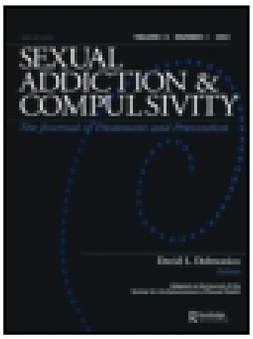

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The Prevalence of Depression in Male Sex Addicts Residing in the United States

DOUGLAS WEISS
Heart to Heart Healing Center, Colorado Springs, Colorado, USA

This study evaluated the prevalence of depression among male sex addicts against the general male population. This research utilized the high estimate of 12% for male depression in the general population as reported by the Diagnostic and Statistical Manual of Mental Disorders *(American Psychiatric Association, 2000). This research had 418 participants, 220 of whom qualified as male sexual addicts residing in the United States. Participants were recipients of a free sexual recovery e-mail newsletter from www.sexaddict.com. A score of 14 or higher on the Sexual Addiction Screening Test operationally defined sexual addiction. A score of 14 or higher on the Beck Depression Inventory (BDI) operationally defined depression. Male sex addicts had a 28% prevalence rate of depression. The hypothesis of male sex addicts having higher scores on the BDI was upheld. An exploratory hypothesis, that participants having received treatment for sexual addiction would have lower depression scores, was upheld.*

STATEMENT OF THE PROBLEM

Major depression affects many Americans. Depression, however, has higher prevalence depending on the population assessed. The addiction population appears to suffer more with depression than the general population. Early studies in sexual addiction indicate possible increases in the prevalence of depression among its community. This study clarified the prevalence of major depression, as identified in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR*; American Psychological Association [APA], 2000) among sexually addicted men regardless of their sexual orientation.

Mood disorders, such as depression, have been the focus of epidemiological studies for over six decades, according to Howrath, Cohen, and Weissmann (2002). These authors state that these earlier studies' research

Address correspondence to Douglas Weiss, Heart to Heart Healing Center, 5080 Mark Dabling Blvd, Colorado Springs, CO 80918. E-mail: Heart2Heart@XC.org

methods have an influence on the current understanding of depression. Therefore, a quick review of depression literature can give placement to prevalence of depression in the general population. This understanding aided this research in adapting a realistic prevalence of depression in males in the general population.

Later epidemiological studies from the 1980s on found a varying prevalence of depression in the general population. In a study of 18,571 participants, with data collection completed in 1984, Riegier et al. (1988) reported depression levels to be 2.9% for females and 1.6% for males. In large epidemiological studies involving over 8,000 individuals with data collected in the early 1990s the rates were reported as significantly higher. The general population rate of major depression was 10%, with men having a 7.7% prevalence rate in the last 12 months (Kessler et al., 1994). In 2001–2002, Kessler completed another very large epidemiological study involving 9,090 participants. The general findings for the 12-month prevalence of major depressive disorder were 6.6%. No numbers are available for gender differences for depression from this epidemiological study (Kessler et al., 2003).

A variety of other researchers have completed studies on prevalence of depression in various settings. Cochran and Mays (2000) found a prevalence rate of 6.4% for depression in men. They pulled their data from the National Health and Nutrition Examination Survey (NHAHES III). This study and the next study identify specific rates of depression for males in the general population. In 2000, the research on prevalence of depression produced several findings. Rienherz, Giaconia, and Hauf (2000) completed a 13-year longitudinal study of children, ending when the children turned 21 years of age. They found the prevalence of depression for the general population to be 10.8%, with females at 13% and males at 8.8%. Rosenthal and Schreiner (2000) found a 13% prevalence rate of depression in a study involving 595 undergraduate students. The differences in findings come from different studies on depression that yield different results. The populations and the research approaches vary from study to study in depression research. The instruments used in depression research also vary.

The addiction community, however, has had a higher prevalence of depression than the general population. A review of this literature supported that the addiction population may be more vulnerable to depression. Weissman et al. (1996) assessed a 17% prevalence rate for alcohol and drug addiction. Inpatient studies of alcoholism and drug addiction also show a significantly higher prevalence of depression. Dawes, Frank, and Rost (1993) found a 65% prevalence rate of depression in inpatient alcoholics. Sexual addiction studies, although limited by smaller sample sizes, also have cited higher prevalence ranges of depression. Garos (1996) found a positive correlation of depression scores and those who scored as sexually addicted. Austin (1997) compared sexually addicted and nonsexually addicted men and found a higher prevalence of depression in the sexually addicted male.

