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How Modes of Interviewing Affect Self-Disclosure

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Abstract

This study examined how different modes of interviewing affect the self-disclosure of sensitive information in emerging adults. Participants included 61 students ages 18 to 22 years old who attended a Western New York university. Internalizing behaviors such as feelings of depression and anxiety were measured using three questionnaire formats: face-to-face, computer, and paper/pencil. Results showed that participants answered significantly different between the interview modes on 6 of the 21 questions. Those in the computer group were significantly more likely to endorse "No" on questions pertaining to feelings of depression and anxiety. These results suggest that the computer mode may be considered less personable and that face-to-face interviews may elicit more self-disclosure on internalizing behaviors.

Introduction

The study of internalizing behaviors such as feelings of depression and anxiety in emerging adulthood is important. In addition, it is important to study the methods of collecting information about individuals' internal mind states. Research has shown that the type of information disclosed by an individual can depend on the interview format used (e.g. computer format vs. face-to-face). Computer questionnaires are more widely used in the last ten years and research has suggested that they may be useful for eliciting self-disclosure on more sensitive or stigmatizing behaviors because of their high level of privacy (Locke & Gilbert, 1995). Some research has also suggested that face-to-face interviews may be more useful for eliciting self-disclosure on psychological distress because they offer a more personable and facilitating environment (Newman et. al., 2002). However despite these findings, the collective research on alternative methods for interviewing individuals about their behaviors has been varied and results are sometimes inconsistent.

The period of life called emerging adulthood is a relatively recent developmental conceptualization. According to Arnett (2000), emerging adulthood is a theoretically and empirically distinct period of development from the late teens through the twenties, with a focus on ages 18-25. This time period is characterized by frequent changes in life directions in love, education, work, and outlook (Shulman, Blatt, & Feldman, 2006). With these life changes an individual may experience a myriad of feelings and changes in psychological well-being. However there is little research documenting the psychological changes that can take place during this time period with regards to specific internalizing behaviors such as feelings of depression and anxiety.

One of the main goals of this study was to examine how different modes of interviewing affect the self-disclosure of internalizing behaviors in emerging adults. For the purpose of this study, self-disclosure is defined as the presentation of personal information to another or others (Rotenberg, 1995). It encompasses "any information exchange that refers to the self, including personal states, dispositions, events in the past, and plans for the future" (Derlega & Grzelak, 1979). Overall, self-disclosure is the ability to communicate and share intimate feelings with others and is an essential part of an individual's mental health and well-being.

Sensitive information includes sexual risk-behaviors and internalizing feelings of depression and anxiety. Sexual risk-behaviors were examined in a separate study. The purpose of this study is not to diagnose clinical depression or anxiety, even though sadness and worry were assessed. Specifically, depression or sadness includes feelings related to hopelessness, negative thoughts about the future, loneliness, lack of social support, and thoughts about hurting oneself and suicide. Anxiety or worry includes feelings related to stress, panic behaviors, social anxiety, coping skills and trauma.

The purpose of this study was to examine these three modes of interviewing and how they affect self-disclosure in emerging adults, specifically with regards to internalizing behaviors. Based on the research, it is believed that the face-to-face interview mode will have the greatest effect on self-disclosure with regards to internalizing behaviors such as depressive and anxious feelings.

Literature Review

This literature review first examines the theory of emerging adulthood, which is considered a distinct period of development with its own defining characteristics. Secondly, current research on different modes of self-disclosure with regards to internalizing behaviors will be explored. These studies mainly focus on the different formats (e.g. face-to-face, paper/pencil, computer) used to elicit self-disclosure in individuals, and also the nature of self-disclosure itself. Finally, research on measuring feelings of depression and anxiety, or sadness and worry, in emerging adults will also be explored. These studies will be compared in order to determine what modes of interviewing are typically being used to measure depressive and anxious feelings in emerging adults, as well as adolescents.

Emerging Adults

Whereas numerous studies have focused on adolescent and adult development, there has been a lack of research regarding the period of development from adolescence to adulthood, also known as emerging adulthood. According to Arnett (2000), emerging adulthood is proposed as a new conception of development for the period from the late teens through the twenties, with a focus on ages 18-25. He argues that the period of emerging adulthood is neither adolescence nor young adulthood, but that is theoretically and empirically distinct from them both.

Prior to Arnett's theory, Erikson's theory of development was one of the first to mention the possibility of a prolonged period of adolescence "during which the young adult through free role experimentation may find a niche in some section of his society"

(Erikson, 1968, p. 156). Levinson had a similar theory in which development in the late teens though the early thirties (ages 17-33) was called the "novice phase" of development. Levinson (1978) argued that during this process, the young person experiences a considerable amount of change and instability while sorting through various possibilities in love and work in the course of establishing a life structure. Keniston (1971) also had his own theory of youth and believed that the time between adolescence and young adulthood was a period of continued role experimentation.

It is widely agreed upon that the late teens and early 20s are a time of change, uncertainty and exploration. According to Shulman et al. (2006), emerging adulthood is a period characterized by frequent changes in life directions in love, education, work, and outlook. During this time many individuals continue their education, explore career choices, become financially independent, or get married and start their own families. For most young people, the years from the late teens through the twenties are years of profound change and importance, where individuals linger between the dependency of adolescence and enduring the responsibilities of adulthood (Arnett, 2000). Arnett (2000) also argues that during this time the scope of independent exploration of life's possibilities is greater for most people than it will be at any other period of the life course.

With all of the changes that individuals face during this age period, emerging adulthood can be a difficult time. Young people may feel like they are leading "divided lives," experiencing aspects of youth and adult life simultaneously (EGRIS, 2001). Others may feel like they are in limbo, as neither adolescents nor adults, feeling that they are "nowhere" (Bynner, Ferri, & Shepherd, 1997). There is also evidence that the

incidence of a number of risk behaviors increases during this age period (Arnett, 1992; Bachman, Johnston, O'Malley, & Schulenberg, 1996). These risk behaviors may include socially approved thrill seeking such as bungee jumping or motorcycle riding but also reckless behavior like drug or alcohol abuse, unprotected sex, and reckless driving at high speed or while intoxicated (Bradley & Wildman, 2002).

In contrast to the evidence that certain risk behaviors increase during emerging adulthood (Arnett, 1992; Bachman et. al., 1996), there is little research documenting the psychological changes that take place during this time period with regards to internalizing behaviors such as feelings of depression and anxiety. While it is important to study internalizing behaviors in emerging adulthood, which will be discussed later on, it is also equally as important to study the ways in which individuals during this time disclose these feelings in order to enable mental-health professionals who serve this population to better assess and treat their clients.

Modes of Self Disclosure

Self-disclosure is defined as the presentation of personal information (e.g. personal histories, experiences, feelings, thoughts, and attitudes) to another or others (Rotenberg, 1995). It encompasses "any information exchange that refers to the self, including personal states, dispositions, events in the past, and plans for the future" (Derlega & Grzelak, 1979). Self-disclosure is thought to be one of the most fundamental aspects of our lives as social and interpersonal beings (Consedine, Sabag-Cohen, & Krivoshekova, 2007). Research has suggested that self-disclosure also has numerous positive implications for relationships and health (Consedine et al., 2007). Consedine et

al. (2007) found extensive research supporting this theory, such as "disclosure protects the person from intrusive thoughts (Lepore, Ragan, & Jones, 2000), frees up cognitive resources (Klein & Boals, 2001), enables insight (Kelly, 1999), improves immune functioning (Booth, Petrie, & Pennebaker, 1997), contributes to physical health (Greenberg, Wortman, & Stone, 1996), and allows for reorganization and closure (Janoff-Bulman, 1992). Interpersonally, self-disclosure has been related to satisfaction, love, and commitment (Sprecher & Hendrick, 2004), the development of intimate relations (Hatfield & Rapson, 1993), and has been linked to therapeutic improvement (Berg & Wright-Buckley, 1988)".

