unemployment (D.W. Sue & Sue, 1999), and, as such could benefit from new modes of mental health delivery. However, often times, the reasons, such as joblessness, that members of these populations need services, are the very reasons that may prevent access to such services. Although gaps in accessibility of services present a different type of problem that requires research and thoughtfulness about how such gaps could be ameliorated, little is known about whether
online counseling would be effective in underserved populations to therapy, and counseling psychologists can use their expertise to empirically examine and answer this question.

5.5 **Implications for training and practice**

This study has direct implications for the training of counseling psychologists. Because of the rapid ascent of web-based counseling, it is vital that graduate students are well-informed of nature and scope of this modality. Therefore, it will be important for graduate programs in counseling psychology to incorporate information about web-based counseling, its benefits and its drawbacks, its ethical implications, and the present status of the relevant research. In this way, students will be equipped to make appropriate decisions regarding the use of web-based therapy in their practice and perhaps be motivated to help further the research into this area of the field.

Because of the breadth of web-based therapy and the limited scope of the present study, the actual direct implications of this study in the present day are minimal. As the further research mentioned above develops, however, this modality may be used to conduct assessments, evaluations, and therapy in remote locations and for individuals who might not otherwise be able to seek mental health services (Mallen, Vogel, Rochlen, & Day, 2005). As previously noted, many individuals in need of therapy have chronic mental illnesses, debilitating physical conditions, or a specific mental illness, such as panic disorder with agoraphobia or social anxiety, which make traditional face-to-face contact with a professional difficult. Additionally, many people across the country and globe live in fairly rural settings that prevent easy access to therapists. Furthermore, the stigma that continues to be associated with mental health services creates a barrier
between the individual and the therapist and online counseling could serve to lessen this barrier. As such, counseling psychologists may be able to extend their expertise and services to individuals they could not otherwise reach due to either real or perceived barriers. Should future research support the idea that online counseling can be especially effective for certain historically underserved populations, online counseling may become an important tool for practitioners who seek to provide service to such populations.

5.6 Conclusion

Counseling psychologists are in a unique position, not only to extend their services to online modes of treatment, but also to conduct research in this area to determine whether online counseling practices are therapeutically beneficial for clients. These new modes of service delivery may offer counseling psychologists an innovative context for furthering the field’s process-outcome research. However, the technology is far more advanced than the infrastructure and guidelines that are currently in place to regulate online counseling services. As such, it is critical for the field of counseling psychology to continue to assess the efficacy of online counseling, as well as the ethical issues that accompany it. From banking to shopping to reading the daily paper, there has been a seismic shift in recent years toward engaging online in what has historically been done in other ways. As a field, counseling psychology should engage in the open-minded research necessary to define the future practice of online counseling and maximize its utility. The emergence of online counseling is inevitable. It is far better for the process to occur with our input than without it.
APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE
1. What is your gender?
   ___ Male
   ___ Female

2. What year of school are you in?
   ___ First-year
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Other

3. Please select your age group:
   ___ 18 – 22
   ___ 23 – 25
   ___ 26 – 30
   ___ 30+

4. What is your race/ethnicity?
   ___ African American / Black / African Origin
   ___ Caucasian / White
   ___ Asian/Pacific Islander
   ___ Hispanic/Latino
   ___ Native American
   ___ Multiracial
   ___ Other (Specify: ___________)

5. What is your sexual orientation?
   ___ Gay
   ___ Lesbian
   ___ Bisexual
   ___ Heterosexual
   ___ Transgendered
   ___ Other (Specify: ___________)
APPENDIX B

PERSONAL QUESTIONS
1. How often do you exercise?

