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OCCURANCE AND CAUSES OF INSOMNIA IN YOUTH OF BAHAWALPUR DIVISION OF PAKISTAN

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Abstract: Insomnia is a globally occurring sleep disorder, affecting specially the youth and more than 30 % of the adults complain to have at least few of the symptoms of sleeplessness. The objective of this study was to highlight the occurrences and basic causes of insomnia in both male and female youth of Bahawalpur (Pakistan). This survey base study was conducted by random circulation of specifically designed questionnaires among a sample size of 500 individuals (250 of each gender) having age in between 16-25 years. The questionnaires contained various questions regarding the occurrences, types and fourteen basic causes of insomnia which were formatted in self explanatory mode. SPSS was used to analyze the data obtained after taking back of questionnaires from individuals. The results indicated that the occurrences and wariness of insomnia was quite high in males (49.2%) as compared to females (34.19%). Similarly, transient insomnia was the principal types of insomnia in both males (63.10%) and females (78.70%). However, stress/anxiety (65.6%) was found to be the leading cause of sleeplessness while excessive use of mobile/internet, uncomfortable sleep environment and unpleasant noise affected above 40% of youth. Sleeplessness in youth warrants social and clinical attention and future research should need to be conducted to explore and resolve sleep problems in youth.

Keywords: Insomnia, Transient insomnia, Sleeplessness, Sleep disorder.



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INTRODUCTION

Insomnia is the most frequently occurring sleep disorder in which the whole body and brain are in a conflict among the desires of wanting a fall asleep and not wanting to go to the waking status. Most often, it is thought that insomnia is a composite of both sign and symptoms¹⁻² which accompany a number of physical, behavioral and psychiatric disorders leading to constant impenetrability in falling asleep or staying asleep to fulfill body's need. The lack of sleep is contributed to several numbers of diverse factors that can be grouped into biological, neurological, medical or psychological categories³.

Insomnia is most commonly affecting elderly people but can occur at any age level⁴. Insomnia affects more than 40% of American youth and about fifteen percent of the adults experience chronic sleeplessness each year. A huge list of issues contributing insomnia includes stress, anxiety, pain, social and economical deprivations, depression, cardiac disorder, drug abuse and side effects of certain medicines⁵. In a broad sense it can be categorized into primary and secondary insomnia⁶. Primary insomnia is not attributed to a physiologic, psychiatric or environmental cause but can be described by the prolonged period of sleep onset latency and facing trouble in maintenance of peaceful sleep⁷. Lack of sleep due to some underlying cause like restless leg syndrome, moderate to severe pain or some neuropsychiatric disorder is generally referred as secondary insomnia⁸. Clinically insomnia can also be categorized on the basis of duration of occurrence of insomnia i.e. transient insomnia (lasting less than one week), short term insomnia (lasting up to four weeks maximum) and chronic insomnia (lasting up to several months)⁹.

Path-physiology of insomnia has been justified in that insomniac patients exhibit elevated cerebral glucose metabolism in comparison with normal control groups. Positron emission tomography express increased beta activity and reduced theta and delta performance on electroencephalography and overall very high metabolic rate along with secretion of ACTH hormone in¹⁰.

The risk factors associated with insomnia may vary greatly among elderly who mostly experience psychiatric disorders, malaise, cognition impairment, loss of appetite and mostly devastating obesity¹¹. Similarly, prolonged insomnia is a major cause of somatic disorders in youth and elderly people¹² and a serious overlapping between disturbed sleep and low labile mood along with psychosocial correlations have been observed in old age¹³. Majority of insomniac people are at extreme risk of co morbid clinical disorders i.e. hypoxemia, dyspnea, gastro esophageal reflux disease and certain neurodegenerative abnormalities. On the other hand, primary insomniac patients usually suffer from periodic limb movement disorders (PLMD), restless legs syndrome (RLS) and sleep dependant breathing abnormalities¹⁴⁻¹⁵.

METHODOLOGY

This survey based research was conducted in Bahawalpur (Pakistan) on 500 young individuals of either gender (250 males and 250 female), having ages in between 16-25 years. The students were selected at random and they were first briefed and addressed regarding the objectives of study. They were fully informed, how to actively participate in study to record their observations regarding to insomnia and its causes. Then exclusively designed questionnaires were circulated separately among male and female subjects and they were requested to read, recognize and be aware of the questionnaires to record their observations quite truly. The participants were insured about the secrecy of their private observations to encourage their active contribution to make the study fruitful. After the collection of questionnaires, all the contributors of this survey were specially thanked and acknowledged.