Overall, self-disclosure is the ability to communicate and share intimate feelings with others and is an essential part of an individual's mental health and well-being. A substantial amount of research (Consedine et al., 2007; Dindia & Allen, 1992; Morrison & Downey, 2000; Rotenberg, 1995; Sprecher & Hendrick, 2004) has been devoted to how individuals self-disclose with regards to gender, ethnicity, age and other descriptive characteristics. While the positive effects of self-disclosure have been widely researched, there still remains a question of what are the most effective methods of getting individuals to disclose about their thoughts and feelings. Research has shown that the type and extent of information disclosed by an individual can greatly depend on the interview format used (e.g. computer format vs. face-to-face).

A few studies have addressed the ways people disclose information through mediated forms, such as telephones, hand-written interviews, and more recently computer-based interviews (e.g. Locke & Gilbert, 1995; Lyneham & Rapee, 2005; Mallen, Day, & Green, 2003; Newman et al., 2002). Online counseling is beginning to

be acknowledged by psychological organizations and professional therapists as a viable means of therapy (Mallen et al., 2003). Technologically advanced methods of interviewing including video-conferencing and computer-assisted checklists are also being researched (Lyneham & Rapee, 2005). With this new technology comes the question of which medium is the best or most useful for gathering information or eliciting self-disclosure from individuals.

Mallen et al. (2003) compared on-line versus face-to-face communication, and also tried to answer common questions about on-line treatment and self-disclosure. Their questions included: whether or not an individual has the same feelings of satisfaction and closeness meeting a new person online or in person; whether or not the amount of self-disclosure is equivalent in the two conditions; whether conflict is perceived differently online and in-person and whether or not individuals judge each other's emotions equally in each condition.

Participants in the Mallen et al. (2003) study included 64 undergraduate students who did not previously know each other. Participants were placed in pairs and randomly assigned to a conversation with a partner in either a face-to-face setting or an Internet chat program. During both the face-to-face and online interactions, each pair instructed on how to interact and get to know one another by talking about any of the provided topics, which were designed to encourage self-disclosure. After the interaction participants rated their experience using several paper/pencil-based questionnaires with a Likert-type response format.

The major findings of this study were that participants in the face-to face condition felt more satisfied with the experience, attained a greater level of closeness or

interconnectedness with their partner, and self-disclosed more often than participants in the online condition (Mallen et al., 2003). In comparison, over time with more interactions, similar ratings were achieved in the online condition. Other results showed that the level of conflict was higher in the online condition, possibly because individuals felt it was easier to disagree when they weren't face to face, and that the online group and face-to-face group were equally capable of judging each other's emotions during conversation.

The general findings of this study suggest that face-to-face interactions may be more useful in eliciting self-disclosure due to the interpersonal connectedness an individual feels when being with another individual. Whereas the overall findings of this study are pertinent in favor of face-to-face interview formats, Mallen et al. (2003) did not specifically address self-disclosure with regards to feelings of depression and anxiety, which are issues likely to be discussed within a counseling setting.

Locke and Gilbert (1995) compared three modes of interview regarding self-disclosure: face-to-face, computer and written questionnaire. The purpose of their study was to assess the amount of self-disclosure, perception of personal sensitivity of inventory items, and (similar to Mallen et al., 2003) type of emotional experience associated with different assessment formats (Locke & Gilbert, 1995). Locke and Gilbert (1995) hypothesized that individuals would disclose higher levels of socially undesirable information about themselves (i.e. higher levels of psychological dysfunction and alcohol consumption) in the computer format.

Participants in the study were 162 college students from an introductory psychology class who were randomly assigned to one of the three formats. The

Minnesota Multiphasic Personality Inventory-Hugo Short Form (MMPI-HSF; Hugo, 1971), and the Drinking Habits Questionnaire (DHQ; Cahalan & Cisin, 1968) were presented to individuals in each format. Those in the computer group were individually administered the questions online, while those in the face-to-face group had the questions read to them individually by an examiner. Participants in the written format were given the questionnaires in a group setting of 10-20 other participants The MMPI-HSF and DHQ were both used as dependant variables to measure self-disclosure.

After the assessment each group was asked to fill out a Research Evaluation Form developed by the authors of the study that used a 5 point Likert scale response format. The REF was used to assess participant's perceptions of the sensitivity of information requested and the type of emotional experience/comfort experienced in responding to each instrument (Locke & Gilbert, 1995). Questions on the REF were specific to the assessment format in which the participant was involved and included questions such as "How comfortable did you feel answering questions given by an interviewer?" (Locke & Gilbert, 1995).

Results of this study provided support for the theory that assessment formats minimizing social contact increase self-disclosure of socially undesirable material (Locke & Gilbert, 1995). The participants in the questionnaire and computer groups were significantly more likely to endorse more pathological and deviant behaviors on the MMPI-HSF compared to those in the interview group. In terms of the Drinking Habits Questionnaire, there was no significant difference found in alcohol consumption endorsed between the three assessment formats.

Locke and Gilbert (1995) concluded that there was support that individuals respond in a more socially desirable direction and self-disclosure is reduced when data is collected in a social context (i.e. in an interview or face-to-face format). However no other significant differences emerged between assessment formats. Locke and Gilbert (1995) propose that individuals may be less willing to self-disclose sensitive information when they are in an environment where they may be judged or be made to feel ashamed of their behaviors by another person.

In contrast, individuals in a face-to-face interview format are more likely to self-disclose psychological distress symptoms because they may see the interview as an opportunity to garner sympathy or social support for their emotional problems (Hill, 1987; Veroff & Veroff, 1980). Therefore, the interview process may serve as a medium for interpersonal connection, motivating respondents to express their true problems (Newman et al., 2002).

. To examine this hypothesis, Newman et al. (2002) compared self-disclosure between computer (audio-CASI) and interview formats, with regards to "stigmatized behaviors", "neutral behaviors", and "psychological distress". In the context of the study, stigmatized behaviors refers to sexual and drug-injecting behaviors, for which embarrassment would be likely and social support unlikely. Psychological distress refers to feelings of sadness and worry, for which embarrassment would be less likely and social support would be more likely (Newman et al., 2002).

Newman et al. (2002) hypothesized that individuals who completed the audio-CASI interview would be more likely to answer positively for questions on stigmatized behaviors. They also hypothesized that there would be no difference between interview

formats for questions pertaining to neutral behaviors, and that face-to-face interviews would elicit more positive responses for questions pertaining to psychological distress. Participants in the Newman et al. (2002) study consisted of 1417 respondents who were interviewed during syringe exchange programs in several different cities. The interview itself contained 90 questions related to drug use, sexual behaviors, and physical and mental health history. Of the 1417 participants, 688 individuals completed the audio-CASI interview and 729 individuals were interviewed face-to-face. Results showed that those in the audio-CASI or computer group significantly reported more stigmatized behaviors and that those in the face-to-face interview significantly reported more psychological distress. The authors concluded that respondents may underreport psychological distress to a computer because the impersonal nature of the computer format is incongruent with the personal nature of questions regarding one's emotional or mental health (Newman et al., 2002). Newman et al., (2002) also concluded that audio-CASI appears to be an important tool for collecting data on socially undesirable behaviors.

