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ABSTRACT

Drug abuse is a serious problem in today's work force. It is found in every occupation, from the entry-level employee to the chief executive officer. Among health care professionals alcohol is the number-one substance abused, prescription drugs are second, and cocaine is third. Substance abuse among health-care professionals in Rutherford, Tennessee and surrounding counties was investigated in this study. There were 1,817 subjects surveyed by mail. Each subject received a questionnaire and cover letter. There were 775 surveys completed, a return rate of 43%. A one-way analysis of variance (ANOVA) found a significant difference in prescription drug use among the groups of health-care professionals. A 2x7 factorial ANOVA found that the occupation of health-care professionals significantly affects their tolerance for working with drug abusers. A third ANOVA did not find a significant difference in users and nonusers' knowledge of substance abuse. The chi-square test found that the gender of the respondent was correlated with the gender he/she believed was the more likely to be impaired. The results of this study show that substance abuse is not a significant problem among the health-care professionals of Rutherford and surrounding counties. Contains 19 references. (Author/JBJ)

SUBSTANCE ABUSE AMONG HEALTH-CARE PROFESSIONALS IN RUTHERFORD AND SURROUNDING COUNTIES

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Abstract

Substance Abuse Among Health-Care Professionals in Rutherford and Surrounding Counties

Substance abuse among health-care professionals in Rutherford and surrounding counties was investigated in this study. There were 1,817 subjects surveyed by mail. Each subject received a questionnaire and cover letter. There were 775 surveys completed, which is a return rate of 43%. A one-way analysis of variance (ANOVA) found a significant difference in prescription drug use among the groups of health-care professionals. A 2 x 7 factorial ANOVA found that the occupation of health-care professionals significantly affects their tolerance for working with drug abusers. A third ANOVA did not find a significant difference in users and nonusers' knowledge of substance abuse. The chi-square test found that the gender of the respondent was correlated with the gender he/she believed was the more likely to be impaired. The results of this study show that substance abuse is not a significant problem among the health-care professionals of Rutherford and surrounding counties.

Chapter 1

Introduction

Drug and alcohol abuse has been with us from the beginning of recorded history and quite probably before historical records were kept. People have continually searched for ways to make life more pleasurable and to ease the burden of day-to-day survival. Plato, the Greek philosopher, wrote that a simple experiment to test the true nature of a man was to get him drunk and ask him questions because he would answer truthfully: in vino veritas--in wine there is truth. Two thousand years later, Bernard Finch wrote that under the influence of hallucinogens a man could be a lunatic or a mystic (Griffenhagen, 1968).

Drug abuse is a serious problem in today's work force. It is found in every occupation, from the entry-level employee to the chief executive officer. Employees who use drugs on the job are one-third less productive, three times as likely to be injured, and absent more often (Brecher, 1983).

Drug abuse carries with it certain dangers. In some professions, drug abuse by employees may be a profound problem. Certainly, it is dangerous when the abuser is a member of the medical profession. Drug abuse is the number-one disabling illness for the medical profession (Castleberry, 1983). Among health-care professionals,

alcohol is the number-one substance abused, prescription drugs are second, and cocaine is third. The literature would indicate that most health-care workers do not abuse "street" drugs, such as heroin or marijuana. Health-care workers' drugs of choice are prescription drugs since they are so readily available. Prescription drugs are viewed as medicine, which to a health-care professional is legitimate therapy (Levine, Preston, & Lipscomb, 1974).

One out of eight physicians is impaired by a substance abuse problem; two-thirds of these doctors abuse alcohol, and 1 in 30 misuses drugs. The risk of drug addiction (dependency) for physicians is estimated to be 30 to 100 times that of the general population (Castleberry, 1983). Physician impairment is defined as the inability to practice medicine with reasonable skill and safety to patients by reason of physical or mental illness, including alcohol or drug abuse (Gallegos, Browne, Veit, & Talbott, 1988). For physicians, the groundwork for substance abuse may be laid in college and medical school. The long and relentless hours of study; grueling schedules of patient rounds; coming to terms with illness, death, and dying; all combined with the lack of time to pursue any kind of personal life, may encourage the student to turn to alcohol and drugs as a coping mechanism.

A study of medical students found that more than 50% of them had used marijuana (Lipp, Benson, & Taintor, 1971). A

similar study 18 years later found that cocaine had replaced other drugs as the stimulant of choice (Conard, Hughes, Baldwin, Achenbach, & Sheehan, 1989). One might theorize that, with the pressures of medical school, the student might have become accustomed to dealing with problems by self-medicating. After becoming physicians, the problems stemming from drug and alcohol abuse do not become any easier to deal with. They tend to suffer from insomnia, agitation, and depression. Their belief is that problems at work cause them to self-medicate, instead of the reverse. Physicians may believe that they are imbued with a sense of omnipotence and may fail to realize or acknowledge that they have a problem. Female physicians have typically been overlooked in the literature on impaired physicians. Because of the severe stigma attached to a female impaired physician, most of them are treated for depression rather than drug abuse, and they may be especially prone to drug abuse because of their isolation in medical training and practice, as well as their lack of positive female role models (Martin & Talbott, 1987).

