Gambling addiction and life meaning

Andrew Bohdan Plesh

University of Nevada, Las Vegas

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GAMBLING ADDICTION AND LIFE MEANING

by

Andrew Bohdan Plesh

Bachelor of Arts
University of Toledo
1996

A thesis submitted in partial fulfillment
of the requirements for the

Master of Arts Degree
Department of Psychology
College of Liberal Arts

Graduate College
University of Nevada, Las Vegas
December 1999

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The Thesis prepared by

Andrew Bohdan Plesh

Entitled

Gambling Addiction and Life Meaning

is approved in partial fulfillment of the requirements for the degree of

Master of Arts

Examination Committee Chair

Dean of the Graduate College

Examination Committee Member

Examination Committee Member

Graduate College Faculty Representative

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ABSTRACT

Gambling Addiction and Life Meaning

by

Andrew Bohdan Plesh

Dr. Russell Hurlburt, Examination Committee Chair
Professor of Psychology
University of Nevada, Las Vegas

Addictive Gambling has plagued mankind for thousands of years. However, it has only recently been studied extensively. One proposed cause for addiction, which has been used in studying alcohol and drug abuse, is a lack of meaning in the addict's life. However, a causal link between life meaning and gambling addiction has not yet been examined. This study used a sample of 355 normal people and compared scores on the South Oaks Gambling Screen (SOGS), the Purpose in Life (PIL) Test, the short form of the Beck Depression Inventory (BDI), and the Michigan Alcoholism Screening Test (MAST). Relationships between the level of gambling addiction, as shown on the SOGS, and the level of meaning in life, as shown on the PIL, were examined. The effect of depression on these variables, as measured on the short form of the BDI, was considered. The relationship of alcohol addiction to gambling and meaning in life, as measured on the MAST, was examined. The study found a mild negative correlation between scores on the SOGS and those on the PIL. This correlation increased as the level of alcoholism among the participants decreased.
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CHAPTER 1

INTRODUCTION

Gambling addiction is a serious problem affecting perhaps 4.2 million Americans (Freeman, 1992). One possible cause for this problem may be a lack of purpose or meaning in life experienced by the addict. A lack of meaning in life has been documented in addictions other than gambling, such as drug abuse and alcoholism (Waisberg & Porter, 1994; Nicholson et al., 1994). However, no research has been conducted linking lack of meaning in life to gambling addiction. This study examined the relationship between gambling addiction and meaning in life by comparing scores on the South Oaks Gambling Screen (SOGS) and the Purpose in Life (PIL) test obtained from a sample of 355 university students. Because meaning in life has been negatively correlated with depression (Lester & Badro, 1992), this study attempted to partial out the effects of that variable through the administration of the short form of the Beck Depression Inventory (BDI). The relationship of alcohol to these variables, as measured by the Michigan Alcoholism Screening Test (MAST), was also be explored. This study aimed to determine the relationship between gambling problems and meaning in life, namely, whether or not a negative correlation exists between scores on the SOGS and on the PIL Test.
Gambling Addiction

Addictive disorders seem to have been a ubiquitous, if unfortunate, element of the human experience from the beginning of time. Problems associated with habitual drinking, for example, have been noted in works as ancient as the Hindu *Ayurveda* (Gossop, 1989) and the Bible. For example, the Bible contains a passage in which the prophet Isaiah lamented that “the priest and prophet reel with strong drink; they err in vision, they stumble in giving judgement. For all the tables are full of vomit” (Isaiah 28, 7-8. Revised Standard Translation).

Addictions have historically been thought of as encompassing activities other than alcohol, however. Confucian philosophy, for example, maintained that the four major vices are opium, alcohol, womanizing, and gambling (Singer, 1974). The Roman historian Tacitus wrote that among Germanic tribal chiefs, compulsive gambling was such a problem that “under the influence of uncontrollable ecstasy the players gambled their wives, their children and ultimately themselves into captivity” (Gossop, 1989). This ancient pattern of behavior persists in modern times; with the rapid expansion of the gambling industry into new markets throughout America through Indian casinos, riverboat gambling, and special initiatives, it appears likely that addictions associated with gambling will be increasing. In 1974 in the United States, approximately $17 billion was legally wagered; by 1988 this had increased to $210 billion (Lesieur & Rosenthal, 1991). At the same time, the prevalence of problem gambling has risen from 0.77 percent in a national survey conducted in 1974 to rates ranging between 1.4 and 3.4 percent found in polls conducted in Maryland, New Jersey, New York State, Ohio, and parts of Pennsylvania between 1984 and 1988 (Lesieur & Rosenthal, 1991). Gamblers Anonymous estimates...
that currently as many as 4.2 million Americans may have a gambling addiction (Freeman, 1992). However, there has been relatively little research concerning gambling addiction, perhaps because of its relatively recent recognition as an addiction; it was not officially labeled as such by the health care establishment until the DSM-III-R in 1987 (Gossup, 1989).

There is a lack of consensus regarding a definition of addiction (Freeman, 1992). In general, it can be said to include characteristics involving a strong compulsion to partake of the problem activity, an impairment in controlling the onset and level of participation in the activity, discomfort when the activity stops, and continued participation even when clear evidence shows that it is harmful (Gossop, 1989). These criteria are characteristic of alcohol and drug problems as well as gambling problems. Indeed, a study comparing MMPI scores of 136 pathological gamblers with those of 96 alcoholics showed no significant differences on that measure between the two groups; they were differentiated only by their level of education and socioeconomic status, which were higher among the pathological gamblers (Ciarrocchi et al., 1991). The Diagnostic and Statistical Manual (DSM-IV) defines problem gambling as an impulse-control disorder in which the individual meets at least five of the following ten criteria: a) preoccupied with gambling, gaining gambling experiences, etc.; b) needs to gamble in increasing amounts; c) has tried unsuccessfully to control the habit; d) becomes irritable when such behavior is restricted; e) uses gambling as a way of escaping problems or negative moods; f) "chases" losses; g) lies in order to conceal the extent of the problem; h) has broken the law in order to finance the habit; i) has experienced significant personal or social losses caused by gambling; or j) relies on others to provide support for the habit (American Psychiatric
Although the patterns of behavior closely match those of other addictions such as drugs and alcohol, gambling does not involve drugs, medication, or toxins and thus is now classified separately from those other addictions as a Disorder of Impulse Control Not Elsewhere Classified.

Meaning in Life

Because of the relative recency of the recognition of gambling as an addiction by the psychological community and the smaller prevalence of gambling in America in the past, research into compulsive gambling is a relatively new field. One aspect of this new field that has been neglected by researchers despite its seemingly great importance is the existential or spiritual significance of gambling. A significant dimension of this aspect is that of personal meaning and sense of purpose in life, concepts that this study will address in a framework defined by Viktor Frankl's theories.