The study by Newman et al. (2002) suggests that the level of sensitive information revealed by a respondent is positively related to the level of privacy of the interview. Therefore individuals may be more likely to self-disclose sensitive or stigmatizing information in a computer interview format because of the high level of perceived privacy. Other studies that have compared computer and face-to-face interview modes have found that individuals completing the computer interviews are more likely to disclose more socially undesirable attitudes, facts and behaviors (Newman et al., 2002). These results are similar to the study done by Locke and Gilbert (1995),

who suggest individuals may be less willing to self-disclose sensitive information in an interview format because it is administered in a less private environment and they may be judged or be made to feel ashamed of their behaviors by another person.

Despite these findings it was noted by Newman et al. (2002) that contradictory results have also been reported in other studies between face-to-face, written and computer interview modes, with interview formats eliciting more self-disclosure on stigmatizing behaviors, or with no difference at all being found between interview modes. In terms of face-to-face interactions, self-disclosure can be influenced by other factors such as gender, race, and personality of the discloser or the person being disclosed to (Dindia & Allen, 1992, Morrison & Downey, 2000). Due to inconsistent findings in the research on interview modes, and the subjective nature of self-disclosure, several researchers have suggested that using a multimodal method of interviewing may be the best approach to eliciting self-disclosure (Joiner, Walker, Pettit, Perez, & Cukrowicz, 2005; Mallen et al., 2003).

Measuring the Self-Disclosure of Internalizing Feelings in Emerging Adults

During the last decade there has primarily been an increase in research on internalizing behaviors such as depressive and anxious feelings in children and adolescents. We know that the prevalence rate of a depressive disorder in adolescence can range from 2% to 19% (AACAP, 1998; Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993), and that female adolescents are significantly more likely to develop depression than males, (Hankin et al., 1998; Kovacs, 2001; Lewinsohn, Pettit, Joiner, & Seeley, 2003). Current research suggests that the age of onset of a full-blown depressive

disorder is becoming increasingly younger. Keenan et al. (2004) found that depressive symptoms can be validly measured in girls as young as 5 to 8 years old, and that earlier onset is associated with greater lifetime impairment.

Current research also indicates that anxiety disorders represent one of the most prevalent mental health problems in the United States in both adults (Kessler et al., 1994) and children and adolescents (Lewinsohn et al., 1993). Females are twice as likely to experience an anxiety disorder as males (Lewinsohn, Lewinsohn, Gotlib, Seeley & Allen, 1998). Several studies have suggested that anxiety symptoms may manifest themselves differently depending on developmental differences. (Kashani & Orvaschel, 1990; Weems & Costa, 2005; Westenberg, Siebelink, Warmenhoven, & Treffers, 1999). Weems and Costa (2005) found that Separation Anxiety appeared to be the predominant expression of anxiety in children aged 6-9 years, and that Social Anxiety symptoms and social/performance-related fears were found to be clearly predominant in adolescents age 14-17. Similarly, Westenberg et al. (1999) found that Separation Anxiety is more prevalent in childhood, and that Overanxious Disorder (part of Generalized Anxiety Disorder) is more prevalent in adolescence. These results suggest that developmental differences may play an important role in the assessment of anxiety symptoms in emerging adults.

A growing body of research suggests that, if untreated, many adolescents will continue to struggle with symptoms of depression and anxiety as they make the transition from adolescence to emerging adulthood (Needham, 2004). In addition adolescent depression and anxiety is associated with negative health related outcomes in emerging adulthood, including increased risky health behaviors such as smoking, heavy drinking,

illicit drug use, greater interpersonal difficulties, and truncated educational attainment (Needham, 2004). Depressive and anxious symptoms can look similar and are highly comorbid in adolescents, which can make diagnosis difficult (Lonigan, Carey & Finch, 1994). With these findings it is becoming increasingly important to continue to study how we measure depressive and anxious symptoms from childhood to adulthood in order to recognize the signs early and to prevent maladaptive outcomes later on in life.

Schulenberg, Maggs and O'Malley (2003) suggest that the transition to adulthood, or the period called emerging adulthood, is marked by a series of psychological changes such as increased emotional regulation. However they, along with any of the previously mentioned studies, do not specifically address feelings of depression and anxiety in emerging adults. Whereas there is a large body of research on measuring depressive and anxious symptoms in children, adolescence, and adults (e.g., Ge, Lorenz, Conger, Elder, & Simons, 1994; Hankin et al., 1998), measuring feelings of depression and anxiety in emerging adulthood in community samples have gone largely unaddressed (Merikangas et. al., 2003) with the exception of a handful of studies. (Galambos, Barker, & Krahn, 2006). Within these studies, in addition to studies measuring depressive and anxious symptoms in adolescents, we will focus on what types of interview modes were used and whether or not they were the best ways to collect information on internalizing feelings.

A study by Galambos et al. (2006) sought to understand the intraindividual variability and trajectory of psychological functioning (e.g. depressive symptoms) that accompanies the many changes that occur in emerging adulthood. Galambos et al. (2006) used a school-based community sample (N = 920) to examine trajectories of depressive symptoms, self-esteem, and expressed anger in emerging adulthood (ages 18–

25). Depressive symptoms were measured using the mean of four items from the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). Participants were asked to indicate "how often in the past few months" they "felt depressed," "felt lonely," "talked less than usual," and "felt people were unfriendly" on a scale ranging from 1 (never) to 5 (almost always). These four items represented the domains covered by the CES-D, such as depressed affect, somatic activity, and interpersonal rejection (Galambos et al., 2006). Participants were assessed for depressive symptoms at ages 18, 19, 20, 22 and 25 using the CES-D in the form of a written questionnaire that was mailed out and then returned to researchers by the participants

With respect to depressive symptoms, Galambos et al. (2006) found that psychological functioning generally improved from ages 18-25 in the school-based community sample. Depressive symptoms and expressed anger decreased, whereas self-esteem increased. Galambos et al. (2006) reported that these findings are notable, given the gap in the literature on changes in depressive symptoms from ages 20–24 (Wight, Sepulveda, & Aneshensel, 2004), and the general lack of knowledge about trajectories of change in psychological well-being in single cohorts of emerging adults. Galambos et al. (2006) concluded that although the 20s may be characterized by a prolonged period in which there is a diversity of life choices, this seems to be a time during which young people are coming to grips with themselves and their lives.

Galambos et al. (2006) relied on the use of a written questionnaire to effectively measure depressive symptoms over time in emerging adults. However one limitation of this study is that they used a shortened measure of depressive symptoms. Using the complete CES-D would have allowed them to examine the change in severe levels of

depression over time, as more severe depression may not actually decrease in emerging adulthood (Galambos et al., 2006). While Galambos et al. (2006) were not specifically measuring self-disclosure it would have also been interesting to see if differences in the reporting of depressive symptoms emerged when a different type of assessment format was used, such as a face-to-face interview or computer questionnaire. Additionally, this was a longitudinal study and did not closely reflect how one might measure depressive symptoms in emerging adults within a short-term counseling setting.

