

# Factors Precipitating Insomnia as Perceived by Low Cadre Company Workers in Nigeria

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## Abstract

The study investigated the factors precipitating insomnia as perceived by low cadre company workers in Nigeria. A total of 200 workers from Nigerian bottling company Owerri in Imo State and Abia State, aged 26-55 years participated in the study. From the sampled population of 200 participants representing equal number of males and females were drawn through systematic random sampling for analysis. A multivariate design was employed to test the hypotheses. The findings showed that incessant use of sleeping pills contributed 43% significantly to the causes of insomnia. Environmental factors contributed 22% significantly to the causes of insomnia. Psychiatric symptoms contributed 16% significantly to the causes of insomnia, substance abuse contributed 8% significantly to the causes of insomnia and gender differences contributed 7% significantly to the causes of insomnia. The remaining 4% accounted for the factors not considered in this study.

**Keywords:** Insomnia, Low Cadre Company workers, Nigeria.

## 1.0 Introduction

Sleep is a major factor in regulation of the body metabolism. It not only provides opportunity for the muscles to recuperate but enhances an individual's present awareness by enhancing concentration ability. It is a physiological rhythm process usually with gradual onset and characteristically, marked by reduction in metabolic indices, such as blood pressure, pulse rate, sensor activities and pronounced lack of consciousness (Lindsely, Hartman & Mitchell, 2011).

According to Webb (1975), sleep is a gentle tyrant, an inmate biological rhythm that can never be entirely side-stepped. Indeed, significant disruption in sleep is believed to be associated with metabolic changes that threaten the overall integrity of human organism, especially the integrating functions of the nervous system. Sleep researchers, however, have established that sleep is a complex process regulated by the brain and it obeys a 24 hours circadian clock. As we advanced in age our sleeping habits changes. In fact, most severe mental health challenges such as depression, anxiety, psychosis and stress often provoked or largely characterized by insomnia, just like good health is epitomized in most cases by adequate sleep. Insomnia on the other hand is a pathological condition that may be described to include difficulty in going to sleep, frequent nightmare awakenings, waking too early, or combination of these problems (Lacks & Morin, 2010).

Researchers have found that a normal night's sleep is mostly divided into two types, what is commonly called REM sleep (rapid eye movement) dream sleep, and non-REM (non dream) sleep. We can say that a person is in REM sleep when the bulge of his eyeball can be seen moving under his eyelids. Non-REM sleep can further be divided into four stages. After lying down, you gently enter stage one; drowsiness of shallow sleep. During this stage your muscles relax and your brain waves are irregular and rapid. Its first occurrence each night typically lasts between 30 seconds and 7 minutes. By the time you move into stage two (true sleep) where you will spend 20 percent of the night, brain waves become larger. You may have fragmented thoughts or images passing through your mind, but you are unaware of your surroundings and cannot see even if your eyes are open. Next, comes stage three and four deeper to deepest and this is what is also called the delta sleep; your brain produces large, slow waves. It is now that your body is most difficult to rouse, as most of your blood is directed to the muscles. During this time (usually about 50 percent of the night) body recovery and repair takes place and it is during delta wave sleep that human bodies grow. It is important to note that people who do not experience the deeper delta stages will likely feel fatigued, apathetic, or even depressed, the next day (Bootzin, 1978).

Finally, each cycle is completed by the radically different REM stages. During this dreaming stage (typically occurring about every 90 minutes) more blood is directed to the brain and your brain waves are almost the same as if you were awake. However, you cannot move your muscles. This immobility apparently keeps you from acting out dreams and hurting yourself or others. REM sleep is a time of high emotions. The heart beats irregularly, and blood pressure and breathing wavers. Both males and females appear to be sexually aroused. Males usually have an erection and genital blood flow increases in 'women. This occurs for all REM sleep, so it is not strictly related to erotic dreams. When an erotic dream does occur, evidence of sexual arousal increases. With all this emotional activity, you might expect that your muscles will be active during dreaming. The reverse is true, however, during REM sleep the body becomes quite still, as if the person were paralyzed. Very likely REM sleep paralysis prevents some hilarious-and dangerous escapades, (Hobson 1989). When REM paralysis