Designing Questionnaire

A specially designed questionnaire covering all the fields of this study was developed and pretested thoroughly to minimize the probability of an error ¹⁶. The questionnaire contained questions about occurrences of insomnia along with its three possible types. Furthermore, fourteen questions about the basic causes of insomnia were included also i.e. stress/anxiety/depression, excessive use of mobile & internet, traumatic events, medication e.g. caffeine, illness, uncomfortable sleep environment, napping, traveling, working in shifts, hormonal changes, presence of appliance, genetic causes, unpleasant noise and seasonal effects. Initially first drafted questionnaire was reviewed and analyzed by the experts and finally modified draft of questionnaire was printed out and was finally circulated among the subjects. Approval for this study was granted by the research Ethics Committee of the institution.

Data Analysis

Questionnaires were taken back from subjects after filling the observations and were categorized into male and female sets. They were observed carefully for recording and analyzing all the information into data sets. Questionnaires were individually entered in SPSS for the application of statistics. SPSS analyzed the data in term of percentages of different types of insomnia and its basic causes. Statistical t-test was applied to find value of P which indicated the level of significance. Value of P less than 0.05 was marked significant.

RESULTS

The results indicated that 39.2% people observe insomnia quite infrequently while 33% of population is frequently suffering from sleeplessness. Transient insomnia is most prevalent (69.80%) type of sleeplessness among the youth of Bahawalpur while acute and chronic insomnia is occurring almost equally (10% each). Out of 72.2% of insomniac subjects, 42.65%

are seriously worried about it and want to get rid as soon as possible. The trend of use of hypnotics is more in males (19.9%) as compared to females (10.32%) with over all usage of sleeping pills in 15.78% of insomniac population. The relevancies of insomnia occurrences, types and wariness are best expressed in table 1.

Table 2 highlights the relative ratios of common causes of insomnia among male and female populations. Stress/Anxiety/Depression is a leading cause of sleeplessness both in male (61.6%) and females (69.6%), whereas unpleasant noises, uncomfortable sleep environment and excessive use of mobile phone/internet is second bigger cause of insomnia affecting above 40% of youth. Insomnia due to unpleasant noise (60.4%), uncomfortable sleep environment (49.2%), illness (39.2%), presence of appliance (38%) and excessive use of mobile phone/internet (33.6%) is creating serious wariness in overall large no (62%) of female population in comparison to (49.02%) insomniac males who usually observe insomnia due to excessive use of mobile phone/internet (47.6%), travelling (33.6%), uncomfortable sleep environment (31.2%), illness (29.6%) and presence of appliances (21.6%).

Table 1: Relative occurrences of different types of Insomnia in male and female population along with ratio of wariness and usage of sleeping pills

		Gender		
		Male (n=250)	Female (n=250)	Total (n=500)
Occurrences	Not at All	44(17.6%)	95(38%)	139(27.8%)
	Some	73(29.2%)	123(49.2)	196(39.2%)
	Times(Infrequently)			
	Yes (Frequently)	133(53.2%)	32(12.8%)	165(33%)
Total occurrence of Insomnia		n= 206(82.4%)	n= 155(62%)	n=361(72.2%)
Type of Insomnia	Transient	130(63.10%)	122(78.70%)	252(69.80%)
	Acute	37(17.96%)	16(10.32%)	53(14.68%)
	Chronic	39(18.93%)	17(10.96%)	56(15.51%)
Wariness	Seriously worried	101(49.02%)	53(34.19%)	154(42.65%)
	Usage of Sleeping pills	41(19.9%)	16(10.32%)	57(15.78%)

