

## The Relationship Between Hospitalization Anxiety and Sleep Quality in Pre-School Children (3-6 Years Old)

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### Abstract

Factors that can affect the quality of sleep in pre-school-aged children are hospitalization anxiety, when experiencing anxiety, sympathetic nerves can increase so that it can interfere with the sleep process. The aim of this study was to analyze the relationship between hospitalization anxiety and sleep quality in pre-school aged children (3-6 years) at Mutiara Hati Gedeg Hospital, Mojokerto. The research method uses a correlation analytic design with a cross sectional study. The population of this research is pre-school age children as many as 40 respondents. The research sampling technique uses purposive sampling with the Lemeshow formula. The research was conducted on March 31, 2023 in the Children's Room of Mutiara Hati Hospital. The research instrument used the DASS questionnaire for anxiety and the PSQI questionnaire for sleep quality which had been modified by researchers with validity and reliability test results of 0.692 for hospitalization anxiety and 0.561 for sleep quality and Cronbach's Alpha 0.920 for hospitalization anxiety and 0.967 for sleep quality. The results of this study indicate that there is the most anxiety about hospitalization, namely moderate anxiety for 16 respondents (40%) and most pre-school age children experience moderate sleep quality as many as 18 respondents (45%). Spearman's rho statistical test results p value  $0.002 < \alpha 0.05$ , in the sense that there is a relationship between hospitalization anxiety and sleep quality. The benefits of accompanying parents, close family and siblings are that children are protected, feel comfortable and safe by providing positive support to children.

**Keywords:** Hospitalization Anxiety, Sleep Quality, Preschool Children

### INTRODUCTION

Hospitalization is a crisis situation in a planned or emergency child, requiring the child to remain in the hospital for several days until the healthy child returns home (Mariani 2019). Many problems are faced by children during hospitalization, which can cause anxiety in these children (Nurlaila 2018). Apart from that, it can also be affected by environmental conditions, temperature and sound that are different from home conditions so that it will affect the quality of children's sleep. Pre-school children aged 3-6 years have a wide range of abilities. At preschool age, they are sensitive to the effects of stress and unsupportive environmental factors, pain from a medical procedure and fear during hospitalization (Nurfatimah 2019). At that age children are in the process of development,

have specific needs (physical, psychological, social and spiritual) that are different from adults (Kartono 2021).

Based on the total number of hospitalizations at pre-school age according to (Padila, Agusramon, and Yera 2019) in 2015, data from the World Health Organization (WHO) found that there were 45% of the total hospitalized patients at pre-school age. Based on research (Gede Yenny and Made Firsia Sastra 2021) data obtained by UNICEF 2017 states that the total pre-school age in the world's 3 largest countries reaches 148 million children, there are 57 million children per year reaching 75% of children who are hospitalized experience trauma such as anxiety. According to research (Hadi, Munir, and Siam 2020) data obtained from the Indonesian Ministry of Health in 2018 the child morbidity rate in Indonesia reached  $\geq 45\%$  of the total child population in Indonesia. Data obtained according to the Central Statistics Agency (BPS) showed an increase in hospitalization in children in 2018, namely the number of hospitalization of children in Indonesia increased by 13% compared to 2017.

Based on data at Mutiara Hati Gedeg Mojokerto Hospital, a preliminary study was conducted from 27 July 2021 to 03 February 2022 and obtained data from 239 pre-school children aged 3-6, consisting of 112 male patients and 127 female patients. Data on pre-school aged patients each day reaches approximately 3 to 4 patients. From the results of interviews with several parents regarding the anxiety of hospitalization in children, namely because their children feel afraid when a health worker comes who often cries and is afraid that they will be injured so that it affects the quality of their children's sleep at night because they still imagine the experience of bodily injuries caused by installation infusion and pain due to drug administration via bolus.