Frankl believed that the primary motivation in people's lives is a will to meaning, in contrast to Sigmund Freud's emphasis on a will to pleasure and Alfred Adler's stress on a will to power. Frankl concurred with earlier existentialist philosophers in the belief that people are basically free and responsible for their own reactions to life, even in settings as aversive as the concentration camps that shaped his theories. Concentration camp inmates were still able to choose their attitude toward, and therefore create their own meaning in, a situation that was out of their control (Frankl, 1984). Through their active role in thought or action, people can transcend barriers imposed on them by external social forces as well by the intrinsic biological factors common to all humanity (Nicholson et al., 1994).

These ideas have been investigated. For example, in one study that supports the
central importance of meaning of life, researchers from John Hopkins University asked
7,948 students in several colleges what they considered to be most important in life. Of
these, 16 percent answered that "making a lot of money" was most important, whereas 78
percent considered "finding purpose and meaning to my life" to be their central goal
(Frankl, 1984). Indeed, other ways in which meaning seems to be a factor in maintaining
healthy life-styles is that people with a high level of meaning in their lives tend to have
lower scores on the Depression subscale of the MMPI, spend less time watching television
or engaging in other solitary activities, and are more resistant to physical and
psychological problems when undergoing aversive environmental situations (Sappington et
al., 1990).

Meaningfulness in peoples' lives has also been shown to be an important factor in
the treatment of weight problems in families. Such families had lower scores on the
Purpose in Life (PIL) Test, a measure designed to investigate the level of meaning in life
as defined by Frankl's theory (Crumbagh & Maholick, 1969), than did normal-weight
families, and an increase in scores was positively correlated to reduced weight and
successful treatment in therapy oriented towards discovering meaningful ways of living for
the family through the therapist's use of empathy, reflection, direction and guidance
(Lantz & Harper, 1988).

However, when a search for meaning is blocked for some reason, an existential
vacuum (a feeling of life's futility and purposelessness) may develop. Such feelings are
relatively common in the modern, often impersonal world and do not necessarily reflect
pathology in the person experiencing them (Nicholson et al., 1994).
The Problem of Depression

Frankl (1984) noted that, although many forms of depression may be linked to psychodynamic or biochemical causes, a further cause may be meaninglessness in people's lives. Several studies support this conceptual link between purpose in life and depression. One of these studies, conducted by Pintos (1988), involved 181 retirement-aged people from Buenos Aires and its suburbs. The participants were given the Spanish translation of the 30-item Geriatric Depression Scale (GDS) and the PIL test. 75% of the participants revealed no depression, 22.09% mild depression and 2.76% severe depression as shown on the GDS scores. Of the 136 non-depressed people, 72 (52.9%) showed an appealing life meaning. By contrast, none of the severely depressed people and only 6.5% of the mildly depressed participants had meaningful lives. Although having a meaningful outlook on life can't prevent personal tragedies common in old age, such as failing health and the death of loved ones, it can provide a means of overcoming such events (Frankl, 1984).

Scores on the PIL have also been highly negatively correlated with scores on the BDI (-.55, p <.001; Lester & Badro, 1992), supporting the conceptual link between lack of meaning in life and depression.

In addition to depression, a lack of meaning in life may be linked to other problems such as aggression and addiction (Frankl, 1984).

Lack of Meaning in Life and Addiction

Frankl proposed that a lack of meaning is at least one of the roots of problems involving addictions, in which the existential vacuum in the life of the addict is maladaptively filled by the addictive behavior (Nicholson et al., 1994). People unable to
cope with the difficulties of existence, when faced with the freedom of responsibility offered through life, retreat into maladaptive patterns of behavior such as suicide, aggression, drug abuse, and addiction. "You are growing blasé," Dostoyevsky's Gambler is told, "...you have not only renounced life, with its interests and social ties...the friends whom I know you to have had, and every aim in life but that of winning money; but you have also lost your memory" (Dostoyevsky, 1994, p. 580). Healthy people, in contrast, use their freedom for contributing to the world, utilizing their abilities as best they can, and for engaging in other adaptive ways in dealing with the existential vacuum that they may experience (Frankl, 1984). Addicts' maladaptive patterns of coping with the world are ultimately unsuccessful. The reinforcing and superficially important, yet spiritually empty, actions associated with the addictions do not address the heart of the person's problem, the need for meaning (Frankl, 1984).

Research with the Purpose in Life (PIL) test has shown a link between lack of meaning in life and addictive behaviors. Scores on the test have been shown to be markedly lower, indicating less purpose in life, for alcoholics than for non-alcoholics, and have risen during the course of in-patient alcohol treatment in two different treatment programs (Waisberg & Porter, 1994). Waisberg and Porter (1994) have shown a significant relationship between the level of purpose in life at the end of treatment and positive changes in health and relationships among the treated alcoholics. The same study showed a significant negative correlation between PIL scores and relapse rates at one treatment program, but a positive correlation at another one. The authors speculated that the latter treatment program's problematic relationship between PIL scores and relapse rates may have represented an idiosyncrasy of the program, which, unlike the one in which
PIL scores indicated lower relapse rates, was more unorthodox and tied to the particular ideas of one person. It emphasized "the direct teaching of a spiritual philosophy with a unique vocabulary" without much skill acquisition which might produce an elevated sense of meaning in life without teaching relapse prevention successfully. It is possible that, given the particular treatment program's focus on compliance and control of the patient, the patients learned the terms used by the clinicians without internalizing the belief system being presented (Waisberg & Porter, 1994). The treatment program with PIL scores being positively correlated with low relapse rates was more representative of typical alcohol treatment centers (Waisberg & Porter, 1994). Another study has shown lower PIL scores in adolescents in inpatient treatment for drug abuse in comparison to matched non-drug-abusing controls (Nicholson et al., 1994).

Cross Addiction?

One phenomenon that may have an impact on this study is that of cross addiction. Cross addiction with various substances may be a relatively common problem among people with gambling addiction but there has not been a uniform consensus concerning the amount of cross-addiction.

The existence of pervasive cross addiction was supported by a study conducted on 186 patients at the Taylor Manor Hospital's Gambling Treatment Program in Maryland. These patients' gambling histories, demographic characteristics, and psychosocial variables were assessed through standard hospital intake procedures as well as through a questionnaire designed to examine life patterns of people with gambling problems. Of the 186 gamblers in the study, 34 percent also had an alcohol abuse problem but didn't abuse
drugs, six percent had a problem with drugs but not with alcohol, and 31 percent had difficulties with both alcohol and drugs. Therefore, approximately 71 percent of these gamblers also had substance abuse problems (Ciarrocchi & Richardson, 1989). In another study conducted in Maryland, the SOGS was administered to 467 consecutive admissions at three treatment sites for a treatment program for substance abusers. Of these patients, 29, or 6.2 percent, were classified as problem gamblers and 21, or 4.5 percent, were pathological gamblers; these rates are more than twice as high as those in the general population in Maryland according to a recent survey there using the SOGS (Ciarrocchi, 1993). In a study conducted in the United Kingdom, 456 letters were sent to various drug and alcohol helping agencies throughout the country requesting information on cross addictions involving gambling and any substance. This yielded 210 responses, of which 150 provided information. Of these, 53 percent reported at least one case of cross-addiction while 47 percent believed that cross addiction did not exist (typically because they felt that drug and alcohol addicts did not have money or energy to spare on gambling). The highest rate of cross addiction was with alcohol (46%), followed by various drugs (20%), solvents/fruit machines (10.5%), alcohol and drugs (7%), and amphetamines (3.5%) (Griffiths, 1994).

