ORIGINAL RESEARCH PAPER

Statistics

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INSOMNIA AMONG ADOLESCENTS

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ABSTRACT

Insomnia is a sleep deficiency and is now becoming a public health problem as life style is getting changed. It is generously affecting the adolescents now a days. In this study we have considered various studies that have their concern with insomnia among the adolescents. In the beneath, discussion is made for further research.

Discussion: Results of different studies shows that insomnia is common among adolescents and associated with multiple factors e.g. physical, psychological, social, academic, and environmental factors. It seems that there is a need for some educational campaigns to make adolescents aware for the betterment in reference to their future prospectus.

INTRODUCTION:

Worldwide, various studies have shown that the prevalence of insomnia in 10%–30% of the population, some even as high as 50%–60%.(Taylor DJ et al, 2007; Buysse DJ, et al, 2008; Schutte-RSet al, 2008). We concentrated on the adolescents and considered some studies under the same head.

One of the studies considered, was found conducted in Hordaland county in Norway in 2012. This study included 10 220 adolescents aged 16–18 years including 54% girls, to access sleep patterns and rates of insomnia. In the study variables included were bedtime, rise time, time in bed, sleep duration, sleep efficiency, sleep onset latency, wake after sleep onset, rate and frequency and duration of difficulties initiating and maintaining sleep and rate and frequency of tiredness and sleepiness. Insomnia prevalence rates were observed ranging from a total prevalence of 23.8 (DSM-IV criteria), 18.5 (DSM-V criteria) and 13.6% (quantitative criteria for insomnia).In the study adolescents were reported short sleep duration on weekdays with mean 6:25 hours.65% of the adolescents were reported sleep onset latency exceeding 30 min. Girls were observed longer sleep onset latency and a higher rate of insomnia than boys in the same study(Mari H et al 2013).

One of the study was observed conducting research using data from youths aged 11-17 years and adult caregivers from a community-based sample of households. The sample size of the study was 4175 youths and their caregivers having 35.4% European American, 35.4% African American, 20.5% Mexican American, and 8.7% Other American. As described in this study the overall prevalence of DSM-IV insomnia-like syndrome in the past month was 4.7%. Females were found more likely to report this syndrome. Prevalence for European American youths was observed 5.3%, 5.2% for African American, and 3.5% Mexican American youths ($p > .05$)(Roberts RE et al ,2006).

In another study considering 4175 youths aged 11 to 17 years at baseline, and 3134 of these youths followed-up a year later. Results of the study revealed that one year incidence was 13.9% for 1 or more symptoms, 5.5% for 1 or more symptoms plus daytime fatigue or sleepiness, and 5.3% for insomnia caseness. Rates of chronicity found observed were 45.8% for 1 or more symptoms, 34.7% with daytime fatigue or sleepiness, and 22.8% for insomnia caseness. This study found no effects of age, sex, or family income in predicting incidence or chronicity of insomnia. A weak association of both somatic and psychological dysfunction with risk of future sleep outcomes was observed with stronger prediction for psychological dysfunction(Roberts RE et al,2008).

We came across a two-wave, community-based cohort of 3134 youths aged 11–17 at baseline. The study assessed major depression using DSM-IV criteria. This study also used P_1, any symptom of insomnia; P_2, any symptom plus impairment; P_3, P_2 with no comorbid mood, anxiety or substance use disorders as measures of insomnia. Study found that the association between insomnia and depression was stronger and more consistent for major depression than for symptoms of depression. Baseline insomnia (P_1 and $P_{2)}$ was reported increased subsequent risk of major depression 2–3-fold and P_1 2-fold in multivariate analyses. Major depression was also found increasing risk for subsequent insomnia 2–3-fold for P_1 and P_2 2-fold for P_2(Roberts RE et al,2013) .

We came across a cross-sectional study, conducted to compute the prevalence of insomnia, its symptoms, and associated factors among Japanese adolescents. On the basis of response of 103,650 adolescents and 102,451 questionnaires that were analyzed study resulted that the prevalence of difficulty initiating sleep, difficulty maintaining sleep, and early morning awakening was 14.8%, 11.3%, and 5.5%, respectively. The prevalence of insomnia reported was 23.5%. The study analyzed, among junior high school students, male sex, poor mental health, skipping breakfast, drinking alcohol, smoking, not participating in extracurricular activities, and late bedtime had significantly higher odds ratios for insomnia. Whereas among senior high school students, the same characteristics were found associated with a significantly higher odds ratio for insomnia(Yoshitaka K et al,2006).

