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Screening Chronic Pain Consumers for Potential Prescription Opiod Misuse by Medical Professionals

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SCREENING CHRONIC PAIN CONSUMERS FOR POTENTIAL PRESCRIPTION OPIOID MISUSE BY MEDICAL PROFESSIONALS

By

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B.A., Southern Illinois University at Carbondale, 2007

A Research Paper Submitted in Partial Fulfillment of the Requirements for the Master of Science

> Rehabilitation Institute in the Graduate School Southern Illinois University Carbondale December 2011

RESEARCH PAPER APPROVAL

SCREENING CHRONIC PAIN CONSUMERS FOR POTENTIAL PRESCRIPTION OPIOID MISUSE BY MEDICAL PROFESSIONALS

By

Jennifer Ann Klein

A Research Paper Submitted in Partial

Fulfillment of the Requirements

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Master of Science

in the field of Rehabilitation Counseling

Approved by:

Dr. D Shane Koch

Graduate School Southern Illinois University Carbondale

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CHAPTER 1

Introduction

Opioids have been viewed for centuries as the most effective treatment for chronic pain, yet in the past decade the misuse of prescription opioids has become a substantial problem in the United States (Brucker, 2008; Compton & Volkow, 2006; Denisco, Chandler, & Compton, 2008; Rosenblum, Marsch, Joseph, & Portenoy, 2008). According to a document published by the Office of National Drug Control Policy,

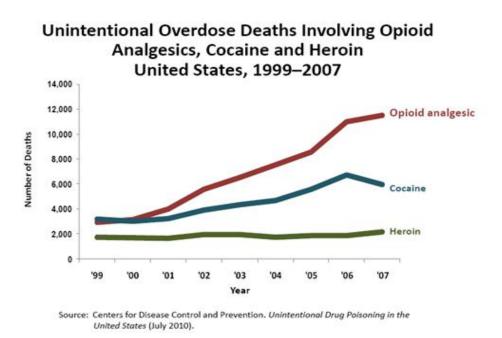
The number of prescriptions filled for opioid pain relievers—some of the most powerful medications available—has increased dramatically in recent years. From 1997 to 2007, the milligram per person use of prescription opioids in the U.S. increased from 74 milligrams to 369 milligrams, an increase of 402 percent. In addition, in 2000, retail pharmacies dispensed 174 million prescriptions for opioids; by 2009, 257 million prescriptions were dispensed, an increase of 48 percent (Office of National Drug Control Policy (ONDCP), 2011, p.1).

According to the results from the 2010 National Survey on Drug Use and Health (NSDUH) (Substance Abuse and Mental Health Services Administration (SAMHSA), 2011), 17.3% reported pain relievers as the initial drug of illicit drug use. In addition, the non-medical use of prescription pain relievers is the second most common form of illicit drug use (Compton & Volkow, 2006; SAMHSA, 2009a). Additionally, another NSDUH report, an estimated 5.2 million people had reported non-medical prescription opioid misuse (SAMHSA, 2009b). On the other hand, according to the Treatment Episode Data Set (TEDS), a mere 7.1% of individuals that were admitted into a substance abuse treatment facility report other opioids as his or her primary substance of abuse

(SAMHSA, 2009b). Moreover, these statistics indicate that although a substantial number of individuals report non-medical prescription opioid misuse, only a small percentage are undergoing the necessary treatment.

The Center for Disease Control and Prevention (CDC) (2010), provided statistics stating prescription opioid misuse overdose incidents have been increasingly surpassing those individuals overdosing from heroin by approximately 5.38 times. (See Figure 1) In addition, the lack of individuals receiving substance abuse treatment has facilitated a need to address prescription opioid misuse in individuals with non-malignant chronic pain through the implementation from a multidisplinary team approach with the purpose of providing the adequate education to consumers for this widespread epidemic (ONDCP, 2011).

Figure 1.



Background of the Problem

The Egyptians described the medicinal purposes of opioids dating back as early as 1500 BC (Meyer & Quenzer, 2005). Opioid can be defined as relating to any synthetic or natural action to that of morphine, which is derived from opium (Hanson, Venturelli, & Fleckenstein, 2006; Meyer & Quenzer, 2005). Opioids are most commonly used to have effects on the central nervous system and the gastrointestinal tract, but can also be used as a cough suppressant (Hanson et al., 2006; Meyer & Quenzer, 2005). In the human body there are three classes of opioid receptors that directly interact with the brain, spinal cord, and gastrointestinal tract with the control of the endogenous opioid peptides (Hanson et al., 2006; Lehne, 2007; Meyer & Quenzer, 2005). Endogenous opioid peptides are small proteins that when released send a message to the brain, spinal cord, and gastrointestinal tract that alters the bodies perception of pain (Hanson et al., 2006). Much of the effects of the opioid depend on the pharmacokinetics and the pharmacodynamics of the specific opioid (Meyer & Quenzer, 2005; Morgan, Frost-Pineda, & Gold, 2006). For instance, if the opioid is administered intravenously at a higher dose, the individual may experience a higher level of euphoria than would an individual who ingested a lower dose (Meyer & Quenzer, 2005). Some of the most common types of opioids are morphine, oxycodone, hydromorphone, hydrocodone, methadone, and fentanyl. In addition, some of the less potent forms of opioids are codeine, meperidine, pentazocine, and propoxyphene (Morgan et al., 2006).

