ASSESSING AND COMPARING ATTITUDES TOWARD ADDICTION AND METHADONE TREATMENT

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This dissertation entitled

ASSESSING AND COMPARING ATTITUDES TOWARD ADDICTION AND METHADONE TREATMENT

by

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The aim of this study is to assess and compare the attitudes of six groups of professionals in Ohio on addiction and methadone treatment. Six hundred professionals licensed in the areas of counseling, chemical dependency, social work, or psychology, were mailed the Attitude towards Addiction and Methadone Questionnaire developed in 1996 by Caplehorn, Irwig, and Saunders. Non-responders were mailed a first and second reminder postcard. One hundred and eighty-nine professionals returned completed questionnaires. Five of the professionals have work experience in methadone treatment. Although the questionnaire had five scales, only three of the scales were addressed in this study: Abstinence-Oriented Scale (AO), Disapproval of Drug Use Scale (DDU), and Knowledge of Methadone Scale (Knowledge). Professionals were given the opportunity to address their willingness to provide counseling to individuals on methadone maintenance. Eighteen questions comprised the AO Scale. There were no significant differences in the mean AO scores among the six professional groups. Nine questions on that scale reveal a significant difference in the mean AO scores among the groups. Significant group differences are shown on the six questions that formed the Disapproval of Drug-Use Scale. Responses on the Knowledge Scale do not show significant differences among professional groups, with 93% of professionals lacking knowledge in addiction and methadone. Fifty percent of the Chemical Dependency Counselors indicate an interest in gaining education and training in the area of addiction and methadone.
treatment. Professionals who viewed methadone negatively advocate for abstinence of all opiates and opioids, and promote the 12-Step philosophy.

Approved:

Thomas E. Davis

Professor of Counseling and Higher Education
Dedication

This work is dedicated to my son Alan for the joy you bring to my life, your love, understanding, and support that has sustained me through all of my endeavors. To my dear friend Randall, who has provided understanding and support through the years and shared his time generously. To my sorority sister Emily, who has always kept me in her prayers. In memory of my parents, Daniel T. and Hazel L. Smith, who inspired me with their unconditional love to value education and be of service to mankind.
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Chapter 1

Introduction

Over the past four decades, advances in addiction treatment have created differing attitudes and beliefs of various professionals working in rehabilitation and addiction (Brill, 1977; Dole, 1988; Dole & Nyswander, 1965, 1968; Dole, Nyswander, & Kreek, 1966; Dole, Nyswander, & Warner, 1968; Jaffe, 1995). In this introductory chapter, an overview of these differing attitudes among treatment staff working in the field of addiction and rehabilitation will be discussed, with a focus on an effective method of treatment.

The controversy among professionals working in the field of addiction and rehabilitation addiction treatment focuses on three distinct views: 1) Some workers support an abstinence-orientation and view methadone maintenance as a method of weaning addicts off all drugs; 2) Some opponents of methadone have viewed it as replacing one drug for another or as representing oppression by the government to control minority groups (Harms, 1975); 3) Others believe that heroin and other opiate users can only maintain a stable lifestyle on methadone and encourage them to remain on methadone indefinitely (Caplehorn, Hartel, & Irwig, 1997; Caplehorn, Irwig, & Saunders, 1996b).

A major debate exists between professional staff working in drug-free treatment facilities and those working in methadone clinics. The controversy centers on whether or not pharmaceuticals should be part of addiction treatment. Rehabilitation counselors working in drug-free treatment facilities that support the Alcohol Anonymous (AA)
philosophy have argued that pharmaceuticals should only be used for detoxification. Historically buprenorphine has been used in most in-patient treatment programs for detoxification (Bickel et al., 1982). Supporters of methadone maintenance or other opioid treatments such as buprenorphine argue that detoxification is useless in drug-free programs since most patients quickly relapse (O’Brien, 1997).

In conjunction with methadone clinics, buprenorphine is being used by physicians as a new medication to treat opioid dependence (Sullivan & Fiellin, 2005). The philosophy or belief that buprenorphine should only be used for detoxification contributes to the controversy that the long term use of buprenorphine to treat opioid dependence and cocaine abuse is substituting one drug for another drug. Proponents of medical management of addictions view addiction as a chronic disorder that requires long-term treatment measured in months and years (O’Brien, 1997; Strain, Stitzer, Liebson, & Bigelow, 1994; Tzschentke, 2002).

Counselors working in drug-free clinics have relied on 12-Step or cognitive-behavioral approaches to bring about positive outcomes (Carey, Purnine, Maisto, & Carey, 1999; Emmelkamp, 1986; Fiorentine, 1999; Fiorentine, & Hillhouse, 2001; Freimuth, 1996; Hillhouse, & Fiorentine, 2001). Longer retention in drug abuse treatment and counseling rapport has been viewed as predictors of favorable post treatment outcomes (Simpson, Joe, Rowan-Szal, & Greener, 1997). Patients achieve specific changes in attitudes, beliefs, and behaviors they are suppose to undergo (Finney, Moos, & Humphreys, 1999). These outcomes will be discussed more fully in Chapter 2.
In regard to staff working in methadone clinics, however, some differing beliefs exist. A primary controversy among professionals working in methadone clinics has centered on the primary objective of methadone and the consequence of illicit drug use (Caplehorn, Dalton, Petrenas, Haldar, & Nisbit, 1996a; Caplehorn et al., 1997). Although research on heroin addiction and other opiate type drugs has found methadone maintenance to be a safe and effective way to treat and normalize the functioning of narcotic addicts (Dole & Nyswander, 1965; Dole et al., 1966; Dole et al., 1968), and although some professionals working in methadone clinics have a positive attitude toward the use of the drug, some professionals working in these clinics seem to share the drug-free philosophy shared above. It is interesting to note these differences even though research has shown methadone to be one of the most effective treatments for opiate and heroin addiction for almost forty years (Schottenfeld, et al. 2005; Brown, Kraus, Fleming, & Reddy, 2006).

Researchers who have believed methadone treatment to be the most effective treatment for treating opiate and heroin addiction have questioned the effectiveness of drug-free programs for opiate abusers (Allison & Hubbard, 1985; Caplehorn et al., 1996a; Zweben, 1991). Because of the many controversies evolving around the ethics of using methadone in the treatment of opiate and heroin addiction, it is one of the most misunderstood drug treatment approaches in the recovery field (Karam-Hage, Nerenberg, & Brower, 2001; Lilly, Quirk, Rhodes, & Stimson, 2000). Stigma has often been associated with the use of methadone in treating addiction, with opponents of
pharmaceuticals viewing the use of methadone as the same as illicit drugs (Abouyanni et al., 2000).

Advances in the understanding of the nature of addiction have influenced approaches to the treatment of addiction. Increased understanding of the nature of addiction has been based on progress in the biological nature of addictive behavior and longitudinal studies. In recent years, addiction has been explained by the medical profession as being similar to other chronic diseases such as diabetes, hypertension, and asthma (Lewis, 2000). Even with this increased understanding, significant differences have been found to exist between scientific facts and the perceptions of individuals regarding drug abuse and addiction (Leshner, 1997).

Leshner (1997) suggested that a major barrier to transferring knowledge into practice is the stigma individuals attach to a drug user or an addict. He identified several negative beliefs held about individuals who suffered from addiction. One belief viewed individuals addicted to drugs as victims of their own situation. Another view perceived drug addicts as bad or weak individuals who were unwilling to control their gratifications and behaviors to lead normal lives. These views support the belief that drug abusers should be handled by the criminal justice system.

Many chemical dependency counselors advocate interventions such as life-long involvement with 12-Step Programs (AA), natural recovery, and relapse prevention techniques (Annis & Davis, 1991; Fiorentine & Hillhouse, 2001; Thombs & Osborne, 2001). Some beliefs about addiction have been influenced by the personal belief of the therapist (Moyers & Miller, 1993). Schaler (1995) found service providers’ beliefs on
addiction to be influenced by gender, professional affiliation, certification, religion, and membership in AA. Ogborne, Wild, Braun & Newton-Taylor (1998) noted the influence of professional discipline and training on one's beliefs towards the efficacy of specific types of intervention had not been studied. This study attempts to assess and compare the influence of professional certification on beliefs about addiction and the controversial treatment of methadone maintenance.

The attitudes of professionals working with methadone patients have been studied since the 1970s. Brown, Jansen, and Bass III (1974) sampled service providers in the field of methadone maintenance to find out their attitudes toward methadone treatment. Results of their study showed that attitude towards drug use strongly influenced the treatment provided. The study also found that the attitude of service providers toward individuals on methadone placed methadone clients in a frustrating situation. This study was one of the first of several studies to examine attitudes among professionals working in the field of addiction treatment (Bradley, 1982; Najavits et al., 1995; Ogborne et al., 1998). The current research project continues in this line of inquiry because research has suggested that negative attitudes and misunderstanding about methadone has resulted in harsh and rigid attitudes toward methadone patients (Zweben, 1991). Strong attitudes against individuals suffering with addiction or choosing methadone maintenance may hinder the establishment of rapport, which is considered to be at the core of the therapeutic relationship (Joe et al., 2001).

Caplehorn et al. (1997) found that some staff members working in methadone clinics condemned methadone. Two opposing beliefs were identified. One belief
supports an abstinence-oriented policy and views methadone maintenance as a way of weaning individuals off of all drugs including methadone. The opposing belief views methadone as an effective long term treatment, as long as the patient remains on methadone.

Background of the Study

The emotional responses of clinicians toward substance abuse patients have been hypothesized to impact treatment outcome (Najavits et al., 1995). Therapeutic relationship factors have been found to account for about 30% of a client’s improvement (Lambert, 1992). Core conditions of relationship factors have been conceptualized by the client-centered tradition as positive regard, accurate empathy, non-possessive warmth, and genuineness (Asay & Lambert, 1999). Core conditions and related therapist relationship variables were suggested to be fundamental in forming a working alliance. Asay and Lambert cited studies that have documented a relationship between therapist attitudes and client outcome. One of these studies was conducted by Najavits and Strupp (1994). The study revealed that therapists who were most effective showed more positive behaviors and fewer negative behaviors.

Studies have been conducted in methadone clinics examining attitudes about drug addiction, and investigating the attitudes toward the methadone client or heroin user (Brown, Benn, & Jensen, 1975; Soverow, Rosenberg, & Ferneau, 1972). Research has compared the attitudes of clients and staff towards the basic aspects of the methadone program and tapering from methadone maintenance. There were significant differences in attitudes and different views of effective treatment (Bradley, 1982; Gold, Sorensen,
McCanlies, Trier, & Dlugosch, 1988; Newman & Peyser, 1991). Some researchers have measured treatment process beliefs among methadone staff and found provided interventions that were consistent with their beliefs about what facilitates behavior change (Ogborne et al., 1998). Other researchers have analyzed the clinical orientations among chemical dependency counselors and found that their orientations were based on their views of addiction and valued treatment practices (Thombs & Osborn, 2001).

Views of addiction and recovery may have reason to change or expand due to continued research in the area. In recent years there has been advancement of pharmacology in the field of addiction medicine. Michael Miller, MD, medical director of the NewStart program at Meriter Hospital in Madison, Wisconsin compared the advancement in addiction treatment to psychiatry where the emphasis moved from psychotherapy and psychosocial interventions to combined psychotherapy and pharmacology treatment (Elliott, 2000). The effectiveness and outcome of methadone treatment has paved the way for research on other new anti-addiction drugs such as buprenorphine and naltrexone which are opioid antagonists.

Also interested in both the new research and in the changing attitudes toward addiction and recovery, Caplehorn et al., (1997) developed a scale to measure and compare attitudes and beliefs of staff working in New York methadone maintenance clinics. Both a 9-item Abstinence Orientation Scale and a 6-Item Disapproval of Drug Use Scale validity were established, after a confirmatory factor analysis. Caplehorn et al. found that nurses and counselors generally supported abstinence oriented policies and administrators usually rejected them. This Caplehorn et al. study was a major influence
in the current research. The 1997 study compared attitudes, beliefs, and knowledge of administrators, counseling staff, and nurses working in methadone clinics.

This study will compare the attitudes, beliefs, and knowledge of licensed professionals in the following six groups: professional counselors, professional clinical counselors, licensed social workers, licensed independent social workers, and psychologists working outside methadone clinics; and certified chemical dependency counselors primarily working in drug-free treatment. These professionals are faced with the need to provide counseling and support services to individuals who present with a wide range of problems and mental disorders including addiction. Few studies examine the relationship between attitudes, education, experiences, and beliefs, and how these factors influence the counseling relationship and treatment outcome.

Statement of the Problem

Increased numbers of individuals are suffering from opiate addiction. An estimated 500,000 seek treatment from methadone clinics (APA, Oct 19, 2000). As the numbers of individuals seeking treatment have increased, there has also been increased national and medical interest in providing treatment. Methadone maintenance has been the most sought after treatment because it has been established as the most effective medical preventive treatment approved by the FDA for opiate addiction. Methadone maintenance is the daily oral administration of doses of methadone ranging from 20mg to 180mg.

In addition to being one of the most effective medical treatments, the results of a meta-analysis of two American, a German, a Swedish, and an Australian study combined
showed individuals in methadone maintenance to be a quarter of a risk of dying than those not in treatment (Caplehorn et al., 1996a). Other studies showed methadone maintenance patients less likely to use contaminated needles or to be infected with HIV than daily heroin users not in treatment (Caplehorn and Ross, 1995; Metzger et al., 1993).

This modality of treatment for all types of opiate addiction has been a controversial treatment since its introduction (Brown et al., 1974; Newman & Peyser, 1991). Early opponents of methadone have viewed it as replacing one drug addiction for another or a way of governmental oppression to control minorities (Bradley, 1982; Harms, 1975). Despite the positive outcomes of methadone treatment over the past four decades, it remains a controversial approach in treating opiate addiction outside the medical community. The general public and staff working in methadone clinics continue to view methadone from two different perspectives.

One perspective, described as abstinence-oriented, views methadone as a substitute drug to be used as a detoxification method to wean addicted individuals off of heroin and other opiates, including methadone. The other perspective, views methadone as an effective treatment only while addicted individuals are maintained on it, and encourages patients to remain in treatment (Caplehorn, 1997).

There is evidence that medical professionals have more negative attitudes toward drug and alcohol dependent patients than patients with more socially acceptable medical problems such as diabetes (Abouyanni et al., 2000; Chappel, 1985). Counselors and doctors working with individuals with the unique medical problem of addiction often reflect ambivalence (Abed & Neira-Munoz, 1990; Najavits et al., 1995). For over four
decades researchers have examined attitudinal barriers and attitudes of medical professionals and psychologists toward alcoholic or chemically dependent patients (Chappel, 1973, 1977).

Clinical staff members who work in methadone clinics have debated whether methadone patients should be maintained on methadone indefinitely. Attitude surveys conducted in New York methadone clinics have shown less qualified staff in support of abstinence-oriented policies and program administrators, doctors, and counselors with postgraduate qualifications to reject abstinence-oriented policies (Caplehorn et al., 1997). The current research will explore more closely the current attitudes of professionals primarily working outside the field of substance abuse and addiction treatment.

Controversies evolving around the ethics of using methadone in the treatment of heroin addiction have influenced the treatment provided by staff members and have placed clients in methadone maintenance treatment in frustrating situations as a result of an important component of the program being condemned by staff members (Brown, et al., 1974). Obviously, the attitudes and knowledge of professionals toward addiction in general, and abstinence verses methadone maintenance specifically, is important to assess and compare.

It has been suggested that attitudes under certain circumstances can predict behaviors (Ajzen, 1991); but to what extent is still relatively unknown. Does one’s knowledge and attitude towards addiction predict whether or not one will be open to a client choosing methadone maintenance as part of treatment? Is it the level of degree, or the amount of experience, or some other quantifiable factor that leads to these specific
beliefs and attitudes? It is suggested here that a comprehensive study that could accurately gauge the attitudes and beliefs of treatment professionals, specifically with regard to methadone maintenance treatment versus abstinence treatment is necessary.

**Significance of the Study**

This research is important because a major goal of substance abuse and addiction treatment is retention, as well as helping to normalize an individual’s life. Methadone (Dole & Nyswander, 1965) was the first pharmacology treatment that could be used in this capacity. Since the success in treating opiate addiction with pharmacology along with counseling, other pharmacology has developed to treat opiate addiction (Benson, 2003; Carroll et al., 2001; Elliott, 2003; Strain et al., 1994). New drugs are being used to treat cocaine, tranquilizer, and alcohol addictions (Elliott, 2000). The adoption of the medical treatment of addictions which combines medication and counseling raises an issue of whether medication should be time limited or ongoing.

**Background of Attitudinal Studies**

National and medical interest in addressing problems presented by alcohol and drug misuse resulted in the establishment of the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute of Drug Abuse (NIDA). In 1984, researchers noted the significant increase in addiction of drugs, alcohol misuse, and attitudinal objectives (Chappel, Veach, & Krug, 1984). Chappel et al. concluded the importance of attitudinal objectives necessitated the need to develop a method for measuring attitude.
In 1985, Chappel et al. addressed the issue regarding the lack of an adequate instrument for measuring the achievement of attitudinal objectives about drug and alcohol misuse. The researchers developed the Substance Abuse Attitude Survey (SAAS). After administering the survey many times, the scale was refined to a more useful, final form. The survey instrument was designed using a five factor design. Other researchers have conducted research to determine the views of general practitioners towards managing drug and alcohol dependent patients, and therapists’ emotional reactions to substance abusers (Abouyanni et al., 2000; Najavits et al., 1995).

Caplehorn et al. (1997) later developed a scale to measure and compare attitudes and beliefs of staff working in New York methadone maintenance clinics. Both a 9-item Abstinence Orientation Scale and 6-item Disapproval of Drug Use Scale validity were established, after a confirmatory factor analysis. Caplehorn et al. found differences in attitudes between counselors, nurses, and administrators. Their study found that counselors and nurses generally supported abstinence-oriented policies and administrators usually rejected them.

Diverse groups of professionals provide counseling and therapy in drug abuse and addiction treatment (Mulligan, McCarty, Potter, & Krakow, 1989). Mulligan et al. suggested that integrated treatment services for drug and alcohol problems may help bridge the gap between settings. The study of health professionals’ attitudes and knowledge about addiction and pharmacology in the treatment of addiction may eventually include other health professionals who do not work specifically with substance
abuse populations. Increased awareness and knowledge by even these professionals may decrease stigma associated with addiction.

