

Sensation Seeking in
Driving-Under-The-Influence Offenders

A Thesis

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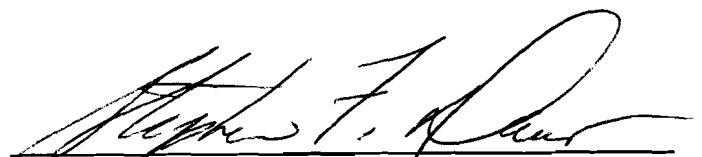
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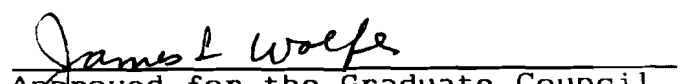
The research on psychoactive substance abuse has been extensive over recent years. Some of this research has linked sensation seeking to chemical use and abuse. The present study was undertaken in order to explore further the area of driving-under-the-influence and sensation seeking.

The sample population consisted of 63 court-referred driving-under-the-influence offenders. There were 50 men and 13 women. Instrumentation consisted of Zuckerman's Sensation Seeking Scale, Form V. The scores of all subjects, and males and females separately, were compared to the normative data. Male subjects' scores were also compared to female subjects' scores.

Analysis of the data found one significant ($p < .05$) difference in sensation seeking scores of the subjects in this study as compared to the normative subjects' scores. The male

subjects in this study were found to be significantly lower than the normative male subjects in sensation seeking. There was no significant difference found between the sensation seeking scores of men and women in this study. Conclusions drawn from this study point to the age difference between both the men and the women participating in this study and the age of the normative groups. Suggestions are made for further research using a larger number of subjects, enabling scores to be statistically tested by age groups. It is also suggested that further research compare the sensation seeking scores of female driving-under-the-influence offenders with those of a matched control group.


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Chapter 1

Introduction

In recent years politicians as well as mental health professionals have become increasingly concerned about the issue of alcohol and drug abuse. Politicians declared a war on drugs, and the week of October 23rd is National Alcohol and Drug Awareness week. In a similar manner, not only have private citizens become more aware of alcohol and drug abuse, but there has been a growing concern on their part regarding the willingness of some individuals to drive-under-the-influence. Groups such as Mothers Against Drunk Driving have developed and become active lobbyists in the political arena for stricter driving-under-the-influence (D.U.I.) laws. According to a recent newspaper article published in a rural midwestern town, one local expert indicated she believed 25 to 40 percent of individuals in this town were affected by alcohol or drug abuse either directly or indirectly (Mooney, 1989). Although different populations differ in their definition of substance abuse and dependence, the American Psychiatric Association has established specific criteria for the different psychoactive substance use disorders in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (1987). The following is a list of the criteria set forth in this manual.

Psychoactive Substance Abuse

A. A maladaptive pattern of psychoactive substance use indicated by at least one of the following:

(1) continued use despite knowledge of having a persistent or recurrent social, occupational, psychological, or physical problem that is caused or exacerbated by the use of the psychoactive substance

(2) recurrent use in situations in which use is physically hazardous (e.g., driving while intoxicated)

B. Some symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a longer period of time.

C. Never met the criteria for Psychoactive Substance Dependence for this substance.

Psychoactive Substance Dependence

A. At least three of the following:

(1) substance often taken in larger amounts or over a longer period than the person intended

(2) persistent desire or one or more unsuccessful efforts to cut down or control substance use

(3) a great deal of time spent in activities necessary to get the substance (e.g. theft),

take the substance (e.g. chain smoking), or recovering from its effects

(4) frequent intoxication or withdrawal symptoms when expected to fulfill major role obligations at work, school, or home (e.g. does not go to work because hung over, goes to school or work "high," intoxicated while taking care of his or her children), or when substance use is physically hazardous (e.g., drives when intoxicated)

(5) important social, occupational, or recreational activities given up or reduced because of substance use

(6) continued substance use despite knowledge of having a persistent or recurrent social, psychological, or physical problem that is caused or exacerbated by the use of the substance (e.g., keeps using heroin despite family arguments about it, cocaine-induced depression, or having an ulcer made worse by drinking)

(7) marked tolerance: need for markedly increased amounts of the substance (i.e., at least a 50% increase) in order to achieve intoxication or desired effect, or markedly

diminished effect with continued use of the same amount

Note: The following items may not apply to cannabis, hallucinogens, or phencyclidine (PCP)

(8) characteristic withdrawal symptoms

(9) substance often taken to relieve or avoid withdrawal symptoms

B. Some symptoms of the disturbance have persisted for at least one month, or have occurred repeatedly over a long period of time.