Pain can be viewed as if it is on a continuum in the fact that it affects people according to the individual perception; therefore, can be difficult to objectively measure (Modesto-Lowe, Johnson, & Petry, 2007). Pain tends to be measured according to a self-reported rating of pain intensity from 0 to 10, with 0 being no pain and 10 being the most

intense pain. Again, the ambiguity of whether an individual is being truthful lies within the primary care provider's professional judgment, along with the facts of point of reference in which the pain is a response to. In other words, if an individual with a physical disability sees the doctor, the primary care provider may be more apt to prescribe an opioid, as opposed to an individual with inflammatory pain, which has shown to be non-responsive in these consumers (Walwyn, Miotto, & Evans, 2010).

Although those who have received opioids for acute pain have a lower probability for addiction, long-term administration of opioids for chronic pain has been linked to prescription opioid misuse (Comptom & Volkow, 2006). The ability for an individual to obtain analgesic opioids has become increasingly accessible (Cicero et al., 2007). Most individuals obtain prescription from the family physician. Other times individuals obtain these medications from others who have been prescribed, but perhaps did not follow the recommended dose and had excess. Analgesic opioids can usually be found in homes of family and friends (Mendelson, Flower, Pletcher, & Galloway, 2008). According to the NSDUH report, 55.7% of individuals that misused prescription opioids said reported they obtained them from a family member or a friend for free, while 11.4% purchased the opioid from family or a friend (SAMHSA, 2011).

Whether from a family member or friend, any individual taking a prescription that was neither prescribed to them nor an intended dosage is misusing prescription opioids. Taking more than the prescribed recommended dosage is also considered prescription opioid misuse. In addition, some individuals misuse the opioid by diverting from the intended route of administration (Cicero et al., 2007; Morgan et al., 2006). For instance, a consumer prescribed an oral dose of an opioid that instead crushes the pill for nasal

ingestion has altered the intended route of administration; therefore, misusing.

Additionally, alternate forms of aberrant behaviors are known as "doctor shopping" and "pharmacist shopping" (DuPont, 2010; El-Aneed et al., 2009). Inevitable these are people that are seeking multiple primary care providers or utilizing multiple medication dispensaries to obtain the desired opioid prescription, yet are still consider misuse regardless.

People tend to have an attitude towards opioids that these drugs are "safer" than illicit drugs because they are normally prescribed by a physician, yet are completely unaware of the potential dangerous side-effects (Bryne, Lander, & Ferris, 2009).

SAMHSA Drug Abuse Warning Network (DAWN) report indicated that the emergency room visits for the non-medical use of opioid analgesic increased 111% from 2004 to 2008 (CDC, 2010). More and more individuals are seeking services from emergencies rooms because he or she has non-medically misused analgesics opioid (Mendelson et. al, 2008). As mentioned previously, the rate of unintentional prescription opioid overdoses have been steadily increasing since 2001 (CDC, 2010).

Attempting to maintain optimal quality of life while experiencing chronic pain can be a difficult task to manage. Individuals with opioid abuse and/or dependence are more likely to have a decrease in productivity in the workplace, accounting for a loss of 60 billion dollars a year (Passik & Kirsh, 2008). According to Hardan (2008), consumers being prescribed opioids for pain management are at an increased rate of unemployment, compared to individuals using non-pharmacological treatments. If there is an opioid dependence, the consumer may be unemployed because of the concern regarding where to obtain the next pain reliever. In addition, transportation barriers are substantial in

individuals who have opioid abuse and/or dependence for the consumer is less likely to be able to operate a vehicle or find employment, let alone seek substance abuse treatment (Brucker, 2008).

Significance of the Study

The fact still remains that there is an unclear division between who should and should not be prescribed prescription opioids. According to research originally from Pasero (2007), "Untreated pain can exacerbate underlying medical conditions, decrease activity and conditioning decrease productivity, delay rehabilitation, and increase emotional distress causing psychological symptoms, sleep deprivation, and inability to manage daily activities" (Walwyn et al., 2010, p. 157). Individuals must also be able to utilize the medicinal effects of opioids, if deemed appropriate to optimize quality of life (Wilsey, Fishman, Casamalhuapa, & Gupta, 2009).

On the other hand, problems amongst the medical community in treating individuals with chronic pain arise due to the controversy associated with pain management (Butler et. al., 2007; Mendelson et. al, 2008; Naliboff, Wu, & Pham, 2006; Walwyn et. al., 2010). Some report that primary care providers over prescribe opioid medication to consumers with chronic pain, whereas others report that the under prescribing of opioids contributes to prescription opioid misuse to some individuals seeking pharmacological treatment (Adams et al., 2004; Gallagher & Rosenthal, 2008; Holmes et al., 2006; Modesto-Lowe et al., 2007). Individuals are entitled to use medication as a form of pain relief; however, consumers appear to have a lack of understanding regarding the abuse and dependence potential. Moreover, could there be a potential shift in the number of individuals receiving prescription opioids from pain

management specialists, or has the insurances companies shifted consumers in a direction that primary care provider provides pain management resulting in the increase of prescription opioid misuse? (Morgan et al., 2006).