With regards to anxiety, Lewinsohn et al. (1998) conducted a study on gender differences in anxiety disorders and anxiety symptoms in adolescences ages 13-17. Lewinsohn et al. (1998) discussed the theory that gender differences in anxiety may be linked to differences in the experiences and social roles of men and women in this culture. Therefore one of the purposes of this study was to explore the effects of a range of psychosocial variables (e.g. environmental stress, impaired social functioning, low self-esteem) on gender differences in anxiety (Lewinsohn et al., 1998). Additionally, Lewinsohn et al. (1998) examined gender differences in age of onset and episode duration in order to determine whether these differences could account for the gender differences in the prevalence of anxiety.

Similar to Galambos et al. (2006), Lewinsohn et al. (1998) conducted a longitudinal study that assessed a large number of adolescents twice over the span of one year. Within the sample participants, 1,079 had never had an anxiety disorder, 95 had recovered from an anxiety disorder, and 47 had a current anxiety disorder. With regards to assessing anxiety, participants were interviewed using two measures. The first measure was based on the presence or absence of a current anxiety disorder, which was

assessed using the DSM-III-R criteria. The second measure was based on the sum of 59 anxiety items from the Schedules for Affective Disorders and Schizophrenia for School Aged Children (K-SADS) that assessed symptoms of agoraphobia, panic, social phobia, simple phobia, and overanxious disorder. The K-SADS was administered by a trained interviewer in a face-to-face format. Psychosocial variables were measured with an extensive battery of questionnaires (Lewinsohn et al., 1998).

Consistent with previous research, Lewinsohn et al. (1998) found that there is a prevalence of anxiety disorders and anxiety symptoms in females during childhood and adolescence. Lewinsohn et al. (1998) also found that gender differences in the psychosocial variables assessed in their study do not account for the gender difference in anxiety symptoms and diagnosis. Therefore, the author's findings did not support their hypothesis that gender differences in vulnerability to anxiety disorders may be explained by differing social roles and experiences, at least in adolescents (Lewinsohn et al., 1998), and that vulnerability to anxiety with regards to gender differences may be more associated with genetic rather than environmental factors. Lewinsohn et al. (1998) noted that a limitation to their study was that the inter-rater reliabilities were not as high as they would have liked, and that as a result future studies should consider using a structured interview designed specifically for anxiety such as The Anxiety Disorder Interview Schedule for Children to increase reliability. Lewinsohn et al. (1998) also only used information from adolescents and did not interview their parents.

Lewinsohn et al. (1998) relied on the use of structured questionnaires given in a face-to-face format. Using this method they were able to measure anxiety symptoms in both males and females and found a prevalence of anxiety symptoms in females, which

suggests that face-to-face interviews are an accurate way to assess anxiety symptoms. This finding is similar to research that suggests that individuals may be more willing to talk about internalizing behaviors because of the personalized nature of the face-to-face format. However Lewinsohn et al. (1998) did not compare other modes of interviewing such as computer or written to see if results would have been different given the different formats of interviewing. Lewinsohn et al. (1998) also did not specifically study the self-disclosure of information on internalizing feelings, and solely examined an adolescent population.

It seems that only a handful of studies have looked at alternative modes of interviewing, such as computers or telephones, to measure internalizing behaviors (Locke & Gilbert, 1995; Lyneham & Rapee, 2005; Mallen et al., 2003; Newman et al., 2002). Lyneham and Rapee (2005) examined the use of a structured telephone interview to assess anxiety disorders in children as opposed to a face-to-face interview. Lyneham and Rapee (2005) administered both the Child and Parent versions of the Anxiety Disorders Interview Schedule for Children for DSM-IV (ADIS-C-IV) over the phone to 73 children and their parents. They found that the level of agreement between telephone and standard administration for diagnosis, individual anxiety disorders, and other disorders was in the good to excellent range. These results suggest that giving a structured interview over the phone is a valid way to differentiate children who have anxiety disorders from those who have no disorder or other disorders.

Telephone interviews have been used in other studies as well. Rohde, Lewinsohn and Seeley (1997) administered a modified version of the Schedule for Affective Disorders and Schizophrenia for School-Age Children over the phone as well as in

person. Agreement between the two methods was good to excellent for anxiety disorders, major depressive disorder, alcohol use disorders, and substance use disorders, which further supports the theory that a phone interview can be a valid way to assess individuals. Telephones and computer interviews have been shown to provide a less resource-demanding alternative to face-to-face assessment.

With the exception of the above mentioned studies, the majority of studies measuring depressive and anxious symptoms seem to focus on using structured interviews or self-report questionnaires in written format such as the CES-D, Children's Depression Inventory or Beck's Depression Inventory. Similarly, self-report questionnaires such as the K-SADS and The Anxiety Disorder Interview Schedule for Children are widely used to assess anxiety symptoms. This is not surprising given the high reliability and validity of these measures with regards to assessing internalizing behaviors. However the question remains whether the written format is the most accurate mode of interviewing for eliciting information on internalizing behaviors from emerging adults.

In terms of the best way to assess internalizing behaviors, Joiner et al. (2005) explored different approaches to conducting evidence-based assessment of depression. Joiner et al. (2005) believed that the assessment of depression is a complex issue due to the ambiguity of the nature of depression (categorical vs. dimensional), the ambiguity of clinician ratings versus self-reports, and when certain approaches should be used over others. According to Joiner et al. (2005), evidence-based assessment of depression should include a myriad of characteristics, including adequate coverage of the symptoms,

adequate coverage of depressed mood and suicidality, and assessment of the atypical and seasonal subtypes of depression.

Through discussion and review of current research and knowledge, Joiner et al. (2005) recommend that the best evidence-based depression assessment in a clinical setting includes structured clinical interviews such as the Structured Clinical Interview for DSM-IV (SCID) and the MINI International Neuropsychiatric Interview. Joiner et al. (2005) also recommend that self-report symptom scales should be used such as and the BDI-II and CES-D. Similar to Mallen et al. (2003), the authors conclude that no one extant procedure is ideal and suggest that the combination of certain interviews and self-report scales, (a multimodal approach), represents the state of the art for evidence-based assessment of depression (Joiner et al., 2005).

While the current research provides relevant information regarding the affect of interview mode on self-disclosure, as well as information on internalizing behaviors such as depressive and anxious feelings, to date no one study attempts to compare all three interview modes (face-to-face, computer, paper/pencil) with regards to feelings of depression and anxiety in the developmental period called emerging adulthood. Therefore the purpose of this study is to examine these three modes of interviewing and how they affect self-disclosure in emerging adults, specifically with regards to internalizing behaviors.

This study seeks to answer the question of what mode of interviewing (paper/pencil survey, face-to-face interview, or computer survey) will have the most effect on self-disclosure in emerging adults answering questions about their feelings of

depression and anxiety. Based on the previously discussed research, the hypothesis is that the face-to-face format will elicit more self-disclosure on internalizing behaviors.

Method

Participants

The participants in this study included 61 students, ages 18 to 22 years old (mean age 19), who attended a Western New York university. The sample of 61 participants included 36 males (59%) and 25 females (41%). According to the statistics of the university, the student population consists of 68% males and 32% females. Therefore this sample is not representative of the population of the university. Ethnicity in the sample was broken down as follows: 80.3% White, 9.8% Hispanic/Latino, 4.9% Asian American, 3.3% African American and 1.6% from other ethnic groups. (See Table 1 for demographics).