Professionals may be more aware of their own biases and avoid stereotyping clients who choose pharmacology along with their counseling. The questions will help counselors to reflect on the role of a counselor and identify whether personal bias will effect basic counseling skills such as unconditional positive regard and counter transference issues.

The study will possibly stimulate thinking, increase awareness, and facilitate professional growth in the area of addictions within helping professions. Professionals will be able to assess their own competencies and take courses that will help to better serve their clients. Information gained will reflect whether their treatment beliefs are based on their own personal beliefs. The information generated from this study may enhance health care professionals’ understanding and awareness for the need of shared care in providing adequate treatment for opiate addicted individuals who choose methadone maintenance therapy.

Based on the background information discussed, the purpose of this study is to assess and compare the attitudes, knowledge, and commitment to abstinence-oriented practices, of the following six groups of professionals: 1) certified chemical dependency counselors, 2) professional counselors, 3) professional clinical counselors, 4) licensed social workers, 5) licensed independent social workers, and 6) psychologists in the State of Ohio. The variables being compared include: attitudes and beliefs regarding addiction, attitude toward addicted individuals, knowledge of pharmaceuticals used in treating
heroin and opiate addiction, attitude towards methadone maintenance, and attitude towards individuals selecting methadone maintenance treatment.

This research will examine whether there are differences in beliefs and attitudes within and among the groups of helping professionals regarding the use of methadone in the treatment of opiate addiction. The study will explore whether counselors support or reject abstinence-oriented practices in the treatment of addiction. The results of the study will indicate whether the surveyed groups are knowledgeable about the benefits of methadone or base their opinion of treatment on their own personal beliefs. For the purpose of this study, opiate addiction includes heroin addiction.

Research Hypotheses

Research Hypothesis.

H1: There will be significant differences among Professional Counselors (PC), Professional Clinical Counselors (PCC), Certified Chemical Dependency Counselors (CCDC), Licensed Social Workers (LSW), Licensed Independent Social Workers (LISW), and Psychologists on their commitment to abstinence-oriented practices as measured by the Attitude towards Addiction and Methadone Questionnaire.

H0: There will not be significant differences among PC, PCC, CCDC, LSW, LISW, and Psychologists on their commitment to abstinence-oriented practices as measured by the Attitude towards Addiction and Methadone Questionnaire.
Alternative Hypothesis 1.

H1: There will be significant differences in beliefs among PC, PCC, CCDC, LSW, LISW, and Psychologists towards the disapproval of drug use as measured by the Attitude towards Addiction and Methadone Questionnaire.

H0: There will not be significant differences in beliefs among PC, PCC, CCDC, LSW, LISW, and Psychologists towards the disapproval of drug use as measured by the Attitude towards Addiction and Methadone Questionnaire.

Alternative Hypothesis 2.

H1: There will be significant differences in knowledge of methadone, buprenorphine, and naltrexone among PCs, PCCs, CCDCs, LSWs, LISWs, and Psychologists as measured by the Attitude towards Addiction and Methadone Questionnaire.

H0: There will not be significant differences in knowledge of methadone, buprenorphine, and naltrexone among PC, PCC, CCDC, LSW, LISW, and Psychologists as measured by the Attitude towards Addiction and Methadone Questionnaire.

Limitation of Study

This study is limited to the professional beliefs of the six professional groups with regard to a specific treatment modality, methadone maintenance, for opiate addiction. Methadone maintenance is not compared to other treatments such as the 12-Step Program or Buprenorphine. Professionals were not provided information about methadone prior to being given the questionnaire. Although the professionals were licensed in six different areas, for the purpose of this study the six groups were considered similar in composition.
Definition of Terms

Opiate Addiction.

Opiate addiction is the increased physical dependence which obliges the individual to continue using heroin or other opiates or suffer abstinence. The advanced state of addiction presents a paradoxical combination of resistance to narcotic effects (euphoria) and the need for repeated use (O’Brien, 1997).

Traditional View of Addiction.

Addiction is defined as tolerance and physical dependence on drug abused. Physical dependence is manifested by withdrawal symptoms. Detoxification of all drugs is the goal of treatment. Addiction is viewed as misbehavior deemed as willful misbehavior (Brown et al., 1975; O’Brien, 1997).

Scientific/Medical View of Addiction.

Addiction is a disease of the brain; a disorder of behavior. The advanced state of addiction presents a paradoxical combination of resistance to narcotic effects and the need for repeated use. The compulsive use of narcotics stems from narcotic receptor dysfunction and the phenomena of euphoria (Dole, 1988; Dole et al., 1966).

Opioids.

In diagnosing drug use and addiction, the word opioid refers to natural opiates such as morphine, semi-opiates such as heroin, and synthetic opioids that have morphine-like action such as codeine, hydromorphone, methadone, oxycodone, meperidine, and fentanyl. Opioids are often prescribed as anesthetics, analgesics, anti-diarrhea agents, or

**Methadone.**

Methadone is a synthetic opioid drug used in the treatment of opioid addiction as defined in the DSM-IV-TR. It is an oral drug that has rapid mucosal absorption after oral administration. Though it is chemically different from morphine and heroin, methadone acts upon central opioid receptors the same as other opioid drugs (Brown et al., 2006). The methadone prescription for opioid withdrawal or opioid dependence has only been legal in a federally licensed methadone maintenance facility in the United States Act in 1973.

**Methadone Maintenance Treatment.**

Methadone maintenance is a corrective way of normalizing neurological and endocrinological processes in individuals whose endogenous ligand-receptor function has been deranged from long term use of opiates. Methadone is administered orally in daily doses. In the treatment of opiate addiction methadone exerts two useful effects: 1) It relieves narcotic hunger and 2) provides a sufficient level of tolerance to block the euphoric effect of an average illegal dose of heroin (Dole & Nyswander, 1965; Dole et al., 1966). A core component of methadone maintenance treatment is counseling and social services to help with the process of social rehabilitation (Dole, 1988).

**Buprenorphine.**

Buprenorphine is a synthetic opioid drug used in the treatment of opioid dependence. Buprenorphine is a partial opioid agonist that acts on the brain’s mu-opioid
receptors blocking exogenous opioid administration and suppressing heroin self-administration (Mello, Mendelson, & Kuehnle, 1982). It prevents some withdrawal symptoms making the detoxification process gentler. The unique properties of buprenorphine make it an effective pharmaceutical to use in opioid withdrawal and opioid dependence (Bickel et al., 1988; Fiellin & O’Connor, 2002; Sullivan & Fiellin, 2005; Walsh, Preston, Stitzer, Cone, & Bigelow, 1994). Buprenorphine is provided in the form of a single tablet marketed as Subutex; Reckitt Benckiser, or combined with naloxone and marketed in the United States as Suboxone (Fiellin & O’Connor, 2002).

*Drug Counseling.*

Treatment centers on identifying the needs and delivering services instead of focusing on the intrapsychic processes (Luborsky, McLellan, Woody, Brien, & Auerbach, 1985).

*Methadone Maintenance Counseling.*

Counseling is a major component of methadone maintenance treatment. Methadone maintenance counseling is a specialized modality of addiction therapy that consists of coordination of care; establishment of a counseling relationship that includes the development of a treatment plan and case management; provision of intervention at the patient’s stage of recovery; providing both structure and flexibility in therapy; and facilitating and supporting the effort of the patient (Hagman, 1994).
Chapter 2

Review of Literature

Chapter 2 will provide an overview of the published literature on 1) the evolution of addiction including the extent of the problem; 2) public policies and attitudes toward addiction; 3) the advancement of research in the treatment of heroin and opiate addiction; 4) a discussion of the effectiveness of methadone in the treatment of heroin and opiate addiction; and 5) the controversy evolving around the use of pharmaceuticals in the treatment of opiate and heroin addiction. A review of the research regarding attitudes towards methadone and individuals on methadone maintenance and the significance of counseling in methadone maintenance treatment will be presented.

Evolution of Drug Use and Knowledge on Addiction

Jaffe (1995) provided the following history of the evolution of drug use in the United States and the governmental role in trying to regulate the sale and distribution of drugs. The most commonly used drugs included alcohol, tobacco, opiates, and cocaine. Cheap gin was introduced into England in the 18th century, and led to alcohol related problems that were more serious than those that resulted from drinking beer and wine. The smoking of opium was a major problem in Asia during the 18th and 19th centuries. Morphine, the most active opioid alkaloid in opium, was not isolated until 1806. Morphine was not commonly used by injection until the latter years of the 19th century. The spread of using morphine and heroin intravenously did not occur until the beginning of the 20th century.
The disease model of addiction was first adopted in 1810 by Benjamin Rush, who suggested that excessive use of alcohol was a disease instead of a moral defect (Jaffe, 1995). The temperance movement emerged and the Washingtonians, a group of reformed drunkards, united to help others maintain sobriety and to advocate for the involvement of the medical profession in dealing with excessive alcohol use. The Washingtonians developed many of the principles of self-help that would later be adopted by Alcoholics Anonymous (AA) in the following years. When the ideas of self-help and voluntarism did not eliminate the problem of drunkenness, physicians debated the use of coerced treatment in asylums supported with public funds (Jaffe, 1995).

Some physicians believed in a spiritual voluntary approach to the problem. Other physicians advocated for medically supervised asylums and compulsory treatment when needed. The focus of concern was no longer limited to those who abused alcohol, but extended to those who use any variety of intoxicant or narcotic excessively (Jaffe, 1995).

Pharmaceutical companies began to sell the cocoa leaf to the United States and Europe in 1860. Sigmund Freud published a book in 1884 which suggested therapeutic uses of cocaine. The medical authorities in the United States recommended cocaine to various remedies. The Hay Fever Association recommended it for treating hay fever. A few years after adopting the use of cocaine and opiates for sale over the counter for a wide variety of ailments, it was recognized that cocaine induced toxic psychosis and gained control over behavior. It was also recognized that long-term use of opiates induced dependence (Jaffe, 1995).
Heroin was introduced for medical use in 1898. Barbiturates and sedatives were introduced in 1903. Drug users found heroin to be similar to morphine in its effect. Opium alkaloids and cocaine were still found in patient medicines sold over the counter until the beginning of the 20th century (Jaffe, 1995).

Moralists and reformers, along with the press viewed the reputation of people with and opiate habit proof of inherent evils of drug abuse. Individuals used morphine during relapse, which led to doctors recommending compulsory treatment, confining addicted individuals until cured. Many doctors experienced stress when morphine addicted individuals were reluctant to seek detoxification and exhibited repeated relapses. Addicts who would not use the clinics bought heroin from illicit traffickers (Jaffe, 1995).

Negative publicity, medical doctors’ reluctance to treat persons suffering from addiction, and pressure from law enforcement agencies brought about the closing of many morphine clinics. The Supreme Court implied that the prescribing of small amounts of cocaine or opiates to an addict for treatment of addiction was illegal sale of narcotic drugs. This led to the imprisonment of several physicians (Jaffe, 1995).

By 1920, individuals addicted to opiates were not treated in doctors’ offices, and were refused treatment in hospitals. These individuals were referred to as dope addicts and dope fiends. The United States Congress passed legislation in 1937 mandating penalties for the sale or possession of marijuana (Jaffe, 1995).

Eventually the medical profession became concerned about the best way to manage withdrawal syndromes and deliberated over the possibility of longer treatment. Two recovering alcoholics added some new principles to the pioneering work of the
Washingtonians and started the self-help movement known as AA. During the 1950’s, treatment programs for alcoholism were built on the medical model and experiences of recovering alcoholics using the 12-step principles of AA (Jaffe, 1995).

From 1958 to 1967, several new approaches to opioid dependence were developed. Earlier methods of treating addiction emphasized detoxification and institutionalization. Therapeutic communities were introduced in the 1960’s. Therapeutic communities were based on methods which originated from non-medical tradition, and previously employed paraprofessional ex-addicts as counselors (De Leon & Rosenthal, 1979). Although therapeutic communities demonstrated effectiveness, only a small minority of addicted persons were willing to commit to such a treatment. Other treatment programs were adopted and referred to as 28-day programs.

Treatment methods varied in terms of philosophical understanding, settings, costs, and population served. Managed-care industries came into existence to control costs on behalf of employers. Congress gave greater attention to the problem of alcoholism in 1969 and established the National Institute of Alcohol Abuse and Alcoholism (NIMH) (Jaffe, 1995).

A major goal of the medical profession was to achieve a long-term cure for opiate addiction. The achievement of this goal was reported to be difficult until the public and medical profession no longer viewed the habitual user of morphine or opium as suffering from a moral deficit. It was noted that individuals who had developed the morphine habit ranged the entire socioeconomic spectrum, ranging from women to various literary and political figures (Jaffe, 1995). Cocaine and morphine use was prevalent and commonly
used by petty thieves, gamblers, prostitutes, and other undesirables in the community. Persons with emotional problems and excessive alcohol users also used opium since physicians usually prescribed opiates to control emotional problems and alcoholism (Jaffe, 1995).

Advances in the understanding of the nature of addiction have influenced approaches to the treatment of addiction (Leshner, 1997). Leshner contended that viewing addiction as a chronic and relapsing disease of the brain is a new concept for the general public, many policymakers, and health care professionals. It was noted that advancements in the neurosciences and behavioral sciences during the past four decades have contributed to a greater understanding of addiction and led to a revolution in the field of addiction.

Cultural Awareness in Drug Abuse and Treatment

Researchers have addressed ethnicity and self-identification of African-Americans, Hispanics/Latinos, Asian-Americans, Pacific Islanders, and Native Americans/American Indians in the United States as it relates to illicit drug use and treatment needs (Castro & Alarcón, 2002; Chaukin, 2001; Harper, 1979; Sanders, 1993, 2002; Tabor, 1970). Tabor noted the early efforts of activist groups within the African-American community trying to make federal and state leaders aware of the need to address cultural specific needs in alcohol and drug treatment programs during the1960s and early 1970s.

Treatment programs were expanded under the sponsorship of NIDA to address the special needs of addicted African Americans (Sanders, 2002). Funding was provided
during the 1980s and 1990s to adapt traditional recovery groups such as AA and NA for African-Americans (Sanders, 1993). In addition, numerous recovery movements specific to African-Americans were founded during those years. One such notable organization was the African American Survivors Organization founded by Benneth Lee of Chicago. The organization provided recovering African American men a place to address issues they might be uncomfortable discussing in a mixed-culture support group. The format incorporated the Seven Principles of Nguza Saba and taught principles of African culture to help solve daily problems (Sanders, 2002).

Other researchers have examined ethnicity and described substance abuse treatment to be culturally blind to the cultural variables that operate in both the mental and behavioral health of minority people (Castro & Alarcón, 2002). The need to incorporate cultural variables into treatment programs was emphasized. It has been further suggested by other researchers that the problems African-Americans experience are different from problems experienced by other racial groups (Brisbane and Wombie, 1985). The differences were contributed to societal barriers and limited knowledge about race-specific treatment models.

Although some writers advocated for programs for African Americans that are culturally specific, other writers have found a similarity and heterogeneity in African Americans and Caucasians in terms of age, sex, and exposure to negative socio-environmental factors (Rogan, 1986). An examination of the racial mix of clients after controlling for social environment was conducted to establish whether race relates to treatment outcome rates (Howard, LaVeist, & McCoughrin, 1996). Race was not found
to be a factor in determining treatment outcome. A treatment approach that places more emphasis on the socio-environmental influences the client is exposed to rather than race was recommended. Treatment organizations were cautioned against defining individuals for treatment on the basis of race; instead, encouraged to place emphasis on socio-environmental influences such as: excessive exposure to environmental hazards, drugs and alcohol, racial discrimination experiences, and police brutality.

*Increasing Need for an Effective Treatment for Opiate Addiction*

One of the major causes of death between the years 1977 and 1993 was due to the use of illicit drugs (McGinnis & Foege, 1993). Illicit drug use accounted for approximately 20,000 deaths in 1990. An estimated 9000 of the deaths were HIV deaths resulting from the use of intravenous drug use (McGinnis & Foege, 1993). In 1995, there were a reported 1.9 million admissions in America alone for substance abuse treatment (NIDA, 1997). It was found that men made up 70 percent of individuals in treatment, with women comprising the other 30 percent. Individuals admitted for heroin use comprised 25.5 percent of the treatment population. Reports showed 56 percent of those entering treatment were White, 26 percent were African American, 7.7 percent were Hispanic, less than 3 percent were American Indian, and 0.6 percent were Asian or Pacific Islanders.

A census conducted in 2000 showed 1.7 million admissions into treatment for alcohol and illicit drug use (SAS Output, 2000). The ethnic demographics showed Whites accounting for 59.6 percent of the admissions, African Americans comprising 25 percent, Hispanics 12.4 percent, American Indians 2.6 percent, and Asian or other 0.9
percent. Further analysis showed Whites to account for 49.3 percent of those admitted for heroin use, African Americans accounted for 24.6 percent, Hispanics 26.3 percent, Americans Indian 1.4 percent, and Asian or other 0.7 percent. Whites constituted 86.0 percent of individuals using other opiates, with African Americans making up 6.8 percent, Hispanics making up 4.1 percent, American Indians making up 1.5 percent, and Asians or other making up 1.1 percent.

Problems created by drug use and addiction transcend socioeconomic status among African Americans (Seamon, 1992). Alcohol and illicit drug use are major contributors of death (McGinnis & Foege, 1993). In 1995, nearly 1.9 million people were admitted into substance abuse treatment (National Institute on Drug Use (NIDA)). Women comprised 30 percent of treatment and men 70 percent. The breakdown by race was 56 percent White, 20 percent African American, approximately 8 percent Hispanics, and a little over 2 percent Native Americans. The largest number of admissions for treatment for illicit drug use was for cocaine, and the second largest was heroin. In the year 2000, the number of admissions for substance abuse treatment had decreased to 1,755,068. However, heroin had moved to the number one drug used and cocaine the number two drug used. The number of Whites coming into treatment for heroin addiction comprised 49.3 percent, while African Americans comprised 24.6 percent. Hispanics and Latinos comprised 26.3 percent.

Throughout the late 1960’s and early 1970’s efforts were made to increase the amount of attention being given to alcohol and drug abuse (Sanders, 2002). The 1980’s brought specific attention to the drug and alcohol problems that were facing the African
American community such as the cocaine epidemic, the war on drugs, and “crack babies” (Seamon, 1992). Despite the fact that African Americans make up a relatively small percentage of overall illicit drug consumers, they make up relatively large numbers of those arrested on drug offenses and those in state prison on felony drug offender charges (Sanders, 2002). With an emphasis of fighting these aforementioned issues, the 1980’s brought about an unprecedented number of African American women incarcerated. Along with the 1990’s came a growing number of indigenous addiction recovery movements within African American communities.