2. Do you feel safe where you live?

3. How many alcoholic beverages do you consume during a week?

4. On average, how many alcoholic drinks do you have per day?

5. What is your current GPA?

6. How would you describe your spending/saving habits?

7. How do different members of your family express anger?

8. What types of things make you feel important?

9. What did you say to the last person whom you heard make a racist remark?

10. For whom did you vote or for whom would you have voted in the most recent Presidential election?

11. What did you get on your ACT and SAT?

12. What is more important to you, making a lot of money or donating to charities?

13. How intelligent do you consider yourself to be?

14. What would someone who is close to you describe as your most annoying habit?

15. What is your worst habit?

16. How would you describe your relationship with your parents?

17. How much do you weigh?

18. On a scale of 1 to 10, 10 being the highest, how attractive do you consider yourself?

19. How can your life be more meaningful?

20. What is your worst fear?

21. If you could change something about yourself, what would it be?

22. What part of your body would you change if you could?
23. How many times have you asked someone out on a date and been rejected?
24. What types of illegal substances do you use?
25. What are your feelings about death?
26. What is your sexual orientation?
27. Have you ever been arrested?
28. When was the last time that you cheated on an exam?
29. Have you ever been cheated on?
30. How much debt have you accrued?
31. In general, what types of experiences have been particularly painful for you?
32. What type(s) of medication do you currently take?
33. Have you ever been pregnant (if a female) or impregnated a female (if a male)?
34. How often do you use illegal drugs?
35. Have you ever been to counseling?
36. When was the last time that you stole something?
37. How regular are your bowel movements?
38. Have you ever suffered from an eating disorder?
39. When was the last time that you watched a pornographic movie?
40. When was the last time that you had unprotected sex?
41. At what age did you lose your virginity?
42. Have you ever cheated on your current or most recent boyfriend/girlfriend?
43. How often have you engaged in self-injurious behaviors (e.g., cutting, burning)?
44. How many sexual partners have you had?
45. Have you ever engaged in sexual activity with someone of the same gender?
46. How often do you masturbate?

47. How many times have you been treated for a sexually transmitted disease?

48. What is your most embarrassing sexual fantasy?

49. How often have you contemplated suicide?

50. Have you ever been sexually or physically abused?

*Note:* The first tier of questions comprises the low intimacy questions that ranged from 1.8 – 3.4; the second tier of questions comprises the moderate intimacy questions that ranged from 3.5 – 5.1; the third tier of questions comprises the high intimacy questions that ranged from 5.2 – 6.8.
APPENDIX C

CONSENT FOR FACE-TO-FACE PARTICIPATION
The Ohio State University Consent to Participation in Research

Protocol title: To e- or not to e-: An analogue study of a potential benefit of e-counseling.

Protocol number: 2006B0090

Principal Investigator: Dr. Pamela Highlen

I consent to my participation in research being conducted by Courtney Camillus and Pamela Highlen of The Ohio State University.

The investigators have explained the purpose of the study, the procedures that will be followed, and the amount of time it will take. The researchers have also explained the possible risks (e.g., potential invasion of privacy) and benefits (e.g., valuable information regarding delivery of mental health services) of my participation. I am also aware of the sensitive and personal nature of some of the questions and understand that I am not obligated to answer any questions that I do not wish to answer, and there will be no adverse consequences if I choose not to answer certain questions.

I have had a chance to ask questions and to obtain answers to my questions. I can contact the investigators at camillus.4@osu.edu; highlen.1@osu.edu at any point with questions/concerns.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form.

For questions about my rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, I may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you agree with the above please proceed with your participation in the study by answering the following surveys.
APPENDIX D

SCRIPT PROVIDED TO FACE-TO-FACE PARTICIPANTS TO READ BEFORE ADMINISTRATION OF INSTRUMENTS
Hello! My name is Courtney Camillus, and I am a graduate student in the Counseling Psychology Ph.D. Program in the Department of Psychology at The Ohio State University. Along with my advisor, Pamela Highlen, Ph.D., I am conducting a research study that relates to your demographic background, personality, and social behaviors. The only requirement for participation is that you are 18 years of age or older.