As awareness and concern regarding alcohol and drug abuse increases, the efforts to understand, prevent, and treat these disorders has led to extensive research in the area. As alcohol and drugs effect the actual central nervous system, and are experienced as altered states of mind by the individuals using them, researchers have sought to find out if these individuals are at least partially motivated by a need or desire for sensation seeking.

Many factors contribute to the stable individual differences which are considered to make up a given individual's personality. Sensation seeking is a construct referring to the degree to which the individual needs or desires varied sensations, arousal levels, or experiences. The high sensation seeker is generally seen as needing more novel, varied, and complex experiences and sensations in

order to achieve and maintain an optimal level of arousal. The optimal level of arousal of high sensation seekers is assumed to be greater than that of low sensation seekers. The high sensation seeker is assumed to become bored more easily and be more likely to be sensitive to inner sensations and less conforming to external constraints (Zuckerman, Bone, Neary, Mangelsdorff, & Brustman, 1972).

The origin of the sensation seeking construct has been traced by Zuckerman (1979) back to 1883 and Wundt's "optimal level of stimulation" construct. The concept lay dormant for about 80 years, until the 1950s and 1960s. Theorists, such as Berlyne (1960), Fiske and Maddi (1961), Hebb (1955), Malmö (1959) and Schlosberg (1954) expanded and relabeled the construct as "optimal level of arousal," in order to better accommodate stimulus parameters such as novelty and complexity.

Purpose of this Study

This project investigated sensation seeking in individuals arrested for D.U.I. who have been diagnosed as psychoactive substance abusive or psychoactive substance dependent. The present study sought to explore the relationship of sensation seeking, alcohol and drug related arrests, and diagnosis of individuals referred to a rural mental health center for an alcohol and drug prevention and education program. The present study hypothesized higher

sensation seeking needs in both male and female D.U.I. offenders, however, the female D.U.I. offenders were particularly expected to have a higher than average need for sensation seeking. Alcohol is a depressant that feels like a stimulant in moderate quantities. While some theorists have hypothesized that alcohol use for chronic alcoholics may be more related to its depressant qualities and tension reduction, it is its stimulant qualities that were expected to be more relevant in relation to D.U.I. offenders.

Although, for social drinkers, drinking alcoholic beverages itself may well be related to sensation seeking, it was expected that D.U.I. offenders have an added need for taking risks. Another factor that may be playing into this is the possibility that D.U.I. offenders also have the necessary confidence in their ability to handle these risky situations which enables them to engage in such behavior.

Zuckerman's Sensation Seeking Scale, Form V (1979), was used in this study to test the above hypotheses. Zuckerman developed the Sensation Seeking Scale (SSS) based on the idea of stable and enduring individual differences in optimal level of arousal or optimal level of stimulation. Zuckerman later found evidence to support his hypothesis that his test was actually measuring four specific subscales. These factors were named Thrill and Adventure Seeking, Experience Seeking, Disinhibition, and Boredom Susceptibility.

Thrill and Adventure Seeking items express a desire to participate in activities involving some element of danger or speed. These include items such as "I would like to try parachute jumping." Experience Seeking items indicate a desire or need for a variety of inner experiences, such as travel, drugs, music, art and unconventional lifestyles. The Disinhibition subscale includes items that express a hedonistic, extroverted philosophy of wild parties, variety in sexual life, and gambling. Boredom Susceptibility items indicate a dislike of repetition and routine, as well as dull or boring people. A restless reaction to monotony, such as inability to watch a movie seen before, would also be indicated.

Significance

If it can be established that sensation seeking is indeed a factor in an individual's willingness to drive under the influence, then this information could be incorporated into educational programs designed for individuals who have alcohol or drug related arrests. A better understanding of sensation seeking as a motivating factor in drinking and driving could conceivably lead both therapists and clients to explore alternative ways to fulfill this need. Additionally, the use of this scale might well prove beneficial as a screening and prevention tool in drivers education programs. The possibility also exists that this knowledge could be used

by school counselors in conjunction with interest inventories to help these youths find positive ways to meet their sensation seeking needs, such as through careers which would be interesting and exciting to them, as well as hobbies. SSS scores could additionally be used as a screening device in school alcohol and drug prevention programs. If there is reason to expect certain youths to be more likely to later abuse alcohol or drugs, possibly we can concentrate extensive prevention efforts on these youths before they start using such chemicals.