These findings, however, are contradicted by two studies. Miller and Westermeyer (1996) in a study in Minnesota found much higher rates of gambling addiction among 211 members of an alcoholism-addictions unit of the Minneapolis Veterans Administration Medical Center than among the general population. These rates were only slightly higher than those obtained from 201 members of a general psychiatric unit. In this study participants were classified as having either none, mild, or pathological gambling problems
based on scores on the SOGS. Of the 201 patients in the general psychiatric unit, 21% were classified as having a mild gambling problem. This compares to 23% of the 211 patients in the alcoholism unit. With regards to pathological gambling, the rates were 12% among the general psychiatric patients and 17% among the patients in the alcoholism-addictions unit (Miller & Westermeyer, 1996). Similarly, Briggs and his colleagues (1996), in an attempt to show a link between alcoholism and gambling addiction, administered the SOGS and the Substance Abuse Subtle Screening Inventory-2 (SASSI-2). The SASSI-2, developed by Miller, consists of 62 true/false questions divided into four scales: Face Valid Alcohol; Face Valid Other Drug; Obvious Attributes; and Subtle Attributes (Briggs, et al, 1996). The participants, 30 members of Alcoholics Anonymous (AA) and 44 habitual gamblers, did not show a significant crossover between gambling and any of the subscales of the SASSI-2. On the Face Valid Alcohol, Face Valid Other Drug, and Subtle Attributes scales of the SASSI-2, AA members scored above the cutoff for chemical dependence while habitual gamblers did not (on the fourth scale, Obvious Attributes, neither group was above the cutoff, although the AA members still scored significantly higher). Likewise, the habitual gamblers scored significantly higher on the SOGS and were above the cutoff, while the participants from AA did not score above the cutoff (Briggs et al., 1996). The authors speculated that this contradiction with other research may have been a result of problems with the other researchers' subject pool. They argued that the bulk of the previous research involved treatment populations who may have been more prone to responding in a clinically appropriate way in order to please the tester or to a desire of the patients to receive the best treatment possible and thus to over-report any potential symptoms (Briggs et al., 1996).
In summary, research on cross addiction shows different results under different conditions. Given the anonymity and normality of the sample used in the present study (and thus, no reason for the participants to "fake bad" either to please the experimenter or to gain more extensive treatment), it is likely that there will be little or no relationship between gambling and alcoholism.

Aims of this Research

The purpose of the present study was twofold. The main purpose of this study was to explore whether gambling addiction is correlated with a lack of meaning in life. This relationship had not yet been explored, and an answer would add to the body of knowledge. It was hypothesized that the level of gambling addiction, as measured by scores on the South Oaks Gambling Screen (SOGS), will generally increase as scores on the Purpose in Life (PIL) test, measuring meaning in life, decrease. Such a result would match previous findings concerning drug and alcohol abuse and addiction and would, to a small extent, add to the growing body of literature describing gambling as an addiction by providing another link, the lack of meaning in life, between gambling and the other addictions. If positive, the results could also point to another approach toward therapeutic intervention, addressing issues of meaning in gamblers' lives, and thus would provide another tool used by those in the helping professions when dealing with this growing problem.

Because of the well-established relationship between lack of meaning in life and depression, and between depression and problem gambling, it was considered necessary to control for this variable in the study. It was hypothesized that, although a link would be
shown between depression as shown by scores on the short form of the BDI and meaning in life as shown by scores on the PIL, there would be a negative correlation between meaning in life and problem gambling independent of depression.

The second purpose of the study was to examine whether a cross-addictive relationship exists between alcohol and/or drug abuse and problem gambling. Because the results of experiments involving cross-addiction between gambling and substance abuse are rather mixed, it seemed prudent to determine the level of substance abuse found in each participant and use that to control the possibility that a correlation between gambling and meaning in life in this study does not merely reflect the already established relationship between substance abuse and meaning, but rather indicates a relationship between gambling per se and meaning. The participants were from a generally nonclinical population and would be anonymous. Thus, they would not benefit from malingering by receiving more treatment and will not have a personal stake in pleasing the experimenter. For these reasons it was hypothesized that this study's results would help support the beliefs of Briggs et al. (1996) that cross addiction is relatively rare, and thus that any relationship between gambling addiction and alcohol use will be modest at best among this "normal" sample.

The Measures Used in the Present Study

Four elements (gambling addiction, purpose in life, depression and alcohol addiction) were investigated in this study. Each was measured by its own questionnaire. Gambling addiction was measured by the South Oaks Gambling Screen (SOGS), a widely used assessment tool for examining the level of gambling addiction. The SOGS consists
of 20 yes/no questions based on criteria from the DSM-III and cross-validated with the
DSM-III-R, and can be given either in paper-and-pencil or in an interview format. A
score of 0 indicates no gambling problem, 1-4 some problem and 5 or more a probable
pathological gambler. This test is both reliable and valid. Its validity has been supported
through a series of studies conducted by Lesieur and Blume (1987). They showed that
there was a significant positive correlation between scores on the SOGS and therapists’
independent scoring of clients’ gambling problems (r = .86, df = 295, p < .001); family
members’ perceptions of gambling problems and SOGS scores were also quite correlated
(r = .60, df = 125, p < .001). When the SOGS was given to 213 members of Gambler’s
Anonymous, 98% of them tested positive on the test; these figures were quite similar for
males and females (98% and 95%, respectively). By contrast, in another sample of 384
university students, only 5% tested positive for gambling addiction, and among hospital
employees 1% did (Lesieur & Blume, 1987). The SOGS is also highly correlated with the
diagnosis of gambling addiction according to the DSM-III R (r = .94, df = 747, p < .001),
which is not surprising because the SOGS is based on the DSM-III.

Lesieur and Blume (1987) also described the reliability of the SOGS, whose scores
have both internal and test-retest reliability. An internal consistency reliability check
showed a Cronbach’s alpha of .97, p < .001. A study involving 74 inpatients and 38
outpatients showed a test-retest correlation of .71. The test was more reliable for
outpatients than for inpatients. Therefore, the results gathered from university students
may be more reliable.