The general purpose of this study is to better understand how the delivery of mental health services can be improved. By participating and sharing your experiences, you will be contributing invaluable information that will lead to better understanding and promotion of mental health services. It is important to note that some of the following questions may be sensitive and personal in nature. Please try to answer all questions but feel free to simply pass on those which you do not wish to answer. In addition, please provide honest answers to the questions to which you choose to respond.

The series of surveys will take approximately 30-45 minutes to complete. Please follow the instructions on each of the questionnaires and indicate your answers to each question using the data response sheet with which you were provided. If you have any questions during the experiment, please ask me for assistance.

Once you have completed the pencil and paper portion of this study, I will escort you on an individual basis to another room where I will ask you to verbally respond to questions in a face-to-face context. I will provide more instructions about this portion later.

Remember that your participation today is entirely voluntary. If at any point you choose not to continue your participation you are free to leave, and you will still receive class credit.

Please answer all questions as honestly as possible. Please be assured that your identifying information and responses will be kept in confidence. You will receive credit within 48 hours of completion of this study. Additionally, I will give you an informational sheet which will explain the nature and purpose of this study and give you some resources and names if you would like to further pursue matters related to this research or would like more general counseling assistance. Thank you in advance for your participation.

By completing these surveys completely and honestly you will be contributing to much needed knowledge to improve the delivery of mental health services for all individuals. Thank you for your participation!

If you would like further information about this study, please do not hesitate to contact me at camillus.4@osu.edu. You may also contact my advisor Dr. Pamela Highlen at highlen.1@osu.edu.

The methods of this research and the plan for protection of rights of participants have been reviewed and approved by the Office of Responsible Research Practices (http://www.orrp.ohio-state.edu/), which oversees all research activities conducted at The
Ohio State University. This plan received Institutional Review Board approval on (enter date of approval here).

Thank you very much for your time and participation!

Sincerely,

Courtney M. Camillus, M. A.
Doctoral Candidate
Department of Psychology
The Ohio State University
APPENDIX E

INSTRUCTIONS READ TO FACE-TO-FACE PARTICIPANTS PRIOR TO THE SET OF PERSONAL QUESTIONS
I would like you to imagine that you are seeking counseling and that I am your counselor. I would also like you to imagine that this is our first session together and I will be asking you a series of questions in order to collect more information about you. If you do not feel comfortable answering any of the questions, you are free to simply say “pass,” with no adverse consequences, and we will proceed to the next question. However, in order for this study to be effective, it is critical that you answer truthfully the questions which you choose to respond. Do you have any questions at this time? If not, then we will begin.
APPENDIX F

CONSENT FOR ONLINE PARTICIPATION
I consent to my participation in research being conducted by Courtney Camillus and Pamela Highlen of The Ohio State University.

The investigators have explained the purpose of the study, the procedures that will be followed, and the amount of time it will take. The researchers have also explained the possible risks (e.g., confidentiality cannot be guaranteed on-line, potential invasion of privacy) and benefits (e.g., valuable information regarding delivery of mental health services) of my participation. I am also aware of the sensitive and personal nature of some of the questions and understand that I am not obligated to answer any questions that I do not wish to answer, and there will be no adverse consequences if I choose not to answer certain questions.

I have had a chance to ask questions and to obtain answers to my questions. I can contact the investigators at camillus.4@osu.edu; highlen.1@osu.edu at any point with questions/concerns.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Furthermore, I understand that I am free to withdraw consent at any time and to discontinue participation in the study without prejudice to me.

Finally, I acknowledge that I have read and fully understand the consent form.

For questions about my rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, I may contact Ms. Sandra Meadows in the Office of Responsible Research Practices at 1-800-678-6251.

If you agree with the above please indicate your agreement by clicking on the “yes” button in order to continue with the study.
APPENDIX G

SCRIPT THAT APPEARED TO ONLINE PARTICIPANTS BEFORE COMPLETION OF INSTRUMENTS
Hello! My name is Courtney Camillus, and I am a graduate student in the Counseling Psychology Ph.D. Program in the Department of Psychology at The Ohio State University. Along with my advisor, Pamela Highlen, Ph.D., I am conducting a research study that relates to your demographic background, personality, and social behaviors. The only requirement for participation is that you are 18 years of age or older.