Review of Literature

Research on the psychological characteristics of alcohol and drug abusers was developed in an attempt to differentiate alcohol and/or drug abusers from other populations, as well as to predict the best therapy for such abusers. Although the research has yielded mixed results, several patterns seem to emerge in the literature. One of these appears to be that the relationship of sensation seeking to alcohol and/or drug use varies with the type of group studied. Two of the factors that seem to influence this relationship substantially are the drug (including alcohol in this context) or drugs of choice and the type of use (social drinking, substance abuse or substance dependence). Relationships have been demonstrated between sensation seeking and drug use patterns in college students (Zuckerman

et al., 1972), and between sensation seeking and alcohol as well as drug use in college students (Zuckerman, Neary, & Brustman, 1970). In the 1970 study, undergraduate subjects with extreme SSS scores were given a drug questionnaire, the number of drugs used was calculated for each group, and the extent of alcohol use was analyzed separately (Zuckerman et al., 1970). In this study, 74% of the high sensation seekers had used at least one of the drugs, as compared to 23% of the low sensation seekers. Extent of alcohol use also differed significantly between high and low sensation seekers. Over half (53%) of high sensation seekers drank six drinks per week or more, but only 13% of low sensation seekers reported drinking this amount (Zuckerman et al., 1970). Zuckerman et al. (1972) failed to replicate the correlation of sensation seeking to extent of alcohol use. Using the same questionnaire, they found 31% of the low sensation seekers reported drinking six drinks or more per week, and 44% of the high sensation seekers reported this. A third group had been added in this study, those with scores falling in the middle range of the SSS, and 42% of those individuals reported drinking this amount. In the women, drug experience was significantly correlated with all SSS subscales, and in the men it was significantly correlated with all, except the disinhibition, subscale (Zuckerman et al., 1972). Marvel and Hartmann (1986) replicated previous studies suggesting that higher scores on sensation seeking (particularly higher

scores on the disinhibition subscales) were associated with higher frequency of alcohol and marijuana use. They hypothesized that high sensation seekers not only choose stimulant drugs such as amphetamines, hallucinogens and cocaine, but also alcohol and marijuana because at low doses usually these substances are experienced as a stimulant. Schwarz, Burkhart, and Green (1978) found similar results, using undergraduate college students. The results suggested college students drink alcohol more for its stimulating properties.

Ratliff and Burkhart (1984) divided 70 male and 70 female undergraduates into heavy and light drinkers, and administered a test battery including the SSS and a variety of other measures. It was hypothesized that heavy drinkers would exhibit strong sensation seeking needs, and this hypothesis was confirmed. It is notable that there were differences in the expectations of the subjects as a function of sex. Men expected a greater degree of aggressive arousal and social deviance, while women expected to enhance social pleasures when drinking. Johnson also administered a test battery to undergraduates (55 women) and had them rate their alcohol consumption pattern. The Sensation Seeking Scale was part of this battery. Heavy drinking women were found to have greater sensation seeking needs, and greater fear of failure.

Using the SSS IV, Malatesta, Sutker, and Treiber (1981) found results supporting the hypothesis that sensation seeking is related to extent of social deviation among alcoholics, differentiated by frequency of arrests for public intoxication. Chronic public drunkenness offenders showed a greater inclination to engage in activities involving elements of danger, pursue varied experiences for their own sake, avoid repetition of experience and routine work, become restless with monotony, and engage in behaviors reflecting a certain disregard for social norms.

Research on the relationship of sensation seeking to alcohol use has been mixed. Galizio, Gerstenhaber, and Friedensen (1985) sought to reconcile the conflicting literature regarding sensation seeking tendencies of alcohol users. Several studies have found SSS scores to be positively correlated with the use of alcohol among college students (Galizio, Rosenthal, & Stein, 1983; Schwarz, Burkhardt, & Green, 1978; Segal, Huba, & Singer, 1980), however, other studies have found no relationship between alcohol use and SSS scores among college students (Zuckerman et al., 1972). Some studies (Mookherjee, 1986) have found results suggesting alcoholics were higher in sensation seeking than non-alcoholics, but other studies have found no differences between SSS scores of alcoholics and control groups (Kish & Busse, 1969). Galizio et al. (1985) hypothesized that differing sensation seeking tendencies of

alcoholics were related to their membership in the often reported alcohol subtypes as determined by MMPI profiles. Galizio et al. (1985) found results suggesting that sensation seeking may be a clinically important variable in differentiating subgroups of alcoholics, determined by Minnesota Multiphasic Personality Inventory (MMPI) profiles. A most notable observation was that no members of the depressive alcoholic subtype (elevations on D [depression scale] only) were high in sensation seeking, while alcoholics in the elevated cluster (elevations on D [depression], Pd [psychopathic deviate], Pa [paranoia], Sc [schizophrenia], and Ma [hypomania]) had significantly higher means on all subscales of the SSS. The traditional subtype (no major elevations of any scales, but peaks at Pd [psychopathic deviate], Ma [hypomania], and Pa [paranoia]) fell between the other two groups in sensation seeking.