The SOGS is generally accepted by the psychological community as the best
measure of the prevalence of pathological gambling, and has been used in the screening of
prospective clients entering gambling treatment centers in Iowa and Maryland and substance abuse programs in New York and New Jersey (Volberg & Banks, 1990). In New Jersey, the SOGS has also been used in the examination of prevalence rates of college students (Frank, 1988, cited in Volberg & Banks, 1990) and prison inmates (Lesieur & Klein, 1985, cited in Volberg & Banks, 1990). It has also been used to examine prevalence rates in New York, Iowa, Maryland, Canada (Volberg & Banks, 1990) and Minnesota (Miller & Westermeyer, 1996).

The present study assessed meaning in life using Part A of the Purpose in Life (PIL) (Crumbaugh & Maholick, 1969). The PIL is an attempt to objectify Viktor Frankl's theoretical constructs and consists of three parts: Part A consists of 20 items that are rated on seven-point Likert scales, Part B is a 13-item sentence-completion task, and Part C is made up of a paragraph concerning goals, progress and ambitions written by the test-taker. Because Parts B and C do not have an objective scoring system and seem to be most useful in individualized clinical application, most research involving the PIL utilizes only Part A (Hutzell, 1988).

Much research concerning reliability and validity has been conducted on the PIL. One common concern is whether or not “meaning” can be measured; it is difficult to obtain an operational definition and an external criterion for this intangible construct. Crumbaugh and Henrion (1988) compared these concerns to those involved with intelligence testing, in which an accurate definition of “intelligence” is lacking, and in which the principal external criterion seems to involve scholastic achievement. Like intelligence tests, the PIL relies primarily on construct rather than criterion validity. Nevertheless, an analysis of concurrent criterion validity has shown a correlation of .38 (n
between actual PIL scores and therapists' predictions of those participants' scores, and a correlation of .47 (n = 120) between participants' scores and their clergy's predictions (Crumbaugh & Henrion, 1988).

In terms of construct validity, the PIL has been shown to predict the order of the means of four nonclinical populations: successful professionals and businessmen (M = 118.9, n = 230, SD = 11.31), Protestant parishioners active in their churches (M = 114.27, n = 142, SD = 15.28), college undergraduates (M = 108.45, n = 417, SD = 13.98), and homeless hospital patients who were not psychiatric patients (M = 106.4, n = 16, SD = 14.49) (Crumbaugh & Maholick, 1969). The PIL has also shown significant differences between clinical (M = 92.60, n = 346, SD = 21.34) and normal populations (M = 112.42, n = 805, SD = 21.34) producing a t-score difference significant at p < .001 (Crumbaugh & Maholick, 1969).

In a sample of 105 “normal” people and 120 patients, the split-half reliability of the PIL was shown to be .81 (n = 225), Spearman-Brown corrected to .90 (Crumbaugh & Henrion, 1988).

Some questions have been raised concerning the PIL’s validity among cross-cultural populations, and a bias towards middle-class western values has been proposed (Roberts, 1991). However, such criticisms have been partially addressed by Shek's (1994) studies involving the Chinese version of the PIL, which showed high internal consistency (Cronbach's alpha = .83 for test session, .88 for retest session). There were high correlations between the Chinese PIL scores and measures of quality of marital life, parent-child relationships, and well being. Research has also shown a low correlation between level of education and income and PIL scores (Waisberg & Porter, 1994),
supporting Frankl’s conviction that meaning in life has little to do with conventional ideas of success. Certain geriatric populations, some schizophrenics, and very young populations find some of the questions ambiguous or confusing, thus making the PIL inapplicable in those cases (Crumbaugh & Henrion, 1988).

Relationships between the PIL and other measures have been studied. A negative correlation between PIL scores and those on the Beck Depression Inventory (−.55, p < .001) has been shown (Lester & Badro, 1992). Moreover, scores on the PIL have shown to be better predictors of a history of prior suicide ideation, threats, and attempts than were scores on the BDI. In the latter category it was the only significant predictor (Lester & Badro, 1992). The PIL has been shown to be highly correlated with the Life Regard Index (Roberts, 1991). No significant correlations were found between scores on the PIL and those of any subscales of the California Personality Inventory, which supports the notion of the test’s creators that the PIL examines factors not considered by other personality inventories (Waisberg & Porter, 1994).

The PIL was also found to be significantly positively correlated with Jones and Crandall’s Short Index of Self-Actualization in a study attempting to provide more construct validation for the latter scale (Ebersole & Humphries, 1991).

One criticism of the PIL is that, due to the straightforward nature of the questions, it may be biased toward social desirability. A correlation of .57 (n = 40 college undergraduates) has been found between the PIL and the Crowne-Marlowe Social Desirability Scale (Braun & Dolmino, 1978, cited in Crumbagh & Henrion, 1988). Crumbagh & Henrion (1988) contended that this is most likely due to the desirable qualities associated with aspects of a meaningful way of life than to inadequacies of the
test itself, however. In a study reported by them, which also had a .57 correlation between scores on the PIL and those on the Crowne-Marlowe Social Desirability Scale, an independent variable was introduced in which half of the subjects were given false norms and told that their scores (representing purpose and meaning in life) were unacceptable and the other half were told that their results were at an appropriate level. When re-testing of both the PIL and the Crowne-Marlowe Social Desirability Scale occurred, a much more modest correlation of .36 between the scales was obtained. Scores on the PIL, in contrast to those on the Crowne-Marlowe Social Desirability Scale, increased only slightly when they were deemed unacceptable. This indicates a different response to the variable of social desirability than that found in the Crowne-Marlowe Social Desirability Scale, and thus relatively low influences of that effect (Crumbaugh & Henrion, 1988).

Other studies have shown correlations of .01 (n = 94), .04 (n = 39), and .39 (n = 96) between the PIL and the Crowne-Marlowe Social Desirability Scale (Crumbaugh & Henrion, 1988). It thus appears that relationships between the answers on the PIL and the participants’ desire for socially acceptable answers is modest and largely caused by the actual social desirability of statements reporting meaning in life, rather than faking answers on the test.

The third element measured in this study, depression, was measured using the short form of the Beck Depression Inventory (BDI). In its original form, the 21-item BDI is used in examining the level of depression in the vast majority of psychological research involving depression (Vredenburg, et al., 1985). It is derived from a systematic consolidation of clinically observed symptoms and attitudes found in depressed people that are significantly less common among those who are not depressed (Beck, et al, 1988).
The short form of the BDI, developed as a quick screen for depression, uses 13 of the BDI's 21 questions: sadness, pessimism, failure, dissatisfaction, guilt, self-dislike, suicidal thoughts, withdrawal, indecisiveness, poor self-image, work inhibition, fatigue, and anorexia (Volk, et al, 1993). Each item is scored on a 4-point scale, with a score of 8 or higher indicating moderate to severe depression (Volk, et al, 1993). The short form and the long form of the BDI have shown Pearson product-moment correlation coefficients of .96 in a mixed sample of psychiatric inpatients and outpatients, .93 in a sample of 193 heroin addicts, and between .89 and .97 in a mixed sample of 93 psychiatric and 338 psychiatric patients (Beck, et al, 1988). One criticism of the short form of the BDI is that it concentrates almost exclusively on the cognitive aspect of depression at the expense of the detection of somatic symptoms (Vredenburg et al., 1985). Because the present study focuses on the participants' thoughts, this shortcoming should not adversely affect the results.