Nurses are not immune to the dangers of addiction either. According to one estimate, there are 40,000 alcoholic nurses in the United States (Baywood, 1990); 10% to 12% of nurses have serious personal problems relating to drug or alcohol abuse (O'Connor & Robinson, 1985). In Florida, statistics reveal that in 1986, 60% of disciplinary

action cases brought to the Board of Nursing were for chemical dependency (Hutchinson, 1987). Nurses have a rate of dependency 50% higher than nonnurses (Creighton, 1988). In studying the problem of impaired nurses, many were found to have extensive medical histories, which included several surgeries, as well as some psychiatric care. Perhaps, because of their extensive involvement in the medical system, these nurses have become accustomed to self-medicating their problems and may have entered the nursing field either abusing drugs or on the threshold of abuse. Abusing nurses have also been found to be heavy cigarette smokers. Smoking among nurses seems to be another form of self-medication since nursing is generally seen as more stressful by smoking nurses than by nonsmoking nurses. As a group, nurses smoke more than either physicians, dentists, or pharmacists (Garfinkel & Stellman, 1986). Nurses see the effects of smoking, lung cancer, emphysema, and smoking-related diseases, yet the percentage of nurses who smoke is higher than women in the general population.

Anesthesiology personnel (physicians, nurse anesthetists, and physician assistants who administer anesthesia) are at especially high risk for the development of chemical dependence due to drug abuse (Gallegos et al., 1988). The Medical Association of Georgia developed an Impaired Physicians Program, and 11.9% of the physicians

treated were anesthesiologists. By contrast, less than 4% of all U.S. physicians are anesthesiologists (Gallegos et al., 1988). Most anesthesiology personnel who are chemically dependent abuse two or more drugs at the same time. The drugs of choice are injected either intravenously or intramuscularly (Gallegos et al., 1988). The supply comes from the drugs used for patients since most require only a small amount to be effective, and a small amount is diverted to the professional. As the abuse continues, an even higher amount is required to satisfy the abuser. The drugs used in anesthesia can be lethal in large amounts, which results in a high mortality rate among anesthesiology personnel who are chemically dependent (Gallegos et al., 1988). Anesthesiology personnel have total control of a patient's bodily functions and vital signs when the patient is under anesthesia. Because a patient's condition can quickly decline, there is a need for the anesthesiologist to be at peak readiness, and using drugs may be a way to maintain that readiness. Pharmacists are also at especially high risk for drug abuse due to controlled substances being readily available. Whatever the reason for drug or alcohol abuse, even the most competent professional cannot hide the signs of drug use. When the effects of impairment show up in the workplace, the problem of drug abuse has typically been going on for several years since the workplace is the last area of the person's life in which drug or alcohol

abuse will show up (Sheffield, 1988). Typical signs of drug abuse include job shrinkage, which is performing only the minimum job requirements; an inability to meet schedules and deadlines; illogical and/or sloppy charting; and, most telling, excessive medication errors in recorded drug breakage, spillage, and incorrect narcotic counts (Baywood, 1990). The abusing professional may also exhibit general irritability, mood swings, and social withdrawal. There will be frequent unexplained absences from their position, and attention to detail and personal grooming suffers. The professional may be hindered from seeking help by a phenomenon called enabling. Enabling occurs when fellow staff members "cover" for their impaired colleague. Enabling is unsupportive to the impaired professional, damaging to the professional practice climate, and detrimental to the patients and community (O'Connor & Robinson, 1985). It also fosters feelings of resentment among staff members and contributes to the decline of morale among the staff. Supervisors and staff need to be trained to recognize the signs of drug abuse and be willing to speak up about an impaired colleague. It is only recently that the problem of impairment among health-care professionals has been examined. The lack of previous research has been due to the pressure to deny or rationalize the problem of professional dysfunction because of the many legal and professional disciplinary consequences surrounding impaired

practice (Hendrix, Sabritt, McDaniel, & Field, 1987). Previously, supervisors did not receive much education, if any, about the problem of impaired professionals and how to deal with them. Education is one of the most important factors in dealing with the problem of drug and alcohol abuse among health-care professionals, and it may help to stop the problem before it becomes one (Muench, 1991).