Kern, Kenkel, Templar, and Newell (1986) obtained significant differences between sensation seeking scores of groups of male prison inmates, differentiated by drug preference. The drug preference most associated with sensation seeking was hallucinogens, with stimulants, opiates, alcohol-plus, and alcohol-only following in this order (Kern et al., 1986). Kern et al. pointed out that the SSS mean of the opiate users was closer to that of the stimulant users than to that of the alcohol users. This is inconsistent with the theory that high arousal persons prefer

central nervous system stimulants, while low arousal persons prefer central nervous system depressants. Kohn, Barnes, Fishlinsky, Segal and Hoffman (1979) found results inconsistent with this hypothesis as well. Using a modified version of Pearson's Novelty-Experience Scale, Pearson's Desire for Novelty Scale, and Vando's Reducer-Augmenter Scale, they studied 32 clients of a methadone treatment program and their results suggested that persons dependent on depressant drugs were more high than low experience seekers. Some researchers, (Carrol & Zuckerman, 1977; Marvel & Hartmann, 1986) have found low or negative correlations between SSS scales and barbiturate or opiate use. Other researchers have found higher sensation seeking scores of stimulant users and polydrug users, and lower sensation seeking scores among opiate users. Galizio and Stein (1983) found sensation seeking to be essentially correlated with all types of drug use for polydrug users. Polydrug users scored higher on all subscales than did the depressant only users. The relationship between drug choice and SSS scores was evident for both whites and blacks, although, consistent with other research, they found blacks to score lower on the SSS than did whites. One hypothesis which was offered was that for polydrug users, sensation seeking may motivate virtually any type of drug use, including the use of depressant drugs.

Addington (1987) investigated subjects who had been arrested for driving under the influence of alcohol and

referred to a local Alcohol Safety Action Program. This researcher found results indicating that the younger the user, and the higher number of drugs which that person had used, the higher the Total Sensation Seeking, Experience Seeking, Disinhibition, and Thrill and Adventure Seeking scores. When the effects of age were controlled, drug users of all types scored higher in the Total score, as well as the Experience Seeking and Disinhibition subscales. Opiate and inhalant users were also found to be higher in Thrill and Adventure Seeking than were non-drug users, and only those which were continuing marijuana and amphetamine drug use were higher in sensation seeking relative to drug use discontinuers.

Also investigating individuals arrested for D.U.I., Donovan and Marlatt (1982) administered parts of several assessment instruments to 172 men that had been arrested and referred to an alcohol-related education program. Included in this test battery was a brief measure of sensation seeking, derived primarily from the Thrill and Adventure Seeking, Experience Seeking, and Disinhibition subscales of the Sensation Seeking Scale. No assessment was made concerning the percentage of alcoholics in the subject pool, however, the researchers do report that only 24.2% of the subjects felt they had a drinking problem. A cluster analysis was done, and 5 clusters were identified. Clusters 2 and 5 were identified by the researchers as least

pathological, with Cluster 2 evidencing the greatest overall degree of affective and behavioral adjustment, being the least depressed, having low levels of risk-enhancing driving attitudes, the lowest overall level of driving related aggression, the lowest levels of hostility, and the lowest levels of sensation seeking. Cluster 4 individuals were characterized as having the highest level of driving-related aggression, competitive speed, the lowest level of caution while driving when upset, the highest levels of assaultiveness, indirect and verbal hostility, irritability, and sensation seeking. Possible different motivating factors for the different groups are discussed.

Using the Michigan Alcoholism Screening Test (MAST) to classify individuals arrested for driving-under-the-influence and referred to an educational program, Mookherjee (1986) found results indicating alcoholics were more inclined than non-alcoholics to be high sensation seekers, and also tend to experience a higher degree of powerlessness and lower levels of self-esteem. Several other studies, Drolet (1972), DePalma and Clayton (1958), Gross (1971), and White and Porter (1966) have found, lowered levels of self-esteem, ego-strength, self-regard, or less self-accepting self-descriptions, among alcoholics. Nocks and Bradley (1969) found results suggesting self-esteem decreases as the duration of the drinking problem increases. Burch (1985) investigated the relationship of ego-strength and self-regard

between men and women D.U.I. offenders at a rural midwestern mental health center serving several counties. She found surprising results. Both men and women rated themselves higher on ego-strength and self-regard than the average population as shown by comparison to the norms. The difference was greater for the female subjects. She offered the possible hypothesis that persons with high self-esteem feel they can handle anything, and so do not hesitate to drive when under the influence of alcohol. Relevant to this hypothesis is the strong correlation between sensation seeking and risk taking (Zuckerman, 1979). Quite possibly a need for and willingness to participate in sensation seeking type activities is indeed linked to self-confidence in D.U.I. offenses.