This brief overview of literature on depression highlights several issues a researcher must consider when embarking on a prevalence study on depression. First, a researcher must clearly define what depression is. For the purpose of this study, the definition of depression was major depression as defined by the *DSM-IV-TR* (APA, 2000). This study is a prevalence study so it did not research the cause of depression related to medical conditions or other variations. In this study, participants were adult males, not children or adolescents.

Second, the population must be defined clearly so that others are not confused by who is actually being studied. In this study, male sex addicts regardless of their sexual orientation were the population studied.

Last, clear instrument choices must be made so a study can easily be replicated. For this study, the Beck Depression Inventory (BDI) was chosen to measure depression, and the Sexual Addiction Screening Test (SAST) was chosen to measure sexual addiction. Major depression in this study is defined by a score of 17 or higher on the BDI (Beck, et al., 1996). A score of 14 or higher on the Sexual Addiction Screening Test (SAST) separated male sex addicts from the nonsexually addicted males. The score on the SAST more clearly defines and separates this population of study from the general population.

DEFINITION OF TERMS

Two terms must be defined to understand this study on the prevalence of depression in sexually addicted males. The first term is depression; the second term is sexual addiction.

Major depression is a clinical condition described in the *DSM-IV-TR (APA*, 2000). The *DSM-IV-TR* describes the criteria for Major Depressive Episode as five or more symptoms that have been present during the same two-week period, and which represent a change from previous functioning. Those symptoms are (1) depressed mood most of the day, (2) diminished interest or pleasure in all or almost all activities, (3) significant weight loss or weight gain, (4) insomnia or hypersomnia nearly every day, (5) the experience of feeling slowed down, (6) fatigue or loss of energy, (7) feelings of worthlessness or guilt, (8) diminished ability to think or concentrate, and (9) recurrent thoughts of death.

In this study, the Beck Depression Inventory was utilized (Beck, et al., 1996). This instrument assesses for depression. This instrument measures the symptoms and attitudes of depression. These symptoms also give insight into determining depression. Beck, Steer and Brown (1996) provide 21 symptoms or attitudes that also may be utilized in helping to define depression. These symptoms and attitudes include:

1. Sadness
2. Pessimism/discouragement
3. Sense of failure
4. Dissatisfaction
5. Guilt
6. Expectation of punishment
7. Self-dislike
8. Self-accusation
9. Suicidal ideation
10. Crying
11. Irritability
12. Social withdrawal
13. Indecisiveness
14. Body image distortion
15. Work retardation
16. Insomnia
17. Fatigability
18. Anorexia
19. Weight loss
20. Somatic preoccupation
21. Loss of libido

Table 1 summarizes the prevalence rates of depression for general population studies identified in this research. When the average of these studies is considered a general population average prevalence rate of depression is 9.8%, for females 9.2%, and for males 6.1%.

The incredible path through these studies of depression is critical to having a literature basis for this study. The considerable amount of data obtained for this research demonstrates that depression in males is measurable. This research supports the range suggested by the *DSM-IV-TR* (APA, 2000) that male depression ranges from 5% to 12%. This study utilized the number of 12% prevalence for male depression.

PREVALENCE RATES

Depression and Addiction

General population studies are one body of literature related to depression. Another body of literature related to this study is that of addiction and depression. Although all addictions are not the same, a gleaning from literature in the general body of addiction and depression literature can give further understanding to this study.

TABLE 1. Prevalence of Depression

Author	Pub. date	Pop. size	General prev. (%)	Male/female (%)
Reigier et al.	1988	18,571	2.2	1.6/2.9
Reigier et al.	1993	15,849	3.2	NA
Kessler et al.	1994	8,098	10.3	7.7/12.9
Kessler et al.	2003	9,090	6.6	NA
Cochran & Mays	2000	3,503 males	6.4	6.4 males
Reinherz et al.	2000	360	10.8	8.8/13
Olfson et al.	2000	1,007	18.9	NA
Jackson et al.	1995	2,546	17	NA
Rosenthal & Schreiner	2000	595	13	NA
Average:	9.8			6.1/9.2

TABLE 2. Prevalence of Depression in Alcohol and Substance Abuse Population

Author	Pub. date	Population	Prevalence (%)
Weissman	1996	Alcoholics	17.7
		Substance	17.6
Dawes, Frank, & Rost	1993	Alcoholics	65
Rahler, Ramsey, & Read	2002	Alcoholics	67
Skinstad, & Swain	2001	Substance	16
McNamara	2002	Substance	24
		Average	34.5

Table 2 demonstrates that the addiction population has a significantly higher rate of depression than the general population. The general population average prevalence rate of the studies cited was 9.8% compared to the addiction population's average 34.5% prevalence rate of depression. The average difference of prevalence of depression between the general population and the addiction population is 24.7%. This definitely raises a question as to whether those with addictions other than alcohol and drugs have higher rates of depression than in the general population.