In the past, hospitals and other agencies dealt with impaired professionals by allowing them to quit or firing them outright. Faced with the current shortage of professionals and decreased enrollment in nursing and other schools of medicine, there is a high degree of motivation to rehabilitate these impaired professionals to avoid losing a valuable resource (Davee & Tranbarger, 1990). In 1982, the American Nurses Association passed a national resolution communicating that drug addiction is a treatable disease. By passing such a resolution, it encourages state nursing associations to establish peer-assistance programs to serve as confidential support groups for impaired nurses (Kelly & Mynatt, 1990). An important aspect of this program is training nurse managers in the early identification of and intervention with nurses who exhibit deteriorating job performance secondary to drug or alcohol abuse (Davee & Tranbarger, 1990). Many nurse managers leading these groups are recovering drug and alcohol abusers themselves. They know firsthand the problems faced by an impaired nurse and

the importance of rehabilitation instead of punishment. In a survey of perceptions toward nursing impairment, supervisors and staff nurses believed that impairment was a problem that could happen to any nurse and that supervisors should be trained to spot developing problems (Hendrix et al., 1987). The Moses H. Cone Memorial Hospital in Greensboro, North Carolina, made the decision to develop and implement a hospital-based program for impaired nurse employees. The hospital will retain an employee who admits to a substance abuse problem and submits to treatment. There is a program of aftercare that involves periodic drug testing, weekly support group meetings, and support from peers and supervisors. The benefits of this program are many to the hospital, the nurse, and the patients under their care (Davee & Tranbarger, 1990). The Georgia Impaired Physicians Program is one of the most successful in treating impaired physicians. The program has 14 steps to success:

> It is headed by the stated medical society. . . . alcoholism and drug addiction are accepted as a psychosocial biogenetic disease. . . . use of a 72 hour comprehensive assessment of the individual. . . . true peer group therapy. . . . a two-year program with a specially trained staff to deal with impaired health professionals. . . . an alcoholics anonymous oriented treatment program. . . . family therapy. . . . mirror image therapy which requires work as alcohol and drug counselor trainees. . . . the use of medical students. . . . a four-week outpatient program. . . . Caduceus club which helps impaired physicians become members of alcoholics anonymous. . . . a formal plan for spiritual development. . . . and the data and statistics division which assures quality control. (Talbott & Martin, 1986, pp. 96-97)

This program has treated over 700 impaired physicians since its inception in 1974, and these physicians have self-reported improved personal and professional lives since treatment (Talbott & Martin, 1986).

The Texas Pharmaceutical Association has developed a rehabilitation program for impaired pharmacists. The program was developed because of the lack of help for impaired professionals other than physicians. The developers of this program believed that pharmacists would understand each other better than anyone else in dealing with the problems of abuse specific to pharmacists (Sheffield, 1988).

In the treatment of impaired anesthesiologists, these physicians pose special problems. It is hard to detect an impaired anesthesiologist with conventional drug testing since their drugs of abuse are prescription and do not show up on the standard tests. The programs developed have as their foundation the belief that self-help groups, such as alcoholics or narcotics anonymous, are essential in the recovery of the impaired professional (Gallegos et al., 1988).

Drug and alcohol abuse among health-care professionals has been shown to be a widespread problem across the United States. The purpose of this study is to discover the effect of drug and alcohol abuse on our local health-care

professionals in Rutherford and surrounding counties. The hypotheses for this study are as follows:

Hypothesis 1: There will be a significant difference among the groups of health-care professionals in their prescription drug use.

Hypothesis 2: There will be a significant effect of occupation and present drug use on health-care professionals' tolerance for working with drug abusers.

Hypothesis 3: There will be a significant difference between users and nonusers on knowledge about substance abuse.

Hypothesis 4: The perception of which gender is more likely to be impaired will be correlated with gender of the respondent.

Chapter 2

Methods

Subjects

The subjects were health-care professionals from Rutherford and surrounding counties. Their names and addresses were obtained from hospital-published directories and lists provided by the Tennessee State Board of Pharmacy, the Tennessee State Board of Nursing, and the Health Statistics Bureau of Tennessee. There were 1,817 subjects.

Materials

A questionnaire and cover letter were mailed to each subject. The questionnaire contained demographic questions on gender, age, race, education, occupation, and years in occupation. It also contained questions on personal drug use and/or abuse, knowledge about drug abuse, tolerance for working with substance abusers, and their perception of the problem of drug abuse among health-care professionals. The answers to yes or no questions were scored with a 1 for yes and a 0 for no. Questions 2 and 3 were scored using a 5-point rating scale, with 1 being the lowest and 5 being the highest. A copy of the questionnaire and cover letter are in Appendix A.

Procedures

The survey and cover letter were mailed to each professional from the provided lists. A postage-paid,

return envelope was enclosed for their convenience. The survey was voluntary and anonymous, and a separate consent form was not needed. Filling out and returning the survey indicated their consent. The envelopes were mailed back to Middle Tennessee State University.