Summary

Growing concern about alcohol and drug abuse and D.U.I. offenses in the political realm, among the general public, as well as in the helping professions, has resulted in extensive research in this area. Some of this research has linked alcohol and drug use to higher than average sensation seeking. This project sought to explore sensation seeking in D.U.I. offenders. Driving-under-the-influence offenders were classified according to diagnoses and sex. The criteria for psychoactive substance abuse and psychoactive substance dependence are substantially different as set forth by the

American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (1987). Those individuals arrested for driving-under-the-influence and diagnosed as psychoactive substance abusive or psychoactive substance dependent were expected to have a higher than average need for sensation seeking.

The following chapter will discuss the selection of subjects for this study, the administration and scoring procedures for the SSS V, as well as the validity and reliability of this instrument. Client confidentiality and protection thereof will also be discussed as well as the statistical procedures that were employed in the analysis. Results of this study will be reported in the third chapter of this paper, and the fourth chapter will consist of an interpretation and discussion of those results in light of the preceding sections.

Chapter 2

Method

In this chapter, attention will be given to the population from which the sample was drawn, and the actual sample used. Instrumentation, procedures, and analysis techniques will also be discussed, as well as the limitations of this study.

Subjects

The population investigated consisted of individuals arrested for D.U.I. and referred to a midwestern rural mental health center. Intact groups were used. The subjects were court referred clients attending an alcohol and drug prevention and education program at a rural midwestern mental health center between June and November, 1989. The scores of driving-under-the-influence offenders diagnosed as psychoactive substance abusive or psychoactive substance dependent were used in the analysis. This yielded a sample of 63 subjects; 50 men and 13 women. The age range was 17 to 57 years. The mean age for the men was 29.68 years. The mean age for the women was 28.23 years.

Materials

Materials consisted of a consent form which all subjects were to read and sign (see Appendix A), a demographic

information sheet asking age, sex, marital status, education level, vocation, and current and prior alcohol and drug related arrests (see Appendix B). Also included in the materials were the Sensation Seeking Scale, form V (SSS V) (see Appendix C), an answer sheet (see Appendix D), and a form which the subjects could fill out if they desired a copy of their results (see Appendix E). All forms are attached in the appendices. The SSS V is a 40 item, forced choice questionnaire. Internal reliability of the SSS V total score for American males is .84 and for American females is .85, and test-retest reliability for a three week interval is .94 (Zuckerman, 1979). Sensation Seeking Scale scores have been found to differ significantly with age and sex. Younger individuals tend to score higher than older ones, and men tend to score higher than women (Zuckerman, 1979). Zuckerman has established T scores and percentile conversions for the total sensation seeking scale score and the subscales for males and females. Acceptance of the scale is apparent by the large number of researchers who have used one of the SSS scales. The room was the presentation room of the above mentioned school.

Procedure

Clients attending the alcohol and drug prevention and education program of a rural midwestern mental health center were asked to participate in this study. Clients were

informed participation was optional and would have no effect on their status at the mental health center. Clients were also informed that their confidentiality would be respected and that no identifying information would be used in reports. The above listed materials were given to those clients expressing a verbal willingness to participate in this study, and subjects were asked to read and sign the consent form. They were then asked to fill out the demographic questionnaire form and the name and address form if a copy of results was desired. Subjects were instructed to answer all questions on the answer sheet provided, and all materials were collected when subjects were finished. The demographic questionnaires were numbered, as were the answer sheets, in order to prevent separation of answer sheets from packet. Diagnoses were determined through center records. All diagnoses used in this study were based on a minimum of one face-to-face interview with a client by a practicing mental health professional. All diagnoses were either made originally by a practicing psychologist or substance abuse specialist after a court ordered evaluation or were supported by such an evaluation if the client had already been seen at the mental health center. Evaluations consisted of a clinical interview assessing the presence and/or extent of any substance abuse problem, as well as other problems psychological in nature. This is accomplished by careful inspection of the results of testing (including the

MacAndrew's alcoholism scale score and Michigan Alcoholism Screening Test score), as well as self-reported type, amount, and frequency of chemical use. Other relevant factors are considered during an evaluation. These generally include at least all of the following: any personal or family history of substance abuse, vocational or social difficulties, arrest record, and blood alcohol content (B.A.C.) if arrested for a D.U.I.. If the MMPI profile indicates the likelihood of evasiveness on the clients part and/or the evaluator notes discrepancies during the interview, these facts are weighed in when considering clients self-reports of substance use. The basis for diagnoses are the criteria established in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised (American Psychiatric Association, 1987). After diagnoses were obtained, these were listed on the demographic questionnaire. This form and the SSS answer sheet provided the data to be analyzed. All identifiable material was kept securely locked up. The level of measurement was the total SSS score for each subject.