The present study assessed the participants' level of alcohol use by means of the Michigan Alcoholism Screening Test (MAST); (Fischer & Corcoran, 1994), a direct measure of alcohol abuse. The MAST consists of 24 face-valid items associated with alcohol problems. Each item on the MAST is given a value between 0 and 5, with 5 considered an indicator of alcoholism (four items are reversed). Three points or lower on the MAST indicate a lack of an alcohol problem, a score of 4 warns of possible alcoholism, and 5 or above indicates a high likelihood of alcoholism (Fischer & Corcoran, 1994). Several independent cross-validations of the MAST have shown moderate to impressive validity, and one study involving a comparison between the MAST and four other ways of measuring the presence or extent of alcohol abuse showed the MAST
scores to be significantly more correlated to DID outputs than any of the other assessment tools (Watson et al., 1995). In a situation in which the people being screened are anonymous (and thus, presumably, there is little reason for them to hide a possible alcohol problem), the MAST has been shown to be more effective than subtle screens such as the Substance Abuse Subtle Screening Scale (Svanum & McGrew, 1995); because of the anonymous nature of this study, the MAST will be employed.
CHAPTER II

METHOD

Participants

A total of 366 university students, meeting a course research participation requirement, volunteered for this study. Although only native English-speakers were solicited, five non-native English speakers volunteered but were screened out. Several volunteers (six) provided incomplete data and were also screened out. Thus, there were 355 participants in this study. Because of administrative error, the first 80 participants did not provide their ages and genders. Of the 275 participants who did so, 188 or 68%, of them were under 21 and 87 (32%), were 21 and over. Out of the 280 participants who listed their gender, 141 were males and 139 were females.

Measures

The participants of this study were given the South Oaks Gambling Screen (SOGS), which measures the degree of problem gambling; Part A of the Purpose in Life (PIL) Test, which measures the level of meaning in a person’s life; the short form of the Beck Depression Inventory (BDI), which measures depression; and the Michigan Alcoholism Screening Test (MAST), which measures the level of alcohol abuse. All four
questionnaires have been described in the introduction. Although the first three questions of the SOGS, dealing with frequency, type and amount of gambling, are not coded when determining whether or not the test-taker is a problem gambler, they were recorded in this study in order to help determine the overall frequency of each person’s gambling.

Procedure

Each of the 355 participants filled out all four questionnaires. The order of the questionnaires was randomly assigned in such a way that approximately 15 participants filled them out in each of the 24 possible orders. The questionnaires were administered in groups whose size ranged from 14 to 40. The experimenter was present during all administrations to answer any questions. Filling out the four questionnaires required between 15 and 40 minutes.
CHAPTER III

RESULTS

The participants responded to questionnaires measuring their level of gambling (SOGS), level of purpose in life (PIL), depression (short form of the BDI), and alcohol abuse (MAST). Table 1 shows that the mean scores for all of the 355 participants on the SOGS, PIL, BDI and MAST were 1.223, 107.67, 4.51, and 4.580, respectively. Among males the mean scores on the SOGS, PIL, BDI and MAST were 1.738, 106.70, 4.972, and 4.582, respectively. Among females these scores were .833, 108.85, 4.288, and 4.504. The mean scores of those under 21 on the SOGS, PIL, BDI and MAST were .798, 108.32, 4.803, 4.70, respectively. Among those 21 and over these scores were 2.789, 103.38, 5.154, and 4.231. Gender was significantly correlated with gambling addiction as measured by the SOGS (-.185, p < .01) but not with any other variable. Among males, 46.1% had some gambling problem and 11.3% were probable pathological gamblers according to the SOGS. In contrast, among females 24.5% had some gambling problem and 5% were probable pathological gamblers.
Table 1

Summary of Outcome Measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>SOGS</th>
<th>PIL</th>
<th>BDI</th>
<th>MAST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>M</td>
<td>M</td>
<td>M</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SD</td>
<td>SD</td>
<td>SD</td>
<td>SD</td>
</tr>
<tr>
<td>Male</td>
<td>141</td>
<td>1.738</td>
<td>2.72</td>
<td>106.7</td>
<td>15.02</td>
</tr>
<tr>
<td>Female</td>
<td>139*</td>
<td>0.8345</td>
<td>2.04</td>
<td>108.8</td>
<td>14.15</td>
</tr>
<tr>
<td>Under 21 Total</td>
<td>188</td>
<td>0.7979</td>
<td>1.66</td>
<td>108.3</td>
<td>14.50</td>
</tr>
<tr>
<td>21 and over</td>
<td>87*</td>
<td>2.414</td>
<td>3.40</td>
<td>106.2</td>
<td>14.76</td>
</tr>
</tbody>
</table>

* Note: The figures for gender and age do not match the total number because not all participants provided this information.

Among all the participants, as measured by the SOGS, 204 (57.46%) showed no gambling problem (indicated by a SOGS score of 0); 123 (34.65%) had some gambling problem (a SOGS score of 1-4); and 28 (7.89%) were probable pathological gamblers (a SOGS score of 5 or higher).

As measured by the MAST, 132 (or 37.18%) participants had no alcohol problem (indicated by a MAST score lower than 4); 79 (22.25%) were possible alcoholics (scored a "4" on the MAST); and 144 (40.56%) were probable alcoholics (indicated by a score greater than 4 on the MAST).

Table 2 shows the correlations between the variables across all 355 participants.
Of particular interest to our hypothesis is the unexpectedly low correlation ($r = -.082$, $p > .05$) between gambling as shown on the SOGS and meaning in life as shown on the PIL.

The SOGS and the BDI were positively correlated ($r = .173$, $p < .01$), as were the SOGS and the MAST at ($r = .208$, $p < .01$). There also was an expectedly large negative correlation between scores on the PIL and those on the BDI ($r = -.561$, $p < .01$).