Women comprise an estimated third of the half million persons in the United States using heroin regularly. Most women are of childbearing age and fail to use contraception (Eldred & Washington, 1975). Neonatal morbidity and mortality was extremely high before the development of methadone maintenance and sophisticated neonatal technology (Finnegan, 1979).

Public Policies on Addiction

A special Action Office for Drug Abuse Prevention (SAODAP) was established in 1971 to develop, publish, and coordinate national government policies related to drug abuse when United States troops stationed in Vietnam were reported heavy heroin users. Opiate dependence was established to be an incurable disorder, and the opioid maintenance approach using methadone was justified and gained federal support. There were 8,000 recognized programs in operation by 1990 (Jaffe, 1995).

Prior to 1989 the responsibility for decreasing the use of alcohol, tobacco, and illicit drug use in Ohio was held by the Department of Mental Health and the Department
of Health. Lawmakers were convinced that the efforts of two departments did not adequately address substance abuse problems. The Department of Alcohol and Drug Addiction Services (ODADAS) was created in 1989 to consolidate services for drugs and alcohol formerly administered by separate departments. Since its formation ODADAS has expanded to support more than 50 prevention and treatment programs and helped to coordinate the efforts of other state departments to combat abuse. ODADAS has a wide range of operations and a substantial budget. It serves as the largest organization in the state to deal with issues of drug and alcohol abuse.

The legislature has had fluctuating attitudes regarding drug use throughout the years. As early as the end of the 1800’s there been a concern about inappropriate and excessive drug use. Understanding the importance of drug use and addiction at the policy level was predicted to have a major impact on public health strategies. Leshner (1997) believed that an updated understanding of addiction would influence criminal justice strategies and possibly deter incarceration for a brain disease of drug use; or, provide treatment to addicts while they are incarcerated. Leshner advocated for clinicians to view addicts as individuals whose minds have been fundamentally altered by drugs.

Medical Attitudes towards Addiction

Early attitudes about excessive and inappropriate drug use did not take into account the addictive properties of drug use. Abed and Neira-Munoz (1990) defined addiction as “the habitual use of opiates, amphetamines, or cocaine” (pp.131).

Abed and Neira-Munoz conducted a survey of general practitioners’ general attitudes towards addiction and drug addicts. Results of the survey showed a range of
negative and positive attitudes. Seventy-two percent of the respondents considered drug addicts to be difficult or uncooperative. The study found younger general practitioners to have more positive attitudes towards drug addicts. Three possible reasons for the more positive attitudes were identified: 1) younger general practitioners could have had more comprehensive training, 2) they could have been more able to identify with the addict due to close proximity of age, or 3) they could have felt that the management of the drug addict should be a shared responsibility with a specialist.

Abouyanni et al. (2000) conducted a more recent study to determine the experience and views of general practitioners in South West Sydney towards managing drug and alcohol patients and interest in shared methadone prescribing. 76 percent of five hundred and forty-eight general practitioners responded; 52 percent believed methadone maintenance was effective. The results of the study suggested that general practitioners lacked experience in managing patients’ addicted to opiates, including their general medical care. General practitioners were also concerned about the services provided by drug and alcohol “services”. The study suggested that general practitioners with less experience with methadone patients needed more intensive support from drug and alcohol services. Chappel et al. (1985) concluded the importance of developing a method for measuring attitudes.

Advancement of Research in Treatment of Heroin and Opiate Addiction

Addiction has been explained several different ways throughout the years. The various views which will be discussed have each impacted the field of drug abuse and addiction. Leshner (1997) contributed the advances in both neuroscience and behavioral
science as providing the most influence in changing the understanding of drug abuse and addiction over the past two decades. Addictive disorders are described as involving the interaction of biological changes and psychosocial behaviors which both need to be addressed in effective treatment.

Medical research has continued to reiterate that methadone is not an opiate and does not act in the body the same way as heroin. Methadone is defined as a synthetic opioid used as a blockade against the effects of heroin and opiate-type drugs (Brown et al., 2006). Recent trials have also indicated its usefulness in reducing cocaine abuse (Schottenfeld et al., 2005).

Traditional View of Addiction

The traditional view of addiction viewed it as a pleasure seeking escape from reality used by weak persons living in a stressful environment. It also promotes the use of an antagonist such as naltrexone to block all narcotic actions (Dole, 1988). Dole argued that the escapist-conditioning explanation had influenced both medical thinking and health policy for 30 years and had not led to a consistent successful treatment. Dole cited the reference of Wikler in 1958 who postulated irresistible craving for narcotics were generated when an addict is in the company of other drug users.

Traditional substance abuse counseling is represented by Alcoholics Anonymous (AA) and their Twelve Step Model (Koch & Benshoff, 2002). Substance abuse counselors relied on AA for support to provide treatment to individuals who suffer from alcohol abuse and drug dependency. Koch and Benshoff contended that substance abuse
treatment and AA are interconnected. The authors pointed out a recurring dilemma with AA’s philosophy of one type of treatment for everyone mentality.

Demographics in a 1998 membership survey conducted by Alcoholics Anonymous World Services Incorporated showed 88 percent of AA’s members were White, 5 percent African American, 4 percent Hispanic, 2 percent American Indian, and 1 percent Asian or other. Koch and Benshoff cited to other writers who suggested that the traditional AA group might not be accessible to individuals from other cultures or backgrounds and should be adapted for individuals from diverse backgrounds.

**Psychoanalytic View of Drug Addiction**

Brill (1977) provided a description of the evolution of the conceptualization of drug addiction from a psychoanalyst perspective. The author cited to analysts such as Sandor Rado and Ernst Simmel, who had experiences with barbiturate addicts and alcoholics in addition to other addicts in psychiatric hospitals in Europe. Many of the earlier conceptualizations of drug addictions originated from the professional thinking of analysts who based their beliefs on a psychoanalytic framework. Under the psychoanalytic framework, drug addiction is linked with impulse neurosis, perversions, compulsion neurosis, character disorders, and sometimes the manic depressive cycle (Brill, 1977). Brill suggested that the principles of AA were very close to those of the psychoanalytic framework.

During the 1970s, Brill (1977) noted that most therapists had fixed stereotypes about addicted individuals and feared being robbed or conned for medication. Brill referred to therapists as having unrealistic goals for addicted patients which included
extensive personality reorganization. Most therapists were believed to find it difficult to understand special socio-cultural problems of lower class groups and minorities in treatment. These groups of addicted individuals were offered institutionalization and medication instead of counseling like middle class patients (Brill, 1977).

Psychoanalytic techniques originated from middle class European framework that needed to be adapted to meet the needs and socio-cultural contexts of individuals with diverse ethnic backgrounds (Brill, 1977). During the era, therapists focused exclusively on the sole determinants of addicted individuals’ drug problems. Earlier research found most addicts to be incapable of personality changes such as probing into their subconscious or developing insight (Brill, 1977). The author explained that therapists relied on paraprofessionals and ex-addicts to help bridge the gap of their lack of understanding and the special needs of the lower class and minority groups. According to Brill, there was a tendency to regard all drug use as bad, without understanding that many drugs are adaptive and help people function better. Emphasis was placed on the person using the drug and the circumstances which lead to drug use.

In later years, Hagman (1995) presented a psychoanalytic model of addiction that was viewed by him to be compatible with the biochemical deficit model of Dr. Dole and Dr. Nyswander in 1965. The psychoanalytic model was described as having five principles: “1) that the addictive use of substances is an attempt to repair deficits in self-regulation and self-structure; 2) that methadone is a substitute for the addictive drug, which has ultimately come to fail in its self-repair function; 3) that once stabilized, the methadone patient seeks to use other aspects of program services, in particular the
counseling relation, to continue the work of self-repair and to maintain stability; 4) that the principles by which the patient organized his or her subjective reality in the “street” impact on the relationships with counseling staff as resistance and transference; and 5) that it is the work of the methadone counselor to manage the treatment relationship in such a way as to assist the patient in developing new, more adaptive and healthy structures of self-organization (Hagman, 1995).

According to Hagman the two models that have most affected the practice and theory of addiction are the disease model and the self-medication hypothesis. These two models of addiction will be discussed.

*Disease Model of Addiction*

The disease model of addiction is based on the premise that addiction meets the criteria of a disease. There are several distinguishable characteristics that chemical dependency share with many other chronic diseases, such as the lack of control over the condition and a strong tendency to relapse (Jaffe, 1995). Gelkopf, Levitt, and Bleich (2002) point out a number of issues with defining addiction as a disease. One issue raised the question of whether drug abuse was an illness of the mind, body, or society. Another issue raised questioned whether drug abuse was de-stigmatized by the disease model. Other issues included whether a correct methadone dosing policy could be established; the role of psychotherapy in methadone maintenance treatment; and how multiple drug use should be treated.

The fundamental concept of the disease model of addiction is the addicted individual is sick and suffering from a disease (Jaffe, 1995). Addiction has an
identifiable cluster of signs and symptoms the same as other chronic diseases (Gelkopf et al., 2002). Some of the main shared characteristics include: 1) lack of control over ones condition; 2) medication is used as an integral part of treatment (O’Brien, 1997); and 3) strong tendency to relapse after periods of refraining from use. The cause of the illness is a result of a physiological phenomenon that is not caused by a mental disorder or social problem.

Many addicts develop both a psychological and physical addiction. Abramovitz (1999) described a psychological addiction as a craving a person has to achieve certain effects. Physical dependence was described as the withdrawal the body goes through with discontinuation of the drug.

**Self-Medication Hypothesis**

The self-medication hypothesis is based on the premise that alcohol and drug users are attempting to cope with social distress or an underlying psychological problem through self-medication (Alexander & Hadaway, 1988). Khantzian (1985) proposed the self-medication theory of addiction. The self-medication hypothesis stated that an addict’s drug of choice is acquired through an interaction between the psychopharmacologic action of the drug and the struggle of dominant painful feelings. Khantzian suggested that individuals dependent on drugs were predisposed to addiction due to suffering from painful affect states and do not randomly chose drugs. It was surmised that the choice of an opiate created a muting action to disorganization and the threatening affects of aggression and rage. The choice of cocaine was used to relieve distress associated with hypomania hyperactivity and depression.
Exposure Orientation and Adaptive Orientation

In 1982 Alexander and Hadaway suggested that there were two views on addiction to heroin and other opiates. The views were referred to as: 1) exposure orientation which viewed opiate addiction as a condition that occurs when opiate use causes a strong tendency to continue to use opiates compulsively; and 2) adaptive orientation which viewed opiate addiction as an attempt to adapt to chronic distress of some sort by habitual use of opiates. The two views were fundamentally compatible and different with contrary implications for treatment and social policy (Alexander & Hadaway, 1982).

Psychotherapy in accordance with the exposure theory would be centered on removing a need created in the addict by the drug. Therapy based on the adaptive orientation would identify existing problem prior to drug use and would attempt to relieve them (Alexander & Hadaway, 1982).

The social policy under the exposure orientation focused on the prohibition of drugs because the drug was viewed as the cause of addiction. This view implied police powers. The adaptive orientation suggested that successful prohibition of drugs would still leave addicts with their original problems while stripping them of their preferred mode of adaptation, causing more destructive behaviors. The social policy under the adaptive orientation promoted public support for clinics and institutions that fostered the development of more effectively adaptive skills in treatment.
Addiction Viewed in Biological Terms

Dole and Nyswander (1965) noted that previous attempts to use morphine to maintain addicts had failed due to the inability of patients to be stabilized on the drug. Despite frequent injections of morphine, researchers observed the patient’s condition to fluctuate between agitation and somnolence throughout each day. Tolerance increased daily to the point of patients being continuously agitated even while being administered large doses of morphine. The administration of heroin, which quickly converts into morphine in the body, showed similar results. The high percentage of addicts who relapsed after detoxification was believed to do so as a result of continued derangement of the endogenous ligand-narcotic receptor system.

The doctors believed that there was a specific neurological basis which led to the compulsive use of heroin by addicts. In 1965 medical researchers identified receptors in the brain and natural ligands for receptors activated by drug use. Heroin use by addicts was found to produce a different effect than narcotic drugs used in ordinary medical practice (Dole et al., 1966). Dole et al. developed a narcotic blockade, methadone, which blocked the abnormal reactions of compulsive use of heroin and obsession with euphoria. The optimal pharmacological effective range of methadone to stabilize the blood level in the 150 to 600 mg/ml range is 60-80 mg/d dose. Success in rehabilitating heroin addicts with methadone was found to require stability of the blood level. They found that daily oral doses of methadone enabled addicted individuals to live a normal lifestyle. Methadone was described as being corrective and normalizing neurological and
endocrinological processes in individuals whose endogenous ligand-receptor function had been damaged by long term use of narcotic drugs.

Dole et al. (1966) noted the lack of success of detoxification efforts by drug-free treatment programs. The researchers showed that patients on methadone did not become re-addicted to heroin. Methadone maintenance showed patients to acquire steady employment, be responsible within their families, and improve appearance. Methadone blockade was reported to be specific for opiate type drugs and not recommended as treatment for non-opiate drug abuse. It was noted that methadone did not eliminate the effect of alcohol, tranquilizers, barbiturates, tobacco, or amphetamines (Dole et al., 1968).

**Biological View versus Traditional View of Addiction**

In 1988 Dr. Dole challenged the traditional view of addiction. Dole pointed out the flaw in the conditioning theory held by proponents of the traditional view. The researcher argued that the antagonist approach was pharmacologically wrong in light of the receptor derangement theory. Dole asserted that antagonist drugs blocked both the natural ligands and illicit narcotics and added to the problem since the modulating system failed to return to normal functioning. The researcher attributed the achievements of molecular biology in providing the analysis of the process of cell function, suggesting that all diseases including behavior disorders could be reduced to biological terms.

Dole (1988) argued that analysts of clinical results of methadone maintenance over the preceding 25 years along with advanced understanding of narcotic receptors and their ligands supported the view that compulsive use of narcotics stemmed from receptor
dysfunction. Legislators were urged to change their attitudes toward addictive behaviors to coincide with scientific understanding and medical tradition (Dole, 1988).

Traditional 12-Step treatment focused on cognitive changes and acceptance of the disease model of addiction (Finney, Moos, & Humphreys, 1999). Treatment consisted of the patient accepting an alcoholic or addict identity, attending 12-Step group meetings, working the steps, and getting a sponsor. Abstinence was a treatment goal. Finney et al. conducted research that showed 12-Step programs to be effective in achieving immediate aims, but not sustaining changes over the 1-year follow-up period.

*Treatment for Heroin and Opiate Addiction*

The introduction of methadone maintenance for the treatment of opiate addiction altered treatment for addiction (Dole et al., 1966). The lack of success of detoxification efforts by drug-free treatment programs was noted. Patients on methadone did not become re-addicted to heroin. It was further noted that methadone did not eliminate the effect of alcohol, tranquilizers, barbiturates, tobacco, or amphetamines (Dole et al., 1968). Methadone blockade was reported to be specific for opiate type drugs and not recommended treatment for non-opiate drug abuse.

The outcome of methadone maintenance showed patients to acquire steady employment, be responsible within their families, and improve appearance. Dole et al. (1968) pointed out that physicians with years of experience in detoxification methods had become enthusiastic supporters of methadone maintenance. In more recent years, addiction has been explained by the medical profession (Lewis, 2000) as being similar to other chronic diseases such as diabetes, hypertension, and asthma. The comparison of
biomedical research findings, genetic predisposition, and treatment outcome has provided scientific evidence that has demonstrated the similarity between addiction and chronic diseases (Jaffe, 1995; O’Brien, 1997). The scientific underpinning of understanding addiction as a disease implicated it is treatable.

Newer thinking regarding treatment for drug dependent persons was based on three broad areas of understanding: issues related to addicts, problems stemming from psychoanalysis, and state of the art issues (Brill, 1977). Developments in psychiatry and psychoanalysis has provided insights in understanding mental health and provided implications for understanding addictions (Khantzian, 1985).

The Effectiveness of Methadone in Treating Heroin and Opiate Addictions

Initial studies using methadone were conducted at Rockefeller Hospital in New York in collaboration with Mary Jeanne Kreek, M.D. (Dole & Nyswander, 1965; Dole et al., 1966). Dr. Dole, Dr. Nyswander, and Dr. Kreek analyzed the processes of the cell function and concluded that disorders of behavior could be reduced to biological terms the same a physical diseases. Clinical effects of different narcotic drugs of the opiate class were examined by administering various doses to long time heroin users. The drugs had all been approved for human use as analgesics and were known to exhibit cross tolerance with morphine.

The administration of methadone was found to produce a distinguishably different result than heroin (Dole & Nyswander, 1965; Dole et al., 1966). Methadone caused the overall system of the addict to shift towards a normal pre-addictive state as opposed to
the acquired obsessive compulsion for doses frame of mind. The reversibility of methadone absorption in the blood distinguished it from other opiates like morphine.

Methadone was found to stimulate a buffer in the blood and keep critical narcotic receptors occupied. The occupation of critical narcotic receptors allowed the narcotic to function normal physiologically. It was later found that a single dose of methadone was required in order to replace the amount of drug eliminated by metabolism (Dole et al. 1968). Research demonstrated methadone’s ability to decrease fluctuations in the addict’s clinical state causing it to disappear all together (Newman & Peyser, 1991).

The clinical successes of rehabilitating heroin addicts with methadone maintenance required stability of the blood level (Dole, 1988). Dr. Dole contended that the high percentage of addicts who relapsed after detoxification was the result of continued derangement of the endogenous ligand-narcotic receptor system. Adequate daily doses of methadone compensated for the derangement.

Methadone acts on mu-opioid receptors throughout the body. This action results in a number of effects common to all mu-opioid agonists, such as analgesia, euphoria, constipation, respiratory depression, and nausea, to name a few (Brown et al., 2006). It also antagonizes specific receptors that make it more effective in the treatment of neuropathic pain when contrasted against other opioids. Methadone’s long half life is mainly attributed to its high affinity for plasma protein, as well as tissue throughout the body. This extensive binding results in a longer half life than would be expected otherwise, especially when methadone has been administered continuously.
Dole and Nyswander (1965) suggested that methadone by itself was insufficient. During the early 1970’s researchers examined the success of counseling with methadone therapy. The social adjustment of individuals maintained on methadone was attributed to counselors and social workers (Dole, 1971). Counseling was identified as a critical factor in rehabilitation. Counseling was viewed as being supportive to the ex-addict in the long social rehabilitating process after one’s somatic function was stabilized (Zweben, 1991).