Table 2: Different causes of insomnia in male and female Population

No	Causes of Insomnia	Male (n=250)	Female (n=250)	Total (n=500)	t-test statistics
1	Stress/Anxiety/Depression	154(61.6%)	174(69.6%)	328(65.6%)	t value= 5.709 df= 13 P value= 0.0001 Level of significance= ***
2	Mobile & Internet	119(47.6%)	84 (33.6%)	203(40.6%)	
3	Traumatic events	30(12)%	36(14.4%)	66(13.2%)	
4	Medication e.g. caffeine	39(15.6%)	63(25.2%)	102(20.4%)	
5	Illness	74(29.6%)	98(39.2%)	172(34.45%)	
6	Uncomfortable sleep environment	78(31.2%)	123(49.2%)	201(40.2%)	
7	Napping	29(11.6%)	58(23.2%)	87(17.4%)	
8	Traveling	84(33.6%)	64(25.6%)	148(29.6%)	
9	Working in shifts	31(12.4%)	24(9.6%)	55(11%)	
10	Hormonal changes	19(7.6%)	35(14%)	54(10.8%)	
11	Presence of appliance	54(21.6%)	95(38%)	149(29.8%)	
12	Genetic causes	29(11.6%)	17(6.8%)	46(9.2%)	
13	Unpleasant noise	53(21.2%)	151(60.4%)	204(40.8%)	
14	Seasonal effects	39(15.6%)	69(27.6%)	108(21.6%)	

Levels of significance (P>0.05= ns Non significant, P<0.05= *Significant, P<0.01= **Significant, P<0.001= ***Significant)

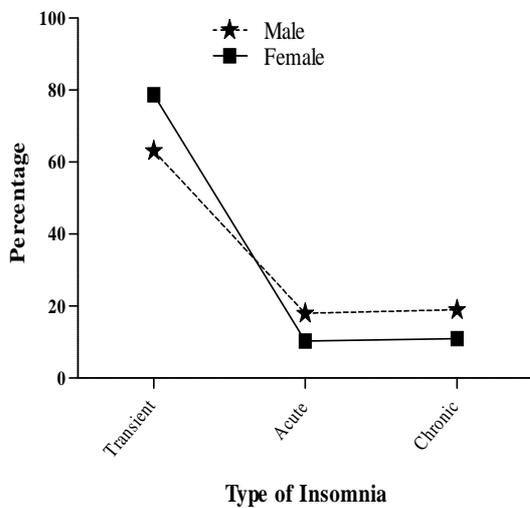


Figure 1: Relative occurrence of different types of insomnia in males and female population.

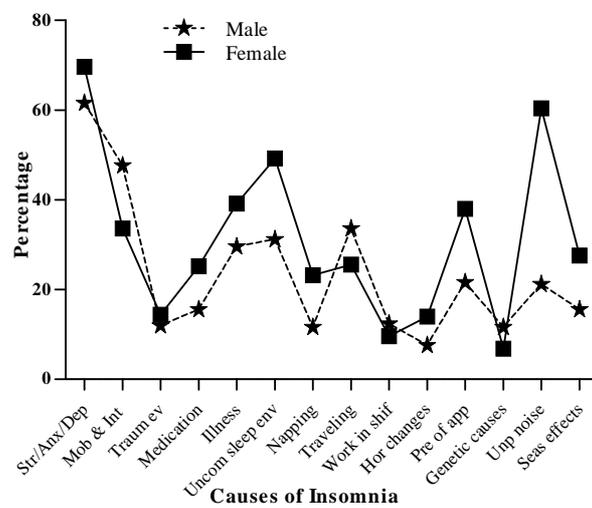


Figure 2: Relative frequencies of different causes of insomnia in male and female Population.

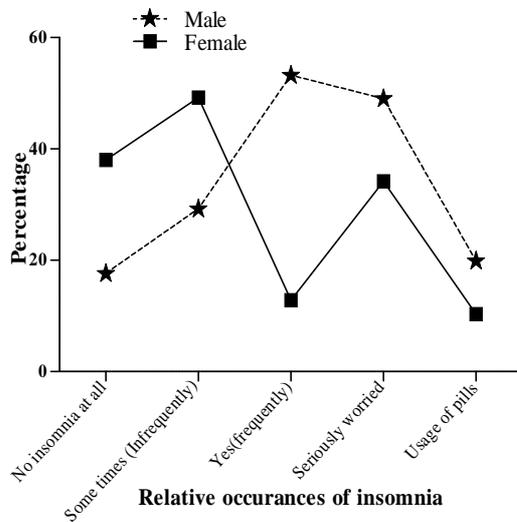


Figure 3: Relative occurrences of insomnia in a population.