Medical professionals may not necessary have the adequate knowledge of the substance abuse and dependence potential opioids have (Buelow, Haggard, & Gatchel, 2009). Clarification of the of substance abuse and dependence is essential for the purpose of this paper and will be defined in accordance to the Diagnostic and Statistics Manual-Forth Edition (DSM-IV) criteria. The DSM-IV criterion defines abuse and dependence as separate entities. A consumer meeting criteria for abuse may tend to have difficulty fulfilling his or her role in the family, work, or school which may also lead to interpersonal problems. Although these individuals are not experiencing opioid withdrawal symptoms, the consumer's actions are usually associated with legal consequences as a result of behavior or the method of which the opioid was obtained.

Opioid dependence is likely to be associated with higher levels of tolerance and experiencing significant withdrawal symptoms. Mainly individuals with opioid dependence are spending a greater part of their day obtaining the opioids or using them in a manner in which they were not intended. According to Densico et al. (2008), individuals receiving pain management treatment currently fall into the DSM-IV diagnostic criteria for opioids dependence disorder, as these individuals have met criterion for tolerance and withdrawal. Of course not every individual prescribed an opioid will develop an opioid use disorder, but the medical professionals need to be cognizant of the potential and how to determine abuse and dependence in accordance to the DSM-IV criteria.

Medical professionals not only need to be aware of the fact that prescription opioid abuse exists in chronic pain consumers and is prevalent in today's society, but the affect it could bring in terms of difficulty with obtaining treatment. If medical professionals continue to prescribe opioids without appropriate screening, the rate of misuse will continue to increase and the consumers likely to seek treatment will decrease. According to the 2007 TEDS, 51.6% of individuals admitted themselves for other opioid as his or her primary substance of choice, whereas the next highest percentage (16.6%) were referred to treatment via the criminal justice system (SAMHSA, 2009b). Moreover, aside from an individual, personally seeking the treatment he or she needs, other avenues need to be explored to determine the most efficient and effective method to refer consumers with prescription opioid misuse to treatment.

Summary of Chapter 1

Opioids have been found to be an effective treatment modality for individuals with chronic pain, yet the number of prescription opioids filled from 1997 through 2007, increased 402 percent (ONDCP, 2011). With the increase of number of prescriptions being filled, there has been an increase in the number of individuals misusing prescription opioids. Society appears to be unaware of the abuse and dependence potential opioids have. Additionally, some medical professionals tend to lack the necessary knowledge when providing pharmacological treatment to individuals with chronic pain. The long-term administration of opioid therapy in individuals with chronic pain has been found to be linked to prescription opioid use. In addition, research suggests that the number of individuals seeking treatment for prescription opioid misuse as the primary substance is quite low in comparison to the number of individuals reporting prescription opioid

misuse. These facts solidify the need to further examine prescription opioid misuse specifically with individuals experiencing non-malignant chronic pain.

Purpose and Objectives of the Paper

The purpose of this paper is to justify the need for a multidimensional approach from medical professionals providing services to consumers with non-malignant chronic pain while utilizing an effective screening instrument when assessing pharmacological opioid treatment for pain management. Screening consumers with chronic pain for abuse potential could aide in future identification and potential prevention of prescription opioid misuse. A further review of the literature regarding potential factors that contribute to the misuse of prescription opioids, along with examination of current screening instruments and monitoring programs will be discussed. In addition, a synthesis of the literature followed by future implications, recommendations for Rehabilitation Counselors, and conclusions.

Definition of Terms

<u>Prescription opioid misuse:</u> A term used interchangeably with non-medical prescription analgesic use (NMPAU) that is the use of an opioid in a manner other than it was prescribed.

<u>Primary care provider:</u> any medical professional trained and certified to prescribe medications. (ie. physicians, dentists, psychiatrists, and nurse practitioner)

<u>SAMHSA-Substance Abuse and Mental Health Service Administration:</u> A federal agency that was developed to improve upon prevention and treatment for substance abuse and/or dependence, and mental health services.

<u>DSM-IV-Diagnostic and Statistics Manual:</u> Published by the American Psychological Association (APA), this manual is a standard classification for all mental disorders.

<u>SUD-Substance Use Disorder:</u> A disorder in the DSM-IV that is characterized by abuse or dependence, depending on the severity of the substance use.

<u>PWD-Persons with a disability:</u> Any person who has a physical or mental impairment that substantially limits one or more major life activities, that has a record of such impairment, or is regarded as having such an impairment.

<u>PMQ-Pain Management Questionnaire:</u> A self-reported screening instrument that is used to assess potential opioid misuse in individuals experiencing pain.

<u>POMI-Prescription Opioid Misuse Index:</u> An interview based screening instrument that is use to assess potential aberrant drug-seeking behaviors.

<u>SOAPP-Screener and Opioid Assessment for Patients with Pain:</u> A brief screening instrument to assess potential opioid misuse in individuals seeking long-term opioid therapy.

<u>PODS-Prescription Opioid Documentation and Surveillance System:</u> A computer based survey instrument used to help primary care providers when determine opioid therapy appropriateness.

<u>COMM-Current Opioid Misuse Measure:</u> A screening instrument used to assess current aberrant drug-seeking behaviors in individuals currently undergoing opioid therapy.