Statistical Design

The means and standard deviations were calculated for the entire sample and for the males and females separately. A series of t tests was utilized to compare the entire sample, and males and females separately to their respective norms. Additionally, a t test was used to compare the scores of the

men to the women. The alpha level was set at .05. The box test for homogeneity of variance was utilized for all comparisons.

Summary

This study sought to determine if D.U.I. offenders, diagnosed as psychoactive substance abusive or psychoactive substance dependent, were higher than average in sensation seeking. Clients were asked to participate in this study, and the SSS V, along with other relevant materials were given to those clients volunteering to do so. The data was collected and analyzed using the t test comparing the entire sample to Zuckerman's normative sample. Men and women were also be compared separately to his data, and to each other. Both groups were expected to score higher than average in sensation seeking, but the women were expected to deviate more from the norm than the men. This was determined by comparing the scores of the female subjects to the male subjects. The women were expected to score as high or higher than the men.

Chapter 3

Results

This study compared the Sensation Seeking Scale scores of driving-under-the-influence offenders diagnosed as psychoactive substance dependent or psychoactive substance abusive to the normative data. In order to accomplish this task, means and standard deviations were calculated for the total experimental group, as well as separately for the men and women. These means and standard deviations were then compared to the norm groups using the t test. Before the t tests were calculated, the Box test was used to test for homogeneity of variance. The results indicated that the variance of the experimental groups were similar enough to the variance of the norm groups to allow the planned t test analysis to be completed. The first table below (Table 1) indicates the standard deviations and the means of all groups. The following table (Table 2) supplies the results of the Box test. In each case with the Box test the obtained F was smaller than critical F. The obtained F not equaling or exceeding the critical F in any case meant that equality of variance was present in the data.

Table 1

Means and Standard Deviations

<u>Experimental Group</u>			<u>Norm Group</u>		
	\bar{X}	S.D.		\bar{X}	S.D.
males	19.76	7.44	males	21.2	5.3
females	17.84	4.57	females	18.5	7.7
Total	18.98	5.95	Total	19.49	7.03

Table 2

Results of Box tests *

Source	F_{crit}	F_{obt}
males to norm males	1.419	1.40
females to norm females	2.21	1.68
males and females to norms	1.37	1.18
males to females	2.34	1.62

* The lack of an obtained F being equal to or exceeding critical F in this table indicates equality of variance present in the data

As indicated in Table 3, there was only one significant difference found in this study at the .05 alpha level. This

was the comparison of the scores of the men in this study to the normative data on men's scores on the Sensation Seeking Scale, Form V. This significant difference, however, was not in the direction expected. The men in this study were found to be significantly lower in sensation seeking than were the men in the normative group. The comparison of the total group in this study to the normative data for Zuckerman's total group yielded no significant difference at the .05 alpha level. In the comparison of the women to their respective norm there was also no significant difference at the .05 alpha level. Additionally, there was not any significant difference found between the scores of men and women.

Table 3

Results of t tests

Source	df	<u>t</u> crit	<u>t</u> obt
males to norm males	425	1.648	1.71 *
females to norm females	657	1.647	0.3
males and females to norms	1084	1.648	0.56
males to females	61	2.0	0.275

* significant at $p < .05$

Summary

Using a series of t tests, this study sought to determine if D.U.I. offenders were higher in sensation seeking than the average population. The Box test was used to test for homogeneity of variance, prior to the completion of the t tests. The results of the Box test indicated that the t tests could be completed as planned with some degree of confidence. There was only one significant difference found in this study. The men in this study were found to be significantly lower in sensation seeking than were the normative men.

CHAPTER 4

Discussion

The purpose of this study was to determine if driving-under-the-influence offenders diagnosed as psychoactive substance abusive or psychoactive substance dependent were more inclined to be sensation seeking than the average population. Using a series of t tests comparing the entire sample to the normative data, men and women separately, and men to women, there was only one significant difference found. The men in this study were found to be significantly lower in sensation seeking than were the normative group. One explanation for this unexpected result is the age range of men in this study. The mean age for the men in this study was 29.68 years, which was substantially older than the mean age of the normative group. The normative data was based on scores of undergraduate introductory psychology students at the University of Delaware. While no mean scores by age groups are available for American men and women, several studies have shown a steady decline of sensation seeking with age (Zuckerman, 1979). The scores of the male subjects in this study showed a similar trend. The mean score of male subjects between the ages of 16 and 19 was 24.33 years. The mean score of male subjects between the ages of 20 and 29 years was 20. The mean score of men 30 to 39 years was 19.94, and the mean score of men 40 years and older was 11.7.