The clinical results of analyzing methadone maintenance treatment for 25 years and understanding of narcotic receptors and their ligands have supported Dole’s view that compulsive use of narcotics stems from receptor dysfunction. Methadone’s main function is to normalize functions. Once the somatic functions are normalized, counseling and social services are necessary to facilitate complete rehabilitation.

*Philosophy and Function of Methadone Clinic*

The rise of opiate abuse during the 1960s stimulated local state and national governments to address the problem. Dole and Nyswander (1965) reported success with a methadone therapy program they organized and managed according to strict criteria.

Methadone therapy was modified for community use and changed from a controlled experimental procedure dealing with a small number of selected patients to an outpatient community based program for the general public. The modified program produced significantly different results. Reports of street use of methadone, patients selling methadone to other addicts, and difficulties within the methadone clinics resulted in criticism that social rehabilitation of the addict was not being explored (Heyman, 1972).
The introduction of methadone maintenance attracted and retained productive individuals who gave up illicit drug use and addiction-related criminality. During the early 1980's skeptics questioned the role methadone played in achieving socially productive individuals who gave up illicit drug use and addiction related criminality (Newman & Peyser, 1991). The skepticism resulted from an absence of scientific studies that statistically compared treatment results to appropriate control groups. Other critics wanted the "placebo effect" examined. The authors noted that the "incongruous" relationship between scientific data and policy implementation regarding treatment for heroin addiction began in the 1970s and continued into the mid-1980s.

During the last 20 years there has been a gap between the availability of slots in existing programs, trained professional staff, or funds to meet the demand for methadone treatment. Politicians were concerned about the spread of the Human Immunodeficiency Virus (HIV) among heterosexuals by addiction-related behaviors. The authors referred to heroin as a major problem in cities throughout the United States. The widespread of cocaine use was noted.

To address this problem, the Centers for Disease Control made federal funds available in 1985 for programs aimed at lowering the risk of the transmission of HIV among intravenous drug users (Newman & Peyser, 1991). The Food and Drug Administration agreed on a proposal provided by the Beth Israel Medical Center in New York to provide interim methadone treatment without supportive services for heroin addicts on waiting lists for comprehensive methadone treatment.

The operation of the interim clinic was set up as a pilot study in early 1987 with
150 patients randomly selected as a control group. The control group was not given methadone. They were assured of admission to one of the 23 comprehensive methadone clinics within a month. The primary results presented in June of 1988 at an AIDS Conference by self report showed a decrease in heroin use by the patients on methadone. Urine analysis did not show a reduction in cocaine use by either group. The staff showed great satisfaction with patient progress on methadone and enormous frustration with the control group not being administered methadone.

It was concluded by the investigators that it was unethical to maintain a control group who were not administered methadone. Newman and Peyser (1991) cited to counselors who viewed the study as "racist" by giving methadone so freely to Hispanic and Black addicts; or perceived it as a "moral dilemma" dispensing methadone to some while turning their backs on others.

The control group was compared to the untreated syphilis patients in the Tuskegee study. Newman and Peyser described the study as being justly criticized for withholding helpful treatment from some while providing it to others. Despite the inconclusive findings on the study, regulatory changes were made in 1989 to legitimize interim clinics in areas where there are extensive waiting periods for comprehensive methadone treatment. Newman and Peyser suggested that scientific methodology is not appropriate for determining whether or not to treat heroin and opiate addictions with methadone maintenance.

Methadone clinics are organized into two models, the metabolic and the psychotherapeutic. The metabolic model was the theoretical framework adopted by Dole
and Nyswander (1965). In this model drug abuse was considered the primary disease. After the primary disease was corrected by the administration of methadone, the therapist worked with the patient's behavior patterns.

Common goals of the methadone program are: reduction in criminal activity, the elimination of drug use, stabilization of family life, and maintenance of employment (Allison & Hubbard, 1985; Graff & Ball, 1976; Kahn, 1992; Lilly et al., 2000; Zweben, 1991). In methadone maintenance treatment counseling plays an important role (McLellan, Woody, Luborsky, & Goehl, 1988). Hagman (1994) proposes a definition for professional methadone counseling as a specialization in addiction therapy and treatment. Methadone maintenance counseling views the counseling relationship as the central unifying core of rehabilitative intervention.

The psychological perspective of methadone treatment has shown the contemporary analytic model of addiction to be compatible with the biochemical deficit model (methadone pharmacotherapy) founded by Dr. Dole and Dr. Nyswander (Hagman, 1995). Hagman further noted that detoxification from methadone may not be a realistic for many individuals. The author argued for the adoption of a psychological model of counseling within and outside of methadone maintenance programs to assist with understanding client relationships and improving services to clients. The role of professional psychotherapy in methadone maintenance was established to be helpful for clients on methadone maintenance who were also diagnosed with a psychiatric disorder in addition to a drug diagnosis (Kleber, 1984).
Williams (1985) explored issues raised during pregnancy by women on methadone maintenance. The author asserted that methadone maintenance was the recognized treatment choice by narcotic dependent women during pregnancy. According to Williams infant mortality associated with opiate dependent women is extremely high. The goal of methadone maintenance in conjunction with a prenatal care intensive program is to maintain the woman on the lowest dosage possible. Williams suggested that pregnant women on methadone were shown to have decreased usage of illicit drugs.

Comparison of Buprenorphine and Methadone

Buprenorphine is an agent being investigated for the treatment of opioid dependence (Bickel et al., 1982) and compared to methadone (Strain et al., 1994) for its effectiveness. The study conducted by Strain et al. showed buprenorphine to be as effective as methadone in the treatment of opioid dependence. Urine screens showed no significant difference between the methadone and buprenorphine treatment group, suggesting that the two drugs are equivalent in the suppression of opioid use. The study noted that flexible dosages and increased dosages for cocaine dirty urine were effective in decreasing cocaine usage while on methadone.

Buprenorphine hydrochloride, by contrast, is a partial agonist at the mu-opioid receptor that has also exhibited an efficacy in the treatment of opiate dependency. It is available as a single medication such as Subutex, or in a 4:1 mixture with naloxone (Suboxone) (Sullivan & Fiellin, 2005). Buprenorphine works through a specific mechanism that results in it having fewer withdrawal symptoms and a lesser potential for abuse, overdose, or respiratory depression when compared with methadone. It is usually
administered as a sublingual tablet, and can be provided either daily or three times per week, depending on the situation.

Buprenorphine has traditionally only used for detoxification; however, medical research has found it useful in both short-term and long-term opioid maintenance therapy. A 1990 Institute of Medicine report concluded that results from clinical trials and other studies had provided strong evidence that opiate dependent individuals have better outcomes when they are maintained on methadone than when they are acutely detoxified and released.

*Family Therapy in the Treatment of Addiction*

During the 1970’s a national survey conducted by Coleman and Davis (1978) showed a trend in the use of family therapy in rehabilitating the heroin addict population. The reasons for using family group therapy in a methadone therapeutic community included: recognition that treating drug abusers without including their family was a futile exercise (Orto, 1974). Bokos, Lipscomb, and Schwartzman (1984) described the implications for using family therapy logical and impressive.

The family system examined the function of drug abuse and interpersonal relationships of family members as behavior patterns maintained by the inter-connecting family network (Vaillent, 1966). Co-joint family therapy with drug abusers produced encouraging results (Reilly, 1976; Hirsch & Imhoff, 1975). Coleman and Davis (1978) used a Family Therapy Questionnaire to elicit information that showed 75 percent of agencies included the addict with their entire family in therapy. More recent research has
used significant other involvement to improve retention in naltrexone treatment for opioid addiction (Carroll et al., 2001).

Professionals in the Field of Drug Abuse and Addiction

Treatment for substance abuse was initially provided by counselors who were recovering substance abusers trained through participation in Alcoholics and Narcotics Anonymous (Rosenberg, 1982). Individuals with professional training entered the field with the growing opportunities of funding and increased demands for accountability. Counselors providing treatment to addicted persons consisted of three categories: 1) counselors with a bachelor’s degree and no history of drug addiction; 2) ex-addict counselors with a history of drug addiction; and 3) non-ex-addict counselors without a bachelor’s degree or history of drug addiction. An earlier study (LoSciuto, Aiken, Ausetts, & Brown, 1984) was conducted to contrast the views of counselors on drug abuse and drug treatment.

Ogborne et al. (1998) conducted a study of service providers’ beliefs about the change processes regarded as helpful or harmful in promoting positive client outcome. The authors cited research conducted by Ajzen (1991) who contended that under certain circumstances, attitude predicts behaviors. Ogborne et al. suggested that service providers deliver interventions consistent with their beliefs on what facilitates behavior change.

Need for Professional Psychotherapy in Methadone Treatment

The rising numbers of opiate addicts seeking treatment in methadone programs and the decreased availability of funds stimulated much debate. NIDA funded two
studies in the late 1970s to determine the efficacy of psychotherapy. Kleber (1984) distinguished between psychotherapy from counseling. Psychotherapy was defined as an attempt to alter mental mechanisms deemed to be maladaptive behaviors. Therapy is aimed at relieving the unconscious psychological conflict. Counseling is not an attempt to alter the counterintuitive mental processes. It is based on the common sense idea of actions and motives.

Rounsaville and Kleber (1985) broadly defined psychotherapy and counseling as "psychological treatments in which changes in maladaptive thought patterns, interpersonal relationships, or behaviors are sought through discussions between the clients and the psychotherapist. Psychotherapy was distinguished from counseling in its attempt to bring about the change by altering mental mechanisms that were seen as underlying maladaptive behaviors. Psychodynamic therapy was defined as therapy aimed at mitigating maladaptive influences of psychological conflict of unconsciousness.

Psychodynamic psychotherapy in both out-patient and inpatient settings was the usual form of available treatment for opiate addicts (Rounsaville & Kleber, 1985). Rounsaville and Kleber described psychotherapy as a cumbersome mode of treatment that involved highly trained professionals. Psychotherapists were often very frustrated due to the addict's failure to engage in treatment, inability to be monitored adequately, and tendency to relapse when psychological conflicts were highlighted (Brill, 1977).

Rounsaville and Kleber cited to an earlier study conducted by Nyswander et al. in 1958 that evaluated the utility of professional psychodynamic psychotherapy, which provided to be difficult to attract and engage addicts. The results of the study indicated
that psychotherapy as an intervention without medication was not important to the majority of addicts.

Psychotherapy for opiate addicts has been evaluated in three types of settings: outpatient drug-free, methadone maintenance, and narcotic antagonist (Rounsaville & Kleber, 1985). The research showed psychotherapy to be most useful in drug-free treatment history or successful clients who graduate from an intensive program, clients who have temporarily relapsed, and clients leaving a hospital or jail. Psychotherapy was not shown to be useful for clients switching from a methadone maintenance program to a narcotic antagonist program. Psychotherapy was found to be useful for entering a context prior to and following treatment such as life stressors, social support, and the acquisition of coping skills or increasing self-esteem.

As early as 1985, Rounsaville and Kleber reframed the question of whether or not psychotherapy counseling belongs in the treatment of addicts. The question was reframed to ask what kind of psychotherapy for what kind of patient or problem?” (pp.870) The authors suggested a broad definition for psychotherapy and counseling defining both as psychological treatments which seek changes in maladaptive thought patterns, interpersonal relationships, or behaviors through discussions between clients and the psychotherapist.

*Therapeutic Relationship*

Other researchers (De Leon, 1995; and Simpson, 1993) have conducted research to focus on therapeutic relationships between patient and counselor, and intermediate cognitive and behavioral outcomes of individuals during treatment. Simpson, Joe,
Rowan-Szal, and Greener (1997) conducted a study using broader model of treatment process and recovery that focused on cognitive influences, therapeutic relationships, and treatment engagement. Previous research demonstrated that there is a relationship between program participation and during-treatment drug use outcomes (Simpson et al.). The research found a relationship between counseling session attendance and the development of positive therapeutic relationships. Counselors rated patients' motivation, self-confidence, and rapport higher with increased counseling session.

The use of a cognitive-based visual representation procedure called "node-link mapping" has been found to help improve counseling, increase ratings of therapeutic relationships, and produce better treatment behavior outcomes than standard counseling (Simpson, Danserau, & Joe, 1997). The study found treatment process constructs to be more important than patient demographic and background variables. Cognitively enhanced counseling procedures improved the quality of the therapeutic relationship.

Controversy in the Treatment of Opiate Addiction

Substance abuse treatment has rapidly grown over the past decades. Methadone maintenance is one of the least understood drug treatment approaches for addiction (Zweben, 1991). Since it’s inception in the mid 1960s, methadone maintenance has sparked a great variety of opinions, both positive and negative (Abed & Neira-Munoz, 1990; Atlas, 1982; Brown, Benn, & Jansen, 1975; Gold, Soreson, McCanlies, Trier, & Dlugosch, 1988; Grief & Drechsler, 1993; Hunt et al., 1985-86). While it has been the center of many controversies, the debates have not slowed down the spread into mainstream use. As of 2001 there were at least 115,000 addicted persons in methadone
maintenance treatment in the United States alone (Yoast, Williams, Deitchman, and Champion, 2001).

*Attitudinal Studies*

A 2-year study on methadone maintenance attitudes was conducted in New York, New Jersey, and Connecticut (Hunt et al., 1985-86). In the study, four methadone maintenance treatment programs were examined to study all aspects of methadone treatment, including the staff, clients, and the community in which the program existed. Over 500 people were assessed including both methadone clients and narcotic users not enrolled in any sort of program. While there were some differences demographically between the people in treatment and active users who were not in treatment; there was not a difference in attitudes overall. The authors suggested that methadone was not the drug of choice for addicts with personal money. Both people in treatment and out of treatment reported methadone being too easy to obtain. Methadone was not the desirable when stronger drugs were available.

Hunt et al. (1985-86) found the attitudes of the addicts to be influenced by the values and norms of the addict’s culture. Individuals in the narcotic-using community overwhelmingly verbalized strong negative beliefs about methadone treatment based on misinformation from aspects of treatment which contradicted with the image of the street addict. The outcome of the present study may show if the attitudes of professionals working in the helping field will be influenced by personal beliefs and knowledge in the area of addiction and treatment.

The attitudes of the six professional groups assessed in this study included:
certified chemical dependency counselors, professional counselors, professional clinical counselors, licensed social workers, licensed independent social workers, and psychologists. The training and scope of practice for these professional groups varies.

**Professional Counselor (PC).**

Under division (D) of section 4 of the Amended Substitute House Bill 205 the PC must hold a master’s or doctoral degree in counseling with a major in mental health counseling, pastoral counseling, rehabilitation counseling, school counseling, or similar titles with the word “counseling” and complete a core coursework representative of professional counseling. A “supervised practicum” and “supervised internship” must be completed under the supervision of a qualified graduate faculty member. The scope of practice of a PC includes rendering a counseling service using clinical counseling principles to individuals and groups, general public, and organizations for a fee or salary.

**Professional Clinical Counselor (PCC).**

A professional clinical counselor is a PC with clinical endorsement. The PCC is permitted to perform all practices, principles, methods, and procedures entitled to PCs under rule 4757-13-02 of the Administrative Code. In addition, a PCC is permitted to act unsupervised as a private practitioner in the diagnosis and treatment of mental disorders.

**Certified Chemical Dependency Counselor (CCDC).**

There are not education requirements for certification; in fact, a high school diploma is not required. Individuals must hold membership under ODADAS. Certification is based on experience in chemical dependency work and employment in a supervised chemical dependency position. Certification is on three levels: Certified
Chemical Dependency Counselor I (CCDC I), Certified Dependency Counselor II (CCDC II), and Certified Chemical Dependency Counselor III (CCDC III). Certified counselors are certified to provide counseling services to individuals receiving treatment in substance abuse or chemical dependency.

*Licensed Social Worker (LSW).*

A LSW must have a Bachelors degree in social work or a related field from an accredited institution and pass the basic examination for Social Work. A LSW can only perform counseling, social psychotherapy, and psychosocial interventions under the supervision of a professional clinical counselor, independent social worker, psychologist, psychiatrist, or RN with a Masters degree in psychiatric nursing.

*Licensed Independent Social Worker (LISW).*

The LISW can perform counseling, social psychotherapy, and psychosocial intervention without supervision as a private practitioner. An independent social worker has a masters or doctoral degree in social work from an accredited college or university. In addition, an independent social worker has two years experience, equivalent to 3000 hours, of social work experience after the graduate degree under the supervision of a LISW. In Ohio, the LISW must have worked as a licensed social worker while acquiring the qualifying experience for independent and must pass an “advanced” or “clinical” examination. Counseling, social psychotherapy, and psychosocial interventions can be performed as a private practitioner without supervision.
Psychologist.

A Psychologist, according to sections 4732.01 through 4732.25 of the revised Code, must have a PhD in the field of psychology and pass an examination. Services offered by psychologists include: assessment, prevention treatment diagnosis, or amelioration of emotional, mental disorders, or psychological problems.
Chapter 3

Method

The present study was a descriptive quantitative analysis designed to compare the attitudes and beliefs of professional counselors and clinical counselors, certified chemical dependency counselors, licensed social workers and independent social workers, and licensed psychologists in the state of Ohio on their commitment to abstinence-oriented policies, attitudes to drug addiction, and knowledge of methadone maintenance. The study also described selected background characteristics of the professional groups. Predictions were made about the impact of professionals’ commitment or lack of commitment to abstinence-oriented policies on their attitudes and beliefs in treating clients addicted to heroin and other opiates.

The research design and data analysis procedures for the present study will be described in this chapter. This chapter is comprised of six sections: (a) research design, (b) identification and description of the population sampled, (c) operational definitions of the variables, (d) instrumentation selected and utilized, (e) data collection procedures and analysis of data, and (f) limitations of this study.

Research Design

The present study draws from the work of two previous studies conducted by John Caplehorn, Les Irwig, and John Saunders in 1996; and John Caplehorn, Les Irwig, and Diana Hartel in 1997. The 1996 study was conducted on staff working in 10 public methadone maintenance units in the Sydney, Australia metropolitan area. The 1997 study was adapted to the United States and conducted in 14 New York City methadone
clinics. The questionnaire used in 1997 contained a 100-item scale. In 2002 the instrument was revised to a 52-item scale and used in a questionnaire. The authors provided permission to use their instrument in this study. The instrument was used to investigate the possibility that the 6 professional groups differed on two basic attitudes: abstinence-orientation and disapproval of drug use; and, knowledge about methadone maintenance.