<u>PMP-Electronic Prescription Monitoring Program:</u> A monitoring program was the implemented as a means for primary care providers and law enforcement agencies to monitor abuse and diversion.

<u>RADARS-Research Abuse, Diversion, and Addiction Related Surveillance:</u> A risk management program developed to detect abuse and diversion of opioids within a certain geographically region.

CHAPTER 2

OVERVIEW OF LITERATURE

Characteristics

The current literature in discussion examined characteristics associated with prescription opioid misuse in individuals with chronic pain. A study conducted by Cicero, Lynskey, Todorov, Inciardi, and Surratt (2008) sought to determine if chronic pain was a factor in prescription opioid misuse and if early substance use is a precursor for opioid misuse. The researchers found that 60 % of individuals who were nonmedically misusing opioids reported moderate to severe chronic pain and reported a low quality of life. In addition, 45% reported misusing opioids solely due to his or her pain, whereas only 14% used opioids for the first time "to get high". Specifically, between 60-70% of the participants reported continuing the use of opioids even after his or her pain had subsided. In this study, early exposure to substances had a significant impact on the individual's psychopathology. Females represented the majority of individuals whose first time use was for pain management, while males tended to use for the euphoria effects. Moreover, this study has recognized that any service provider working with individuals with chronic pain need to remember the impact opioids could potentially have on the consumer (Cicero, Lynskey, Todorov, Inciardi, & Surratt, 2008).

Consistent with the above study, Becker et al. (2009) performed a study to determine if a relationship exists between chronic pain and prescription drug abuse.

More specifically, this study used Veteran participants whom were referred for a behavioral health evaluation from the primary care provider. The results yielded an independent correlation between chronic pain and prescription drug abuse. Furthermore,

the researchers found that those misusing prescription opioid are "younger age, being unmarried, having a strained financial situation, possible and probable depression, current smoking, past year illicit drug use, and chronic pain were all associated with any prescription drug abuse" (Becker et al., 2009, p.533). In addition, results were consistent with that of previous empirical data and found that individuals who were younger and had used illicit drugs previously, or had a mental illness were at higher risk for prescription drug abuse (Becker et al., 2009).

Additionally another study, conducted by Ives et al. (2006) utilized a multidisciplinary approach when managing participants that consisted of "a clinical pharmacist practitioner, an internist, a psychiatrist with sub-specialization in pain medicine, a nurse, and a program assistant" (p.1) when assessing for potential risk factors associated with prescription opioid misuse. Unlike the previous mentioned study, the researchers did not find a consistent correlation between pain and prescription opioid misuse. On the other hand, the most prominent factors linked to non-medical prescription opioid misuse was self-reported history of alcohol or cocaine abuse along with previous drug or alcohol-related convictions. Moreover, the researchers suggest that the study population appears to be more likely to have co-occurring disabilities.

Additionally, those with co-occurring substance use disorders (SUD) are at a higher risk for morbidity and mortality. Furthermore, the researchers justified a need to minimize the risk associated with non-medical prescription opioid misuse, while also maximizing chronic pain management (Ives et al., 2006).

Novak, Herman-Stahl, Flannery and Zimmerman (2009) conducted a study to determine if there is a correlation between physical pain and non-medical prescription

analgesic use (NMPAU) utilizing cross-sectional data from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC) and a community based sample. The results yielded that there is a positive correlation between levels of pain and NMPAU for both individual who do and do not meet DSM-IV criteria. Results reflected that even with the additional factor of substance use and psychiatric disabilities the correlation remained consistent; therefore, implying that there is an independent correlation between pain and NMPAU. The researchers also found that prior substance use was a prominent factor with NMPAU according to the degree of pain. On the other hand, the study indicated that there is a high prevalence of co-occurring disorders between SUDS and psychopathology. Specifically, there is a distinctive relationship between anxiety disorders and those who do not meet DSM-IV criteria. Meanwhile, there is a similarly unique relationship between mood disorders and those that do meet DSM-IV criteria for abuse and/or dependence (Novak, Herman-Stahl, Flannery & Zimmerman, 2009). This study is consistent with previous studies mentioned above, yet it provided valuable information on co-occurring disorders.

As the research suggests, individuals misusing prescription opioid appear more susceptible to have a SUD and/or mental disability. With this notion, co-occurring disorders rendered a further evaluation to examine whether or not a relationship exists; however limited research exists on persons with a disability (PWD). Brucker (2008) conducted a study that involved determining if there is a link between prescription drug abuse and persons with a mental disability. PWD more frequently interact with medical professionals; hence, this population appears to be more prone to being prescribed opioids with a greater chance of misusing prescription opioids. Moreover, according to

Waldrop and Stern (2003), substance abuse by PWD accounts for 53 million individuals in the United States (as cited by West, Graham, and Cify, 2009). The researchers found that individuals with a mental disability are significantly more susceptible to have an issue with misusing opioids. Additionally, PWD with primary alcohol, marijuana, or cocaine abuse were less likely to have a secondary problem with opioid misuse, which is in contrast to previous findings (Brucker, 2008).