occurs, some people may violently leap out of bed and may attack their bed partners. This recently recognized problem is called REM behaviour disorder (Chase and Morales, 1990). A good percentage of people are believed to depend on sleep pills on daily basis. These drugs usually barbiturates, decreases both stage 4 sleep and REM sleep, which drastically lowered sleep quality (Kripke, Garfinkel, Wingard, Klauber & Marker, 2002). In addition a drug tolerance rapidly builds up such that the initial dosage quits working. Many people become dependent on sleep pills, "Junkies" who need an ever greater number of pills to get to sleep (Conn, 2004). However, many psychologists have suggested the use of behavioural techniques such as relation technique in treatment of insomnia (Jacobs, Benson & Friedman 1983). In a recent poll, 48 percent of adults ages 18 and older reported that, in the past year, they experienced insomnia a few nights or more each week (National Sleep Foundation, 2003). Insomnia is a complex disorder caused by a variety of psychological, environmental, and biological factors (Spielman & Glovinsky, 1997). However, when insomniacs are studied in sleep laboratories, the objectives quantity and quality of their actual sleep vary considerably, from disturbed sleep to normal sleep. Research has revealed that many insomniacs who complained of lack of sleep actually show completely normal physiological patterns of sleep – a condition described as subjective insomnia. For example, in one study 38 percent of the participants who reported that they suffered from insomnia actually had normal sleep (Edinger, Fins, Glenn, Sullivan, Bastian & Marsh, 2000). Equally increasing, the same early study showed detectable sleep disturbances in 43 percent of the participants who had no complaints of insomnia. The discrepancies may result from differences in the cognitions and emotions that surround sleep (Espie, 2002). People who experience insomnia- or those who only think they do may be less able to banish intrusive thoughts and feelings from consciousness even while they are trying to sleep.

## 2.0 Types and causes of Insomnia

**Temporary insomnia:** it is caused by worry, stress, hunger frustration and excitement. It usually set up a cycle in which heightened physical arousal. Then frustration and anger may cause more arousal which further delays sleep (Seidel, Roth & Dement, 1984).

**Sleep onset insomnia:** It is characterized by individuals having difficulties falling asleep at the hour at which they would like, but sleep is normal after it begins.

**Early - awakening insomnia:** It is characterized by walking up earlier than desired; either several times in the middle of the night or early in the morning.

**Chronic Insomnia:** This is said to *exist* if sleeping problems last for more than three weeks. Studies have shown that the sensations that are transmitted to the brain during REM sleep have little meaning on their own. They are in the form of raw neural energy that must be organized and interpreted in the process we call perception (Hochberg, 1988). In altered states of consciousness, distortions often occur in what is seen, heard and felt. Time passes differently and the body may seem distorted indeed, the body may even seem to have been left behind and is being observed from the outside during REM sleep. Learning experiences, dreams, memories, motives, and emotion *of* the individual can also Influence perception. Most people perceive insomnia in different ways. Some people believe that insomnia is caused by stressful environment and excessive anxiety. While some believe that it is as a result of taking different types of sleeping pills (Hauri & Linde, 1990).

Low cadre company workers in our society are faced with sleeplessness daily as result of waking very early for work and dismissing very late in the evening. For that reason, sleeplessness "insomnia" has become a problem among low cadre company workers in Nigeria.

## 2.1 Objectives of the study

The objectives of the study were to:

- Identify the factors that are responsible for sleep disorder "insomnia".
- Describe the circumstances which cause insomnia.
- Determine if there are gender differences in the perception of the etiology of insomnia.
- Discuss some remedies of insomnia.
- This study is very relevant to scientific and clinical knowledge because it will aid clinicians and doctors in redesigning a treatment package for the patients suffering of insomnia.