Chapter 3

Results

A total of 775 surveys were completed, which is a return rate of 43%. The means, standard deviations, and number of subjects for each job description are presented in Tables 1 and 2.

Results of a one-way analysis of variance (ANOVA), conducted to examine the difference in the prescription drug use among the health-care professionals surveyed, found a significant difference among the groups, $F(4, 762) = 12.35$, $p = .0001$. A 2 (drug use and no drug use) x 5 (5 professionals) factorial ANOVA showed that tolerance for working with drug abusers is not affected by present drug use and that no interaction effect is present between occupation and present drug use on tolerance. The analysis, however, did find a significant effect of occupation, $F(4, 1) = 2.43$, $p = .0465$, which indicates that the occupation of a health-care professional affects his/her tolerance for working with drug users. A third ANOVA found an insignificant difference between users and nonusers in their knowledge of substance abuse, $F(1, 737) = 1.99$, $p > .05$.

The chi-square test of which gender was more likely to be impaired, as it correlated with the gender of the respondent, found that the gender of the respondent was

Table 1

Means, Standard Deviations, and Number of Subjects (Hypothesis 2)--Measuring Tolerance

Job	Physician	Physician assistant	Nurses	CNA	Pharmacist
Mean	3.424	4.111	3.195	2.600	3.362
SD	1.252	1.054	1.538	0.843	1.378
Number	265	9	237	10	254

Note. CNA = certified nursing assistant.

Table 2

Means, Standard Deviations, and Number of Subjects (Hypothesis 3)--Measuring Knowledge

Job	Physician	Physician assistant	Nurses	CNA	Pharmacist
Mean	4.145	4.333	3.724	2.700	3.936
SD	1.824	1.581	1.741	1.337	1.817
Number	265	9	237	10	254

Note. CNA = certified nursing assistant.

correlated with the gender he/she believed the more likely to be impaired, $\underline{X}^2(2) = 12.367$, $\underline{p} = .002$.

Chapter 4

Discussion

The problem of substance abuse among health-care professionals in Rutherford and surrounding counties was examined in this study. Health-care professionals were surveyed by mail on their personal drug use and/or abuse, knowledge about drug abuse, tolerance for working with substance abusers, and how they perceived the problem of substance abuse among health-care professionals as a group.

Hypothesis 1 stated that there would be a significant difference among the groups of health-care professionals in their prescription drug use. Analysis did find a significant difference among the groups of health-care professionals surveyed. A majority of the surveyed professionals used prescription drugs only under the care of a physician. Occasionally, drugs were used to ease job-related stress or to relax. Instances of abuse of prescription drugs were found, although the percentage of abuse was very small. As a group, physicians used less prescription drugs than either nurses, pharmacists, or physician assistants.

Hypothesis 2 stated that there would be a significant effect of occupation and present drug use on health-care professionals' tolerance for working with drug abusers. Analysis found that the occupation of a health-care

professional did affect his/her tolerance for working with drug abusers. Physicians were found to be the least tolerant group when it came to working with or around substance abusers. Nurses, pharmacists, and physician assistants were found to be the most tolerant. As the old ways of dealing with impaired professionals are discarded and replaced by rehabilitation, nondrug-using professionals will have to confront their ideas and feelings about working with drug abusers.

Hypothesis 3 stated that there would be a significant difference between users and nonusers on their knowledge about substance abuse. Analysis found a nonsignificant difference between users and nonusers in their knowledge of substance abuse. Substance abuse among health-care professionals has been receiving much-needed attention in the past few years. Almost all of the respondents indicated that they had received education about substance abuse at least once, and many more than once. Education is one of the most important factors in dealing with the problem of substance abuse among health-care professionals.

Hypothesis 4 stated that the perception of which gender was more likely to be impaired would be correlated with the gender of the respondent. Analysis found that the gender of the respondent was correlated with the gender he/she believed was more likely to be impaired. In considering

this hypothesis, the fact that more physicians are male and more nurses are female must be taken into account.

This study found that the problem of substance abuse among health-care professionals in Rutherford and surrounding counties was not a significant problem, based on those professionals who responded to the survey. Although the return rate was excellent, we can hypothesize that the majority of respondents did not have problems with substance abuse, and those who did not return the survey may have had substance abuse problems. The majority of respondents had tried drugs, such as marijuana, when they were 18 or 19 years old and no longer used these drugs now that they were 30 or 40 years old. Some of the respondents did indicate that they had a current problem with substance abuse. Others indicated that they had received treatment for a substance abuse problem and were making a successful recovery.

With increased awareness of the problem of substance abuse among health-care professionals and the factors which may influence a professional to turn to substance abuse as a relief mechanism, it is hoped that potential abusers will be identified and receive help before a substance abuse problem develops.

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