Instruments and Materials

The questionnaire (see Appendix A) was developed by the authors of this study and was presented in three different modes: a paper and pencil, a computer-based, and an interview questionnaire delivered by a trained interviewer. Questions on the survey regarding internalizing feelings were adapted from other assessment measures (e.g., the Life Difficulties Questionnaire, the Goldberg Depression Questionnaire, and online anxiety screening measures). The questions for each mode of presentation were identical and were organized into three sections. Section one included demographic information such as age, ethnicity, gender and college of study, as well as descriptive questions regarding extracurricular participation, time spent on the computer, and personality factors.

Section two contained questions pertaining to sexual risk behaviors, which were not analyzed in this study. Section three contained 19 questions regarding feelings

related to depression and anxiety. Section three also contained two questions that assessed the participant's honesty and comfort level for answering questions on feelings related to depression and anxiety. For the first 19 questions the participants were given a choice of three responses: "Yes", "No", or "I choose not to answer". For the final two questions regarding honesty and comfort level, the response format was based on a 5 point Likert scale with the following choices: "Completely dishonest/Completely uncomfortable", "Slightly dishonest/Slightly uncomfortable", "Neither", "Mostly comfortable/Mostly honest", and "Completely comfortable/Completely honest".

The length of time estimated to complete each form of the questionnaire was as follows; the computer and paper/pencil forms of the questionnaire were estimated to take approximately 10 minutes to complete. The interview form of the questionnaire required approximately 15 minutes to complete.

Procedure

Participants were recruited for this study in one of two ways. Flyers (see Appendix B) were posted at several locations on campus and participants were encouraged to email the researchers if they were interested in participating. Each individual who responded to the flyers was randomly assigned to the paper/pencil group, the computer group, or the interview group. A meeting place was then determined and the participant was required to read and sign an information letter and consent form (see Appendix C) before filling out the questionnaire.

In addition, participants were recruited from the dormitories and the campus' student union. The researchers set up a table in both locations and advertised the study

with a flyer or by word of mouth. Interested participants who approached the table were given the information letter and consent form. Those who chose to participate were then randomly administered to one form of the questionnaire. For both recruitment methods the participants were told that their information would be kept confidential. Incentive for participating in the study was a coupon for a free ice cream on campus and was given to each participant after they completed the questionnaire. Due to the sensitive nature of the questions on the questionnaire, each participant was also given an informational hand-out about the campus' counseling center (see Appendix D).

Results

The purpose of this study was to examine whether the difference in interview mode (i.e., Interview, Computer, and Paper/Pencil) affects respondents' answers on questions pertaining to feelings of depression and anxiety. A frequency analysis was conducted in order to examine participant's overall responses compared to the current incidence and prevalence rates on the 19 questions (See Table 2).

For many of the questions, the majority of participants tended to respond that they did not have feelings related to depression or anxiety. For example on the item "I feel hopeful about the future", which addresses feelings of depression, 93.4% of participants reported that that they did feel hopeful about the future. However it was noted that on certain questions the responses were more evenly split. Participants appeared to be more closely divided on certain items that pertained to feelings of depression ("I sometimes feel like a failure and that I let have myself and others down", and "There are days when I feel overwhelmed by sadness or loneliness"). Participant's responses were also closely split on questions pertaining to feelings of anxiety, such as extensive worrying, fears of public speaking, and being uncomfortable in social situations.

Multiple Analyses of Variance

A multivariate analyses of variance (MANOVA) was conducted with group as the independent variable (i.e. Interview, Computer, and Paper/Pencil) and the 19 questions pertaining to feelings of depression and anxiety and the 2 questions regarding honesty and comfort level as the dependent variables. The Hotelling's Trace MANOVA yielded a significant main effect, $T^2 = 1.8$, $p = .041$, indicating that the mode of questionnaire had

a significant effect on how participants responded to the 19 questions regarding feelings of depression and anxiety and the 2 questions pertaining to honesty and comfort level.

Subsequent univariate analyses conducted showed that 6 of the 21 items pertaining to feelings of depression and anxiety were significant. As seen in Table 3, a significant difference was found between how participants responded on; "There are days when I feel overwhelmed by sadness or loneliness". The response of "No' on this item was significantly higher for the computer group, $F(2, 59) = , 4.021$, $p = .023$, when compared to the interview group. In other words, participants in the computer group were significantly more likely than the interview group to endorse that they do not have days when they feel overwhelmed by sadness or loneliness.

Similar results were found on the item "I feel like I am in control of my sad feelings", $F(2, 59) =, 4.904$, $p = .011$. Participants in the computer group were found to be significantly more likely than the interview and paper/pencil groups to endorse that they do feel like they are in control of their sad feelings. On the item "I sometimes feel like I am helpless in changing the way things are in my life and that I have no control over my circumstances and feelings" participants in the computer group were found to be significantly more likely than the interview and paper/pencil groups to endorse that they do not feel like they are helpless in changing the way things are in their lives, $F(2, 59) =, 4.215$, $p = .020$.

Participants in the computer group were found to be significantly more likely than the interview group to endorse "No" on the item "I sometimes have thoughts about hurting myself" $F(2, 59) =, 3.298$, $p = .044$. A significant difference was also found between how participants responded on the item; "I have sometimes thought about how

to kill myself". Those in the computer group were found to be significantly more likely than the paper/pencil group to endorse that they have not thought about how to kill themselves, $F(2, 59) =, 4.129, p = .021$.

Finally, a significant difference was found between how participants in the responded on the item; "How comfortable were you answering the previous questions about your thoughts, feelings, and worries". Participants in the computer and paper/pencil group were found to be significantly more likely than the interview group to endorse that they felt more comfortable answering questions on feelings related to anxiety and depression, $F(2,59) =, 6.211, p = .004$.

Even though the groups were randomly assigned, further analysis of group membership was conducted to determine if the groups were similar with regards to gender representation, age, and computer use, as these are variables that could possibly effect the results. Variables from these questions were recoded in order to assess whether a significant percentage of participants answered the items in a similar manner.

Age was recoded into two groups; participants who were 18 years old and those who were ages 19-22. Chi Square was used to determine if groups differed significantly with regards to age, $x^2 = 15.07, p < 0.05$. Within the interview group, the majority of participants (70%) were 18 years of age whereas 30% of participants were over 18. Similarly within the computer group, the majority of participants (66.7%) in this group were 18, whereas 33.3% were over 18. In contrast, within the paper/pencil group the majority (85%) of participants were over 18, whereas 15% of participants were 18. Overall the paper/pencil group had significantly more participants over the age of 18 when compared to the interview and computer groups.

In terms of gender, within the interview group the majority (60%) of participants were male, whereas 40% of participants were female. Similarly within the paper/pencil group the majority (60%) of participants were male, while 40% of participants were female. Within the computer group, the majority (57.1%) of participants were male, whereas 42.9% of participants in this group were female. Chi Square analysis, $x^2 = 0.046$, $p > 0.05$, determined that there is no significant difference between the groups with regard to gender.

