NATIONAL FORUM JOURNAL OF COUNSELING AND ADDICTION
VOLUME 3, NUMBER 1, 2014

Sleep Aids: Sedative-Hypnotic Drugs in America

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Abstract

Sedative-hypnotic products such as, Ambien, Doral, and Lunesta are common sleep aids, prescribed for the treatment of a variety of sleep disorders. When taken as directed, and properly monitored, this can be an effective form of treatment. In many situations this is not the case. Prolonged use can lead to a patient becoming dependent upon the drug and ultimately addicted. This has become a widespread problem within the United States. "At least 8.6 million Americans take prescription sleeping aids, and between 50-70 million suffer from disrupted sleep" (CNN, 2013, p. 1). With this growing trend of drug utilization to manage sleep disturbances, an increase in people becoming addicted to the substances seems inevitable.

The use of sedative-hypnotic sleep aids has been a topic of discussion in the medical community since their inception. In 1904, Farbwerke Fr Bayer and Co introduced diethyl-barbituric acid as one of the first hypnotic, sedative, and anti-convulsant medications (López-Muñoz, Ucha-Udabe, & Alamo, 2005). It was thought that when used correctly, this drug could be useful in combating a variety of afflictions. Although popular in main stream medicine, not everyone agreed that the pros would outweigh the cons. In a correspondence in the *British Medical Journal*, the authors discuss this at length. "I have no hesitation in saying that where a proper discretion is exercised in the choice of patient, serious toxic symptoms with the usual medicinal doses (5 to 10 grains), even when long continued , are rare" (Gillipse, et al., 1927, p. 1125). Coauthor Agnes Savill argues that "although these drugs can help produce sleep in an

individual, this will greatly affect one's cognitive functioning as well as emotional stability" (Gillipse, et al., 1927, p. 1125). As with any medication, sleep aids have both positive and negative side effects. Whereas they may be helpful in granting an individual a full night's sleep, they are in many cases habit forming, and can produce many dangerous side effects.

Literature Review

In today's fast paced society, disturbances in sleep patterns are a common problem for many Americans. Approximately 10-15% of the population suffers from insomnia (Sateia & Nowell, 2004, p. 1959). Work overload, emotional stress, and financial worries can lead to an individual not attaining the proper amount of sleep to live a healthy lifestyle. "The National Sleep Foundation suggest that seven hours of sleep is the minimum amount of sleep that adults need on a regular basis for optimal performance" (Chong, Fryar, & Qiuping 2013, p. 4). While there are a number of over the counter, non-habit forming sleep aids, many people choose to seek medically prescribed alternatives instead. In the minds of many it is easier to seek out a magic pill to solve their problems than to find the extra hours in the evening to wind down and get a good night's rest. Paul Roman points this out when he states, "Many persons afflicted with anxiety and/or exhaustion, which may be related to sleep deprivation, may seek help from various medical professionals, general practitioners, as well as psychiatric specialist" (1972, p. 1973). This magic pill mindset could be a leading cause in the increase in sleep aid addiction throughout America. "50-70 million Americans suffer from sleep disorders or deprivation" (Chong et al., 2013, p. 5). As found in the *Diagnostic and Statistical Manual of Mental Disorders* (5^{th} ed.),

> Sleep-wake disorders encompass 10 disorders or disorder groups: insomnia disorder, hypersomnolence disorder, narcolepsy, breathing-related sleep disorders, circadian rhythm sleep-wake disorders, non-rapid eye movement (NREM) sleep arousal disorders, nightmare disorder, rapid eye movement (REM) sleep behavior disorder, restless leg syndrome, and substance/medication-induced sleep disorder. (APA, 2013, p. 361)

The treatment for many of these can include sedative-hypnotic drugs. For example, for one to be diagnosed with insomnia disorder, a patient would need to show a chronic pattern of having difficulty falling asleep and/or maintaining sleep throughout the night. Some of the signs and symptoms of insomnia disorders include "appear either fatigued of haggard or, conversely, over aroused and 'wired'" (APA, 2013, pp. 366-65). Pair these alongside the "increased incidence of stress-related psychophysiological symptoms (e.g., tension headache, muscle tension or pain, gastrointestinal symptoms)" (APA, 2013, pp. 366-65), and one can see how this can create problems in all aspects of an individual's life. Therefore, it is easy to understand how one might turn to sleep aids in order help stabilize their sleep patterns. Yet, even as we identify problems in sleep habits, one should use caution before diagnosing and treating any sleep disorder. There are many factors that can account for sleep disturbances (Teplin, Raz, Daiter, Varenbut, & Tyrell, 2006).