Considering the above information, quite possibly another study using a larger sample of men might support the original hypothesis. This study would need to have a large enough sample of male subjects to statistically test the men by age ranges.

The mean age of the women in this study was 28.23 years. These subjects were also significantly older than the normative subjects. The clear decline with age, however, was not apparent as it was in the case of the men. The average score of women under 30 years was 17.5. The average score of those over 30 years was 18.4. Due to the extremely small sample size no further breakdown of ages is feasible. Women tend to score lower in sensation seeking than men (Zuckerman, 1979). As there was no significant difference in sensation seeking between the men and women in this study, and the older women actually scored higher than the younger ones, further study with a larger sample of female subjects investigating the meaning of this finding would be in order. One could hypothesize that if older female D.U.I. offenders were compared to a matched control group of non-D.U.I. offenders one might well find a significant difference in sensation seeking scores.

This study investigated the relationship of sensation seeking and driving-under-the-influence. The scores of D.U.I. offenders were compared to the normative data. It was hypothesized that both male and female D.U.I. offenders would

score higher than the norm group on the Sensation Seeking Scale, form V. There was only one significant difference found in this study. The men in this study scored lower on the scale than did the normative male subjects.

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Appendix A

PLEASE READ THE FOLLOWING STATEMENTS AND SIGN YOUR NAME AT THE BOTTOM OF THIS FORM IF YOU AGREE WITH THEM AND ARE WILLING TO PARTICIPATE IN THIS RESEARCH PROJECT.

THANK YOU.

I agree to participate in the study conducted by Deborah Kinder. The purpose of this study is to investigate the relationship between demographic variables (age, gender, occupation, marital status, alcohol and drug related legal charges, and education) and sensation seeking. However, I understand that I may stop participating in this study at any time, for any reason, if I so choose.

I understand that my confidentiality will be respected and neither my name nor any identifying data will be used in any report of this research. I realize that approximately 30 minutes of my time will be required for participation in this study.

Having considered the above factors, I hereby agree to participate in this study.

Signed _____

PLEASE NOTE: YOUR PARTICIPATION OR LACK OF PARTICIPATION
WILL HAVE NO EFFECT ON YOUR EVALUATION

Appendix B

Demographic Information

SEX : Male ____ Female ____

WHAT IS YOUR AGE ? _____

MARITAL STATUS : Single ____
Married ____
Divorced ____
Separated ____
Widowed ____

HIGHEST LEVEL OF EDUCATION ACHIEVED :

Some High School ____
High School graduate ____
Some College ____
College Graduate ____

OCCUPATION : _____

How long has this been your occupation? _____

WHAT WERE YOU ARRESTED FOR? _____

Have you had any prior alcohol and/or drug related arrests?

Yes ____ No ____

If yes, please list the charges : _____

Appendix C

Sensation Seeking Scale - Form V

DIRECTIONS: Each of the items below contains two choices, A and B. Please indicate on your answer sheet which of the choices most describes your likes or the way you feel. In some cases you may find items in which both choices describe your likes or feelings. Please choose the one which better describes your likes or feelings. In some cases you may find items in which you do not like either choice. In these cases mark the choice you dislike least. Do not leave any items blank.

It is important you respond to all items with only one choice, A or B. We are interested only in your likes or feelings, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers as in other kinds of tests. Be frank and give your honest appraisal of yourself.

1. A. I like "wild" uninhibited parties.
B. I prefer quiet parties with good conversation.
2. A. There are some movies I enjoy seeing a second or even a third time.
B. I can't stand watching a movie that I've seen before.
3. A. I often wish I could be a mountain climber.
B. I can't understand people who risk their necks climbing mountains.
4. A. I dislike all body odors.
B. I like some of the earthy body smells.
5. A. I get bored seeing the same old faces.
B. I like the comfortable familiarity of everyday friends.
6. A. I like to explore a strange city or section of town by myself, even if it means getting lost.
B. I prefer a guide when I am in a place I don't know well.
7. A. I dislike people who do or say things just to shock or upset others.
B. When you can predict almost everything a person will do and say he or she must be a bore.
8. A. I usually don't enjoy a movie or play where I can predict what will happen in advance.
B. I don't mind watching a movie or play where I can predict what will happen in advance.
9. A. I have tried marijuana or would like to.
B. I would never smoke marijuana.