Participation in the study was entirely voluntary and the information provided was kept anonymous. Directions were provided at the top of the page. Randomly selected members from each group were mailed the 52-item questionnaire entitled “Attitude towards Addiction and Methadone Questionnaire” (via U.S. Postal Service).

A copy of the instrument along with the demographic sheet, cover letter, and return post card was mailed to randomly selected licensed or certified professionals in the State of Ohio. There were two sections to the Questionnaire: personal details and beliefs and opinions on drugs, drug addiction, and addiction treatment. The personal details cover page included: 1) gender, 2) age range, 3) marital status, 4) ethnicity, 5) educational level 6) certification/license, and 7) employment experiences of the respondents.

**Identification of Population**

Caplehorn et al. (1996; 1997) administered the questionnaire to staff working in methadone clinics. The sampled population of this study included members of the State of Ohio Counselor and Social Worker Board, Ohio Department of Alcohol and Drug Addiction Services, and State Board of Psychology of Ohio. Individual members
represented Professional Counselors (PC), Professional Clinical Counselors (PCC), Licensed Social Workers (LSW), and Licensed Independent Social Workers (LISW), Certified Chemical Dependency Counselors, and licensed Psychologists.

These groups of professionals were selected as subjects for this study for the following reasons: (1) the sample represents self-identified professionals who possess the necessary credentials to work with individuals with drug abuse or drug dependency issues, (2) accessibility to subjects via postal mail was facilitated by the credentialing and licensing board providing the names and mailing addresses of registered professionals, and (3) the sample drew from the widest range of professionals identified to provide social and mental health services to the substance abuse population in the state of Ohio would be representative of the beliefs and attitudes of professionals in this region.

Subjects of this study consisted of a simple random sample of 100 PCs, 100 PCCs, 100 CCDCs, 100 LSWs, 100 LISWs, and 100 licensed psychologists provided to the researcher at her request. The sample size was selected to ensure a representation from each of the professional groups. All licensed and certified persons in Ohio were eligible for inclusion in this study.

It was decided to use members of the ODADAS for this study for these reasons: (1) the population is comprised of individuals in the field of chemical dependency counseling, (2) the sample represents the largest group of individuals in the area of chemical dependency counseling in the state of Ohio, and (3) ODADAS breaks the population into easily classifiable demographics, making it a prime sample for analysis.
The sampled population will also include Licensed Social Workers (LSW) and Licensed Independent Social Workers (LISW). The role of social work only had a minor role in the 1970s in addiction services (Weiner & Schut, 1975). The importance of social factors in the successful treatment of addiction has been recognized in more recent years. Chapter 4757 of the Ohio Revised Code established licensure for social workers in October of 1984. The Ohio Revised Code created a Counselor and Social Worker Board to regulate social workers in their practice of work.

*Design of Survey Instrument*

The original survey instrument was first developed and validated in Sydney, Australia by combining original items with items from existing questionnaires (Gold et al., 1988; Sutker et al., 1974;). The instrument was derived from a survey of 90 staff working in 10 public methadone clinics (Caplehorn et al., 1996). Two sets of original questions were developed to measure two dimensions of support for abstinence-oriented maintenance. The two domains measured were commitment to the goal of abstinence and support for disciplinary sanctions to enforce program compliance.

In modifying the Australian instrument for use in the United States, Caplehorn et al. (1997) used confirmatory factor analysis again to refine and test the two scales. The goodness-of-fit of the final model was measured using the maximum likelihood function and again taken as a test of the scales construct validity (Bollen, 1989). Cronbach’s $a$ (1951) was used to maximize and measure the scales’ internal reliability. The intra-class correlation coefficient was used to measure the test-retest reliability (Bartko, 1966).
The modified instrument had 100 attitudinal and knowledge questions in the form of 5-point Likert rating scales (Caplehorn et al., 1996). Subsequent work by these authors led to the development of a 52-item questionnaire. The survey instrument consisted of 18 Abstinence-Oriented (AO) questions, 6 Disapproval of Drug Use (DDU) questions, and 13 Knowledge of methadone maintenance treatment questions. The remaining 15 questions comprised two additional scales. The two additional scales were developed to measure attitude towards methadone as a treatment modality and attitude towards illicit drug use in general.

Understanding the Commitment to Abstinence-Orientation Scale (AO) and Disapproval of Illicit Drug Use Scale (DDU)

The hypothesis that a person’s support for abstinence-oriented policies is based on a punitive attitude to illicit drug use was developed and tested by an Australian team (Caplehorn, Dalton, Haldar, Nisbet, & Petrenas, 1996a). The researchers acquired an interest in developing a scale to measure staff members’ attitudes based on their perceptions that many maintenance staff members were opposed to the fundamental principle of methadone treatment. The fundamental principle of methadone treatment is to maintain addicted persons on an oral substitute for heroin (Dole, 1988; Zweben & Payte, 1990).

Caplehorn et al. (1996) developed the attitudinal scales using a series of confirmatory factor analyses to compute ordinary least squares to assess goodness-of-fit (Loehlin, 1987). The goodness-of-fit was measured using the maximum likelihood function. The goodness-of-fit was taken as a test of the scales construct validity (Bollen,
Confirmatory factor analyses was used. The internal reliability was assessed using Cronbach’s $a$ (Cronbach, 1951).

*Understanding the Knowledge of Benefits of Methadone Scale Scoring*

Both the original and later developed instruments included a test of knowledge of the benefits and risks of methadone maintenance treatment (Caplehorn et al., 1996b; Caplehorn et al., 1997). The knowledge questions were answered on a modified Likert Scale. The scoring of the knowledge items was established by subtracting one point for wrong answers and subtracting one point for incorrect answers, and no points for uncertain or skipped questions.

*Description of Instrument Used*

The first page of the survey instrument included a Personal Details sheet. The following pages consisted of 52 attitudinal and knowledge questions. The survey instrument consisted of 18 AO questions, 6 DDU questions, and 13 Knowledge on methadone questions. The remaining 15 questions which made up two additional scales were not used because the two scales had reliabilities below .60.

The AO questions and DDU questions were scored using a 5-point Likert rating scales: 1 = strongly disagree; 2 = disagree; 3 = uncertain; 4 = agree; 5 = strongly agree. The overall score for each person on the AO scale and DDU scale was the average of their answer to the questions that made up each scale. The knowledge questions were scored +1 for correct responses; 0 for an uncertain or missed response, and -1 for a wrong response. A person’s knowledge score was the average of their score on the 13 knowledge questions.
For this study, the items were reviewed for appropriateness to use with professionals not working in substance abuse or methadone clinics. The reliability of 3 of the scales on this instrument was checked before analyzing group differences. The overall score for each person on the AO scale and DDU scale was the average of their answer to the questions that made up each scale. The knowledge score of each person was the average of their score on the 13 knowledge questions.

*Analysis of Group Differences*

Group differences were investigated by the use of a multiple analysis design with 3 dependent variables and one independent variable. The 3 dependent variables were the average score on the AO questions, DDU questions, and knowledge of methadone questions for each professional. The independent variable was the professional group membership. LSD post hoc tests were run to test for differences among the professional groups.

Three one-way analysis of variance tests were used to analyze the results of the questionnaires. Intergroup and intragroup differences were compared for the three addict conditions. The reliability of the three scales on this instrument was checked before analyzing group differences.

*Likert Scale*

The Likert scale uses 5 points that are separated by equal distances. The scale allows the subjects to record the extent of their agreement or disagreement to a particular statement of an attitude or belief.
Pilot Study

The instrument was pilot tested with 21 professionals working in the area of methadone maintenance. The professionals ranged in work experiences including counselors, nurses, physicians, social workers, and psychologists. Only 12 of the respondents worked with the substance abuse population. All of the professionals attempted to complete the 52-item survey; however, five questionnaires had a missing page. Two questionnaires were returned with some missing data.

The internal reliability for the Abstinence Orientation Scale, based on fourteen cases, yielded a Cronbach’s coefficient alpha of .59. Internal reliability for the Disapproval of Drug Use Scale yielded a Cronbach’s coefficient alpha of .72. The internal reliability of the Knowledge Scale yielded a Cronbach’s coefficient alpha of .57. Although fourteen subjects is a small number, the result of testing suggests the scales have sufficient reliability.

Data Collection Procedure

A request was made to the Institutional Review Board for Review of Research Involving Human Subjects (IRB) of Ohio University for a declaration of exempt status for the proposed study (Attached). After a determination of exempt status from the IRB review the following procedure began:

A response rate of at least 50 percent was the aim of this study. The response rate from a survey of general practitioners on their attitudes towards drug addicts and addiction (Abed & Neira-Munoz, 1990) was 87 percent. The response rate from a survey of general practitioners on their attitudes towards managing drug and alcohol-dependent
patients (Abouyanni et al., 2000) was 76 percent. The response rate from a survey of staff working in a mental health clinic on their attitudes and beliefs on methadone (Caplehorn et al., 1996) was 95 percent. In a survey given to staff measuring attitudes and beliefs on methadone (Caplehorn et al., 1997), 201 staff members responded. All of the above studies were conducted on staff working at an identified facility with the researcher present. In the present study the questionnaire was mailed to professionals throughout Ohio; therefore, a much lower response rate was projected.

The subjects for this study comprised a random sample of approximately 600 licensed and/or certified professionals in one of the following areas: counseling, chemical dependency rehabilitation, social work, or psychology. Professionals were surveyed via postal mail using one instrument: “Attitude towards Addiction and Methadone Questionnaire.” A copy of the instrument, along with the personal details sheet, and cover letter were mailed to 100 professionals in each of the following six professional groups: 1) certified chemical dependency counselors, 2) professional counselors, 3) professional clinical counselors, 4) licensed social workers, 5) licensed independent social workers, and 6) psychologists.

The initial mailing included a self addressed, stamped envelope to return the completed instrument and a stamped postcard to verify participation in the study. The cover letter described the present study and advised participants that their individual responses will be kept anonymous. They were informed that returning the postcard to the researcher would signify their consent to participate in the study. Returned postcards also served as an indication of the participant’s request to receive a summary of the research
findings. Instructions to the participants advised them to mail the postcard under separate cover, at the same time the completed instrument and personal details sheet were mailed.

Three additional mailings were administered. The first reminder was mailed three weeks after the initial mailing. The second mailing was mailed two weeks after the first reminder. The third mailing was mailed to non-respondents two weeks later. It was the same packet used in the initial mailing with a revised cover letter. The final mailing was a postcard reminder to non-respondents.
Chapter 4

Results

Results of the study are presented in this chapter. First, the professional and personal characteristics of the respondents are described. A one-way analysis of variance was used to test differences in responses to abstinence-oriented policies (AO Scale); disapproval of drug use (DDU scale); and knowledge (Knowledge Scale) of methadone maintenance among the six professional groups (Stevens, 1999). The three scales were the dependent variables and the group membership was the independent variable. The AO and DDU scales were a series of 5-point Likert rating scales. The Knowledge scale was scored by assigning 1 point for correct responses and -1 point for incorrect responses. Zero was assigned to uncertain or missed responses. Tables will be provided to show the means and standard deviations for each group on each scale.

The reliability of all three scales was calculated using Cronbach’s Alpha. The reliability of the 18 items that made up the AO scale was .81; the reliability of the 6 items which made up the DDU scale was .73; and, the reliability of the 13 items that made up the Knowledge scale was .60. As an experiment the 4 worst items were deleted. The Cronbach Alpha was .61 so the original scale was retained.

Professionals’ scores on the three scales were significantly correlated with each other. The correlation between the AO and DDU scale was .41, p < .001. The correlation between the Knowledge scale and the scores of the other two scales were negative. AO and knowledge was a - .48, p < .001. The correlation between knowledge and DDU scale was - .27, p < .001. The moderate negative correlation indicated that the
amount of correct knowledge was associated with a weaker attitude toward abstinence-oriented policies. The weak negative correlation between knowledge and the DDU scale indicated that correct knowledge was to a limited extent associated with a less adverse attitude towards drug use. With more knowledge professionals tended to be less punitive towards drug use.

The scores from the three scales were checked for normality using a T-test. Both the AO scale and DDU scale were approximately normally distributed. Neither skewness nor kurtosis were statistically significant. The Knowledge scale was significantly positively skewed, $t = 4.63, p < .01$. The homogeneity of variance assumption was tested by Levene’s method. There were no significant differences in variance among the 6 professional groups on the three scales. As will be reported later, both the AO and Knowledge scales did not show differences among groups.

Response to the Study

The first mailing consisted of 600 questionnaires mailed to 100 randomly selected licensed professionals in each of the six groups. The seven undeliverable questionnaires were replaced with randomly selected professionals from the same group. The six groups in this study are: Professional Counselors (PC), Professional Clinical Counselors (PCC), Certified Chemical Dependency Counselors (CCDC), Licensed Social Workers (LSW), Licensed Independent Social Workers (LISW), and Psychologists. From the first mailing, 169 professionals returned completed questionnaires; 2 spouses returned notice of the addressee’s death; 5 professionals returned questionnaires indicating their retirement; and 15 professionals returned the questionnaires with notes explaining lack of
training and work experience in the area of addiction or methadone treatment. Only 2 respondents declined to respond due to their belief that the use of methadone was equivalent to substituting one drug for another drug.

The first reminder resulted in 16 more professionals returning completed questionnaires. The second reminder card resulted in 4 professionals returning completed questionnaires. Two professionals requested another questionnaire. The three mailings together resulted in 213 responses and a total of 189 professionals returning completed questionnaires yielding a response rate of (31%). Among usable questionnaires, a few questions were left blank. This study resulted in 92 professionals (48%) requesting a summary of the results.

Summary of Respondents

A total of 30 CCDCs completed a questionnaire. Three were also licensed social workers and one was a professional counselor. Twenty-five respondents were PCs, 36 were PCCs, 39 were LSWs, 29 were LISWs, and 29 were psychologists.

Table 1 shows the mean age of the respondents in each of the six professional groups. The mean age of all respondents in this study was 52.4 years. There was a significant difference among the mean age of the professional groups, \( F(5, 164) = 9.61, p < .001 \). The largest difference in age was found between PCs and LSWs with PCs being the oldest group with a mean age of 60 years and LSWs being the youngest group with a mean age of 46 years. The mean age of PCCs was 57 years, LISWs 52 years, and psychologists 51 years. Eighteen respondents (9.6%) did not report their age.
Table 1

Age of Professionals

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Age</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>50.0</td>
<td>27</td>
</tr>
<tr>
<td>PC</td>
<td>59.8</td>
<td>24</td>
</tr>
<tr>
<td>PCC</td>
<td>57.0</td>
<td>32</td>
</tr>
<tr>
<td>LSW</td>
<td>46.1</td>
<td>35</td>
</tr>
<tr>
<td>LISW</td>
<td>52.5</td>
<td>26</td>
</tr>
<tr>
<td>PSYC</td>
<td>51.0</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td>52.4</td>
<td>170</td>
</tr>
</tbody>
</table>

As shown in Table 2, females constituted 66 percent of the combined professional groups. A chi-square test did not reveal significant group difference in gender among the professional group. Psychologists, with 51.7 percent had the smallest percentage of females. LSWs, with 82.1 percent had the largest percentage of females.
Table 2

Gender of Respondents

<table>
<thead>
<tr>
<th>Group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>CDCC</td>
<td>11</td>
<td>36.7</td>
<td>19</td>
</tr>
<tr>
<td>PC</td>
<td>6</td>
<td>24.0</td>
<td>19</td>
</tr>
<tr>
<td>PCC</td>
<td>16</td>
<td>44.4</td>
<td>20</td>
</tr>
<tr>
<td>LSW</td>
<td>7</td>
<td>17.9</td>
<td>32</td>
</tr>
<tr>
<td>LISW</td>
<td>10</td>
<td>34.5</td>
<td>19</td>
</tr>
<tr>
<td>PSYC</td>
<td>14</td>
<td>48.3</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>64</td>
<td>34.0</td>
<td>124</td>
</tr>
</tbody>
</table>

Table 3 shows the marital status of the professional groups. The percent of professionals who were married or partnered was 71.4%. The remaining professionals were approximately equally divided between divorced and single.
Table 3

Marital Status

<table>
<thead>
<tr>
<th>Group</th>
<th>Married/</th>
<th>Separated/</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Partnered</td>
<td>Divorced</td>
<td>Single</td>
<td>Widowed</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>CCDC</td>
<td>72.4</td>
<td>17.2</td>
<td>10.3</td>
<td>0</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td>64.0</td>
<td>16.0</td>
<td>16.0</td>
<td>4.0</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>PCC</td>
<td>85.7</td>
<td>5.7</td>
<td>5.7</td>
<td>5.7</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>LSW</td>
<td>61.5</td>
<td>15.4</td>
<td>20.5</td>
<td>2.6</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>LISW</td>
<td>67.9</td>
<td>14.3</td>
<td>10.7</td>
<td>7.1</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>PSYC</td>
<td>75.9</td>
<td>13.8</td>
<td>10.3</td>
<td>0</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71.4</td>
<td>13.5</td>
<td>12.4</td>
<td>2.7</td>
<td>185</td>
<td></td>
</tr>
</tbody>
</table>

The educational level is shown in Table 4. The level of education is divided into five groups: high school; bachelor degree; Masters; Masters+; and PhD/MD/JD/EdD/PsyD. CCDCs had the lowest level of education. Psychologists had the highest level of education.
Table 4