In terms of computer use, the majority (80%) of those in the interview group responded that they spend less than 4 hours a week on the computer, whereas 20% of participants in the computer group responded that they spend more than 5 hours a week on the computer. Of those in the computer group, the majority (57%) responded that they spend 4 hours or less on the computer a week, whereas 43% responded that they spend more than 5 hours. Finally in the paper/pencil group, 35% of participants responded that they spend less than 4 hours a week on the computer, while 65% responded that they spend more than 5 hours. Chi Square analysis, $x^2 = 8.1$, $p<0.5$, determined that the groups were significantly different with the interview group spending less time on the computer.

Discussion

The purpose of this study was to examine three modes of interviewing (face-to-face, computer, paper/pencil) and how they affect self-disclosure in emerging adults, specifically with regards to internalizing behaviors such as depressive and anxious feelings. For many of the questions, the majority of participants tended to respond that they did not have feelings related to depression or anxiety. For example on the item "I feel hopeful about the future", which addresses feelings of depression, 93.4% of participants reported that that they did feel hopeful about the future. Similarly, 77% percent of participants have never thought about hurting or killing themselves. This finding is closely related to a study done by Galambos et al. (2006), whose results suggested that depressive symptoms decrease in emerging adulthood and that this seems to be a time during which young people are coming to grips with themselves and their lives.

It was noted that on certain questions the responses were more evenly split. Participants appeared to be more closely divided on certain items that pertained to feelings of depression ("I sometimes feel like a failure and that I let have myself and others down", and "There are days when I feel overwhelmed by sadness or loneliness"). Participant's responses were also closely split on certain questions pertaining to feelings of anxiety, such as extensive worrying, fears of public speaking, and being uncomfortable in social situations. This finding is consistent with Shulman, Blatt and Feldman's (2006) theory that emerging adulthood is a period characterized by frequent changes in love, education, work and outlook. Emerging adulthood is characterized as a time of change, uncertainty and exploration, and young adults at this time are lingering between the

dependency of adolescence and enduring the responsibilities of adulthood (Arnett, 2000). Many of the participants in this study were in the midst of their first year of college and possibly experiencing life away from home for the first time, which could explain why some responses were more evenly split on questions related to feeling overwhelmed, feeling like a failure, and extensive worrying.

The main goal of this study was to examine which mode of interviewing effects self-disclosure of depressive and anxious feeling in emerging adults. Results showed that a significant difference was found between groups on how participants responded on 6 of the 21 questions pertaining to depressive and anxious feelings. Participants in the computer group were significantly more likely than the interview group to endorse that they do not have days when they feel overwhelmed by sadness or loneliness. Participants in the computer group were also found to be significantly more likely than the interview and paper/pencil groups to endorse that they do feel like they are in control of their sad feelings.

In addition, participants in the computer group were found to be significantly more likely than the interview and paper/pencil groups to endorse that they do not feel like they are helpless in changing the way things are in their lives and that they don't have thoughts about hurting themselves. Overall those in the computer group endorsed "No" on questions pertaining to feelings of depression and anxiety suggesting that they appeared to disclose less with regards to feelings of depression and anxiety. This finding is consistent with Newman et al. (2002) findings that respondents underreport psychological distress to a computer because the impersonal nature of the computer format is incongruent with the personal nature of questions regarding one's emotional or

mental health. The computer group participants in this study may have felt more comfortable answering questions on feelings of depression and anxiety in a face-to-face format.

In comparison, participants in the computer and paper/pencil group were found to be significantly more likely than the interview group to endorse that they felt more comfortable answering questions on feelings related to anxiety and depression. The privacy level of both the computer and paper/pencil formats was high, leading to the conclusion that the participants in the computer and paper/pencil groups likely felt more comfortable even though they disclosed less depressive and anxiety feelings. It is possible that the privacy offered by the computer format created a distancing environment that "allowed" the participants to be less "obligated' to self-disclose their depressive and anxiety feelings.

Limitations and Future Implications

Despite the positive findings there were several limitations to this study. The first was that a relatively small sample size was used (n=61). This limits the ability to make conclusions or to generalize to a larger population of emerging adults. The second limitation of this study was the limited cross-section of participants used. The sample examined in this study contained young adults aged 18 to 22 years old. Although this is an important age group in which to study depressive and anxious feelings, the generalization of the results to adult, adolescent or child samples is unclear.

The third limitation in this study was unequal age distribution across modes. Overall the paper/pencil group had significantly more participants over the age of 18

(85%) when compared to the interview and computer groups, which may have skewed results. Also, those in the face-to-face interview group were found to spend significantly less time on the computer, which may have also skewed results. Finally, the fourth limitation was that the study was designed to use three modes to assess three different groups instead of using three modes to assess the same participant. Results may have been different if one participant had been administered three forms of the same questionnaire.

Overall the hypothesis that the face-to-face interview format would elicit more self-disclosure on internalizing behaviors in emerging adults was not supported. However there was some evidence to support that a computer format may not be the most effective way to get emerging adults to self-disclose on feelings of depression and anxiety. Despite these findings future research is still needed in this area. As mentioned in the literature, a multimodal approach may be the most effective method of eliciting self-disclosure and for measuring internalizing feelings such as depressive and anxious feelings in emerging adults.

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Tables

Table 1

Demographic Characteristics

General Characteristics	n	Percent
Gender		
Male	36	59.0
Female	25	41.0
Age		
18	31	50.8
19	11	18.0
20	11	18.0
21	4	6.6
22	4	6.6
Ethnicity		
Asian American	3	4.9
African American	2	3.3
Hispanic/Latino	6	9.8
White	49	80.3
Other	1	1.6
College of Study		
CAST	7	11.5
College of BUS	1	1.6
CIAS	14	23.0
COLA	5	8.2
COS	1	1.6
Golisano	14	23.0
Gleason	16	26.2
NTID	3	4.9

Table 2

Frequency by Question

Question	n	Percent
Hopeful Future		
Yes	57	93.4
No	4	6.6
I choose not to answer	0	0.0
Activity Interest		
Yes	10	16.4
No	51	83.6
I choose not to answer	0	0.0
Failure		
Yes	25	41.0
No	36	59.0
I choose not to answer	0	0.0
Overwhelmed		
Yes	34	55.7
No	27	44.3
I choose not to answer	0	0.0
Control of Sad Feelings		
Yes	48	78.7
No	13	21.3
I choose not to answer	0	0.0
Helpless Changing		
Yes	15	24.6
No	45	73.8
I choose not to answer	1	1.6
Enjoyed Life		
Yes	55	90.2
No	6	9.8
I choose not to answer	0	0.0
Guilt Feelings		
Yes	16	26.2
No	45	73.8
I choose not to answer	0	0.0
Hurting Self		
Yes	13	21.3
No	47	77.0
I choose not to answer	1	1.6
Kill Myself		
Yes	13	21.3
No	47	77.0
I choose not to answer	1	1.6
People to Talk To		
Yes	54	88.5
No	7	11.5
I choose not to answer	0	0.0
Panic Attack		
Yes	10	16.4
No	51	83.6
I choose not to answer	0	0.0