Table 2

Correlations (Pearson product-moment) Between Variables for all Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>SOGS</th>
<th>PIL</th>
<th>BDI</th>
<th>MAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOGS</td>
<td>--</td>
<td>-.082</td>
<td>.173**</td>
<td>.208**</td>
</tr>
<tr>
<td>PIL</td>
<td>--</td>
<td>--</td>
<td>-.561**</td>
<td>-.184**</td>
</tr>
<tr>
<td>BDI</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>.070</td>
</tr>
<tr>
<td>MAST</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

**$p < .01$**

It was hypothesized that a negative correlation would exist between scores on the SOGS (investigating the level of gambling problems) and those on the PIL (measuring the level of purpose in life). This correlation can be measured in several ways with somewhat different results as shown on Table 3. The most straightforward way is to compute the Pearson correlation between SOGS and PIL scores ($r = -.082$, $p > .05$). This correlation was nonsignificant as we have seen. A second way of measuring the correlation of SOGS and PIL scores is to compute a Spearman's rho correlation between level of gambling as
coded by the SOGS and PIL score. The SOGS is designed to measure the level of
gambling addiction, with a score of 0 indicating no gambling problem, 1-4 indicating some
 gambling problem, and 5 or higher indicating a probable compulsive gambler. A mild but
statistically significant relationship was found between level of gambling and PIL scores
(Spearman’s rho = -.144, p < .01). A third way of measuring the correlation between
scores on the SOGS and PIL is to partial out, or take out the effects of, the tendency
toward alcoholism as measured by the MAST. Doing so produced a Pearson correlation
of -.046 (p > .05). The fourth way the SOGS-PIL correlation was measured was by
partialling out level of depression as measured by the BDI. Doing so produced a Pearson
correlation of -.018 (p > .05).

The remaining four ways of measuring the correlation between the SOGS and the
PIL, although not explicitly hypothesized in this study, involve accounting for the extent
of alcohol problems on the relationship between gambling and meaning in life (see Table
3). Among the 63 participants who scored 0 on the MAST, that is, who had no indicators
of alcohol abuse, the Pearson correlation between SOGS and PIL scores was -.308 (p <
.05). Among the 138 participants who were without a probable alcohol problem on the
MAST (scores of 0-3, including the 63 individuals described previously), the Pearson
correlation between SOGS and PIL scores was -.246 (p < .01).
Table 3

**Correlation of SOGS with PIL (all are Pearson Product-Moment unless specified)**

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untransformed</td>
<td>355</td>
<td>-.082</td>
</tr>
<tr>
<td>By level (Spearman’s rho)</td>
<td>355</td>
<td>-.144**</td>
</tr>
<tr>
<td>MAST partialed out</td>
<td>355</td>
<td>-.046</td>
</tr>
<tr>
<td>BDI partialed out</td>
<td>355</td>
<td>-.018</td>
</tr>
<tr>
<td>with MAST = 0 (no indicators of alcohol)</td>
<td>63</td>
<td>-.308*</td>
</tr>
<tr>
<td>with MAST = 0-3 (non-alcoholic)</td>
<td>138</td>
<td>-.246**</td>
</tr>
<tr>
<td>with MAST = 4 (possible alcoholic)</td>
<td>72</td>
<td>.093</td>
</tr>
<tr>
<td>with MAST &gt; 4 (probable alcoholic)</td>
<td>145</td>
<td>-.032</td>
</tr>
</tbody>
</table>

*  p < .05
** p < .01

Those who were likely to have an alcohol problem (MAST = 0) displayed no significant relationship between scores on the SOGS and those on the PIL (.093, p > .05). Among those who were probable alcoholics according to the MAST (MAST > 4), there was a -.032 (p > .05) Pearson correlation between PIL and SOGS scores.
CHAPTER IV

DISCUSSION

This study found a mild correlation between gambling and meaning in life by investigating the relationship between the SOGS, measuring gambling, and the PIL, measuring level of meaning in life. The SOGS indicated that of the sample of 355 students at the University of Nevada, Las Vegas, 7.9 percent of the students were probable pathological gamblers. This was somewhat similar to the rate of probable pathological gambling among UNLV students of 11% and 8% in two previous studies involving 544 and 350 participants, respectively (Oster & Knapp, 1999). This percentage of probable pathological gamblers is substantially higher than the national average, estimated at between 1.1 and 5 percent (Lesieur & Blume, 1987). This may have been a measurement issue and not a sign of higher incidence of problematic gambling in the city. Because of the ubiquitous presence of gambling opportunities (poker machines in convenience stores and supermarkets, and bowling alleys, movie theaters, and shopping malls being located in casinos) it may be more likely for Las Vegas residents to encounter situations in which they would perform a behavior that would result in a negative mark on the SOGS. For example, item 7 on the SOGS is, “Do you ever gamble more than you intend to?” It is possible that a Las Vegas resident may answer “yes” to that item because they may
have “gambled more than they intended to” by emptying their pockets of all their spare change en route to a movie.

The possibility that a low score on the SOGS among this sample of students in Las Vegas indicates a measurement issue rather than "some gambling problem" in at least some cases is supported by the relative similarity between mean PIL scores of those with no gambling problem and some gambling problem according to the SOGS. Those with no gambling problem (SOGS = 0) had a mean PIL score of approximately 110 (n = 183) and those with some gambling problem (SOGS = 1-4) had a mean PIL score of approximately 108 (n = 109). In contrast, participants who were classified as probable pathological gamblers (SOGS > 4) had a mean PIL score of approximately 101. More research is needed in order to determine if higher scores on the SOGS reflect special measurement concerns for a population living in the constant presence of casinos or whether the higher scores on the SOGS reflect a greater incidence of problem gambling among such a population. If the latter explanation for the higher SOGS scores among this population in southern Nevada would turn out to be true, the large prevalence of problem gambling in this community would serve as a warning to those in other areas of the country contemplating legalizing gambling.

The mildly significant correlation (-.185, p < .01) of gender and SOGS, reflected by the higher mean on the SOGS scores of males (M = 1.738) than females (M = .835) is consistent with other findings. In a study involving 1,011 men and women in Iowa, women reported significantly less problematic gambling behavior than did men, although on other aspects of problem gambling such as loss of control and consequences of gambling there was no difference (Hraba & Lee, 1996).
The mean PIL score of this sample, 107.67, was not atypical for university students. Several different studies have produced PIL means of 108.45 (n= 417) among undergraduates, 116.84 (n= 75) among another group of undergraduates, and 102.93 (n= 50) among graduate psychology students (Hutzell, 1988).

The mean BDI score of this sample, 4.510, is only slightly lower than the reported mean of 7.28 found among 204 undergraduates in studies conducted in 1961 and 1978 (Beck, et al, 1988).

In contrast to the rate of gambling, which was measured to be higher among these students than among the population at large, the high prevalence of alcoholism among this student sample was quite typical for that of university students. Approximately 41% of our sample were likely alcoholics (their MAST score was higher than 4), and an additional 22% were possible alcoholics (MAST = 4). These prevalence rates were similar to those found in other studies. Among 164 students at a university in Ohio, 86 (52%) scored higher than 4 on the MAST, indicating problem drinking (Myerholtz & Rosenberg, 1998). Another study involving 278 freshmen medical students showed 7% of them having a virtual 100% likelihood of being an alcoholic and another 23% of them having an 80% likelihood of being an alcoholic. (Sheridan, et al, 1995). In general, estimates of alcoholism among university students range from 19% to 52% (Myerholtz & Rosenberg, 1998).