A study proposed by Becker, Sullivan, Tetrault, Desai, and Fiellin (2008) assessed clinical characteristics associated with psychopathology and how it relates to non-medical use of prescription opioids. All participants had admitted to past year prescription opioid misuse. The researchers found "that younger age (especially 18–21), Hispanic ethnicity, unemployment, panic, depressive and agoraphobic/social phobic symptoms, past-year alcohol abuse/dependence, cigarette smoking, other prescription drug misuse, other illicit substance use and young age of initiating substance use are significantly associated with past-year non-medical use of prescription opioids" (Becker, Sullivan, Tetrault, Desai, & Fiellin, 2008, p.41). Moreover these researchers indicated potential risk factors associated with the ever growing problem of prescription opioid misuse, consistent with previous research that can help primary care providers identify individuals that may be at risk to develop a prescription opioid misuse.

Another study attempted to better describe the characteristics of individuals and the correlation and predictors of the misuse. Passik, Hays, Eisner, and Kirsh (2006) found that 84% of the participants reported that they have received a prescription from a physician for pain management at some point, with 61% reported experiencing chronic pain, while all participants reported non-medical misuse of prescriptions. According to

the Distress Thermometer, the biggest concern for the participants was pain (76%), while 55% indicated distress due to anxiety, and 53% was reportedly due to depression. Additionally, 91% had obtained the opioid from a street dealer and 80% changed the intended route of administration. Furthermore, the researchers finding was consistent with that of previous studies and indicated that individuals who non-medically misuse opioids tend to have co-occurring substance abuse and/or dependence along with a psychiatric disability (Passik, Hays, Eisner, & Kirsh, 2006).

Medical Professionals

The dilemma occurs most frequently to primary care providers regarding treatment modalities for individuals with chronic pain. The primary care providers are essentially in this dilemma due to the inefficient training received in relation to pain management and substance abuse or dependence (Wiedemer, Harden, Arntd, & Gallagher, 2007). Wiedemer Harden, Arntd, & Gallagher conducted a study to measure the effectiveness of a program implemented at an Opioid Renewal Clinic (ORC) in a primary care setting (2007). Additionally, the researchers consisted of a nurse practitioner, clinical pharmacist, and a multidisciplinary team. The program consisted of an opioid treatment agreement that included urine drug testing and other standardized documentation. The results suggest that the use of the ORC model in this study provided a decrease in positive urine drug tests and a decrease in aberrant behaviors (Wiedemer et al., 2007). Moreover, this study suggested that primary care providers can manage treatment for individuals with chronic pain with appropriate tools while utilizing a multidisciplinary team.

In a study conducted by Gunderson, Levin, and Owen (2008), the researchers assessed students in a residency training program when screening for alcohol misuse and illicit drug use, by incorporating a two-day training session into the curriculum at a substance abuse treatment facility. The results yielded that the medical residents improved in the screening evaluation of consumers in regards to alcohol; however, the residents still did not utilize a valid alcohol screening instrument such as the Cut Down, Annoyed, Guilty and Eye Opener (CAGE). On the other hand, the participants were more likely to screen for illicit drug use due to the familiarity with the DSM-IV criteria during the training program (Gunderson, Levin, & Owen, 2008). Similarly to the previous study, the researchers provide adequate knowledge for the need of training in primary care providers when screening for illicit drug use.

Additionally, Isaacson et al. (2005), reported seven red flag signs that may aid in the identification of individuals misusing prescription opioids (As cited by Weigel, Donovan, Krug, & Dixon, 2007).

"These warning signs are (a) demonstrating more concern about obtaining a drug than about resolving any medical issues, (b) reporting multiple medication sensitivities, (c) stating an inability or unwillingness to take generic medications, (d) refusing to participate in diagnostic workups or consultations, € presenting with an unusually sophisticated knowledge of drugs, (f) appealing to the physician that he or she is the only person who can help, and (g) reporting lost or misplaced prescriptions (as cited in Weigel et al., 2007).

The purpose of these warning signs is to provide primary care providers that have experienced little to no training what to look for when evaluated for potential prescription opioid misuse.

Screening

Although there are several studies that include characteristics associated with prescription opioid misuse, there appears to be a need within the medical community to receive training associated with the utilization of effective and efficient screening instrument when assessing potential or immediate risks factors for prescription opioid misuse.

The first instrument is known as the Pain Medication Questionnaire (PMQ) developed by Adams et al. (2004), a 26-item self-reported screening instrument measuring for potential opioid misuse in individuals with chronic pain. Validity was measured by comparing the PMQ scores with variables that include "the outset of treatment, including measures of substance abuse, psychosocial distress, physical/functional ability, and employment status" (Adams et al., 2004, p. 442). Moreover, several types of validity were examined and results indicated that the higher PMQ scores were usually seen in individuals receiving opioid treatment, reporting more psychological distress, and poorer physical functioning that may make these individuals more at risk for prescription opioid misuse. In addition, those who reported unemployment status scored higher on the PMQ and demonstrated more attitudes and behaviors that could put them at risk for misuse (Adams et al., 2004).

Similar findings to that of the previous study, Holmes et al. (2006) concluded that the higher the PMQ scores, the more likely a participant is at risk to misuse opioids. In

addition, the facility is comprised of an "interdisciplinary treatment program that includes medical, psychological, psychiatric, and physical therapy components" (Holmes et al., 2006, p. 76). The interdisciplinary team approach may have yielded the most captivating finding in that as the participants went through the program a decrease in the PMQ scores were displayed; therefore, a risk decrease in opioid misuse. Also noteworthy, demographically speaking, the results indicate that individuals receiving disability funding services were more likely to misuse prescription opioids (Holmes et al., 2006).