Sexual Addiction

Sexual addiction is a key term to be understood in this study. Patrick Carnes (2001) coined "sex addiction" as a term for a population that struggles with sexual behavior in a compulsive or addictive manner.

Coleman (1990) has this to say about the prevalence of what he calls Compulsive Sexual Behavior, CSB: "There are no good national statistics to estimate how many people suffer from CSB. Estimates are complicated by simultaneous under- and over-reporting. My own estimate is that the problem occurs in approximately 5% of the population" (Coleman, 1990, p. 321).

Cooper, Delmonico, and Burg (2000) did a study attempting to discover the prevalence of sex addiction in those who use the Internet. His study of 9,265 Internet users found that "17% of the entire sample scored in the problematic range for sexual compulsivity" (p. 5). There is no other scientific research that states a prevalence of sex addiction in the general population. A dissertation on a study of prevalence of sex addiction in a substance abuse population revealed that 14% of substance abusers are sexually addicted (Meadows, 2002).

Irons and Schneider (1997) characterize an addictive disorder as, "compulsivity—that is, the loss of the ability to choose freely whether to stop or continue; continuation of the behavior despite adverse consequences, such as loss of health, job, marriage, or freedom; and obsession or preoccupation with the activity" (p. 152).

The review of sex addiction is quite a different terrain than that of depression literature. Unlike with depression, there are no real epidemiological studies that have addressed sexual addiction. The depression literature has permeated many disciplines and has been studied empirically from various directions. Sexual addiction has less than a handful of studies that are descriptive and even fewer that are experimental designs.

Sexual Addiction and Depression

Garos (1996) enlisted 1,000 subjects in her study to create validity for an instrument she created. Her sample was drawn from inpatient treatment centers, 12-step group members, and outpatient addiction counseling subjects. In Garos' study, the participants completed various instruments. Among the instruments in this study were the Beck Depression Inventory (BDI) and the Sexual Addiction Screening Test (SAST). Of the 1,000 participants, only 34 were identified as sexual addicts. The study postulated that those participants who were conflicted about their sexuality would score higher on the BDI, which her results confirmed. Garos expected BDI scores to positively correlate with sexual obsession, which was also confirmed in her study.

Austin (1997) also was interested in sexual addiction and depression. In his study, he compared the scores of several instruments on four groups of men. His sample included 22 heterosexual men with compulsive sexual behavior, 19 homosexual men with compulsive sexual behavior, 38 heterosexual men without sexual compulsive behavior, and 8 homosexual men without sexual compulsive behavior. Austin had all of the participants complete several instruments, including the BDI and SAST. The sexually compulsive men scored significantly higher on the BDI than the nonsexually compulsive men. The homosexually compulsive men scored even higher on the BDI than the heterosexual sexually compulsive men did.

A study by Meadows (2002) involved 122 participants in a substance abuse treatment center. Participants completed the substance abuse Subtle Screening Inventory-3, Beck Depression Inventory-II (BDI-II), South Oaks Gambling Screen, and the Sexual Addiction Screening Test (SAST). The author stated, "A correlation between the BDI and the SAST revealed a statistically significant relationship" (p. 61). The author found a correlation between depression scores and sexual addiction scores.

Austin (1997), Garos' (1996), and Meadows' (2002) studies have a limitation due to the size of the sample. Austin (1997) states that, "Future research in this area may include examining these characteristics, and others, using a much larger sample" (p. 52). That is the goal of this research, to study depression in a much larger population. The review of literature on sexual addiction is crucial for this study. The instruments used most often in these studies were the BDI and the SAST. This study also utilized the BDI and

the SAST as the primary measures. This review highlighted the need for a larger study of sexual addicts to assess the prevalence of depression in this population of sexual addicts.

HYPOTHESIS

The alternative hypothesis of this study is that there is a greater prevalence of depression in sexual addicted males than in males in the general population. This study also had an exploratory hypothesis: Those participants having received treatment for sexual addiction will have lower depression scores.