Worry		
Yes	23	37.7
No	38	62.3
I choose not to answer	0	??
Thoughts and Impulses		
Yes	16	26.2
No	44	72.1
I choose not to answer	1	1.6
Public Speaking		
Yes	38	62.3
No	23	37.7
I choose not to answer	0	0.0
Uncomfortable at Parties		
Yes	22	36.1
No	37	60.7
I choose not to answer	2	3.3
Traumatic Event		
Yes	10	16.4
No	50	82.0
I choose not to answer	1	1.6
Drugs/Alcohol and Anxiety		
Yes	16	26.2
No	45	73.8
I choose not to answer	0	0.0
Anxiety Interfering		
Yes	7	11.5
No	53	86.9
I choose not to answer	1	1.6
Comfort with Questions		
Completely Uncomfortable	2	3.3
Slightly Uncomfortable	4	6.6
Neither	7	11.5
Mostly Comfortable	19	31.1
Completely Comfortable	29	47.5
Honesty with Questions		
Completely Dishonest	1	1.6
Slightly Dishonest	1	1.6
Neither	0	0.0
Mostly Honest	13	21.3
Completely Honest	46	75.4

Table 3

Means on Significant Differences between Survey Types

Dependent Variable	Survey Type	N	Mean	Std. Dev.	Std. Error
Overwhelmed	Interview[a]	20	1.25	.444	.099
	Computer[b]	21	1.67	.483	.105
	Paper/Pencil[ab]	20	1.40	.503	.112
Control of sad feelings	Interview[a]	20	1.35	.489	.109
	Computer[b]	21	1.00	.000	.000
	Paper/Pencil[ac]	20	1.30	.470	.105
Helpless changing	Interview[a]	20	1.55	.605	.135
	Computer[b]	21	1.95	.218	.048
	Paper/Pencil[ac]	20	1.65	.489	.109
Hurting self	Interview[a]	20	1.60	.503	.112
	Computer[b]	21	1.95	.218	.048
	Paper/Pencil[ab]	20	1.70	.571	.128
Kill myself	Interview[ab]	20	1.75	.444	.099
	Computer[a]	21	1.95	.218	.048
	Paper/Pencil[b]	20	1.55	.605	.135
Comfort with Ques.	Interview[a]	20	3.50	1.318	.295
	Computer[b]	21	4.52	.750	.164
	Paper/Pencil[b]	20	4.35	.813	.182

Note: Means with same superscript do not differ from each other

Appendix A

Questionnaire

1) What is your age? _____ 2) What is your sex? a) M b) F

3) What college are you enrolled in at RIT? (Choose one):
- a) College of Applied Science and Technology
- b) College of Business
- c) College of Imaging Arts & Science
- d) College of Liberal Arts
- e) College of Science
- g) Golisano College of Computing & Information Sciences
- f) Kate Gleason College of Engineering
- h) National Technical Institute for the Deaf

4) Are you an international student?
- a) Yes
- b) No

5) How do you usually describe yourself?
- a) Native American or Alaska Native
- b) Southeast Asian American (such as Cambodian, Vietnamese, Laotian, Thai)
- c) Asian American (such as Chinese, Japanese, Korean, East Indian)
- d) Black or African American
- e) Hispanic or Latino
- f) Native Hawaiian or Other Pacific Islander
- g) White/ Caucasian
- h) Other

6) Which of the following describes you?
- a) Deaf
- b) Hard of Hearing
- c) Hearing

7) How many hours, on average, do you spend in front of a computer each day? _____

8) How many different on-campus extracurricular activities do you participate in (e.g. intramurals, clubs, student government)?
- a) None
- b) I
- c) 2-3
- d) More than 4

9) Rate yourself in regards to all of the following descriptions:

Shy/Reserved	1	2	3	4	5	Outgoing/Sociable
Creative/Artistic	1	2	3	4	5	Practical/Down to Earth
Neat/Organized	1	2	3	4	5	Careless/Unorganized
Helpful	1	2	3	4	5	Rude
Worried	1	2	3	4	5	Calm/Relaxed

10) Are you currently in a romantic relationship?
- a. Yes
- b. No

I1) Which of the following best describes your sexual orientation?
- a. Heterosexual (straight)
- b. Gay or lesbian
- c. Bisexual
- d. Not sure
- e. I choose not to answer

The following questions pertain to sexuality and sex behaviors. Please take a moment to read each question carefully and then answer as honestly as you can.

I2) I wonder whether I am normal sexually.
- a) All the time
- b) Most of the time
- c) Some of the time
- d) Rarely
- e) None of the time
- f) I choose not to answer

I3) I am comfortable with my sexuality:
- a) Extremely comfortable
- b) Very comfortable
- c) Fairly comfortable
- d) Not so comfortable
- e) Not at all comfortable
- f) I choose not to answer

I4) I have had sexual intercourse:
- a) Yes
- b) No
- c) I choose not to answer

I5) During my life, I have had sexual intercourse with _____ people.
- a) I choose not to answer

I6) During my life, the person(s) with whom I have had sexual contact is (are)
- a) I have not had sexual contact with anyone
- b) Female(s)
- c) Male(s)
- d) Female(s) and Male(s)
- e) I choose not to answer

I7) I have consumed alcohol or used drugs before I had sexual intercourse:
- a) I have not had sexual intercourse
- b) All the time
- c) Most of the time
- d) Some of the time
- e) Rarely
- f) None of the time
- g) I choose not to answer

I8) During my life, my partner or I have used a condom during sexual intercourse:
- a) I have not had sexual intercourse
- b) All of the time
- c) Most of the time

d) Some of the time
e) Rarely
f) None of the time
g) I choose not to answer

19) The last time I had sex, I used a condom (or my partner did):
a) I have not had sexual intercourse
b) Yes
c) No
d) I choose not to answer

20) I have engaged in anal sexual intercourse:
a) All of the time
b) Most of the time
c) Some of the time
d) Rarely
e) I have never engaged in anal sexual intercourse
f) I choose not to answer

21) I have been pregnant or have gotten someone pregnant:
a) Yes
b) No
c) Not sure
d) I choose not to answer

22) I have been tested for HIV infection or other sexually transmitted diseases (STD's):
a) No
b) Yes, I have been tested for HIV
c) Yes, I have been tested for other STD's
d) Yes, I have been tested for both HIV and for other STD's
e) I choose not to answer

23) I have had an STD:
a) No
b) Yes
c) Not sure
d) I choose not to answer

24) How comfortable were you answering the previous questions about your sexuality and sex behaviors?
a) Completely uncomfortable
b) Slightly uncomfortable
c) Neither completely uncomfortable or completely comfortable
d) Mostly comfortable
e) Completely comfortable

25) How honest were you in answering the previous questions about your sexuality and sex behaviors?
a) Completely dishonest
b) Slightly dishonest
c) Neither completely dishonest or completely honest
d) Mostly honest
e) Completely honest

The following questions pertain to thoughts, feelings, and worries. Please take a moment to read each question carefully and then answer as honestly as you can.