Sleep disturbances are generally caused by several physical disorders, there are also mental disorders, for example anxiety. The quality of a child's sleep can be influenced by several factors, including pain, a noisy or uneasy environment, illness, fatigue, anxiety and emotional stress, and several types of drugs (Yuniawati and Khodijah 2013). When a child experiences anxiety, the sympathetic nerves can increase so that it can interfere with the sleep process, then factors from diseases such as fever, pain, respiratory infection and others can result in the patient not getting enough sleep or not being able to sleep so that the child has difficulty getting to sleep, waking up too early, unsatisfactory sleep and stated not feeling well rested. The impact of the above hospitalization on pre-school age 3-6 years experience sleep quality disturbances.

There are many cases of hospitalization in children so that it can disturb children's sleep, this requires support from families and nurses to overcome the impact of hospitalization on children. Nurses are expected to pay more attention to and get closer to children, especially in providing nursing care for problems that cause children to feel anxious and be able to overcome sleep disturbances that occur in children, so that children's rest disorders can be handled. This is the importance of the role of the family in accompanying children aged 3-6 years during hospitalization in order to provide a sense of security and not feel disturbed as well as a sense of love and motivation for children and to invite children to play

## METHOD

The researcher used a correlation analytic design, using the cross-sectional method, namely the causal variables that occur in the research object are measured and collected at certain times at the same time. Researchers analyzed the relationship between hospitalization anxiety and sleep quality in pre-school aged children (3-6 years) at Mutiara Hati Gedeg Mojokerto Hospital. The population in this study were all pre-school aged 3-6 years who experienced hospitalization anxiety at Mutiara Hati Gedeg Hospital, Mojokerto. The sample in this study were pre-school children aged 3-6 years who experienced hospitalization anxiety at Mutiara Hati Gedeg Hospital, Mojokerto. Researchers will use a purposive sampling technique. Purposive sampling technique is a sample whose sample members are chosen deliberately on the basis of the knowledge and beliefs of the researcher. That the selected sample has met the criteria of a scientifically accountable researcher (Husna and Suryana 2017). In the purposive sampling technique, researchers have not found the number of samples to be taken, therefore researchers use the Lemeshow formula where the formula is to calculate the number of samples with a total population that is not known with certainty (Rahman 2022). The researcher used the anxiety questionnaire instrument, DASS-14, which had been modified by the researcher, and the sleep quality questionnaire used the PSQI, which was modified by the researcher.

The DASS 14 anxiety questionnaire has been modified by researchers to measure anxiety based on indicators including: autonomic arousal, striated muscle effects, situational anxiety and subjective experience. After these indicators were found, the researcher made a questionnaire with variations of normal, mild, moderate, severe and very heavy answers.

The sleep quality questionnaire using the PSQI was developed based on subjective sleep quality indicators, sleep latency and sleep latency scores, sleep duration, sleep efficiency, sleep disturbances, drug use and daytime dysfunction. After that according to the PSQI questionnaire grid with variations of good, mild, moderate and bad answers. Location This research was conducted at Mutiara Hati Gedeg Mojokerto Hospital which began in November 2022 by submitting a preliminary study letter and the research was carried out on December 16, 2022. In research using cross-sectional, the research used a lot of researchers who can measure a relationship between variables using an ordinal scale. Penelitian ini telah dilakukan uji *Ethical Clearance* sebelum melakukan suatu penelitian. Setelah melakukan uji *Ethical Clearance* dinyatakan lulus uji dengan nomer : 065/KEPK-SM/2023.

## FINDING AND DISCUSSION

Table 1 : Frequency Distribution of Respondents Based on Hospital Admission History at Mutiara Hati Gedeg Hospital, Mojokerto

No	RMRS	Frekuensi	Persen%
1	Never	22	55.0
2	once	18	45,0
<b>Amount</b>		40	100

Source : primary data , 2023

From the data in table 4.3 it was found that the majority of respondents based on a history of being admitted to the hospital were never, namely 22 respondents (55%).