METHOD

Description of Research Design

The study employed a descriptive research method and therefore no variables were manipulated. The study was a correlational research design. These selections seemed most appropriate for this study. A correlational design by definition measures the score on two or more variables to determine whether or not a relationship between the two variables is present.

This study sampled a group of sexually addicted men who were asked to complete the Beck Depression Inventory (BDI) and the Sexual Addiction Screening Test (SAST). The results of these scores were compared to the upward of 12% prevalence of male depression as cited in the *DSM-IV-TR* (2000) for males in the general population.

INSTRUMENTS

Beck Depression Inventory

A score of 17 or higher on the BDI operationally defined depression in this study. The BDI is one of the classic measures for depression in research. Impara and Plake (1998) list over a thousand test references for the BDI in professional literature.

The BDI is a 21-question instrument that measures depression in adolescents and adults. The instrument has a total score that can range from zero to sixty-three. These scores are broken down into four major categories. Scores 0–9 would be categorized as minimal depression. Scores of 10–16 would be categorized as mild depression. Scores of 17–29 would be categorized as moderate depression. Scores of 30 and above would be categorized as severe depression (Impara & Plake, 1998).

Sexual Addiction Screening Test

The SAST was developed by Patrick Carnes. This screening test is comprised of 25 yes/no questions.

Carnes stated, "The internal consistency of the instruments as measured by Cronbachs Alpha for 191 male addicts was .92; for 67 nonaddict men was .85; and for 258 men in the total sample was .95" (Carnes, 1989, p. 216). This instrument is used to operationally define a sex addict from a nonsex addict and limits the confounding variable of self-identification of subjects as sex addicts. Those with a score of 14 or more on the SAST are operationally defined as sexual addicts.

In the SAST (Appendix B), the score of 13 "yes" responses on the test yields a 64.3% chance of the participant being a sexual addict. A 14 "yes" answer yields an 87.5% chance of someone being classified as a sex addict. In this study, 14 "yes" responses were chosen to operationally define sex addiction due to a desire to truly have an unquestionable probability that the measured population was comprised of sex addicts.

Meadows (2002) stated that, "although evidence as to the psychometric properties of the SAST is limited, the SAST is the most used and researched instrument available for sexual addiction" (p. 48).

PARTICIPANTS

Participants for this study on depression in male sexual addiction were subscribers from the sexaddict.com newsletter. This weekly e-mail newsletter has been active for over seven years. This is a double opt-in newsletter so all subscribers are receiving it because of interest in healing from sexual addiction. Those who volunteered for the research and scored as a sexual addict on the SAST and are male residents of the United States without regard to sexual orientation were selected as the participants for this study.

DATA ANALYSIS

Male sex addicts that qualified for this study also completed the BDI. Participants who scored a 17 or above were qualified in this study as depressed. The participants received a "1" score if they scored 17 or higher on the BDI. The participants received a "2" score if they scored 16 or lower on the BDI and were identified as not depressed in this study. The one-sample chi-square statistic was utilized in this study. The chi-square demonstrated the difference in the observed frequency of depression in male sex addicts in contrast to the 12% frequency of depression in the general male population.

The 12% general population occurrence of depression is the upward percentage utilized by the *DSM-IV-TR*. This is appropriate in this study due to the one-sample nature of this study and that this study utilized observed frequency of nominal data to do calculations. This investigation used software to do the chi-square procedure and report the results.

RESULTS

Findings

Participants were free to take part in the research and were presented with a consent form prior to completing the instruments in the questionnaire. The questionnaire included the BDI to measure depression and the SAST to measure sexual addiction. The questionnaire also had a question related to the exploratory hypothesis.

The total number of participants who responded to the questionnaire was 418. Those not qualifying as American male sex addicts (as determined by SAST score) were removed. The numbers and categories of those removed are presented in Table 3. The number of those qualifying as male sexual addicts residing in the United States was 220. These 220 participants are the source of all other data from this study.

The average age of the U.S. male sexual addict was 44. The education level of the participants was 23.2% ($n = 51$) high school, 50.5% ($n = 111$) college, 18.6% ($n = 41$) Master's degree, 5.9% ($n = 13$) Ph.D. or equivalent, 1.8% ($n = 4$) no response.

Table 4 reports the BDI scores.

A two-way ANOVA was conducted on the independent variables of age and education with regard to depression. The results of a two-way ANOVA performed on age and educational level found no main effect of age, $F(4,212) = 1.155$, n.s., no main effect of education, $F(2,212) = .322$, n.s., and no interaction between age and education, $F(8,212) = 1.413$, n.s.