10. A. I would not like to try any drug which might produce strange and dangerous effects on me.
B. I would like to try some of the new drugs that produce hallucinations.
11. A. A sensible person avoids activities that are dangerous.
B. I sometimes like to do things that are a little frightening.
12. A. I dislike "swingers."
B. I enjoy the company of real "swingers."
13. A. I find that stimulants make me uncomfortable.
B. I often like to get high (drinking liquor or smoking marijuana).
14. A. I like to try new foods that I have never tasted before.
B. I order the dishes with which I am familiar, so as to avoid disappointment and unpleasantness.
15. A. I enjoy looking at home movies or travel slides.
B. Looking at someone's home movies or travel slides bores me tremendously.
16. A. I would like to take up the sport of water-skiing.
B. I would not like to take up water-skiing.
17. A. I would like to try surf-board riding.
B. I would not like to try surf-board riding.
18. A. I would like to take off on a trip with no pre-planned or definite routes, or timetable.
B. When I go on a trip I like to plan my route and timetable fairly carefully.
19. A. I prefer the "down-to-earth" kinds of people as friends.
B. I would like to make friends in some of the "far-out" groups like artists or "hippies."
20. A. I would not like to learn to fly an airplane.
B. I would like to learn to fly an airplane.
21. A. I prefer the surface of the water to the depths.
B. I would like to go scuba diving.
22. A. I would like to meet some persons who are homosexual (men or women).
B. I stay away from anyone I suspect of being "queer."
23. A. I would like to try parachute jumping.
B. I would never want to try jumping out of a plane with or without a parachute.

24. A. I prefer friends who are excitingly unpredictable.
B. I prefer friends who are reliable and predictable.
25. A. I am not interested in experience for its own sake.
B. I like to have new and exciting experiences and sensations even if they are a little frightening, unconventional or illegal.
26. A. The essence of good art is in its clarity, symmetry of form and harmony of colors.
B. I often find beauty in the "clashing" colors and irregular forms of modern paintings.
27. A. I enjoy spending time in the familiar surroundings of home.
B. I get very restless if I have to stay around home for any length of time.
28. A. I like to dive off the high board.
B. I don't like the feeling I get standing on the high board (or I don't go near it at all).
29. A. I like to date members of the opposite sex who are physically exciting.
B. I like to date members of the opposite sex who share my values.
30. A. Heavy drinking usually ruins a party because some people get loud and boisterous.
B. Keeping the drinks full is the key to a good party.
31. A. The worst social sin is to be rude.
B. The worst social sin is to be a bore.
32. A. A person should have considerable sexual experience before marriage.
B. It's better if two married persons begin their sexual experience with each other.
33. A. Even if I had the money I would not care to associate with flighty persons like those in the "jet set."
B. I could conceive of myself seeking pleasures around the world with the "jet set."
34. A. I like people who are sharp and witty even if they do sometimes insult others.
B. I dislike people who have their fun at the expense of hurting the feelings of others.
35. A. There is altogether too much portrayal of sex in the movies.
B. I enjoy watching many of the "sexy" scenes in movies.

36. A. I feel best after taking a couple of drinks.
B. Something is wrong with people who need liquor to feel good.
37. A. People should dress according to some standards of taste, neatness, and style.
B. People should dress in individual ways even if the effects are sometimes strange.
38. A. Sailing long distances in small sailing crafts is foolhardy.
B. I would like to sail a long distance in a small but seaworthy sailing craft.
39. A. I have no patience with dull or boring persons.
B. I find something interesting in almost every person I talk with.
40. A. Skiing fast down a high mountain slope is a good way to end up on crutches.
B. I think I would enjoy the sensations of skiing very fast down a high mountain slope.

Appendix D

SENSATION SEEKING SCALE (SSS) ANSWER FORM

	A	B		A	B		A	B
1.	—	—	14.	—	—	28.	—	—
2.	—	—	15.	—	—	29.	—	—
3.	—	—	16.	—	—	30.	—	—
4.	—	—	17.	—	—	31.	—	—
5.	—	—	18.	—	—	32.	—	—
6.	—	—	19.	—	—	33.	—	—
7.	—	—	20.	—	—	34.	—	—
8.	—	—	21.	—	—	35.	—	—
9.	—	—	22.	—	—	36.	—	—
10.	—	—	23.	—	—	37.	—	—
11.	—	—	24.	—	—	38.	—	—
12.	—	—	25.	—	—	39.	—	—
13.	—	—	26.	—	—	40.	—	—
			27.	—	—			

Appendix E

PLEASE FILL IN THE FOLLOWING WITH YOUR NAME AND ADDRESS IF YOU WOULD LIKE A COPY OF THE RESULTS OF YOUR SCORES ON THIS SCALE SENT TO YOU. BE SURE AND PUT YOUR NAME ON YOUR ANSWER SHEET IF YOU WANT TO KNOW YOUR RESULTS, OR I WON'T KNOW WHICH ONE IS YOURS. THANK YOU AGAIN FOR YOUR HELP IN THIS PROJECT.

NAME

ADDRESS

CITY

STATE

ZIP