## 2.2 Hypotheses

- i. Workers will significantly perceive difficulty in getting to sleep as caused by incessant use of sleeping pills.
- ii. Workers will significantly perceived frequent nighttime awakenings as caused by stressful work environment.
- iii. Workers will significantly perceived sleeplessness as caused by psychiatric symptoms.
- iv. Workers will significantly perceive frequent night waking as caused by substance abuse.
- v. Male participants will not differ significantly from female in the perception of insomnia.

### **3.0 Method**

#### **Participants:**

A total of Two hundred (200) low cadre company worker participated in the study. They were randomly selected from the pool of workers population in the Nigerian bottling company in Owerri, Imo state and Aba, Abia State respectively. The systematic random sampling techniques' as a method used in selecting the participants of the study was conducted in such a way that in a cluster of 10 workers, one male and one female participant were selected for the study. The participants consist of one hundred (100) males and one hundred (100) females. There ages ranged from 26 to 55 year with the mean age of 40.5 and with the standard deviation (SD) of 8.8. One hundred and fifty (150) participants are holders of secondary school certificate while the remaining 50 participants are holders of first school leaving certificate as their educational qualifications.

#### **Instrument:**

The instruments used in this study were the insomnia rating scale (IRS), which was developed by Abamara (2012). The questionnaire comprised of 60 items which has a subscales measuring attitude towards the use of sleeping pills, environmental, psychiatric and substance induced insomnia. He obtained a cronbach alpha reliability of .84 by correlating scores obtain from structured questionnaire with scores obtained from General Health Questionnaire (GHQ). The GHQ is a screening instrument aimed at detecting non-psychotic psychiatric disorders, regardless of diagnosis in the community. The GHQ was originally developed by Goldbery (1972; 1978). It can also be used as self administered screening test to detect psychiatric disorders in people presenting for treatment. The questionnaire focuses on two major areas (a) inability to function normally and (b) the appearance of new and distressing phenomena. The GHQ consisted of 60 items each of which was followed by four responses. The respondents are expected to choose one.

#### **Procedure**

The data collection was done by the means of questionnaire. The questionnaire has two sections, A and B. Section A is for demographic data collection while Section B comprised the main items of the questionnaire. The questionnaire was structured in 5-point Likert format and they are as follows: 5 = strongly agreed, 4 = agreed, 3 = undecided, 2 = disagreed, 1 = strongly disagreed. The participants were randomly selected through cluster sampling techniques to give equal chances to all participants in Nigerian bottling company in Owerri and Aba. The participants have worked in these companies for the period of not less than six (6) months. The sleeping patterns of all the participants were carefully assessed by asking them and making a detailed chart on how many hours they sleep at night, in order to ascertain the degree of their sleeplessness before they were selected for the study. The administration of the questionnaire lasted for six consecutive days in the two soft drink plants. However, out of 210 questionnaires administered, 200 copies of questionnaires were completed and returned, representing 90% of the total questionnaire administered. Ten (10) copies of the questionnaire were discarded for improper completion. At end a total of 200 questionnaires were used for data analysis.

#### **Design/ Statistics**

Multivariate design was adopted, while multiple regression analysis was employed to test all the hypotheses of the study. The reason for using multiple regression analysis is that the study has many independent variables; (intake of sleeping pills, environments, psychiatric symptoms, substance abuse and gender) and the dependent variable was insomnia.

#### 4.0 Result

**Table 1: Summary Result of the Multiple Regression Analysis And F-Test Showing The Factors Precipitating Insomnia As Perceived By Low Cadre Company Workers In Nigeria**

Model	Independent variables	AdjustedR <sup>2</sup>	Adjusted multipleR <sup>2</sup>	F	P
1	<b>Sleeping pills</b>	0.43	0.25	28.68	.0001
2	<b>Environment:</b> - Light - Noise - Heat - Cold - Uncomfortable mattress, restlessness	0.22		25.49	.001
3	<b>Psychiatric symptoms:</b> - Depression - Anxiety - Panic	0.16		22.66	.001
4	<b>Substance abuse:</b> - Cigarette smoking - Indian Hemp - Alcoholism	0.08		2.033	
5	<b>Gender</b>	0.07		7.88	.001