Gambling and Purpose in Life

The results have provided mixed confirmation of the hypothesis that a negative correlation exists between meaning in life and gambling. Although the Pearson correlation
between SOGS and PIL scores was only -.082 (p > .05) and therefore nonsignificant, the Spearman correlation between level of gambling (no gambling problem, some gambling problem, probable compulsive gambler) and meaning in life was statistically significant (Spearman’s rho = -.144, p < .01). Either way, the relationship between gambling as measured on the SOGS and meaning in life as measured on the PIL was small. Why was this so?

The most likely explanation for the weakness of this correlation was the original failure to take into account other addictions. Frankl’s idea was that people who cannot properly resolve the lack of meaning in life often turn to addictions that may include gambling but may also include alcohol or other patterns (Nicholson, et al, 1994). Perhaps some of our participants who lacked life purpose responded to this lack by turning to alcohol. For many of them, gambling would not be necessary. Thus when scores on the PIL are low, we might expect scores on the MAST and/or the SOGS to be high (not merely the SOGS alone). Indeed, when those who exhibited problems with alcohol as shown on the MAST were excluded from the calculations, the negative correlation between meaning in life, as measured by the PIL, and problem gambling as measured by the SOGS, increased dramatically. Those who exhibited no alcoholic symptoms according to the criteria found in the MAST (MAST score of 0) a showed -.308 (p < .05) correlation. Non-alcoholics (those with MAST scores on 0-3, including the previously described group) showed a correlation of -.246 (p < .01) between scores on the SOGS and those on the PIL. This correlation of SOGS and PIL scores for a group of participants decreased as the amount of indicators of alcoholism in that group increased, so that there was no significant correlation between scores on the PIL and those on the
SOGS among possible and likely alcoholics. Thus, one can conclude that among those who have not turned to other addictions such as alcohol, a strong relationship exists between lack of meaning in life and problem gambling.

Exploration of the link between addictions in general and meaning in life was attempted by formulating several composite addiction scores. One of these involved tabulating z-scores of both the level of gambling addiction as measured by the SOGS and the level of alcohol abuse as measured by the MAST; these z-scores were then added together to form an “Addiction Quotient.” This addiction quotient was only moderately correlated with meaning in life as measured by the PIL (r = -0.172, p < .01). Another attempt at producing an “Addiction Quotient” involved adding the level of gambling (three groups of SOGS = 0, 1-4, or 5 or higher) and the level of alcoholism (three groups of MAST = 0-3, 4, or 5 and higher). This also yielded a mild negative correlation (Spearman’s rho = -0.199, p < .01). A third “Addiction Quotient” was formulated by using each participant’s highest level of either gambling or addiction. For example, if a participant obtained a SOGS score of 6 and a MAST score of 4, only the SOGS-based classification would be applied, because it would be on a higher level of addiction than would be the classification based on the MAST score. This yielded a Spearman’s correlation of -0.202 (p < .01).

The Internal Consistency of the PIL

One might criticize the PIL for its lack of an internal consistency measure. Although this study did not include an explicit examination of the consistency of the answers given by the participants, a post hoc reliability check was attempted by examining paired items on the PIL that were quite similar to each other. The pairs were: items 1 ("I
am usually completely bored or exuberant, enthusiastic") and 2 ("Life to me seems always exciting or completely routine"); items 4 ("My personal existence is utterly meaningless, without purpose or very purposeful and meaningful") and 20 ("I have discovered no mission or purpose in life or clear-cut goals and a satisfying life purpose"). Each item is scored on a 7 point Likert scale. A discrepancy of 3 points on the 7 point Likert scale between the items of each pair was considered possibly indicative of random or thoughtless responses. Of the 355 participants, 16 showed such a discrepancy on one of those pairs. Of the participants who responded to these items with discrepancies, 7 did so on items 1 and 2, and 9 participants did not answer items 4 and 20 consistently. Not a single person answered both pairs inconsistently.

The items were not identical and possibilities other than random or thoughtless answering may account for the items not matching each other. For example, 6 of the 7 participants showing a discrepancy with items 1 and 2 showed higher scores on item 1 than on item 2. This would seem to indicate that those respondents lead routine lives but are not bored with their situation. It is also likely that, given the small differences between the items, some respondents answered inconsistently because they paid especially careful attention to the details of the questions.

When the participants who scored inconsistently on either of the paired items were screened from the data, the correlations were remarkably similar to those found with the original sample. The new sample produced a Pearson correlation of -.079 (p > .05) between scores on the SOGS and those on the PIL, in comparison to -.082 (p > .05) in the original sample. The new sample produced a Pearson correlation of -.562 (p < .01)
between scores on the PIL and on the BDI, quite similar to a correlation of \(-0.561\) \((p < .01)\) found with the original sample.

Given the small number of inconsistent responses on similarly paired items on the PIL (as well as the observation that not a single participant answered both paired items inconsistently), as well as the minor differences between the correlations of the original sample in comparison to the sample with the 16 participants who scored items 1 and 2 and 4 and 20 inconsistently, one can conclude that our data have not been overly affected by random or careless responding.

**Recommendations for Future Study**

This study has shown a link between problem gambling and meaning in life. The strongest results, involving the exclusion of participants with alcohol problems, were obtained in a way that was not explicitly hypothesized. Therefore, it seems prudent to call for further research with clearly stated goals of having people with alcohol problems screened out in order to solidify this study's findings. It seems quite likely that a large correlation between SOGS scores and PIL scores would be found.

The apparent link between a lack of meaning in life and problem gambling suggests that Logotherapy, which focuses on helping clients find meaning in their lives, may be quite effective in interventions involving people with gambling problems. Logotherapy has been used successfully in treating patients suffering from other addictions such as alcohol and narcotics. A review of four years of work at the California Rehabilitation Center involving the rehabilitation of approximately 260 people addicted to narcotics using logotherapeutic techniques as a basis for treatment showed 40% of them maintaining
drug-free status; only 10% of addicts completing treatment programs at the same time, being helped by traditional therapy, were able to maintain a drug-free lifestyle (Fraiser, 1995). Klinger (1987) reported on two studies involving the usefulness of logotherapy in the treatment of alcoholism. One study showed no difference in drinking habits between those who undertook logotherapy and those who had no treatment. This finding, however, was based on a weekend retreat, and the patients indicated an overall better quality of life. Another study conducted at a Veterans Administration Alcoholism Treatment Unit showed that 72% and 66% of participants in two logotherapy samples made a "good" recovery. People in non-logotherapy samples reported 51% and 54% rates of "good" recovery. The link between meaninglessness in life and addictions such as alcoholism and narcotics explain the efficacy of logotherapy in treating those populations. The results of this study, correlating gambling addiction and meaning in life, indicate that logotherapy may also be helpful for problem gamblers.