A one-sample chi-square test was conducted to assess if depression was more prevalent in sexually addicted males than in the general population. The results of the test were significant, $x^2(1, N = 220) = 54.55$, $p < .01$.,

TABLE 3. Breakdown of Study Participants Removed

Category	Total number
Female sex addicts	40
Female partners of sex addicts	98
Males outside the U.S.A.	40
Males not qualifying as a sex addict	40
Total removed	198
(some participants are represented in more than one category)	

TABLE 4. BDI Scores by Total and Percent

	Total number	Percent
Depressed (BDI 17 or higher)	61	28
Non-depressed (BDI 16 or below)	159	72

demonstrating that the sexually addicted male depression rate was greater than the depression rate of the general population.

An independent samples *t*-test was conducted to evaluate the hypothesis that those participants having received treatment for sexual addiction will have lower depression scores. The test was significant $t(216) = -2.601$ $p = .01$ and the results were in agreement with the hypothesis (see Table 5). Those participants who received treatment for sex addiction ($M = 11.77$, $SD = 8.59$) did score lower on depression than those participants who did not receive treatment for sexual addiction ($M = 15.33$, $SD = 10.76$).

The current study compared the rate of depression among male sexual addicts residing in the United States, regardless of sexual orientation, to depression rates in the general male population. This study showed the rate of depression for sex addicts to be 28%.

The findings are clear. Sexually addicted males in this study have a greater prevalence of depression than the general male population. The one group chi-square statistic was significant, $p < .0001$ in this study.

Previous studies in the field of sexual addiction addressed depression. Garos (1996) found 34 sexual addicts had higher scores on the BDI. Austin (1997), studying 22 heterosexual and 19 homosexual sexually compulsive participants also found higher BID scores in the sexually compulsive male over the nonsexually compulsive male. Meadows (2002), with 17 subjects qualifying for sexual addiction, found a positive correlation between SAST scores and BDI scores.

This research contributes to this body of literature with a study sample of 220 male sex addicts, by far the largest experimental sample available examining depression in male sexual addicts. This study is unique in the field of sexual addiction in that an instrument clearly defines its population of sex addicts instead of simple self-reporting which is common in sex addiction studies.

The current investigation supports earlier studies related to addiction and depression as well as depression and sexual addiction and conclude that male sexual addicts in this study have a higher prevalence of depression than the general male population.

TABLE 5. Findings for Exploratory Hypothesis

	Mean BDI score	*SD*
Participants who received sex addiction treatment	11.77	8.587
Participants who did not receive sex addiction treatment	15.33	10.758

RECOMMENDATIONS

Depression is more prevalent among male sex addicts than the general population. This information is important to those who work with the sexually addicted population, and may be important to the academic and clinical professionals who work in this field.

In the clinical community, an awareness of external factors can assist a clinician in more thoroughly assessing depression. If a clinician can assess depression as a comorbid condition with an American male with a sex addiction, the client may be more likely to be successful in the sexual recovery process.

Further inquires must be made into the area of mental disorders and sexual addiction. This study identifies that depression is higher among male sex addicts. This awareness opens a significant question as to why the difference occurs. Further research should focus on the why. Is depression greater in the male sex addict because of sexual abuse, sexual shame, family of origin issues, or possible chemical imbalances? Further research needs to address the prevalence of other mental disorders, such as antisocial personality disorder and anxiety disorder, in the sex addiction population. Additionally, there is a need for the development of a better instrument to assess sexual addiction. A last area for future research is that of a general population study that includes sexual addiction.

Limitations

There are limitations to this study. The first limitation is created by the research design. This research design does not allow a researcher to make any claims of causality. This study cannot claim that depression causes sex addiction or that sex addiction causes depression. A second limitation in this study is the reporting methods. In this study, a questionnaire was emailed to over 10,000 subscribers to a sexual addict recovery newsletter. The self-reporting of their answers is the basis on which data was collected and measured in this study.

A third limitation in this study was in the area of instrumentation. The SAST is the most utilized research instrument in the field of sexual addiction. This instrument was normed utilizing American males. This limits the study to American males only.

The collection and statistical analysis were completed on 220 male sexual addicts. Through this study, the scientific view is clearer regarding depression and sexual addiction. After many years of dialogue and assumptions, this study has shown through statistical evidence that American male sexual addicts have a higher prevalence of depression than males in the general population.

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