#### Interpretation

The result showed that incessant use of sleeping pills contributed 43% ( $R^2 = 0.43$ ;  $F(199) = 28.68$ ;  $p < .001$ ) to the causes of insomnia among low cadre company workers. Environmental factors contributed 22%, ( $R^2 = 0.22$ ;  $F(199) = 25.49$ ;  $p < .001$ ), psychiatric factors contributed 16% ( $R^2 = 0.16$ ;  $F(199) = 22.66$ ;  $p < .001$ ), substance abuse contributed 8% ( $R^2 = 0.08$ ;  $F(199) = 20.33$ ;  $p < .001$ ) and gender differences contributed 7% ( $R^2 = 0.07$ ;  $F(199) = 7.88$ ;  $p < .001$ ) to the causes of insomnia. The remaining 4% was contributed by other factor not considered in the study.  $R^2 = 0.25$  showed that these factors jointly contributed 25% to the causes of insomnia among low cadre company workers.

#### 5.0 Discussion and Conclusion

The result from the study showed that sleeping pills, environment, psychiatric symptoms and substance abuse and gender differences contributed in various measures to the causes of insomnia as indicated in the interpretation of the result. Based on the mean result of the gender (male 18.97, female = 16.80). The result showed that male workers experienced insomnia more than female workers. This study also revealed that all the factors jointly contributed 25% to the causes of insomnia. Other factors not considered in the study contributed 4% to the causes of insomnia among low cadre company workers.

The finding of this study further revealed that most low Cadre company workers do not sleep well at night. They normally leave the office late after working hours, and after their official duties in the office, they will go home to start their domestic duties. The domestic duties normally take them long hours to complete. And when they finally get to bed they don't sleep well. In their attempt to get some sleep, most of them will resort to the use of some sleeping pills in order to induce them to sleep. A times some of them wake up to drink alcohol, such as beer and smoke cigarette or Indian hemp with the aim of trying to get some sleep. After all this attempts to get some sleep failed, most of them finally become depressed and anxious of what tomorrow's work environment will look like. Hence, the incessant stressful work environment had also induced this sleeplessness "insomnia" among these workers.

This finding is in line with the findings of Lahey (2004). He posited that in sleep-onset insomnia, individuals have difficulty falling asleep at the hour at which they would like, but sleep is normal after it begin. In contrast, early awakening insomnia is characterized by waking up earlier than desired, either several times in the middle of the night or early in the morning. Both are found in individuals experiencing no other psychological problems other than individuals undergoing periods of stress, anxiety or depression. Insomniacs tend to overestimate the extent of their sleeplessness, and some come to rely on hypnotics (sleep medication), which can exacerbate the problem. True insomnia often reflects normal age-related changes, but perhaps the most common cause is psychological disturbances. We usually have difficulty falling asleep when we are anxious or upset, and depression is often accompanied by early awakening.

In subsequent studies, researchers should verify if individual needs vary dramatically when it comes to sleeping.

A sincere self analysis will further determine if you are already in a healthy pattern or are experiencing a sleep debt. I therefore agree that sleep comes easily without resorting to drugs or fighting restlessness or anxiety.

### Recommendations

1. **Stimulants:** avoid stimulants such as coffee and cigarettes.

Remember too that alcohol, while not a stimulant, impairs sleep quality.

2. **Worries:** Find a convenient time to write down your worries or concern and what you will do about it the next day.

3. **Relaxation:** Device a physical or mental strategy for relaxing.

Such as progressive muscle relaxation, strenuous exercise during the day promotes Sleep, but it is usually too stimulating in the evening. Avoid taking heavy meal in the evening, light evening exercise may be helpful.

4. **Sleep restriction:** when you have a hangover, do not sleep late in the morning, nap more than an hour, sleep during evening, or go to bed early the following night. Try to restrict sleep to your normal bedtime hours, by so doing you will avoid fragmenting your sleep rhythms.

5. **Stimulus control:** Associate only sleep with your bedroom so that it does not trigger worrying. Go to bed when you are feeling sleepy.

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