Buelow, Haggard, and Gatchel (2009) designed a study as a validation process to determining the validity of a condensed version of the PMQ, while also evaluating the predicted validity for prescription opioid misuse. Results yielded similarly to that of Holmes et al. (2006) and were consistent with the findings from Adams and colleagues. Moreover, the utilization of an interdisciplinary team has shown to have positive effects on diminishing the risks associated with prescription opioid misuse (Buelow et al., 2009).

The Prescription Opioid Misuse Index (POMI) is a screening tool assessing an individual based upon an 8-item interview addressing prescription use behaviors.

Knisely, Wunsch, Cropsey, and Campbell (2008) results indicated that after running several analysis, 6-items were deemed necessary in determining which participants were using a prescription opioid as it was medically intended, and those individuals at risk for prescription opioid misuse. An important finding this study revealed was that a highly correlated response to at least two of the six questions classified an individual with a prescription opioid misuse (61.7%) met DSM-IV criteria for opioid abuse or dependence. Additionally, out of the number of individuals that were known to have a substance abuse or dependence, 100% met the criteria for at risk of misuse. Moreover, the POMI is said

to be and efficient and effective screening instrument in identifying individuals who may be at risk for prescription opioid misuse (Knisely, Wunsch, Cropsey, & Campbell, 2008).

The Screener and Opioid Assessment for Patients with Pain (SOAPP) was developed as a brief screening instrument to help assess individuals with chronic pain considering long-term opioid treatment (Butler, Budman, Fernandez, & Jamison, 2004). Butler, Budman, Fernandez, and Jamison (2004) developed this instrument to assess aberrant drug behaviors associated with non-medical prescription opioid misuse. SOAPP is a measure that is easily understood by participants and took minimal time to administer and produce results. Researchers evaluated the internal consistency by using an alpha (α) Coefficient for the 14 items in the SOAPP prediction score. The initial SOAPP responses were calculated along with the follow-up responses. Both scores were calculated and were consistent yielding an α =.74. To determine reliability, test-retest was examined utilizing a Pearson product moment correlation between the predicted baseline score and at a 6-month follow-up. The result yielded a correlation was 0.71 and indicated that the screening method is reliable and valid. The appropriateness of the instrumental is necessary in order to yield valid results and should be used concurrently with medical records and any additional health records (Butler et al., 2004).

Akbik et al. (2006) conducted another examination of the SOAPP, to assess further validation of the instrument. Reliability was consistent with the previous study and results indicated an α =0.75. In addition, the researchers found that after "a combined factor analysis of the SOAPP revealed five factors labeled 1) history of substance abuse, 2) legal problems, 3)craving medication, 4) heavy smoking, and 5) mood swings" (Akbik et al., 2006, p.287). Moreover, the research suggests that this instrument is a mean to use

when determining potential prescription opioid misuse in individuals with chronic pain (Akbik et al., 2006).

The Prescription Opioid Documentation and Surveillance (PODS) System was developed by Wilsey, Fishman, Casamalhuapa, & Gupta (2009) for the purpose of meeting "several specific clinical and documentation needs related to assessment, education, and tracking of patients undergoing chronic opioid therapy" (p.867). The PODS system is a computer based survey instrument that utilizes several assessments to help clinicians determine appropriateness when initiating opioid therapy in individuals with chronic pain. The preliminary research conducted in this study resulted in a potential effective and efficient screening instrument to help assist clinicians without any face to face contact when determining consumer's pain management (Wilsey et al., 2009).

Another screening instrument, Current Opioid Misuse Measure (COMM), measured past thirty days prescription misuse behaviors. Butler et al. (2007) developed a study for the validation of the COMM, assessing participants receiving services from a pain management specialist. Content validity was evaluated through the utilization of a panel of experts, specifically pain and addiction specialist, in an analysis of concept mapping. The 40-item questionnaire consisted of seventeen items that results yielded reliability and validity in the identification of prescription opioid misuse in consumers currently on long-term opioid treatment. Unlike the SOAPP designed to measure risk potential, the COMM assess current behaviors and thoughts regarding the misuse of current prescription opioids (Butler et al., 2007).

In a further evaluation of the COMM, Meltzer et al. (2011) evaluated the diagnostic characteristics of the instrument according to the DSM-IV criteria for prescription drug use disorder (PDD). Unlike the study mentioned above, the researchers conducted the study on primary care patients with chronic pain. The findings indicated the COMM can differentiate those consumers who meet DSM-IV criteria for PDD, have a co-occurring substance use disorder, or no disorder. Moreover, it can be said that this screening instrument can be beneficial for primary care providers as it can be administered in approximately ten minutes and has been rendered useful in determining consumers who are less likely to participate in prescription opioid misuse (Meltzer et al., 2011).