Educational Level

<table>
<thead>
<tr>
<th>Group</th>
<th>High</th>
<th>School</th>
<th>Bachelors</th>
<th>Masters</th>
<th>Masters +</th>
<th>PhD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>7</td>
<td>23.3</td>
<td>15  50.0</td>
<td>7  23.3</td>
<td>1  3.3</td>
<td>0  0</td>
<td>30</td>
</tr>
<tr>
<td>PC</td>
<td>0</td>
<td>0</td>
<td>1   4.0</td>
<td>14  56.0</td>
<td>6  24.0</td>
<td>4   16.0</td>
<td>25</td>
</tr>
<tr>
<td>PCC</td>
<td>0</td>
<td>0</td>
<td>0   0</td>
<td>16  44.4</td>
<td>7  19.4</td>
<td>13  36.1</td>
<td>36</td>
</tr>
<tr>
<td>LSW</td>
<td>0</td>
<td>0</td>
<td>24  63.2</td>
<td>11  28.9</td>
<td>2  5.3</td>
<td>1   2.6</td>
<td>38</td>
</tr>
<tr>
<td>LISW</td>
<td>0</td>
<td>0</td>
<td>0   0</td>
<td>24  82.8</td>
<td>2  6.9</td>
<td>3   10.3</td>
<td>29</td>
</tr>
<tr>
<td>PSYC</td>
<td>0</td>
<td>0</td>
<td>0   0</td>
<td>0   0</td>
<td>1  3.4</td>
<td>28  96.6</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>3.7</td>
<td>40  21.4</td>
<td>72  38.5</td>
<td>19 10.2</td>
<td>49  26.2</td>
<td>187</td>
</tr>
</tbody>
</table>

The ethnicity of the professional groups is shown in Table 5. Ninety percent of the respondents were Caucasian and ten percent non-white. The percentage of Caucasians in each of the six groups was not statistically different. CCDCs had the highest percentage of non-whites (20%) and psychologists the lowest (7%).
Table 5

Ethnicity of Respondents

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Caucasian</th>
<th></th>
<th>Caucasian</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>CCDC</td>
<td>6</td>
<td>20.0</td>
<td>24</td>
<td>80.0</td>
<td>30</td>
</tr>
<tr>
<td>PC</td>
<td>4</td>
<td>16.0</td>
<td>21</td>
<td>84.0</td>
<td>25</td>
</tr>
<tr>
<td>PCC</td>
<td>2</td>
<td>5.7</td>
<td>33</td>
<td>94.3</td>
<td>35</td>
</tr>
<tr>
<td>LSW</td>
<td>3</td>
<td>7.7</td>
<td>36</td>
<td>92.3</td>
<td>39</td>
</tr>
<tr>
<td>LISW</td>
<td>2</td>
<td>6.9</td>
<td>27</td>
<td>93.1</td>
<td>29</td>
</tr>
<tr>
<td>PSYC</td>
<td>2</td>
<td>6.9</td>
<td>27</td>
<td>93.1</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>10.2</td>
<td>168</td>
<td>89.8</td>
<td>187</td>
</tr>
</tbody>
</table>

On the questionnaire there were ten areas of employment experiences listed. Four of the areas were specifically related to drug use treatment. The other six areas were outside of drug use treatment. Table 6 shows the number of professionals with employment experiences in the areas of substance abuse treatment, drug-free treatment, residential treatment, methadone treatment, private practice, and community agencies. Persons suffering from drug abuse can also be treated in private practice; therefore, private practice employment will be included in Table 6.
Table 6

Number of Respondents with Employment Experiences

<table>
<thead>
<tr>
<th>Substance</th>
<th>Abuse</th>
<th>Drug-Free</th>
<th>Residential</th>
<th>Methadone</th>
<th>Private</th>
<th>Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>18</td>
<td>8</td>
<td>12</td>
<td>1</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>PC</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>PCC</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>22</td>
<td>17</td>
</tr>
<tr>
<td>LSW</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>LISW</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>PSYC</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>14</td>
<td>34</td>
<td>5</td>
<td>76</td>
<td>100</td>
</tr>
</tbody>
</table>

The numbers of professionals with work experience in each of the identified areas of employment differed between groups. CCDCs had the largest number of professionals with work experience in substance abuse, drug-free, and residential treatment. Only 5 of the 188 respondents had work experience in methadone treatment. Each professional group, with the exception of PCs, had one professional with work experience in methadone treatment.

There were only 2 professionals from each group of psychologists and LISWs with work experience in substance abuse. Work experience in drug-free treatment varied among professional groups. No PCs had prior work experience in drug-free treatment.
Only one LSW had work experience in drug-free treatment. CCDCs, LISWs, LSWs, and psychologists had similar numbers with work experience in community agencies ranging from 17 to 25 professionals. LISWs, PCCs, and psychologists had similar numbers of professionals with work experience in private practice ranging from 14 to 22 professionals.

Results

Hypothesis 1.

H1: There will be significant differences among Professional Counselors (PC), Professional Clinical Counselors (PCC), Certified Chemical Dependency Counselors (CCDC), Licensed Social Workers (LSW), Licensed Independent Social Workers (LISW), and Psychologists on their commitment to abstinence-oriented policies.

H0: There will not be significant differences in attitudes among PCs, PCCs, CCDCs, LSWs, LISWs, and Psychologists on their commitment to abstinence-oriented policies.

There were 18 questions on the questionnaire that comprised the Abstinence-Oriented (AO) scale. There were not significant differences among groups (Table 7), F(5, 181) = 2.13, p = .063. No group mean differed from the overall mean by more than one-half a standard deviation. The average response was close to “uncertain” which is coded as 3 on the 5-point Likert scale. LISWs and psychologists had the means closest to 3, 3.07 and 3.05 respectively. CCDCs had the mean furthest from 3, with an average score of 3.32. One reason the average response was close to 3 is due to most professionals checking the middle response labeled “uncertain”.

Table 7

Group Means on Abstinence-Oriented (AO) Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>30</td>
<td>3.32</td>
<td>.58</td>
</tr>
<tr>
<td>PC</td>
<td>25</td>
<td>3.26</td>
<td>.35</td>
</tr>
<tr>
<td>PCC</td>
<td>36</td>
<td>3.20</td>
<td>.38</td>
</tr>
<tr>
<td>LSW</td>
<td>39</td>
<td>3.26</td>
<td>.35</td>
</tr>
<tr>
<td>LISW</td>
<td>29</td>
<td>3.07</td>
<td>.37</td>
</tr>
<tr>
<td>PSYC</td>
<td>29</td>
<td>3.05</td>
<td>.37</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>3.20</td>
<td>.41</td>
</tr>
</tbody>
</table>

Ad Hoc Analysis of Abstinence Orientation Scores.

While this study did not reveal significant differences among the professional groups on the abstinence-oriented scale, some general group differences were found by looking at responses to individual items on the questionnaire. Of the 18 AO items, responses to 9 of the items showed significant group differences, by Chi-square tests. The differences in answers by the six groups seemed to reflect two factors: 1) different professional views on addiction and treatment; and 2) frequency of uncertain responses to an item. Each of the items will be discussed in the following paragraphs.

1. Many methadone patients would be better off on naltrexone.
The two professional groups with the largest percentage of uncertain responses were psychologists (96.6%) and PCs (92.0%). These two groups differed significantly in responses for those responding. All psychologists responding (3.4%) disagreed with the item. All PCs responding (8.0%) disagreed with the item. CCDCs had the lowest percentage of uncertain responses (63.3%). Responses differed within the group with 20.0% of CCDCs disagreeing with the item and 16.6% agreeing with the item. 84.2% of LSWs responded uncertain.

2. Maintenance patients who continue to use heroin should have their dose of methadone reduced.

CCDCs had the lowest percentage of uncertain responses (10%). There was significant disagreement within the group with 46.7% agreeing with the item and 10% disagreeing. PCCs and psychologists showed the highest percentage of uncertain responses with PCs showing 52% and psychologists showing 51.7%.

3. No limits should be set on the duration of methadone maintenance.

CCDCs showed the lowest percentage of uncertain responses (3.3%). 63.3% were in disagreement with the item and 33.3% were in agreement. Both PCCs and psychologists showed the highest percentage of uncertain responses with 44.4% of PCCs responding uncertain and 44.8% of psychologists responding uncertain.

4. Methadone should be gradually withdrawn once a maintenance patient has ceased using heroin.

5. Buprenorphine is a better maintenance drug than methadone. All PCs responded uncertain. Only 66.7% CCDCs responded uncertain. 10% disagreed with the
item and 23.3% agreed with the item. The other professional groups were more equally divided on the item.

6. Methadone patients who ignore repeated warnings to stop using heroin should be gradually withdrawn off methadone.

Only 3.3% of CCDCs were uncertain. 76.7% agreed with the item and 20.3% disagreed. Psychologists had the highest percent of uncertain responses 55.2%. Those who responded showed significant disagreement, with 34.5% agreeing with the item and 10.3% in disagreement. All other groups showed significant within group disagreement. 51.5% of PCCs agreed with the item and 8.6% in disagreement. 52.0% of PCs agreed with the item and 12.0% disagreed. 37.9% of LISWs agreed with the item and 13.8% disagreed. 50.0% of LSWs agreed with item and 7.9% disagreed. About a third of the responses of CCDCs and LSWs were in strong agreement.

7. Methadone patients who continue to abuse non-opioid drugs (e.g. benzodiazepines) should have their dose of methadone reduced.

Only 10.0% of CCDCs responded uncertain. 60.0% agreed with the item and 30.0% disagreed. PCs showed 36.0% in agreement with the item and 20.0% in disagreement. PCCs showed 27.8% in agreement with the item and 5.6% in disagreement. 27.6% of psychologists responded in agreement with the item and 13.8% in disagreement. LISWs had 31.0% in agreement with the item and 3.4% in disagreement. LSWs had 47.4% in agreement with the item and 5.2% in disagreement. CCDCs and LSWs had responses in strong agreement and strong disagreement. This
item had a low negative correlation with age: $r = -.16$, $p = 0.043$. This means that older professionals tended to disagree with the item.

8. Methadone patients should be encouraged to remain in maintenance for at least three to four years.

CCDCs showed the smallest percent of uncertain responses (30.0%). There were within group differences with 40.0% in disagreement with the item and 30.0% in agreement. LISWs and LSWs showed notable within group differences. LISWs showed 31.0% to be in agreement with the item and 6.9% in disagreement. LSWs responded 34.1% in agreement with the item and 18.4% in disagreement. PCs, PCCs, and psychologists showed within group differences that were more equally distributed. PCs showed 24.0% in disagreement with the item and 20.0% in agreement; PCCs showed 16.7% in agreement with the item and 19.5% in disagreement; and psychologists showed 6.9% in disagreement with the item and 10.3% in agreement.

9. Young addicts should have failed buprenorphine maintenance before being offered methadone.

CCDCs had the smallest percent of uncertain responses (56.7%). There was significant within group differences with 33.3% in agreement with the item and 10.0% in disagreement. CCDCs were the only group of professionals that had responses in strong agreement and strong disagreement with this item. Psychologists had the largest percentage of uncertain responses (93.1%). Those who responded were in disagreement with this item.
A possible reason psychologists responded with uncertainty is their advocacy has been for using buprenorphine in the treatment of opiate addiction, since it can be prescribed by doctors, without comparing its effectiveness with methadone (Elliott, 2002, 2003). LISWs and LSWs had more professionals in agreement with this item than in disagreement. PCs were more evenly divided.

_Hypothesis 2._

H1: There will be significant differences in beliefs among PCs, PCCs, CCDCs, LSWs, LISWs, and psychologists towards the disapproval of drug use as measured by the Attitude towards Addiction and Methadone Questionnaire.

H0: There will not be significant differences in beliefs among PCs, PCCs, CCDCs, LSWs, LISWs, and psychologists towards the disapproval of drug use as measured by the Attitude towards Addiction and Methadone Questionnaire.

Six questions comprised the DDU scale (Table 8). There were significant group differences among the professional groups in their mean responses to the DDU scale, F (5, 182) = 7.07, p < .001. A post hoc LSD test found significant differences between CCDCs and PCCs with PCCs showing the larger mean, p < .001. CCDCs and LISWs differed with CCDCs showing the larger mean, p = .011. PCs and PCCs differed with PCs showing the larger mean, p < .001. PCs and LSWs differed with LSWs showing the larger mean, p = .042. PCs and LISWs differed with LISWs showing the larger mean, p = .001. PCCs and psychologists differed with PCCs showing the larger mean, p < .001 (Table 8).
Table 8

Group Means on Disapproval of Drug Use Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCDC</td>
<td>30</td>
<td>2.45</td>
<td>.71</td>
</tr>
<tr>
<td>PC</td>
<td>29</td>
<td>2.96</td>
<td>.64</td>
</tr>
<tr>
<td>PCC</td>
<td>39</td>
<td>2.70</td>
<td>.66</td>
</tr>
<tr>
<td>LSW</td>
<td>36</td>
<td>3.14</td>
<td>.74</td>
</tr>
<tr>
<td>LISW</td>
<td>25</td>
<td>2.36</td>
<td>.61</td>
</tr>
<tr>
<td>PSYC</td>
<td>29</td>
<td>2.49</td>
<td>.62</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>2.70</td>
<td>.72</td>
</tr>
</tbody>
</table>

The following six questions comprised the Disapproval of Drug Use Scale:

1. Modern society is too tolerant toward drug addicts.
2. Persons convicted of the sale of illicit drugs should not be eligible for parole.
3. Drug addiction is a vice.
4. Adults convicted of selling heroin or cocaine to minors should be jailed for life.
5. People who become addicted to heroin only have themselves to blame.
6. Drug addiction is a menace to society.
Hypothesis 3.

H1: There will be significant differences in knowledge of methadone, buprenorphine, and naltrexone among PCs, PCCs, CCDCs, LSWs, LISWs, and psychologists as measured by the Attitude towards Addiction and Methadone Questionnaire.

H0: There will not be significant differences in knowledge of methadone, buprenorphine, and naltrexone among PCs, PCCs, CCDCs, LSWs, LISWs, and psychologists as measured by the Attitude towards Addiction and Methadone Questionnaire.

Thirteen questions comprised the Knowledge scale. Responses on these items did not show a statistical difference in the mean knowledge score among the professional groups (Table 9). The average mean score of each of the professional groups was close to 0, suggesting no knowledge or being uncertain. An analysis of the Knowledge scores resulted in an F of 1.66 (5, 179), p > .05.
Table 9

Group Means on Knowledge Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Original scoring</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCDC</td>
<td>30</td>
<td>.18</td>
<td>.36</td>
</tr>
<tr>
<td>PC</td>
<td>25</td>
<td>.16</td>
<td>.26</td>
</tr>
<tr>
<td>PCC</td>
<td>36</td>
<td>.12</td>
<td>.23</td>
</tr>
<tr>
<td>LSW</td>
<td>38</td>
<td>.10</td>
<td>.32</td>
</tr>
<tr>
<td>LISW</td>
<td>29</td>
<td>.27</td>
<td>.24</td>
</tr>
<tr>
<td>PSYC</td>
<td>29</td>
<td>.24</td>
<td>.26</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>.17</td>
<td>.29</td>
</tr>
<tr>
<td><strong>Excluding uncertain responses and counting wrong answers as zero</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CCDC</td>
<td>30</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td>25</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>PCC</td>
<td>36</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>LSW</td>
<td>38</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>LISW</td>
<td>29</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>PSYC</td>
<td>29</td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>.70</td>
<td></td>
</tr>
</tbody>
</table>
Ad Hoc Analysis of Knowledge Scores.

The initial analysis used by Caplehorn et al. (1996b) of giving a score of zero for being uncertain and a score of negative one for incorrect responses led to non-significant differences in the average scores among professional groups. The use of zero for being uncertain and subtracting one point for being incorrect was an unusual way to score a test of knowledge. Table 9 also shows a more common way to score a test of knowledge. Uncertain responses were not counted and wrong answers were scored as zero. When the latter scoring is used, there is a significant difference among professional groups in average scores, $F = 3.92$ (5,154), $p = .002$.

Table 10 shows the frequency of answers to the knowledge questions and whether each item is true or false. PCCs and psychologists mean scores differed with psychologists having an average score of .39 showing them answering 5 out of 13 of the Knowledge questions.
Table 10

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance reduces addicts’ risk of death.</td>
<td>CCDC</td>
<td>19</td>
<td>5</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>11</td>
<td>12</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>20</td>
<td>10</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>17</td>
<td>16</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>24</td>
<td>5</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>22</td>
<td>5</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>113</td>
<td>53</td>
<td>22</td>
<td>188</td>
</tr>
</tbody>
</table>

True (Kreek, 1983).

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone is more dangerous to the unborn child.</td>
<td>CCDC</td>
<td>11</td>
<td>15</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>8</td>
<td>15</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>5</td>
<td>28</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>7</td>
<td>27</td>
<td>5</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>5</td>
<td>22</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>5</td>
<td>24</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41</td>
<td>131</td>
<td>16</td>
<td>188</td>
</tr>
</tbody>
</table>

False (Braude, 1983; Williams, 1985).
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance can cause chronic constipation.</td>
<td>CCDC</td>
<td>12</td>
<td>17</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>5</td>
<td>20</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>2</td>
<td>34</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>9</td>
<td>29</td>
<td>1</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>7</td>
<td>22</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>6</td>
<td>22</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>41</td>
<td>144</td>
<td>3</td>
<td>188</td>
</tr>
</tbody>
</table>

True (Kreek, 1983).

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable doses of methadone significantly interfere with the ability to drive a car and operate machinery.</td>
<td>CCDC</td>
<td>11</td>
<td>7</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>6</td>
<td>17</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>6</td>
<td>28</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>8</td>
<td>19</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>8</td>
<td>20</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>10</td>
<td>17</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>49</td>
<td>108</td>
<td>31</td>
<td>188</td>
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</tbody>
</table>

False (Chesher, Lemon, Gomel, & Murphy, 1989; Maddux, Williams, & Ziegler, 1977).
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance can cause disturbance of sexual function,</td>
<td>CCDC</td>
<td>11</td>
<td>16</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>(e.g. impotence, amenorrhoea)</td>
<td>PC</td>
<td>5</td>
<td>19</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>5</td>
<td>30</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
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<td>29</td>
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<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>6</td>
<td>22</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>5</td>
<td>20</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>41</td>
<td>136</td>
<td>11</td>
<td>188</td>
</tr>
<tr>
<td>True (Kreek, 1983).</td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance reduces addicts’ risk of fatal heroin overdose.</td>
<td>CCDC</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>7</td>
<td>17</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>8</td>
<td>18</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>11</td>
<td>22</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>11</td>
<td>16</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>11</td>
<td>16</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>62</td>
<td>100</td>
<td>25</td>
<td>188</td>
</tr>
<tr>
<td>True (Caplehorn et al., 1995)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance can cause liver damage.</td>
<td>CCDC</td>
<td>3</td>
<td>14</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>1</td>
<td>19</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>1</td>
<td>31</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>2</td>
<td>25</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>3</td>
<td>23</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
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<td>21</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
<td>133</td>
<td>43</td>
<td>188</td>
</tr>
<tr>
<td>False (Kreek, 1983).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methadone maintenance increases the severity of pre-existing depression.</td>
<td>CCDC</td>
<td>8</td>
<td>15</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>5</td>
<td>15</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>7</td>
<td>23</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>11</td>
<td>26</td>
<td>8</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>5</td>
<td>23</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>7</td>
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<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37</td>
<td>122</td>
<td>29</td>
<td>188</td>
</tr>
<tr>
<td>False (Rounsaville et al., 1983).</td>
<td></td>
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</tr>
</tbody>
</table>
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance reduces addicts’ criminal activities.</td>
<td>CCDC</td>
<td>17</td>
<td>7</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>9</td>
<td>14</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>14</td>
<td>14</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>17</td>
<td>14</td>
<td>8</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>12</td>
<td>13</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>14</td>
<td>12</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>74</td>
<td>31</td>
<td>188</td>
<td></td>
</tr>
</tbody>
</table>

True (Gearing & Schweitzer, 1974; Ball & Ross, 1991).