DISCUSSIONS

Very high prevalence of insomnia (72.2%) within our youth population is alarming in the sense that this is diverging the youth (15.78%) towards the misuse of sleeping pills and 42.65% people are in serious trouble to get rid of it. This would exert a negative impact over physical and mental health of a society which is sufficient to offend the socio-economic status of the nation¹⁷⁻¹⁹. Neuro-imaging studies have revealed that sleep deprivation results into decline of mental capabilities to perform a task. Mental stress due to insomnia is caused due to alteration in states of the brainstem, thalamus and particularly in the prefrontal cortex²⁰. Following sleep deprivation, cortex and thalamus undergoes reduction in metabolic states that is associated with fatigue, stress and impaired cognition. Patients suffering from insomnia often complain the sleep disturbances and day time drowsiness and fatigue²¹.

Adequate sleep exerts a remarkable impact on human health and conduct by influencing endocrinal hormones level in body. Sleeplessness results into alterations in cognition, behavior, attention and immunity of the body²²⁻²³. Similarly, inadequate sleep patterns may also incorporate into maladaptive coping, which results into increased level of rumination and somatic complications²⁴.

Our results indicated that stress or anxiety induced insomnia is highly prevalent within both genders and affecting 65% of population. This is a major debilitating cause of sleeplessness, greatly distressing routine performances and stamina of youth²⁵⁻²⁶. Here the logic for higher

prevalence of insomnia in female is primarily due to the fact that psychotic disorders are more frequently occurring in female ²⁷.

47.6% male and 33.6% female usually observe insomnia due to excessive and meaningless use of mobile phones and internet. This trend has been settled in various societies where public has become totally confined to the devastating uses of information media which tainted their biological clock settings so vigorously. Similarly, uncomfortable sleep environment is affecting about 49.2% female and 31.2% male individuals which is not only disturbing the sleeps of individuals but also influencing the aggressiveness and personality factors within insomniac patients ²⁸⁻²⁹. On the other hand, insomnia due to traumatic events is more prevalent in females (14.4%) and 12% in male as compared to illness which is disturbing sleep in 39.2% of females as compared to males (29.6 %). A number of pathological conditions i.e. post traumatic pain, gynecological disorders, asthma, cardiac arrest, migraine, high blood pressure, bowel disorder, diabetes and infectious diseases are associated with loss of sleep as well as quality of sleep ³⁰⁻³⁴. Similarly, the use and abuse of certain substances to alleviate the diseased condition is often contributing to feel difficulty in falling asleep and in its maintenance ^{30,35}.

Napping and hormonal changes are mostly prominent in female youth which are affecting 23.2% and 14% feminine population, respectively. Hormonal changes are thought to occur more abruptly in females as compared to males which having negative influences over different physiological activities like sleep and rest ³⁶. However, it's a big task to know and identify whether the insomnia is occurring due to hormonal changes or some other cause ³⁷⁻³⁸. Usually hormonal changes produce a cascade of symptoms like hot flashes, sweating, fatigues, irritability, malaise and other vasomotor symptoms which generate insomnia quite abruptly and weakness and loss of exertion on the following day ³⁹⁻⁴⁰.

Presence of appliances, travelling and seasonal effects are some other causes of insomnia which disturb the normal pattern of sleep by avoiding peacefulness, calmness and softness of soma of an individual. All of these causes along with stress and strain not only change the sleeping pattern of an individual but also persuade the negative physiological and behavioral module ⁴¹. Similarly lack of sleep is also observed in people who usually nap in day time and work in shifts which are justified in the sense that again biological clock and time management fails to adjust the body. Both of these are associated with the alteration in the extent and quality of sleep ⁴². People working in night shifts often fail to get appropriate sleep during day time and complain the loss of sleep ⁴³.

CONCLUSION

From above discussion it is concluded that insomnia is exerting bad impact over the health and physiological activities of our youth. There are several debilitating causes like stress, anxiety,

depression, excessive use of information technologies, unpleasant noise, uncomfortable sleeping environment and diseased conditions, which are proved to be quite serious for loss of sleep for both young males and females. There is an urgent need of awareness programs to be arranged to make the youth aware about the seriousness of causes of insomnia and to resolve this at national level.

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