The general purpose of this study is to better understand how the delivery of mental health services can be improved. By participating and sharing your experiences, you will be contributing invaluable information that will lead to better understanding and promotion of mental health services. It is important to note that some of the following questions may be sensitive and personal in nature. Please try to answer all questions but feel free to simply pass on those which you do not wish to answer. In addition, please provide honest answers to the questions to which you choose to respond.

If you choose to participate in this study, please click on the next button to proceed with the survey once you have read this page. The survey will take approximately 30-45 minutes to complete. Due to the nature of Internet research, the security of the survey data during transmission cannot be guaranteed; however, security is guaranteed once the researchers receive the data. Your responses and identifying information will be kept strictly confidential.

***Please try to answer all items in the survey but feel free to type the word “pass” for any that you do not wish to answer. Please answer all items honestly.

By completing this survey completely and honestly you will be contributing to much needed knowledge to improve the delivery of mental health services for all individuals. Thank you for your participation!

If you would like further information about this study, please do not hesitate to contact me at camillus.4@osu.edu. You may also contact my advisor Dr. Pamela Highlen at highlen.1@osu.edu.

The methods of this research and the plan for protection of rights of participants have been reviewed and approved by the Office of Responsible Research Practices (http://www.orrp.ohio-state.edu/), which oversees all research activities conducted at The Ohio State University. This plan received Institutional Review Board approval on (enter date of approval here).

Thank you very much for your time and participation!

Sincerely,

Courtney M. Camillus, M. A.
Doctoral Candidate
Department of Psychology
The Ohio State University
APPENDIX H

INSTRUCTIONS THAT APPEARED TO ONLINE PARTICIPANTS PRIOR TO THE SET OF PERSONAL QUESTIONS
I would like you to imagine that you are seeking counseling services online and that I am your counselor. I would also like you to imagine that this is our first online session together and I will be asking you to respond to a series of questions in order to collect more information about you. If you do not feel comfortable answering any of the questions, you are free to simply type the word “pass,” with no adverse consequences, and simply proceed to the next question. However, in order for this study to be effective, it is critical that you answer truthfully the questions to which you choose to respond. Please proceed to the informed consent form by clicking the “next” button.
APPENDIX I

DEBRIEFING SHEET GIVEN TO PARTICIPANTS
Thank you for your participation in our experiment. We are interested in examining the whether individuals in a face-to-face setting, analogous to the setting of traditional counseling sessions, are less inclined to disclose personal information than individuals whose communications take place online. Two types of modalities were used in this study: face-to-face and online.

The first measure you responded to was a demographic questionnaire that will enable us to make comparisons between genders and among various ethnic groups. The second measure examined the extent to which you responded to questions in a socially desirable manner. Lastly, the set of personal questions was intentionally designed to be intimate in nature, and we thought it likely that a fair number of participants would be unwilling to answer. The responses to these questions themselves were not of import, but, instead, we are interested in the number and type of questions to which participants were unwilling to answer. The number of “responses” will be used to make comparisons between the face-to-face and the online groups. It is our belief that online participants will be more likely to respond to questions that were more intimate in nature than face-to-face participants due to the disinhibition effect of the Internet.

Although you were asked to provide your identifying information, this information will be separated from your responses once your participation in the study has been credited.

If in the course of this experiment you have developed concerns, you may wish to seek counseling. If you wish to do this, you would be able to find counseling at Counseling and Consultation Services located in the Younkin Success Center on the Fourth Floor, and if needed, may be reached at 292-5766. If you have any other
questions about this study, please contact Courtney Camillus at camillus.4@osu.edu.

Again, thank you for assisting us with this research.
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