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance reduces addicts’ heroin use.</td>
<td>CCDC</td>
<td>21</td>
<td>6</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>11</td>
<td>11</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>18</td>
<td>17</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>20</td>
<td>15</td>
<td>4</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>20</td>
<td>8</td>
<td>1</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>17</td>
<td>12</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>69</td>
<td>12</td>
<td>188</td>
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</tbody>
</table>

True (Gearing & Schweitzer, 1974; Ball & Ross, 1991).
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance can cause kidney damage.</td>
<td>CCDC</td>
<td>2</td>
<td>20</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>2</td>
<td>21</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>3</td>
<td>30</td>
<td>3</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>3</td>
<td>29</td>
<td>7</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>2</td>
<td>25</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>0</td>
<td>25</td>
<td>4</td>
<td>29</td>
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<tr>
<td></td>
<td>Total</td>
<td>12</td>
<td>150</td>
<td>26</td>
<td>188</td>
</tr>
</tbody>
</table>

False (Kreek, 1983).

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Withdrawing from methadone “cold turkey” is definitely worse than similarly withdrawing from methadone.</td>
<td>CCDC</td>
<td>10</td>
<td>11</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>2</td>
<td>19</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>3</td>
<td>28</td>
<td>5</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>6</td>
<td>27</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>6</td>
<td>15</td>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>3</td>
<td>22</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30</td>
<td>122</td>
<td>36</td>
<td>188</td>
</tr>
</tbody>
</table>

False (Martin et al., 1973).
Table 10 (cont’d)

Frequency of Answers to Knowledge Questions (N = 188)

<table>
<thead>
<tr>
<th>Question</th>
<th>Group</th>
<th>Correct</th>
<th>Uncertain</th>
<th>Incorrect</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methadone maintenance reduces (“blocks”) the euphoric effects of injected heroin.</td>
<td>CCDC</td>
<td>11</td>
<td>13</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>4</td>
<td>20</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>PCC</td>
<td>5</td>
<td>30</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>LSW</td>
<td>10</td>
<td>27</td>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>LISW</td>
<td>6</td>
<td>21</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>PSYC</td>
<td>7</td>
<td>19</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>43</td>
<td>130</td>
<td>15</td>
<td>188</td>
</tr>
</tbody>
</table>

True (Dole et al., 1966).

Ad Hoc Analysis of Comments.

This study provided an opportunity for professionals to address their willingness to provide counseling to individuals choosing methadone maintenance. A total of 102 professionals commented. Fourteen of the 30 CCDCs commented. Twenty-four of the 36 PCCs commented. Eighteen of the 25 PCs commented. Eleven of the 39 LSWs commented. Twenty of the 29 LISWs commented. Sixteen of the 29 psychologists commented. The comments varied. The comments were in four general areas: 1) would be willing if I had additional training; 2) would be willing; 3) philosophy on addiction treatment; 4) lack of knowledge about methadone.

Fourteen CCDCs commented. Eight of the 14 CCDCs noted that they would be willing to work with individuals taking methadone. Two CCDCs noted their beliefs that
the goal of all addiction treatment, including methadone maintenance, should be abstinence. Five of the 14 CCDCs indicated a need to acquire additional knowledge about methadone. Only one CCDC noted observations of patients doing well on methadone.

Eighteen PCs commented. Five PCs expressed a willingness to provide counseling to methadone patients. One PC noted a willingness only if the patient agreed to work a 12-step program. One PC advocated promoting methadone to addicted individuals and educating the public on the effectiveness of methadone. One PC noted the need for methadone maintenance to be viewed as a medical treatment. Four PCs would provide counseling after education and training. Seven PCs indicated a lack of interest in providing counseling due to lacking qualifications and interest.

A total of 24 PCCs commented. Four of the 24 PCCs expressed confidence in providing counseling to methadone patients. Two indicated a willingness to provide counseling in a team approach. Five PCCs were willing to provide counseling after receiving more education. Fourteen PCCS indicated a lack of relevant education and knowledge in addiction treatment and methadone. Four PCCs were strongly against the use of methadone and referred to methadone maintenance as illicit drug use. One of the PCCs who was against methadone worked with the Cleveland Police Department. One PCC preferred 12-Step programs pointing out the belief that 12-Step programs work in all areas of a person’s life.

LSWs comprised the smallest number of professional commenting. Their comments included: one apology for not being knowledgeable; seven reported having
limited or no experience in the field of addiction and methadone maintenance; one of the 7 who reported limited knowledge believed it would be better to wane a person off of methadone via the 12-Step Program to become sober. Of the two LSWs who were willing to provide responses, one was only willing to provide methadone in the most severe cases of addiction, and then only if there were goals to take the person off of methadone for good. This LSW did not indicate the amount of knowledge of addiction and treatment. The second LSW believed that methadone maintenance should be limited to one year. This LSW did not indicate the amount of knowledge of addiction and methadone treatment. The comments suggested that all 10 LSWs possessed limited knowledge of opiate addiction and methadone maintenance. The comments further suggested no relationship between support of abstinence oriented/12-step programs and knowledge.

Twenty LISWs commented. Six LISWs indicted a willingness to provide counseling to methadone patients. One of the six LISWs was willing to provide counseling to methadone patients who also had mental health issues. Thirteen CCDCs noted lack of education and training in the area of methadone treatment for addiction. One LISW viewed methadone as being a barrier to addiction treatment. Two LISWs reported having no interest in working with the addiction population. One LISW indicated a preference of buprenorphine over methadone.

Eleven of the 16 psychologists reported lacking knowledge about chemical dependency or methadone as a treatment modality. Only one psychologist was very willing to provide counseling. One psychologist indicated a willingness to provide
counseling services after adequate training. Two psychologists noted uncertainty about providing psychological services; 3 psychologists lacked interest in working in the area of substance abuse or addiction counseling; 3 psychologists indicated they would make referrals; and one psychologist would be willing to provide counseling based on the setting.
Following the pioneering footsteps of John Caplehorn, this study was conducted to assess the attitudes and knowledge of professionals towards addiction and pharmacological treatment. The research hypotheses about differences among the following six groups: Professional Counselors, Professional Clinical Counselors, Certified Chemical Dependency Counselors, Licensed Social Workers, Licensed Independent Social Workers, and Psychologists in terms of their commitment to abstinence-oriented policies, disapproval of drug use, and knowledge of methadone were partially supported.

Summary

The major finding of the survey was that there were greater similarities than differences among the six professional groups on their attitude toward abstinence-oriented policies, disapproval of drug use, and knowledge concerning methadone. There were not significant differences on their commitment to abstinence-oriented policies, possibly because most professionals indicated uncertain on the Likert Scale. There were small, but statistically significant differences among the professional groups on their attitudes toward disapproval of drug use. When using the scoring utilized by Caplehorn et al. (1996b), there were non-significant differences in knowledge scores among professional groups. When an alternate way of scoring was used, there were significant differences in knowledge among professional groups.
The average age of professionals in each group was older than anticipated. Although there were significant differences in age among the groups, their attitudes toward abstinence-oriented policies were similar. This suggests that age did not influence attitudes towards abstinence-oriented policies. Age may have contributed to the differences found between groups on their disapproval to drug use. The PCs were the oldest, with an average age of 60. Large differences were found between PCs and the following professional groups: LSWs, average age 46; LISWs, average age 53; and PCCs, average age 57.

Caplehorn et al. (1997) found highly significant differences in AO scores of better qualified staff and administrators compared to less qualified staff. Administrators and better qualified staff rejected abstinence-oriented policies while less qualified staff (nurses and chemical dependency counselors) supported abstinence-oriented policies. In contrast, Abed and Neira-Munoz (1990) found general practitioners with fewer years experience, male practitioners, practitioners in smaller practices, and practitioners with patients who also suffered from addiction to have significantly more positive attitudes toward drug addicted individuals and to be more willing to prescribe methadone. This study found CCDCs, LISWs, and psychologists having more positive attitudes toward drug addicted individuals.

Research conducted by Caplehorn et al. (1996b) suggested that differences in attitudes were not related to knowledge of staff members. Their research found no significant correlation between the staff’s knowledge of the benefits of methadone and support for abstinence-oriented policies. In the present study the majority of
professionals from each group indicated a lack of training and knowledge in the field of addictions. Most professionals also indicated a lack of knowledge about methadone. A small number of professionals in this study believed the use of methadone was equivalent to substituting one drug for another drug. Their beliefs were not based on scientific findings about methadone. In fact, only 5 of 188 professionals had work experience in methadone treatment. It was interesting to note that the level of knowledge about methadone had a low to moderate negative correlation with AO and DDU scales. Professionals with less knowledge tended to be stronger advocates of abstinence and more disapproving of drug use.

**Implications and Future Considerations**

Medical research has continued to reiterate that methadone is not an opiate and does not act in the body the same way as heroin. The words opiates and opioids should not be used interchangeably because they are not the same. Opioids are corrective synthetic drugs developed to block the effects of opiates (Dole & Nyswander, 1965; Dole et al., 1966; Dole, 1988). Methadone is defined as a synthetic opioid used as a blockade against the effects of heroin and opiate-type drugs (Brown et al., 2006). Therefore, methadone is not an opiate substitute as it has been argued.

The terminology used to refer to the addicted individual as an addict needs to be discontinued. Adopting the medical term of addiction would allow individuals suffering from addiction to be viewed as patients in need of medical treatment. Future research can revolve around terminology. Past terminology viewed the addicted individual as an
addict, which implies a negative person. The new medical term refers to an individual in methadone treatment as a patient.

Medical research presented in this study distinguishes methadone and buprenorphine from opiates and heroin. In treating heroin addiction, recent data has indicated that subjects receiving methadone remained in treatment appreciably longer than those on buprenorphine; and to be useful in reducing cocaine abuse (Schottenfeld et al., 2005). Methadone maintenance has proven to be the most effective treatment for opiate addiction combined with other drug abuse. Individuals on methadone have remained in treatment for years while receiving counseling for the mind altering effects of addiction. A major goal of treatment for addiction is retention. Not only have large numbers of addicted individuals remained in methadone counseling; thousands of people are on waiting lists to enter treatment.

The comments provided by the professionals also suggest that there are differences in views about the etiology of addiction and how to effectively work with addicted individuals. Future research can obtain personal background information on professionals regarding whether professionals or family members have experienced problems with addiction or received treatment.

Further research could be conducted on a larger scale along the line of the current study to look more closely at the relationships among educational level, age, professional group memberships, and answers to specific questions on the questionnaire. A comparison study could be conducted on the attitudes and knowledge toward addiction and treatment among professionals who have education in the methadone treatment and
other professionals who lack education. The majority of professionals participating in this study were White. CCDCs and PCs had the most Non-Whites. The small number of Non-White in each professional group suggests a need to try to attract professionals from diverse cultures.

Several trials in recent years have been performed comparing the efficacy of methadone and buprenorphine in a variety of treatment contingencies. A study especially concerned with decreasing the spread of drug-related HIV infection provided information towards deciding which would be better suited for treatment. It found that buprenorphine exhibited a limit of opioid receptor activity, meaning that it decreases the risk of being abused for personal pleasure when compared to full agonists such as methadone. It also has been demonstrated to show efficacy with administrations as seldom as 3 times a week, compared with the daily administration necessitated with methadone (Sullivan & Fiellin, 2005). The success of methadone in the treatment of opiate addiction has opened the pathway of using pharmaceuticals in conjunction with counseling to treat alcohol and other drug addictions.

**Conclusion**

The misunderstanding about methadone has resulted in professionals showing rigid or harsh attitudes towards individuals who take methadone (Zweben & Payte, 1990). Early research focused on attitudes of staff working in the field of substance abuse and addiction. The earlier studies documented negative attitudes of physicians, psychologists, and psychologist toward alcoholic and chemically dependent patients (Chappel & Schnoll, 1977). Medical students were found to display more negative
attitudes toward persons suffering from substance abuse and addiction than other more socially accepted medical problems, such as diabetes (Chappel et al., 1985). In an effort to facilitate attitude change, the APA has recommended specific training for physicians to strengthen skills needed to work with opiate dependent individuals.

This study provided valuable information on the experience, confidence, knowledge, and attitudes of six professional groups in Ohio in the area of opiate addiction and methadone treatment. Caplehorn et al. (1997) found staff with no tertiary education had a significantly higher mean AO score than administrators, doctors, and post graduate qualifications in social work or psychology. Staff with background in methadone maintenance treatment had significantly lower mean AO scores while those with addiction or alcohol experience had higher mean scores.

Uncertain responses were most common among the six groups in this study on all three rating scales. It is unclear whether the professional groups differed in knowledge. When the Knowledge scale was scored according to Caplehorn et al. (1997), the differences in knowledge among the groups were quite small. To see what effect uncertain responses had on the results, another analysis was run excluding the uncertain responses. Knowledge scores were then based only on answers that were either right or wrong. When uncertain responses were excluded, some differences among the groups were shown with PCs having the highest level of knowledge and PCCs and psychologists having the lowest level of knowledge.

Comments made by professionals suggested that professionals outside the field of drug abuse treatment are becoming aware of the need to provide counseling to
individuals selecting methadone maintenance. The American Psychological Association (APA) has emphasized the importance of appropriate counseling and psychosocial services for patients receiving methadone therapy to provide the best chance for recovery and prevent relapse (O’Connor, 2001). Some researchers have compared methadone maintenance to insulin used in the treatment of diabetes. Other researchers have referred to methadone as a heroin substitute.

The six professional groups in this study lacked knowledge in the area of addictions and effective medical treatments. Responses also indicated an awareness of their scope of practice. This study found the majority of professionals in each group responding with uncertainty. Not responding to questions outside one’s area of licensing indicates adherence to licensing guidelines.

In fact, the corrective medical treatments can only be prescribed by medical professionals licensed to administer methadone and buprenorphine. As defined in Chapter 1, the scope of practice, of all six professional groups in this study, does not include writing prescriptions for methadone or buprenorphine. Therefore, professionals who do not possess the credentials to prescribe methadone or buprenorphine should not debate whether or not an addicted individual should be prescribed methadone or the length of time a patient should remain in methadone maintenance.

There is a need for education in the area of addiction and medical treatments in all six professional areas of study, prior to licensing and for continuing education requirements. This study revealed a willingness of professionals to acquire training to provide counseling to methadone patients. Most comments demonstrated a positive
attitude toward individuals receiving methadone therapy for addiction problems.

Caplehorn and other researchers are continuing to examine the views of staff in working with drug dependent patients on methadone maintenance (Caplehorn et al, 1997).

The number of respondents in this study constituted about a third of the practitioners contacted for participation in this study. While the number of respondents is fewer than projected, the number of respondents from each group is larger than many methadone staffs which have participated in previous studies. Based on the response rate, it can be concluded that about 30% -35% of each identified group of professional are interested in additional training in the area of opiate addiction and methadone counseling. The lack of training and knowledge in the field of addictions may have also accounted for the high number of uncertain responses and the low response rate. Other factors contributing to a low response rate may have been the satisfaction of licensed professionals with work outside of addiction treatment and no interest in working in the area of drug treatment.

This study has supported the findings of Abouyanni et al. (2002) who found that General Practitioners in South West Sydney lacked experience in addiction treatment, were less confident in managing addicted patients, and displayed attitudes that reflected their concern about the safety and compliance of methadone maintenance. This research has provided valuable information on the experience, confidence, knowledge and attitudes of six professional groups in Ohio towards providing counseling to addicted persons on methadone. The outcome of the study clearly suggests a lack of understanding and education among the professional groups regarding addiction and
methadone maintenance. It further suggests beliefs about addiction and treatment are based on professionals’ own personal belief and not scientific knowledge.

The outcome of this study conducted with chemical dependency counselors, professional counselors, professional clinical counselors, social workers, and psychologists suggests a lack of knowledge regarding addiction and methadone. The large numbers of patients on methadone necessitates professionals in the helping fields gaining the education and competence to be able to provide counseling. Comments showed a willingness of professionals to acquire the necessary education to coordinate services with the medical community to provide a comprehensive patient care.

Dole et al. (1966) began their research by looking for a medication to block the abnormal reaction to heroin. They started their search by gaining an understanding of the pharmacological state of mind of an individual addicted to heroin. It was found that a person addicted to heroin was functionally disabled most of the time. The initial study was conducted on persons who had the traditional treatment of 12-step programs which included detoxification using a drug such as buprenorphine. The traditional treatment had not been successful as demonstrated by repeated relapse.

Professionals must not discriminate against individuals suffering from addictions. Individuals who suffer from addictions have many problems that can be addressed in counseling. Professionals must begin their gaining a more in depth understanding of the pharmacological state of mind of addicted individuals through acquiring additional education. They must avoid relying on traditional outdated beliefs that views addiction
as a willful act. Professionals must refrain from confusing synthetic corrective opioids with opiates.
References


treatment success among four counselors. *Journal of Nervous Mental Disorders*, 176(7), 423-430.


Schottenfeld, R. S., Chawarski, M. C., Pakes, J. R., Pantalon, M. V., Carroll, K. M., &


APPENDICES
Appendix A: Request for Exempt Status

Certificate of Completion
Dear Rebecca Cale,

I am a doctoral student in Counselor Education. I am requesting exempt status for conducting research for my dissertation: “Assessing and Comparing Attitudes towards Addiction and Methadone Treatment.” This exemption request is made according to the guidelines of, “Exemption from Review.”

The subjects for my study will comprise of a random sample of 600 licensed and/or certified professionals in Ohio.

