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RESEARCH ARTICLE

EFFECT OF SLEEP ON HEALTH OF HOSPITALIZED CHILDREN.

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Abstract

Sleep is especially important for children as it directly impacts mental and physical development. During the deep states of NREM sleep, blood supply to the muscles is increased, energy is restored, tissue growth and repair occur, and important hormones are released for growth and development.[1]

Introduction:-

Sleep is especially important for children as it directly impacts mental and physical development. During the deep states of NREM sleep, blood supply to the muscles is increased, energy is restored, tissue growth and repair occur, and important hormones are released for growth and development.[1]

Sleep affects how children feel and function, helping child to get the recommended amount of sleep by improving child's health psychological well-being and safety. Sleep is the key of child's growth and development as well as his/her ability to learn. There may be individual differences between children as preschool aged children 10-12 hours, School-aged children At least 9 hours. Teens need more sleep than adults. Adequate sleep is a central part of a healthy lifestyle. During sleep, body and brain actively work to support healthy brain and body function. Sleep helps child to focus and remember what he or she has learned. Memory is improved with sleep. Sleeping seems to enhance learning as if it were extra practice. As one example, sleeping well supports the immune system, which helps fight infections, and thus sleep may decrease your child's risk of getting sick. Even repeatedly losing an hour of sleep per night can be harmful to child's function. This is because such nightly sleep loss accumulates (adds up) and produces a sleep debt. Performance and function decrease with each added night of sleep lost.[2]

The experience of being in the hospital is associated with sleep disruptions for many children with medical conditions. For example, 25% of hospitalized children with cancer reported poor sleep such as sleep fragmentation and night waking. Sleep disturbances may be due to disruptions in routine, fears and anxiety about separation from parents, loss of privacy, and frequent interruptions by medical staff. Children may also have to alter their sleeping position due to IV placement or location of surgical incisions.[3]

Two publications reviewed literature on Melatonin hormone which is secreted by the pineal gland in a diurnal rhythm regulated by light- light suppresses melatonin secretion, while darkness enhances it. Melatonin has both chrono-biotic and sleeps promoting properties. Exogenous administration of melatonin shortens sleep latency, increases sleep efficiency and total sleep time. Melatonin also improves disrupted circadian rhythm. Melatonin promotes sleep in a similar way to the natural sleep process, and maintains normal sleep architecture.[4]

Melatonin has a positive effect on children with sleep disturbances and is routinely administrated in pediatric sleep centers around the world for insomnia and a variety of sleep disorders. Side effects of melatonin are rare and scarce. Circadin is a slow released formulation of melatonin, which mimics night time secretion of natural melatonin.

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Children with sleep disorders who were treated with controlled release melatonin, demonstrated improvement in sleep latency and total sleep time.[4]

Sleep was significantly disrupted during hospitalization, more so for younger children and parents. Concluded study as sleep disturbances due to noises, worries, pain, and vital sign checks were related to longer sleep onset latency, increased night wakings, and earlier wake time. Interventions that reduce these disruptions, many of which are amenable to nursing influence, are needed to improve child and parent sleep in hospital.[5]

Herbert AR et al. conducted study on exploratory study of sleeping patterns in children admitted to hospital. Sleep is considered an important time of healing and restoration during illness. To determine the prevalence of self-reported sleep disturbance in children admitted to a tertiary children's hospital with a variety of medical diagnoses. Parents of children admitted to the hospital, aged between 1 and 18 years, were asked to complete a sleep diary during one night of their child's hospital stay.

Overall, 107 children were surveyed for one hospital inpatient night. The overall prevalence of poor sleep was 52.3%. The wide age range and variety of diagnosis limited further detailed analysis of specific causes of this problem. Poor sleep prior to admission was the strongest predictor of poor sleep in hospital suggesting that these children already had an underlying sleep problem. Children admitted to hospital have a higher prevalence of poor sleep compared with healthy children in the community. Children were woken frequently by both external noise and attention provided by hospital staff. Education of hospital staff about the importance of sleep for children and factors that affect children's sleep may reduce the negative impact of hospitalization on children's sleep.[6]

Cognitive and behavioral sleep interventions are indicated to improve sleep in school-age children and adolescents. However, because treatment protocols were heterogeneous and risk of bias high, results should be interpreted with caution. Large and rigorous trials are needed.[7]

Method:-

Electronic searches of Medline, Pubmed of systematic reviews were conducted to indentify all relevant empirical studies

Discussion:-

Overall, research supports that children admitted to hospital have a higher prevalence of poor sleep compared with healthy children in the community.

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