An important "next step" from this research would be a comprehensive analysis of the helpfulness of specific logotherapeutic techniques in the treatment of people with problem gambling. One common logotherapeutic technique is dereflection. This involves having the client "ignore" his symptoms by concentrating on something else. A classic example of this technique involved a woman suffering from "frigidity" despite (or rather, because of) constant body self-monitoring, reading books about the problem, etc. Once she was told to focus all of her attention onto her husband, the symptoms disappeared (Guttmann, 1996). This relatively simple technique illustrates the positive nature of self-transcendence and of thinking of others (Kocourik, 1995). Another commonly used therapeutic technique, quite applicable toward people with addictions, is the appealing
technique (Guttmann, 1996). This method involves suggestion and support towards the realization by the client of a meaningful and willful stance in life. Another logotherapeutic technique is that of the logoanchor, which involves using the client's past experiences ("anchors") as tools used for unearthing the client's creativity, insight, intuitive knowledge of things, and so on.

Perhaps one of logotherapy's best known techniques, and one that has been used extensively by other psychological approaches (Dr. Joseph Wolpe described Frankl as "perhaps the only non-behaviorist to have contributed a method to behavior therapy") (Frankl, 1988), is that of paradoxical intention (Frankl, 1988). This involves telling the patient, often in a humorous way, to do the opposite of what is intended: to exaggerate unwanted behavior in order to extinguish it. Paradoxical intention is rooted in the logotherapeutic notion that man is inherently free to choose his attitude towards a given situation (Gerz, 1995). For example, a stutterer may be told to stutter as much as possible; such a stance brings about the client's awareness of his own control and facilitates taking action (Guttmann, 1996). Frankl (1988) reported one case of a pair of psychiatrists using the technique of paradoxical intention on a patient suffering from compulsive gambling. After instructing the patient to gamble every day during a certain period of time, the patient lost all of his money after three weeks, whereupon the "therapist suggested that he might sell his watch." Following this treatment, the patient experienced his first remission in more than twenty years. The existence of the link between problem gambling and meaning in life indicates that, perhaps, the time has come for a more exhaustive and detailed examination of logotherapeutic techniques used in helping people who suffer from problem gambling.
Gambling and Alcoholism

Contrary to the hypothesis, a moderate correlation of .208 ($p < .01$) was shown between scores on the SOGS and those on the MAST, and a mild correlation of .122 ($p < .05$) was shown when the level of gambling and the MAST were compared. This contradicts research conducted by Briggs, et al. (1996) and their conclusion that there is no relationship between problem gambling and alcoholism. The anonymity of the present study, as well as the non-hospitalized status of the participants, prevents the application of Briggs et al.’s (1996) criticism of previous studies linking alcohol abuse and problem gambling in which correlations between gambling and alcoholism may have been due to either personal crises on the part of the participants or to their desire to respond in a clinically appropriate way. However, because the present study’s correlations were rather moderate, it would be prudent to conduct more research into this area before rejecting Briggs et al.’s claims.

Other Data and Corresponding Implications

The large correlation between scores on the PIL and those on the short form of the BDI ($-.561$, $p < .01$) is quite similar to Lester & Badros’ (1992) description of a $-.55$ ($p < .01$) correlation between scores on the PIL and on the long version of the BDI. This is quite understandable because considerable conceptual overlap exists between depression and lack of meaning in life. Frankl (1984) considers depression, aggression, and addiction as three pervasive consequences of an existential vacuum. In a description of what he termed "unemployment neurosis," people who lost their jobs equated their unemployment with uselessness and their uselessness with a lack of meaning in life. Those patients
suffering from "unemployment neurosis" who were then persuaded to take part in meaningful activities such as adult education, library volunteering, or work in youth organizations experienced an elimination of their depressive symptoms (Frankl, 1984). This link of meaning in life and depression is supported by the finding that when depression as measured by the BDI is partialed out, the correlation between SOGS scores and PIL scores is only .018 (p > .05); with level of gambling and PIL score it is -.073 (p > .05). In general, BDI scores are more correlated with SOGS scores than are PIL scores.

The link between meaning in life and depression can also be seen in the way the correlation between gambling as measured by the SOGS and depression as measured by the BDI increases as those with more symptoms of alcohol problems are excluded. This was examined by repeating the procedure of screening out participants with progressively more symptoms of alcohol addiction. Among those who have no symptoms of alcohol abuse (MAST = 0), SOGS and BDI scores display a .415 (p < .01) correlation. Among

Table 4

Correlations of SOGS and BDI, by level of alcoholism

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>With MAST = 0 (no indicators of alcoholism)</td>
<td>63</td>
<td>.415**</td>
</tr>
<tr>
<td>With MAST = 0-3 (non-alcoholic)</td>
<td>138</td>
<td>.275**</td>
</tr>
<tr>
<td>With MAST = 4 (possible alcoholic)</td>
<td>72</td>
<td>.079</td>
</tr>
<tr>
<td>With MAST &gt; 4 (probable alcoholic)</td>
<td>145</td>
<td>.135</td>
</tr>
</tbody>
</table>

** p < .01

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non-alcoholics (MAST < 4) this correlation is .275 (p < .01), and among probable alcoholics it ceases to be significant (.135, p > .05) (see Table 4). This is a pattern quite similar to the one involving SOGS and PIL scores as level of alcohol decreases.

Although the BDI scores were generally more correlated to SOGS scores than the latter were to scores on the PIL, the opposite effect was seen when comparing the PIL-MAST correlation. Whereas the SOGS and the PIL scores were correlated at -.082 (p > .05) and the SOGS and the BDI scores at .173 (p < .01), the MAST and the PIL scores showed a correlation of -.183 (p < .05) and the MAST and BDI had a .070 (p > .05) correlation. This implies a large and possibly important difference between the two addictions. It is recommended that more research be conducted investigating the meaning behind the difference between alcoholism and gambling with respect to purpose in life. Such inquiries would lead to more understanding of both addictions and might lead to an appropriate differentiation between gambling and other addictions, and therefore, may lead to more effective treatment.


of Gambling Studies, 10(4), 371-384.


VITA

Graduate College
University of Nevada, Las Vegas

Andrew Bohdan Plesh

Local Address:
1900 E. Tropicana Apt. 287
Las Vegas, NV 89119

Permanent Address:
P.O. Box 133
Macedonia, OH 44056

Degrees:
Bachelor of Arts, 1996
University of Toledo

Special Awards or Honors:
President’s List
Dean’s List
Golden Key National Honor Society

Thesis Title: Gambling and Meaning in Life

Thesis Examination Committee:
Chairperson, Dr. Russell T. Hurlburt, Ph.D.
Committee Member, Dr. Jeffrey Kern, Ph.D.
Committee Member, Dr. Terry Knapp, Ph.D.
Graduate Faculty Representative, Dr. Craig Walton, Ph.D.