Subjects will be surveyed via postal mail using one instrument: “Attitude towards Addiction and Methadone Questionnaire.” A copy of the instrument, along with the demographic sheet, cover letter, and return post card to be used, are enclosed with this request for exempt status.

The initial mailing will consist of a packet containing (1) a cover letter, (2) the questionnaire, (3) a demographic sheet, and (4) a self-addressed, stamped envelope to return the completed instrument and demographic sheet to the researcher. The cover letter will describe the present study, advise participants that their individual responses will be kept anonymous, and inform the participant that returning the enclosed stamped post card to the researcher will signify their consent to participating in the study. The separate, stamped post card, addressed to the researcher, will contain the subject’s name and is intended to verify participation in the study, while keeping his or her individual responses anonymous. Returned post cards will also serve as an indication of the participant’s request to receive a summary of the research findings. Instructions to recipients will advise them to mail the post card under separate cover, at the same time that the completed instrument and demographic sheet are mailed.

Three additional mailings will be administered approximately two weeks apart. The second mailing will be a post card reminder mailed to non-respondents. The third mailing will be the same packet used in the initial mailing, with the exception of a revised cover letter. The final mailing will be a post card reminder to non-respondents.

I am requesting exempt status for this study because it involves the collection of existing data from publicly available sources. The investigator will record the
information in such a manner that subjects cannot be directly identified or linked through identifiers.

Thank you for your attention to this request. Attached is a completed Project Outline Form for additional information.

Sincerely,

Jessica Smith Evans

Encl: Attitude towards Addiction and Methadone Questionnaire
    Demographic Sheet
    Cover Letter to Subjects
    Post Card to be returned by Subjects to Researcher

Cc: Dr. Tom Davis, Academic Advisor and Director of Dissertation
Certificate of Completion

Ohio University certifies that JESSICA EVANS completed the computer-based training course on the Protection of Human Research Subjects.

Serial: 143766
Date: 9/13/2003
Appendix B: Verification of Exempt Status
A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2 - research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior.

Project Title: Assessing and Comparing Attitudes Towards Addiction and Methadone Treatment

Project Director: Jessica Smith Evans

Department: Counselor Education

Advisor: Thomas Davis

Rebecca Cale, Associate Director, Research Compliance
Institutional Review Board

6-18-04

Date

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the consent must be approved by the IRB (as an amendment) prior to implementation.
Appendix C: Request to Use Research
Permission to Use Research Instrument

I read your article “Attitudes and Beliefs of Staff Working in Methadone Maintenance Clinics”. My name is Jessica Evans and I am a doctoral student at the Ohio University in Athens, OH working on my dissertation. I want to measure the attitudes of chemical dependency counselors, licensed social workers, and licensed professional counselors on their beliefs about addiction and methadone maintenance. I would like permission to use the survey instrument you developed using the “Abstinence Goal” Scale, the “Compliance” Scale, along with the two additional sets of questions, the “Methadone Efficacy” and the “Attitudes to Drug Use” Scale, and the “Methadone Knowledge” Scale. Your survey instrument comprised 100 attitudinal and knowledge questions, which were answered on a 5-point Likert scale.

If I am able to use your instrument, please let me know what I need to do to acquire it as soon as possible. If you have updated this instrument, I would be interested in reviewing it as well. I believe that your instrument would be a very good one to use in lieu of developing a new instrument for my research. Thank you for your consideration.

Jessica Evans, MA, LPCC
The University of Sydney

School of Public Health
Faculty of Medicine

Edward Ford Building, A27
University of Sydney, NSW 2006
Tel: 61.2.9351-4372
Fax: 61.2.9351-5049 or 7420
Email: john@health.usyd.edu.au

John Caplehorn MB BS MPH PhD
Senior Lecturer
Clinical Epidemiology

FAX TO: Jessica Evans
FAX NO: 0015 1 614 341 6885
DATE: 20th June 2003
NO PAGES: 5

MESSAGE:

Dear Jessica,

I've prepared a 52-item staff questionnaire and used it in 2002 in Sydney, following. It has 14 AO items with 4 new items for testing for inclusion in the AO - they're on buprenorphine and naltrexone. The easiest thing for you is to keep them separate.

There are 8 DDU items - these are from the Australian DDU - for the US drop the two questions on marijuana and add "Adults convicted of selling heroin or cocaine to minors should be jailed for life"; and, "People who become addicted only have themselves to blame".

There are 13 items on knowledge of the risks and benefits of methadone maintenance. But the one on constipation does not work in some US clinics which put sorbitol in with the methadone. Also, the one on withdrawals is problematic as my own clinical experience suggests methadone withdrawals can be psychologically worse for longer.

The 12 toxicity questions concern knowledge of the risks and signs and symptoms of methadone toxicity. We keep finding staff are generally ill-informed.

Good luck.

Yours sincerely,

John Caplehorn

If you'd prefer to use the "old" 100-item scale - just ask and I'll send it.
Appendix D: Cover Letter
    Return Post Card
    Reminder Post Cards
January 15, 2005

Dear Clinician,

We are conducting research in the area of drugs, drug addiction and addiction treatment out of our counseling department. At our request, the State of Ohio Counselor and Social Worker Board, Ohio Department of Alcohol and Drug Addiction Services (ODADAS), and State Board of Psychology of Ohio provided us with your name and the names of certified and/or licensed professionals randomly selected. Please take a few minutes to review this questionnaire and consider participating in the present study.

The enclosed “Attitude Towards Addiction and Methadone Questionnaire” is designed to assess the beliefs and attitudes of professional regarding addiction and treatment. There are two sections: (1) “your personal details,” and (2) “beliefs and opinions on drugs, drug addiction and addiction treatment.” There are not right or wrong answers. Directions are provided at the top of each section. Responding to each question will take 15-20 minutes.

Participating in this study is entirely voluntary and the information you provide will be kept anonymous. Data will be collected in such a manner that you cannot be identified, directly or through identifiers linked to you. Please do not write your name on any part of the questionnaire.

Please return the completed questionnaire in the enclosed, pre-addressed, and postage-paid envelope by Feb. 10, 2005. Verification of your participation will be made by returning the enclosed, pre-addressed, and postage-paid post card. The only information on the return postcard is your name and address, your participation in the study, and your request (if you choose) for a summary of our research results. Please mail this post card to us at the same time you mail the completed questionnaire, but please do so separately. A reminder post card will be sent within two weeks to those we do not hear from.

Thank you in advance for your time and participation. With the increased numbers of individuals in need of counseling services for drug abuse and addiction, it is necessary for professionals to reflect on their own beliefs toward providing care and coordinating services with community agencies. The information you provide may help in the planning to expand outreach for professionals to provide services to individuals in need of treatment for addictions.

Sincerely,

Jessica Smith Evans, M.A., PCC

Tom Davis, Ph.D., PCC, Chair
Department of Counseling and Higher Ed
Ohio University
Athens, Ohio 45701
Please check the items that apply to you: RETURN

____ I have willingly participated in the study of helping professionals' attitudes toward addiction and methadone treatment, and have mailed, under separate cover, the completed “Attitude Towards Addiction and Methadone Questionnaire.”

____ I wish to receive a summary of the research results at the address above.

____ I do not wish to receive a summary of the research results.

Thank you again for your participation!
REMININDER

Have you completed the "Attitude Toward Addiction and Methadone Questionnaire" that was mailed to you about a week ago from the counseling department at Ohio University? If you have not, please complete it and mail it in the postage-paid envelope provided by _________.

If we do not hear from you in two weeks, another questionnaire will be sent to you. If you have completed and sent back the questionnaire, we appreciate your time and participation in this study.

Sincerely,

Jessica S. Evans          Thomas E. Davis, Ph.D., PCC, Chair
Doctoral Candidate       Department of Counseling and Higher Ed

---

We're back!

This is the last time you will hear from us. Please take a few minutes to complete the "Attitude Toward Addiction and Methadone Questionnaire" that was mailed to you a week ago from our counseling department at Ohio University.

If you have already returned it, thank you! If you have not returned the questionnaire, please take the time to complete and return it in the postage-paid envelope by _________. Your time and participation are greatly appreciated in this important research study.

Sincerely,

Jessica S. Evans          Thomas E. Davis, Ph.D., PCC, Chair
Doctoral Candidate       Department of Counseling and Higher Ed
Appendix E: Attitude towards Addiction and Methadone Questionnaire
ATTITUDE TOWARDS ADDICTION AND METHADONE
QUESTIONNAIRE
2004 version

This questionnaire is designed to measure the attitudes and beliefs towards addiction and methadone maintenance treatment of Chemical Dependency Counselors, Social Workers, Counselors, and Psychologists certified and/or licensed in the state of Ohio. The survey is anonymous and all data will be treated with the strictest confidence. Results will not be reported in a way that will identify or allow the identification of individual respondents or programs. Completed forms will be kept for five years after the protection of reports and then destroyed. If you agree to be involved in the study under these conditions, please complete the questionnaire.

PERSONAL DETAILS

Gender
- Male
- Female

Age: ________

Marital Status
- Married/Partnered
- Separated/Divorced
- Single
- Widowed

Ethnicity
- Caucasian
- African American
- Native American
- Biracial/Multiracial
- Hispanic
- Asian
- Other ____________

Educational Level
- High School Diploma
- Bachelor's Degree
- Masters Degree
- Post Masters Degree
- Ph.D.
- Other ____________

Primary License (choose one)
- Certified Chemical Dependency Counselor (CCDC)
- Professional Counselor (PC)
- Professional Clinical Counselor (PCC)
- Licensed Social Worker (LSW)
- Licensed Independent Social Worker (LISW)
- Psychologist

Employment Experiences (Check all that apply)
- Private Practice/Consultant
- Community Agency
- University/College
- Correctional/Probation/Court
- School (K-12)
- Psychiatric Hospital
- Substance Abuse Agency
- Drug-Free Treatment
- Residential Treatment
- Methadone Maintenance Treatment
- Other ____________
INSTRUCTIONS

This questionnaire seeks to measure your beliefs and opinions on drugs, drug addiction and addiction treatment. The items on methadone maintenance policy seek to determine what you think SHOULD happen in maintenance clinics. Please do NOT feel limited by current policy or practices. Please read the questions carefully and give your initial, gut reaction.

PLEASE CIRCLE OR CROSS ONE RESPONSE TO EACH STATEMENT

1. Confrontation is necessary in the treatment of drug addicts.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

2. Methadone is potentially dangerous because it reduces breathing.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

3. Needle and syringe exchanges should be established in all cities and large towns with large numbers of injecting drug users.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

5. Adults convicted of selling heroin or cocaine to minors should be jailed for life.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

6. Left to themselves, most methadone patients would stay in maintenance for life.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

7. Many methadone patients would be better off on naltrexone.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

8. Methadone services should be expanded so all heroin addicts who want methadone maintenance can receive it.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

9. Modern society is too tolerant towards drug addicts.
   - strongly disagree
   - disagree
   - uncertain
   - agree
   - strongly agree

10. Abstinence from all opioids (including methadone) should be the principal goal of maintenance treatment.
    - strongly disagree
    - disagree
    - uncertain
    - agree
    - strongly agree
11. Repeated doses of methadone given 24 hours apart can have a cumulative, toxic effect.

12. Methadone is more dangerous to the unborn child than heroin.

13. Maintenance patients who continue to use heroin should have their dose of methadone reduced.

14. Methadone maintenance can cause chronic constipation.

15. Drug addiction is a menace to society.

16. Stable doses of methadone significantly interfere with the ability to drive a car and operate machinery.

17. Methadone maintenance can cause disturbance of sexual function, (e.g. impotence, amenorrhea).

18. New maintenance patients who have trouble staying awake or waking up should have their daily dose of methadone reduced.

19. No limits should be set on the duration of methadone maintenance.

20. Methadone maintenance increases addicts’ risk of fatal heroin overdose.

21. Young addicts should have failed naloxone maintenance before being offered methadone.

22. Methadone maintenance can cause liver damage.
23. Persons convicted of the sale of illicit drugs should not be eligible for parole.

24. Brown fluid coming from the mouth or nose of an unconscious drug user is a sign of a medical emergency.

25. Methadone maintenance increases the severity of pre-existing depression.

26. Safe injecting rooms should be established wherever large numbers of addicts use on the street.

27. People who become addicted only have themselves to blame.

28. Methadone should be gradually withdrawn once a maintenance patient has ceased using heroin.

29. Healthy adults who do not have a tolerance can die from the cumulative, toxic effects of daily doses of 30mg to 40mg of methadone.

30. It is unethical to deny heroin addicts methadone maintenance.

31. Withdrawing from methadone "cold turkey" is definitely worse than similarly withdrawing from heroin.

32. When taken in excessive doses methadone can cause fatal pulmonary edema (fluid accumulation in the lungs).

33. Buprenorphine is a better maintenance drug than methadone.
34. Methadone patients who ignore repeated warnings to stop using heroin should be gradually withdrawn off methadone.

35. High-dose methadone maintenance reduces ("blocks") the euphoric effects of injected heroin.

36. Maintenance patients should only be given enough methadone to prevent the onset of withdrawals.

37. Methadone maintenance patients’ risk of dying is highest in the first two weeks of treatment.

38. Methadone maintenance reduces addicts’ criminal activities.

39. Methadone patients should be encouraged to remain in maintenance for at least three to four years.

40. Drug addiction is a vice.

41. Drug users with a tolerance to the effects of opioids are much less likely to die from a heroin overdose than those with no tolerance.

42. It is unethical to maintain addicts on methadone indefinitely.

43. Unusually loud snoring in a maintenance patient who is difficult to wake can be a sign of dangerous methadone toxicity.

44. Methadone maintenance reduces addicts’ heroin use.
45. Methadone patients who continue to abuse non-opioid drugs (e.g., benzodiazepines) should have their dose of methadone reduced.

46. Methadone maintenance can cause kidney damage.

47. Deaths from prescribed doses of methadone are most likely to occur in the first 3 to 5 days of maintenance treatment.

48. Young addicts should have failed buprenorphine maintenance before being offered methadone.

49. Addicts are at increased risk of fatal heroin overdose after detoxification and naltrexone treatment.

50. The clinician’s principal role is to prepare methadone maintenance patients for drug-free living.

51. Starting new maintenance patients on daily doses of 30mg to 40mg of methadone is completely safe.

52. Doctors should be able to prescribe heroin to known addicts.

Comments: Regarding your willingness to provide services to persons choosing methadone maintenance.

PLEASE QUICKLY CHECK THAT YOU HAVE RESPONDED TO ALL ITEMS

THANK YOU!
Appendix F: Questions Grouped by Scales
1. Confrontation is necessary in the treatment of drug addicts.

6. Left to themselves, most methadone patients would stay in maintenance for life.

7. Many methadone patients would be better off on naltrexone.

8. Methadone services should be expanded so all heroin addicts who want methadone maintenance can receive it.

10. Abstinence from all opioids (including methadone) should be the principal goal of maintenance treatment.

13. Maintenance patients who continue to use heroin should have their dose of methadone reduced.

19. No limits should be set on the duration of methadone.

21. Young addicts should have failed naltrexone maintenance before being offered methadone.

28. Methadone should be gradually withdrawn once a maintenance patient has ceased using heroin.

30. It is unethical to deny heroin addicts methadone maintenance.

33. Buprenorphine is a better maintenance drug than methadone.

34. Methadone patients who ignore repeated warnings to stop using heroin should be gradually withdrawn off methadone.

36. Maintenance patients should only be given enough methadone to prevent the onset of withdrawals.
39. Methadone patients should be encouraged to remain in maintenance for at least three to four years.

42. It is unethical to maintain addicts on methadone indefinitely.

45. Methadone patients who continue to abuse non-opioid drugs (i.e. benzodiazepines) should have their dose of methadone reduced.

48. Young addicts should have failed buprenorphine maintenance before being offered methadone.

50. The clinician’s principal role is to prepare methadone maintenance for drug-free.

**DDU**

5. Marijuana use among teenagers can be healthy experimentation.

9. Modern society is too tolerant towards drug addicts.

15. Drug addiction is a menace to society.

23. Persons convicted of the sale of illicit drugs should not be eligible for parole.

27. The use of marijuana should be decriminalized.

40. Drug addiction is a vice.

**TOXICOLOGY**

2. Methadone is potentially dangerous because it reduces breathing.

11. Repeated doses of methadone given 24 hours apart can have a cumulative, toxic effect.

18. New maintenance patients who have trouble staying awake or waking up should have their dose of methadone reduced.
24. Brown fluid coming from the mouth or nose of an unconscious drug user is a sign of a medical emergency.

29. Healthy adults who don’t have a tolerance can die from cumulative, toxic effects of daily doses of 30mg to 40 mg of methadone.

32. When taken in excessive doses methadone can cause fatal pulmonary oedema.

37. Methadone maintenance patients’ risk of dying is highest in the first two weeks of treatment.

41. Drug users with a tolerance to the effects of opioids are much less likely to die from a heroin overdose than those with no tolerance. Unusually loud snoring in a maintenance patient who is difficult to wake can be a sign of dangerous methadone toxicity.

43. Unusually loud snoring in a maintenance patient who is difficult to wake can be a sign of dangerous methadone toxicity.

47. Deaths from prescribed doses of methadone are most likely to occur in the first 3 to 5 days of maintenance treatment.

49. Addicts are at increased risk of fatal heroin overdose after detoxification and naltrexone treatment.

51. Starting new maintenance patients on daily doses of 30 mg to 40mg of methadone is completely safe.

**M Knowledge**


12. Methadone is more dangerous to the unborn child than heroin.
14. Methadone maintenance can cause chronic constipation.

16. Stable doses of methadone significantly interfere with the ability to drive a car and operate machinery.

17. Methadone maintenance can cause disturbance of sexual function, (e.g. impotence, amenorrhea).

20. Methadone maintenance can cause kidney damage.

22. Methadone maintenance can cause liver damage.

25. Methadone maintenance increases the severity of pre-existing depression.

31. Withdrawing from methadone ‘cold turkey’ is definitely worse than similarly withdrawing from heroin.

35. High-dose methadone maintenance reduces (“blocks”) the euphoric effects of injected heroin.

38. Methadone maintenance reduces addicts’ criminal activities.

44. Methadone maintenance reduces addicts’ heroin use.

46. Methadone maintenance can cause kidney damage.

HM

3. Needle and syringe exchanges should be established in all cities and large towns with large numbers of injecting drug users.

26. Safe injecting rooms should be established wherever large numbers of addicts use on the street.

52. Doctors should be able to prescribe heroin to known addicts.