Monitoring

The Electronic Prescription Monitoring Program (PMP) was developed as a mean of balancing pain management and prescription opioid misuse to the extent that it is utilized by the medical community (Katz et al., 2008). PMP is designed to not only track individuals seeking multiple opioid prescriptions, but it also detects excessive prescription prescribed by a single primary care provider (DuPont, 2010). According to a survey conducted by Katz et al. 18 of 23 currently running PMP administrators responded to the study (2008). In response to whether or not healthcare providers had access to the PMP information, analysis concluded that "two programs provided unsolicited data to providers (e.g., providing unsolicited threshold reports on those patients who exceed predetermined prescription thresholds), nine provided information upon request only, and seven programs did not share data with providers" (2008, p. 589). Moreover, the researchers suggested the need for further research in order to validate the relevance in

engaging medical professionals in the use of PMP to aid in the access to opioid as a pain relief while decreasing the number of consumers misusing prescription opioids (Katz et al., 2008).

Barrett and Wilson (2005) conducted a study to survey physicians in order to assess their knowledge of the newly implemented PMP and their attitudes towards the program. Astonishing, less than half of the physicians participating in the study had heard about the PMP prior to receiving the survey instrument; therefore, these physicians were not included in the results. A mere 11% responded that the implementation of the PMP alternated their current practice (Barrett & Wilson, 2005). Some physicians indicated that they did not use the PMP because 40% did not understand how to properly obtain the necessary information. In addition, 25 % did not think the information was relevant, whereas 18% did not participate in the PMP due to the fact that they did not like how the information could not be received immediately upon request (Barrett & Wilson, 2005). The researchers indicated that physicians are concerned as to the role of the physician patient relationship. More specifically, how with the implementation of the PMP affect consumers privacy, and what role will law enforcement have in the program (Barrett & Wilson, 2005).

The Researched Abuse, Diversion and Addiction Related Surveillance (RADARS) system was established as a risk management program assessing geographical abuse and diversion of opioid drugs, mainly OxyContin, in the pursuit of preventative measures (Cicero et al., 2007; Katz, Dart, Bailey, Trudeau, Osgood, & Paillard, 2011). Cicero et al. utilized detection systems that consisted of experts in the fields of substance misuse and pain management as it relates to prescription opioid

misuse, information collected from law enforcement agencies regarding diversion of prescription opioids, and data was collected from the Poison Control Center in regards to intentional prescription opioid misuse (2007). The researchers found an overlaying between each of the three detection systems which appear to indicate that the RADARS system has been validated to regionally understanding that prescription opioid misuse is a nationwide problem and can be further evaluated based upon specific regions.

Furthermore, the utilization of this system could potentially assist in determining more regional specific interventions when facing prescription opioid misuse (Cicero et al., 2007).

Summary of Chapter 2

Upon evaluation of the literature, several studies indicated a positive correlation between prescription opioid misuse and individuals with chronic pain. Throughout these studies, the researcher's findings were fairly consistent with one another and reported that individuals who are younger, have a past history of alcohol and/or illicit drug use, or have a medical disability appear to be prominent factors linked to prescription opioid misuse. Moreover, these factors suggest that individuals who have co-occurring disorder are more apt to misuse prescription opioids; however, there is a lack of research involving this specific population and the misuse of prescription opioids. The identification of potential risk factors associated with prescription opioid misuse could assist primary care providers when determining long-term opioid therapy.

The predicament for primary care providers is determining long-term opioid therapy appropriateness for individuals experiencing chronic pain. Research suggests that medical professional do not necessarily receive the required training to work with

individuals with addictions and/or pain management. On the other hand, when the primary care providers received brief training or guidelines when prescribing, there was a decrease in aberrant drug-seeking behaviors.

In order for medical professionals to be able to adequately determine the appropriateness for long-term opioid therapy, they must first utilize a screening instrument. There are several screening instruments available for primary care providers prior to the initial prescribing of the opioid. Many of these instruments assess for potential characteristics and aberrant drug-seeking behaviors associated with prescription opioid misuse. Moreover, individuals being prescribed opioids for long-term therapy should also be continuously monitored through the utilization of the PMP and RADARS.

CHAPTER 3

DISCUSSION AND IMPLICATIONS

Summary

Opioids have been viewed as an effective pharmacological treatment for individuals experiencing chronic pain, yet there has been a steady increase in prescription drug misuse. This widespread epidemic has brought upon a vast awareness throughout the research community. Meanwhile, research is steadily attempting to provide adequate information to medical professionals when faced with controversy surrounding opioids (Rosenblum et al., 2008). Much of the ambiguity lies in determining whether or not an individual will benefit from prescription opioids, or if the initial usage may develop into a prescription opioid misuse.

Consistent throughout the literature, chronic pain and prescription opioid misuse were found to have a positive correlation (Becker et al., 2009; Cicero et al., 2008; Novak et al., 2009). The correlation between chronic pain and prescription opioid misuse solidified the need for a further evaluation of the affiliation between these two concepts. In addition, chronic pain and prescription opioid misuse appear to have validated a unique concern as Passik et al. found, the majority of the participants in the study were once prescribed an opioid from a primary care provider (2008).

In those individuals experiencing chronic pain, two distinct characteristics were found to be risk factors associated with prescription drug misuse. More specifically, individuals who were found to have a psychological disorder and/or previous substance abuse or dependence were more likely to misuse prescription opioids. That is to say, co-occurring disorders were more likely to be a contributing factor to individuals who were

misusing prescription opioids. In addition, individuals who use illicit drugs at a younger age tend to be more susceptible to prescription drug misuse.