Many of the more common sleep aids can be categorized under three different types of central nervous system depressors, or CNSs. These are Benzodiazepines, Non-benzodiazepines,

and Barbiturates. Benzodiazepines (e.g., Valium, Xanax, and Halcion) are often used as means to relax or get high throughout the day, instead of at night to aid in sleeping. Due to this, many medical professionals choose to prescribe non-benzodiazepine alternatives such as Lunesta, Ambien, and Sonata. Although less habit forming than benzodiazepines, they can still be habit forming, and are accompanied by many different adverse side effects. Barbiturates like Luminal, Nembutal, and Meberal are often avoided due to their highly addictive nature, and relative ease of over dose (NIDA, 2011).

An increased number of adults are utilizing sleep aids, as can be seen in the increase in emergency room visits related to benzodiazepines, from 13,000 in 2004 to 29,000 in 2009 (NIDA, 2011, p.45). This increase in the use of prescription sleep aids shows that these drugs are ever more popular, and easily available, to all age groups. Utilizing sleep aids is not in itself a problem. With proper dosing and professional monitoring, these drugs can have a positive impact on an individual's life. As with any prescription medication, the problem lies in the fact that many use them for reasons other than which they were prescribed. In doing so they put themselves in danger of becoming dependent upon the drug. "It seems that about a third of patients starting on hypnotic drugs may become dependent on them in low dosage for a long period if no effort is made by the general practitioner to discontinue them" (Clift, 1972, p. 616).

Identification of Sleep Aid Abuse

One of the leading problems in identifying sleep aid abuse and addiction is the demographic in which it prevails. The common stereotype for drug users does not apply to this case. In a study conducted in 2013, Chong et al. suggests that sleep aid use in adults is predominantly found in older, non-Hispanic white women, as well as more use among those with higher education. This deviation in the stereotypical concept that many have regarding drug addicts also applies to teen users. Teenage users of prescription drugs are often white females. (Twombly & Holtz, 2008). What one thinks a drug addict is and the truth about one are often two totally separate things. This can be the case even in the professional setting. "Much of the descriptive terminology associated with drug abuse refers more directly to the perceived attributes and characteristics of the individual than it does to his drug-using behavior" (Kupperstien, 1975, p. 79). Another problem with identifying prescription drug dependence is that many of the side effects are psychological in nature. This makes it difficult to spot unless trained to look for specific things. Additionally, many abusers often see multiple doctors and receive prescriptions from both. These problems can make it hard to pinpoint when someone is taking the prescription as "recommended" or not. The exact signs involved in identifying prescription drug abuse can vary according to the drug being taken. In the case of sedative-hypnotic drugs, identifying these signs can become more difficult the longer an individual has taken the drug. As the body begins to grow accustomed to the drug and build up a tolerance, the signs can become less noticeable. The common symptoms and side effects of these drugs can include drowsiness and loss of coordination. The outward appearing symptoms are only a small part of the danger involved in taking a CNS depressor. Because these drugs work by suppressing brain activity, there are many different possible side effects. These include seizures, inhibition of cardiac rhythms, slow respiration, and sometimes death (NIDA, 2011). If a person mixes these

drugs with another, such as alcohol or a stimulant, as is often the case, the level of danger will rise significantly.

Another startling fact about the abuse of prescription drugs is the prevalence of use among adolescents and young adults. "The current generation of youth has been referred to as 'Generation Rx'" (Twombly & Holtz, 2008, p. 503). In 2005, nearly 10% of 12-17 year olds were utilizing prescription drugs. Of these teens, they were more commonly abused by 12 and 13 year olds (Twombly & Holtz, 2008, p. 504). In most cases of teen prescription use, the drugs are being acquired from their parents' medicine cabinet and distributed amongst each other at school or other social gatherings. This can present a huge problem as they move through life. The earlier an individual begins to abuse prescription drugs significantly correlates with a pattern of drug abuse and dependence later in life (McCabe, West, Morales, Cranford, & Boyd, 2007). In short, if an individual begins to abuse drugs early in life, they will more likely continue to do so as they grow older.

Conclusion

In order to get a handle on this growing trend of sleep aid use among adults and teens, we should work hard to not only educate ourselves, but our children as well on the dangers of misusing these drugs. We should put forth the effort to conduct more research on alternative therapies to sleep disorders. With sleep aids being one of the most common drugs used to deal with sleep disturbances, it would seem prudent that an effective means of dealing with the problem be found that does not include drugs with addictive qualities. There are vast amounts of over the counter alternatives that could be utilized in place of these dangerous medications. "OTC sleep aids are non-habit-forming and do not present the risk of allergic reactions and complex sleep related behaviors" (FDA, 2007, p. 3). Yet, even this should be used as a last resort in most cases. More focus should be put towards therapeutic techniques in making lifestyle changes to accommodate for their inability to rest properly. One simple solution that appears to work in some cases is simply finding a way to occupy one's mind instead of lying in bed obsessing over the inability to sleep. Changes in how one not only thinks about, but addresses the problem, has shown to be effective in many cases (Satia & Nowell, 2004).

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