In another study conducted in Japan considered a total of 3473 (776 junior high and 2697 senior high) students, to calculate the incidence rate and predictive factors of insomnia. This study conducted a baseline survey on first year junior and senior high school students and then conducted a follow-up survey after two years.The data was observed collected using self-administered questionnaires inquiring about sleep, mental health status, lifestyle, participation in club activities, and study hours. Study revealed that the incidence rate of newly developed insomnia was 7.8% among junior high and 9.2% among senior high school students. On the other hand factors associated with new insomnia reported were 'sleep paralysis experience' and 'poor mental health status' in junior high school students, and 'being woken by a nightmare', 'poor mental health status', '≥2 h of extracurricular learning per day' and 'mobile phone use for ≥2 h per day' in senior high school students(Mikiko T et al,2017).

In another cross-sectional survey, out of 1,070 subjects, the prevalence of insomnia was reported to be in 40% of the adolescents. The physical, psychological, social, academic, family, and environmental factors were indicated to contribute to adolescent insomnia(Saraswathi H et al,2017).

In the year 2012, in a cross-sectional study, 6,919 students were evaluated from the 7th to the 12th grade from 26

secondary schools. Data were collected using a self-administered questionnaire. Insomnia was defined based on the Diagnostic and Statistical Manual of Mental Disorders IV criteria. The prevalence of symptoms of insomnia found was 21.4 %, and the prevalence of insomnia reported was 8.3 %. After adjustment for gender and age, insomnia was observed associated with female gender (adjusted OR=1.82; CI 95 %: 1.56–2.13), age ≥16 years (adjusted OR=1.17; CI 95 %: 1.01–1.35), coffee and alcohol consumption (adjusted OR=1.40; CI 95 %: 1.20–1.63 and adjusted OR=1.21; CI 95 %: 1.03–1.41, respectively), and depressive symptoms (adjusted OR=3.59; CI 95 %:3.04–4.24)(Maria OPA,2013).

REFERENCES:

1. Taylor DJ, Mallory LJ, Lichstein KL, Durrence HH, Riedel BW, Bush AJ. Comorbidity of chronic insomnia with medical problems. Sleep. 2007;30:213–8.
2. Buysse DJ, Angst J, Gamma A, Ajdacic V, Eich D, Rössler W. Prevalence, course, and comorbidity of insomnia and depression in young adults. Sleep. 2008;31:473–80.
3. Schutte-Rodin S, Broch L, Buysse D, Dorsey C, Sateia M. Clinical guideline for the evaluation and management of chronic insomnia in adults. J Clin Sleep Med. 2008; 4:487–504.
4. Mari Hysing , Ståle Pallesen, Kjell M. Stormark , Astri J. Lundervold and Borgesivertsen. Sleep patterns and insomnia among adolescents: a population-based study. J Sleep Res. 2013; 22: 549–556
5. Robert E. Roberts, Catherine R. Roberts, Wenyaw Chan. Ethnic differences in symptoms of insomnia among adolescents. Sleep. 2006; 29(3): 359-65
6. Robert E. Roberts, Catherine Ramsay Roberts, Wenyaw Chan. Persistence and change in symptoms of insomnia among adolescents Sleep 2008; 31(2): 177- 184
7. Robert E. Roberts Hao T. Duong. Depression and insomnia among adolescents: A prospective perspective. Journal of affective disorders. 2013; 148(1): 66-71
8. Yoshitaka KaneitaTakashi Ohida, Yoneatsu Osaki, Takeo Tanihata, Masumi Minowa, Kenji Suzuki, Kiyoshi Wada, Hideyuki Kanda, Kenji Hayashi. Insomnia among Japanese adolescents: A nationwide representative survey. Sleep 2006; 29(12): 1543- 50.
9. Mikiko Tokiya, Yoshitaka Kaneita., Osamu Itani, Maki Jike, Takashi Ohida. Predictors of insomnia onset in adolescents in Japan. Sleep Med. 2017; 38: 37–43 .
10. Saraswathi Hebbar, Tessy Treesa Jose, Shalini Nayak .Prevalence and the contributing factors of insomnia among adolescents in selected secondary schools of Udupi district Karnataka. Manipal Journal of Nursing and Health Sciences. 2017: 3(1); 23-28
11. Maria Odete Pereira Amaral & Carlos Manuel de Figueiredo Pereira & Diana Isabel Silva Martins & Carla do Rosário Delgado Nunes de Serpa & Constantino Theodor Sakellarides. Prevalence and risk factors for insomnia among portuguese adolescents .Eur J Pediatr. 2013:DOI 10.1007/s00431-013-2037-0