**Table 2. Distribution of Hospitalization Anxiety Frequency in Pre-School Age Children at Mutiara Hati Gedeg Hospital, Mojokerto**

No	Information	Amount	Percentage
1	Light	7	17.5
2	currenty	16	40,0
3	Heavy	8	20.0
4	So heavy	9	22.5
<b>Amount</b>		40	100.0

Source : primary data , 2021

Data in table 2 shows that almost half of pre-school-aged children experience the most hospitalization anxiety, namely moderate anxiety at most 16 respondents (40%) and the least hospitalization anxiety, namely mild anxiety, 7 respondents (17.5%).

**Table 3** Frequency Distribution of Sleep Quality in Pre-School Age Children at Mutiara Hati Gedeg Hospital, Mojokerto

No	Information	Amount	Percentage
1	Light	5	12.5%
2	Currently	10	25.0%
3	Heavy	18	45.0
4	So Heavy	7	17,5%
<b>Amount</b>		40	100,0%

Source : research data , 2021

Based on the research results, it showed that most respondents in study were not a smoker that is as many as 38 respondents (74.5%) and the others were a smoker as many as 13 respondents (25.5%)

**Table 4 Cross Tabulation of environmental correlation to smoking habit in school age children in Mangelo Village Mojokerto Regency**

smoking habit in school age children	Smoker environment					
	do not have smoker friend		have smoker friend		Amount	
	f	%	f	%	f	%
<b>Not smoking</b>	29	76,3	9	23,7	38	100
<b>Smoking</b>	4	30,8	9	69,2	13	100
<b>Amount</b>	33	64,7	18	35,3	51	100
<b>Chi-square</b>	0.003					

Source : research data , 2021

Based on the results of this study, respondents who did not smoke and also did not have smoker friend were 29 children (76.3%) and other non smoker respondents who have smoker friend were 9 respondents (23.7%), meanwhile for smoking respondents, obtained that most respondents who have smoker friend were 9 respondents (69.2%) and only small part of respondents who did not have smoker friend were 4 respondents (30.8%). Based on chi square test results with significance  $\alpha$  (0.05) was obtained sig value (2-tailed) of 0.003  $< \alpha$  (0.05) so the hypothesis in this study was accepted. That means there is correlation of environment to smoking habit in school age children in Mangelo Village Mojokerto Regency .

**Table 5 . Cross tabulation of correlation of family member smoking behaviour to smoking habit in school age children in Mangelo Village Mojokerto Regency**

Smoking habit in school age children	Smoking behaviour of family member					
	No smoking family member		smoking family members		Amount	
	f	%	f	%	f	%
<b>Not smoking</b>	23	60.5	15	39.5	38	100
<b>Smoking</b>	3	23,1	10	76.9	13	100
<b>Amount</b>	26	51.0	25	49.0	51	100
<b>Pearson chi-square</b>	0.020					

Source : research data , 2021

Based on this research, it was obtained that respondents who did not smoke and did not have smoking family member either were 23 respondents (60.5%) and few respondents who own smoking family member were 15 respondents (39.5%), meanwhile smoking respondents in this research are mostly having smoking family member also. The number was 10 respondents (76.9%) and few respondents did not own smoking family

member that was as many as 3 respondents (23.1%). Based on chi square test results with significance  $\alpha$  (0.05) was obtained sig value (2-tailed) of  $0.020 < \alpha$  (0.05) so hypothesis in this study was accepted. It means that there is correlation between smoking behavior of family member with smoking habit of school age children in Mangelo Village Mojokerto Regency.

