



The Influence Of Sleep Patterns Based On The Sleep Disturbance Scale For Children (Sdsc) On The Height Of Children Aged 8-11 Years

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ABSTRACT

Sleep main an essential role in human development because growth hormone works best during the slow wave phase. About 20-30% of children have sleep problems. Children's bedtime has fallen more than usual over the last century, with school-age children having the most significant rate of change. This study aims to determine the effect of sleep patterns on height in children of SD Muhammadiyah 4 Malang aged 8-11 years. The cross-section method was used in this study. The sample in this study were all boys aged 8-11 years up to 98 children who met the inclusion criteria in SD Muhammadiyah 4 Malang. Data on height and weight were obtained from schools, and sleep patterns were obtained from questionnaires filled out by parents. Statistical analysis used Fisher's exact test with significance at $p = 0.5$. The results of this study did not show a significant effect between the child is sleeping position and height ($p = 0.649$). Most 8-year-old participants had poorer sleep patterns than their parents' height in the relevant categories. SD Muhammadiyah 4 Malang There is no significant effect between sleep patterns and height in children aged 8-11.

Keywords : Height., pattern, sleep.

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INTRODUCTION

Sleep is understood as a living phenomenon that occurs in the circadian cycle and directly or indirectly affects the endocrine cycle and postural (behavioral) patterns(Adamovich et al., 2022). The plan covers sleep and wakefulness, sleep rhythms, circadian sleep frequency, sleep maintenance, and sleep satisfaction(Jaradat et al., 2022). These are associated with various adverse effects on physical and cognitive outcomes. Therefore sleep is essential for children and Very important for health(Smith & Pollak, 2020).

Sleep disturbances in children are one of the parents' concerns, occurring in about 20-30% of children (Retnosari et al., 2021). A study of 690,747 children in 20 countries found that children's sleep decreases every year, getting more and more popular(O'sullivan et al., 2021). The habit of

sharing the same bed, and the need for assistance to sleep at night, is the most common cause of sleep disturbances in children aged 5-8 years and the most common cause of sleep disturbances in children aged 9-12 years. The cause is sleep disturbances Gadgets and devices TV (Putri et al., 2022). Short sleep duration is associated with short stature in children. A study by Walsh et al., (2021) linked the length of a night's sleep and the length of a nap with an increase in height. That explains the importance of a child's sleep and its effect on their height. Additionally, studies show that about 10 to 20 percent of 8 to 9-year-olds have trouble falling asleep or staying asleep (Morrissey et al., 2020).

Sex hormones also affect changes in height in children. Boys do not experience physical changes until they are 12 years old. That is because, after age 12, sex hormone-induced sexual dimorphism becomes very evident in variables such as height, fat thickness, and shoulder width (Fogarty, 2018). Children's Sleep Disorders can measure sleep patterns in children—scale (SDSC), where SDSC is the Multidimensional Sleep Questionnaire (Ludwig et al., 2019). SDSC allows seeing the occurrence of sleep disturbances over the last 6 months (Mancini et al., 2019).

Muhammadiyah 4 Elementary School (SD) Malang City is one of the elementary schools that has a full-day tahajud prayer program under the supervision of their respective parents. Allows students to make different sleep modifications from other elementary school students, so students spend time at school and home learning and practicing the Tahajud prayer program. Based on this interpretation, the authors want to analyze the effect of SDSC-based sleep patterns conducted at SD Muhammadiyah 4 Malang City on height in children aged 8 to 11.

METHODS

This study was an analytical observational study with a cross-sectional design to analyze the effect of sleep habits on height in children aged 8 to 11 years. In this study, sleep patterns were assessed using the SDSC questionnaire (Eid et al., 2020).

RESULTS AND DISCUSSION

A cross-sectional study of 98 children using the goal-setting technique at SD Muhammadiyah 4 Malang City from February 2020 to March 2020. They did not meet the chi-square requirement. In the results of the analysis described in the previous section, the children participating in the study identified as being 8 to 11 years old, with the majority being eight years old, or 33.7%. Registration of this research was done by calculating nutritional status. The results showed that in SD Muhammadiyah 4 Malang City, most boys aged 8-11 years with good nutritional status were eight years old. This study determined that most of the children had poor sleep habits 57.1%. The highest incidence is in children aged 12 years. Based on the analysis, most children with sleep disorders were determined to be eight or less than 13 years old (Wang et al.,

2020). Sleep is relatively high at eight, so deviations from good or bad sleep patterns can occur at this age. Most children with poor sleep habits found sleep-wake transition disorders up to 30.4% (Weber & Harrison, 2019). In this study, it was impossible to determine the cause of temporary sleep-wake disturbances, the gangrenous response experienced by participants, with a wake-up schedule from 01:00 until dawn on the day of Tahajjud prayer. Sleep disturbances must continue, Distribution of Height Distribution of Height of Children aged 8 to 11 Years Based on the analysis results, most of the children's heights was included in the relevant category, namely 94.9% of the participants in this study (Carmichael et al., 2021). Most non-disabled children were eight years old, up to 36%. (Steinhardt et al., 2021). The percentage of children's height is significantly associated with favorable environmental, genetic, and socio-cultural factors. In addition, a child's genetic potential can only be realized with adequate and proper nutrition, and a child can lead a relatively healthy life with love and care. Therefore, there may be many factors in the parents' height (Petrauciene et al., 2018).

In this study, most underweight participants were identified as 8-year-olds, and 9 out of 25 children (3.1%) fell into this category (Klerks et al., 2021). Explained that short children are sufficient for optimal growth and development in children under the age of 10 years with a low intake of nutrients, energy, and macronutrients (protein, carbohydrates, and lipids). Parental height does not always mean abnormal growth in children. It must be based on other co-existing conditions, so further research is needed (Pan et al., 2021). Effect of sleep patterns on height in children aged 8-11 years In this study, there was no significant effect between sleep patterns and height in children aged 8-11 years at SD Muhammadiyah 4 Malang City ($p\text{-value} = 0.649, p > 0.05$). (Mi et al., 2019). This study showed a negative relationship between children's height and total sleep time, whereas Wunsch et al., (2021) assessed sleep patterns in children aged 5-11 years over seven days. There is evidence that increases in physical factors at age 10 are related to sleep duration, perhaps for other unexplained reasons. In this study, subjective sleep assessments are based on information provided by parents. Thus parents were strongly influenced by this information. Furthermore, further research is recommended to review the biological factors that predict growth, such as genetics, gender, and diet (Astrup et al., 2020).

Another study of Iranian children showed that children's sleep did not affect height. The results of this study differ from previous studies because several factors affect the growth of children who play. Play is essential in growth but should not investigate in this study (Yeager & Dweck, 2020). Research has found that there is no relationship between patterns of sleep and the height child's body; however, it is influenced by several other factors. Factors other influencing height, such as physical activity and health conditions not investigated in the research, must be re-evaluated (Leis et al., 2020).

CONCLUSION

Conclusion Based on the research and discussion described in the previous section, conclusions can be drawn. In SD Muhammadiyah 4 Malang City, sleep habits do not significantly affect the height of children aged 8-11 years, while in SD Muhammadiyah 4 Malang City, sleep habits of children aged 8-11 years reached 33.7%. 57.1% experienced sleep-wake transition disorders up to 30.4% SD Muhammadiyah 4 In Malang City, children aged 8-11 years in this category were 94.9% higher than the average height of their parents.

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