Although there are certain characteristics that provided evidence for medical professionals as potential risk factors associated with prescription opioid misuse, research suggests that lack of training for primary care providers may also contribute. On the other hand, when primary care providers were afforded the opportunity to participate in a structured program, findings yielded positive results. In addition, it appeared that those studies that utilized a multidisciplinary team tended to see better results in the decrease of aberrant behaviors associated with prescription opioid misuse.

Research has shown several screening instruments to aide medical professionals when providing an adequate evaluation in determining pharmacological treatment appropriateness for consumers with chronic pain. The PMQ, POMI, and the SOAPP are instruments that have been proven to be efficient and effective when assessing individuals prior to opioid recommendation for potential risk factors associated with prescription opioid misuse. Perhaps the most time efficient instrument is the PODS system, which involves little effort on behalf of the primary care provider. Unlike the previously mentioned screening instruments, the COMM assesses the consumer's current behaviors and can be valuable throughout the ongoing process of long-term opioid therapy.

Not only should medical professionals utilize the existing screening instruments that have been found to be reliable and valid, but one must also consider monitoring throughout the consumer's long-term opioid therapy process. The PMP was created as a means to provide access of prescription opioid misuse to healthcare providers; however,

Katz et al. suggested that majority of the PMP did not implement an effective system in exchanging the data (2008). On the other hand, if PMP is utilized, it is found to have assisted in evaluating for some aberrant behaviors. Additionally, the risk management program RADARS could yield beneficial upon determining appropriate interventions, in specific geographical regions.

Implications

Although much attention has been given to prescription opioid misuse in recent years, there appears to be a lack of research conducted on PWD in the literature (Brucker, 2008). More specifically, there appears to be an absence of information in assisting primary care providers in how to treat co-occurring disorders. In other words, primary care providers have a predicament when it comes to determining appropriate treatment modalities for individuals experiencing chronic pain with co-occurring psychological and/or substance use disorders, due to the associated characteristics for prescription opioid misuse (Jamison et al., 2010). Co-occurring disorders are seen to be most effectively treated simultaneously, yet a further evaluation into the treatment of chronic pain, SUDs, and psychological disorders may assist primary care providers in the direction of the most effective and efficient treatment for individuals with co-occurring disorders.

Additionally, there still appears to be a lack of training guidelines for primary care providers when determining appropriateness for pharmacological treatment in pain management. More or less, the fact still remains that both the primary care provider and the consumer need to become educate on the abuse and dependence potentials that can accompany the use of prescription opioids. In the future, research will need to guide

primary care providers in a direction that measures how effective implementing the use of screening assessments and monitoring programs are in decreasing aberrant drugseeking behaviors in individuals on long-term opioid therapy.

Recommendations

The literature suggests that there has been a shift from individuals with chronic pain receiving treatment from a pain management specialist, to a primary care provider. In fact, many of the studies indicated that guidance from pain and addiction specialists provided resourceful in gather adequate knowledge in addressing the problem of prescription opioids. Thus the responsibility of tackling prescription opioid misuse should be viewed from a multidisciplinary team approach (Naliboff, Wu, & Pham, 2006). In other words, this vast growing problem should be regarded by all medical professional providing comprehensive services to individuals with chronic pain, not primary care providers alone. The research has shown that screening instruments are useful tools when detecting potential misuse; however, screening instruments by themselves will not unravel the problem. These instruments should be utilized prior to determining pharmacological treatment, while also educating consumers on potential detrimental effects of prescription opioid misuse.

Several studies suggested the importance of employment in individuals experiencing chronic pain, not only to optimize quality of life, but because of the risk factors associated with unemployment and prescription opioid misuse. Moreover, it is critical for Rehabilitation Counselor to be aware of the impact prescription opioid misuse has on potential consumers with chronic pain. In addition, it is important to note that those employed in the blue collar industries or those that work in any manual labor

position tend to experience chronic pain more frequently than those in a sedentary position (Inciardi & Cicero, 2009). Rehabilitation Counselors may be administering vocational evaluations on consumers when exploring alternate employment opportunities. Thus, Rehabilitation Counselors must take an active role as part of the multidisciplinary team in screening individuals for prescription opioid misuse. As vocation being a primary goal for the role of the Rehabilitation Counselor, it is critical for employment purposes that issues of prescription opioid misuse are not involved, yet if in fact it is the case, helping consumers find the necessary resources available should be a priority in the rehabilitation plan (Brucker, 2008).

As research suggests, co-occurring disabilities appear to be more prevalent in individuals with chronic pain because of the physiological, psychological, and societal affects. Furthermore, as Rehabilitation Counselor working closely with persons with disabilities, it is vital that the counselor utilized available resources while also concurrently providing the necessary services to the consumer.

Conclusion

Based on the evidence gathered, it is imperative that medical professionals become aware of the potential risk factors associated with prescription opioid misuse in individuals seeking long-term opioid therapy for chronic pain, while utilizing valid screening instruments along with monitoring programs. Moreover, the problem of prescription opioid misuse needs to be address from a multidimensional team approach, while also advocating for the need to train medical professionals. DuPont best described the notion that prescription opioid misuse "will require significant changes in strategy in

medical practice, drug development, law enforcement, and public education" (2010; El-Aneed et al., 2009).

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