## CONCLUSION

Based on chi square test results with significance  $\alpha$  (0.05) was obtained sig value (2-tailed) of  $0.003 < \alpha$  (0.05) so hypothesis in this study was accepted. It means that there is correlation between smoking behavior of family member with smoking habit of school age children in Mangelo Village Mojokerto Regency. This research has similar results with the research conducted regarding correlation of peer friend with smoking behavior in early teenagers at SMP PGRI 1 Perak. From the study results obtained that almost whole peers are highly supporting smoking behaviour that is as many as 29 students (80.6%) and some students support smoking behavior as many as 7 students (19.4%). From the study results that was using spearman rho rank test showed score probability or level error ( $p : 0.022$ ) far more small from standard significant ( $\alpha : 0.05$ ) then H1 is accepted and H0 is rejected which means there is correlation of peers with smoking behavior in teenagers at SMP PGRI 1 Perak. Smoking behavior shown by the teenagers in this study are possible to happen due to the same behavior that was done by their peers. This study showed the data that smoking respondents whose smoking friends either are 9 respondents (69.2%), and only few respondents who do not have smoking friends that is as many as 4 respondents (30.8%). This result proves that environment of peers has strong influence to respondents to follow their friend's behavior. The condition of school age children's psychology are still susceptible to get easily influenced by environment around them. This has a potentia to influence school age children to smoke following their peers' behaviour. When school-age children is close to smoker environment, that will influence them to do that behaviour. School age children that has smoking habit, have higher possibility to affect their peers to follow their behavior (Amin, 2017). A smoker will not comfortable to smoke around non smoker people. To feel comfortable, the will try to offer cigarettes to others. If they get rejected, they will try to dodge from that environment. When school-age children face this kind of situation, they will choose to follow their peers behaviour so they can play and spend time together with them (Pakpahan, M., Siregar, D., Susilawaty, A., Tasnim, T., Ramdany, R., Manurung, E. I., ... & Maisyarah, 2021).

However peer friends cloud not always influence school-age children for smoking. From cross tabulation table could be obtained that as many as 9 respondents (23.7%) choose not to smoke eventhough they have smoker friends. This related to theory of cognitive study which stated by Bandura, that somebodies could Imitate other's behavior but they can also choose behaviour or habit that they desire to adopt and learn. This skill is a form of cognitive learning aspect. School-age children who has smoker friend can get along together and still have their own principle that smoking is health detrimental action, so they choose not to smoke although they are in the smoker environment(Wawan, A., & Dewi, 2011). On the other hand, school age children is a state for them to Imitate or try

something new. This showed in this study that as many as 4 respondents (30.8%) have smoking habit eventhough they do not have smoker friend. This shows that at school age, it is possible to have negative behaviors such as smoking both caused by the rise of promotions carried out by cigarette manufacturers and other factors that have the potential to trigger smoking habits at school age. In addition to environmental influences (peers), smoking behavior in school-age children is also related to the smoking behavior of family members of school-age children. Based on the results of the chi square test with a significance of  $\alpha$  (0.05) a sig (2-tailed) value of  $0.020 < \alpha$  (0.05) is obtained so that the hypothesis in this study is accepted, which means there is a relationship between family members' smoking behavior and school-age children's smoking habits in Mangelo Village, Mojokerto Regency. The results of this study are similar to research conducted by Utami (2019) concerning the correlation between the smoking behavior of family members with the smoking behavior of students at SMPN 2 Plupuh Sragen. From the results of bivariate analysis using Chi Square, it was obtained that the p value was  $0.021 < 0.05$  and the X count was 5.363 which was greater than the X table, which was 3.841, which means that there is a correlation between the smoking behavior of family members with the smoking behavior of SMPN 2 Plupuh Sragen students. The behavior of family members who smoke is one of the reasons for school-age children to choose to smoke. From the results of the tabulation, it was found that the majority of smoker respondents had family members who smoked as well, as many as 10 respondents (76.9%) and a small proportion of respondents did not have family members who smoked, as many as 3 respondents (23.1%). Family is a role model for a school-age children. Everything that their family members (parents or older siblings) do will justify them doing something including smoking although not all smokers will justify this reason(Wawan, A., & Dewi, 2011). Family is an environment where school-age children will spend most of their time learning and observing. When they see that smoking does not pose any danger and tend to look more comfortable, they will try to do the same. But if they know about the detrimental effects of smoking by themselves, for example if their parents or siblings experience health problems due to smoking, school-age children will never try the same thing. Parents or older siblings are role models for school-age children. Whatever they do, will provide behavioral teaching to school-age children. There is a tendency for a son to imitate the activities of his father, or for children to try to imitate the figure of their father. When parents do not have the ability to provide proper parenting (not smoking), the tendency is that their children will also become smokers and vice versa. This is what underlies that good parenting is needed by a child from his parents.