26) I often feel hopeful about the future:
a) Yes
b) No
c) I choose not to answer

27) I feel less interested in doing activities that I used to enjoy and that used to be important to me:
a) Yes
b) No
c) I choose not to answer

28) I sometimes feel like a failure and that I let have myself and others down:
a) Yes
b) No
c) I choose not to answer

29) There are days when I feel overwhelmed by sadness or loneliness:
a) Yes
b) No
c) I choose not to answer

30) I feel like I am in control of my sad feelings:
a) Yes
b) No
c) I choose not to answer

31) I sometimes feel like I am helpless in changing the way things are in my life and that I have no control over my circumstances and feelings:
a) Yes
b) No
c) I choose not to answer

32) In my lifetime I feel like I have enjoyed life:
a) Yes
b) No
c) I choose not to answer

33) I sometimes have overwhelming feelings of guilt:
a) Yes
b) No
c) I choose not to answer

34) I sometimes have thoughts about hurting myself:
a) Yes
b) No
c) I choose not to answer

35) I have sometimes thought about how to kill myself:
a) Yes
b) No
c) I choose not to answer

36) I feel that I have close friends or family members to talk to when I experience feelings of sadness, guilt, or loneliness:

a) Yes
b) No
c) I choose not to answer

37) I sometimes experience a sudden, unexplained attack of intense fear, anxiety, or panic accompanied by physical symptoms such as shortness of breath, heart palpitations, feelings of choking, dizziness, loss of control, etc., for no apparent reason:

a) Yes
b) No
c) I choose not to answer

38) I worry about finances, health, work, school, family, etc, and I feel that I worry about these things more often than other people:

a) Yes
b) No
c) I choose not to answer

39) I am sometimes bothered by persistent, senseless thoughts, impulses or images that I can't get out of my head, such as thoughts of death, illnesses, aggression, sexual urges, contamination and other senseless thoughts:

a) Yes
b) No
c) I choose not to answer

40) I can speak and perform in front of large groups of people without an intense fear of embarrassment or of being scrutinized by others:

a) Yes
b) No
c) I choose not to answer

41) I feel uncomfortable at parties and social gatherings and often feel anxious alone even though I'm surrounded by large groups of people:

a) Yes
b) No
c) I choose not to answer

42) In my lifetime I have experienced a very frightening, traumatic or horrible event (e.g. been the victim of a violent crime, been seriously injured in an accident, been sexually assaulted, saw someone seriously injured or killed, or been the victim of a natural disaster):

a) Yes
b) No
c) I choose not to answer

43) When I feel tense or nervous I sometimes use alcohol, tobacco or other drugs to ease anxious feelings:

a) Yes
b) No
c) I choose not to answer

44) I feel that anxiety is interfering with my daily life:

a) Yes
b) No
c) I choose not to answer

45) How comfortable were you answering the previous questions about your thoughts, feelings, and worries?

a) Completely uncomfortable
b) Slightly uncomfortable
c) Neither completely uncomfortable or completely comfortable
d) Mostly comfortable
e) Completely comfortable

46) How honest were you in answering the previous questions about your thoughts, feelings, and worries?

a) Completely dishonest
b) Slightly dishonest
c) Neither completely dishonest or completely honest
d) Mostly honest
e) Completely honest

Appendix B

PARTICIPATE IN OUR STUDY!

See what it's like to be a participant in a real psychology experiment!

It takes 10-20 minutes and
you get a *free* Ben & Jerry's ice cream

If you want to participate, please e-mail
Sara Nicholls:
sen0914@rit.edu

In your e-mail:
-Title it as "Research Participation"
-How to best contact you

Thank you,
Sara Nicholls and Claire Young
School Psychology Graduate Students

Appendix C

Information Letter and Consent Form

Rochester Institute of Technology
School Psychology Program
February 23, 2006

Contact Information:
Claire Young:
Sara Nicholls:
Dr. Jen Lukomski, Thesis Supervisor:

Hello! We are School Psychology graduate students from Rochester Institute of Technology working on our Master's Thesis. You and your classmates are being asked to participate in a study about self-disclosure among young adults. This study will focus on specific issues such as socio-emotional thoughts, feelings and behaviors. While there is a lot of research done on early and middle adolescence, there is little research on the feelings of young adults and their willingness to talk about these issues. The goal of our research is to get more information on young adult's thoughts and behaviors in order to create more appropriate programs and services in the future.

If you agree to participate you will be asked to fill out either a paper/pencil questionnaire, a computer-based questionnaire, or participate in a face-to-face interview. These questionnaires contain questions on your background information and demographics, and also on your socio-emotional thoughts, feelings and behaviors. The paper/pencil questionnaire or computer questionnaire should take approximately 10 minutes, while the individual interview will take from 15 to 20 minutes. You will be randomly assigned to take one of the 3 forms of the questionnaire; however each questionnaire will contain the exact same questions.

Our study has been fully approved by the Rochester Institute of Technology Institutional Review Board (IRB). To ensure confidentiality, your name will never be used and in no way or at any time will your information be revealed to anyone in or outside of RIT.

The degree of risk associated with this study is minimal. Some of the questions you will be asked are personal and include sensitive issues you may or may not be comfortable talking about. However, if at any time you wish to withdraw from the study you will be able to do so. We will also be providing a booklet that highlights the mental health resources available on campus. Once again we stress that any information you provide us will remain confidential.

For participating in this study you will receive a free ice cream from Ben & Jerry's to show our appreciation for your help and cooperation. We realize that college life is busy and we want to thank you for taking the time to help us out. The results of this study will also be available to you if you choose.

If you have any questions prior to your participation or at any time during the study please do not hesitate to contact us or our thesis supervisor using the information provided above. Thank you again for your time.

Sincerely,

Sara Nicholls and Claire Young

AUTHORIZATION

I have read the above information and understand the nature of this study and agree to participate. I understand that by agreeing to participate in this study I have not waived any legal or human rights. I also understand that I have the **right to refuse to participate** and that **my right to withdraw from participation at any time during the study will be respected with no coercion or prejudice**. In addition, I understand that if I have any concerns about the study, I can contact the Chair of the Institutional Review Board at Rochester Institute of Technology (475-7983) at any time.

Participant's name (please print): _____

Participant's signature: _____ Date: _____

Researcher's signature: _____ Date:_____

Appendix D

The RIT Counseling Center

The Counseling Center's hours of operation are 8:30 a.m. – 7:00 p.m. Monday through Thursday and 8:30 a.m. to 4:30 p.m. on Friday, except during break weeks, finals, and summer quarter, during which time the hours are 8:30 a.m. – 4:30 p.m. Monday through Friday. You can find more information on the Counseling Center at their website: http://www.rit.edu/%7E361www/index.php3 or:

Location
2100 August Center (building 23A), second floor

Address
Counseling Center
Rochester Institute of Technology
114 Lomb Memorial Drive
Rochester, NY 14623-5608

Phone
(585)475-2261

Fax
(585)475-6548

Emergency Contacts
For psychological emergencies during Institute business hours, contact the Counseling Center at 475-2261 (V) / 475-6897 (TTY) or go directly to Room 2100, August Center (second floor).

For psychological emergencies that cannot wait for business hours, call Campus Safety at 475-3333 (V) / 475-6654 (TTY) and ask to speak with the counselor who is on-call.

All services offered through the Counseling Center are confidential. The following services are available at the Counseling Center:

For Deaf and Hard of Hearing Students - The Counseling Center currently has three counselors who are fluent in American Sign Language. Individual counseling is available for deaf and hard of hearing (hoh) students from those counselors. Group counseling is also available.

Individual Counseling - Individual counseling/psychotherapy is a process in which a trained clinician (counselor, psychologist or social worker) facilitates a helping relationship characterized by acceptance, empathy and concern. The counselor is there to help you explore your feelings, thoughts, and concerns, learn more about yourself, examine your options, overcome obstacles, and achieve your goals.

Group Therapy - Group therapy is a form of treatment that allows participants to learn about themselves and their relationships with others and address personal difficulties that are often shared by some other members of the group. Groups include Skill Training groups and Eating Disorder groups.

Career Assessment and Counseling

Stress management

Consultation for Faculty, Staff, Parents and Students

Crisis Intervention and Emergency Services