Parenting patterns that do not support the process of growth and development of children, and even seem to ignore it, have a risk to trigger negative behavior in children. From the cross-tabulation results, it was found that 3 respondents (23.1%) did not have family members who smoked but had smoking behavior. This is possible because of the wrong parenting style applied by parents. One of the parenting styles adopted by parents in their family environment is influenced by the educational background of the parents. Based on the results of the study, it was found that almost all respondents in this study had mothers with secondary educational backgrounds (SMA/SMK), as many as 48 respondents

(94.1%) and almost all respondents in this study had fathers with secondary educational backgrounds (SMA/SMK). ) as many as 46 respondents (90.2%). High school educational background is an adequate educational background. This is because the education that an individual has can shape a person's character and behavior. High school educational background makes individuals able to accept all the new information conveyed to them. However, not all individuals are able to understand the new information they receive and then apply it in their life. This is because not all parents understand the good parenting that they should practice with their children. Factors of experience and parenting they have received, tend to influence the parenting style they apply to the families they have.

To ensure that every child has positive behavior or does not smoke, cooperation from various parties is needed. Health workers should be more routine in conducting socialization regarding the dangers of smoking behavior both through the mass media and through environmental education activities. Furthermore, parents have to be in part and also start to pay attention to every child they have. Monitoring children's behavior does not have to make parents always have to be near children. But positioning yourself as a friend of the child will make the child able to adopt the behavior shown by their parents. The better and the more examples of positive behavior that parents teach, the better behavior the children have.

## REFERENCES

- Amin, M. B. (2017). *American Cancer Society* (Eight edit). FCAP.
- Duli, N. (2021). *METODOLOGI PENELITIAN KUANTITATIF* (C. B. UTAMA (ed.)).
- Durandt, J., Bidjuni, H., & Ismanto, A. (2015). Hubungan Antara Pola Asuh Orang Tua Dengan Kebiasaan Merokok Anak Usia Remaja 12 Â 17 Tahun Di Desa Kilometer Tiga Kecamatan Amurang. *Jurnal Keperawatan UNSRAT*, 3(1), 113272.
- Ermalena, M. H. S., & RI, W. (2017). *Indikator Kesehatan SDGs di Indonesia*. (ICTOH (ed.)).
- Fabiana Meijon Fadul. (2019). 済無No Title No Title No Title. 003.
- Kemendes RI. (2019). *Profil Kesehatan Indonesia Tahun 2018* (K. K. R. Indonesia (ed.)).
- Maseda, D. R., Suba, B., & Wongkar, D. (2013). Hubungan Pengetahuan dan Sikap Tentang Bahaya Merokok dengan Perilaku Merokok Pada Remaja Putra di SMA Negeri 1 Tompasobaru. *Jurnal Keperawatan*, 1(1), 1–8.
- Pakpahan, M., Siregar, D., Susilawaty, A., Tasnim, T., Ramdany, R., Manurung, E. I., ... & Maisyarah, M. (2021). *Promosi Kesehatan dan Perilaku Kesehatan*. Yayasan Kita Menulis.
- Wawan, A., & Dewi, M. (2011). *Teori dan pengukuran pengetahuan, sikap dan perilaku*. Nuha Medika.