The Correlation between Hospitalization and Anxiety in Children Aged 2-5 Years Old in Yogyakarta Hospital

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Abstract. Childhood is the most vulnerable time for anxiety syndrome since anxiety syndrome will continue to adolescent, and 15-20% can cause trauma, decreased school performance, turnover of mental health disorders such as depression and early treatment due to psychiatric disorders. About 8% of children in the United States experience anxiety, and2/3 anxiety disorders were caused by hospitalization. This type of research was observational analytic with cross sectional method. The population in this study were 460 people, with sampling using purposive sampling as many as 173 children aged 2-5 years who were treated in Yogyakarta hospitals. The analysis showed that among 173 respondents underwent hospitalization, and 60 people (34.7%) with hospitalization ≤ 3 days experienced moderate anxiety. Bivariate test results found that there was a correlation among hospitalization (p value = 0.037), experience (p value = 0.049), age (0.023) and anxiety in children. Among five variables (hospitalization, salary, age of the child, experience, sex of the child) which hadbeen conducted a logical regression analysis, it was found that the variables that were at risk of affecting child anxiety were the parent's salary (OR = 2.258, CI = 1.18-4,391) and the children's age (OR = 2.063, CI = 1.083-3.931). Based on the result of the study, it can be concluded that children who undergo hospitalization can experience anxiety, meanwhile parent's salary and the child's age are at risk of increasing anxiety in children aged 2-5 years when undergoing hospitalization. Hence, it is necessary to have an SOP, especially in child care in terms of psychological aspects, and health workers need to provide education about the effects of anxiety on children.

Keywords: Anxiety, Children 2-5 years old, Hospitalization.

1 Introduction

Childhood is the most vulnerable period for experiencing anxiety symptoms and syndromes that continue into adolescence with a prevalence of 15 to 20% [1]. This is due to the level of cognitive development, parenting style, peer victimization and parental and environmental anxiety. Research by Bruckauf (2017) has shown that childhood anxiety leads to early onset of mental health disorders in adulthood [2].

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Mental health is an essential part of children's health and well-being. Mental health includes children's mental, emotional and behavioral well-being. It will affect the way they think, feel and act. Also, it affects the way children deal with stress, bond to other people, and the way they make decisions in the future. This will change the way they learn, behave and deal with emotions (www-cdc-gov).

Around the world, one over seven children aged 10-19 years, experience mental health disorders (www-who-int.) Research conducted by Em et al. (2015) used the Diagnostic and Statistical Manual of Mental Disorder (DSM), Anxiety disorders occurred in children aged 1-6 years as much as 3.0-6.6% [3]. In developing countries, 10-20% of children experience mental health disorders, one of which is anxiety [4]. Souza et al. (2013) said that 88.5% of children aged 0-5 years undergoing hospitalization were diagnosed with anxiety [5]. In the United States, around 8% of children experience anxiety and 2/3 of anxiety disorders result from hospitalization [6]. Souza et al. (2013) said that 88.5% of children aged 0-5 years undergoing hospitalization experience anxiety [5].

This is a stressful situation for both the child and the family when the child is hospitalized [7]. Hospitalized children report feeling scared and anxious due to medical treatment like infusions, injections, and other medical procedures, changes in children's routines, discomfort with their surroundings, loss of autonomy, unfulfilled desires, and a sense of danger.

2 Methods

This study used an analytic observational method with a cross sectional approach. In taking the number of samples using purposive sampling adjusted to the inclusion and exclusion criteria as many as 173 people. The inclusion criteria were parents who were willing to conduct interviews and parents who could read and write, while the exclusion criteria were children who needed special care, had developmental disabilities, and parents who had mental health problems.

The data collection tool in this study was an anxiety questionnaire which had previously been tested valid with r count > r table (0.361) and reliability with r table (0.809> 0.361).

3 Results

3.1 Univariate analysis

Characteristics of Respondents

Table 1. Distribution of characteristic frequencies in children aged 2-5 years undergoing hospitalization at the Yogyakarta Hospital

Characteristic	Total	
Age	N	%
-. 2-3 years old	116	67,1
- 4-5 years old	57	32,9

Gender		
- Male	97	56,1
- Female	76	43,9

Source: Primary Data 2019

Table 1 shows that the majority of children who undergoing hospitalization were aged 2-<5 years as many as 116 people (67.1%), of which 97 people (56.1%) were male.

3.2 Bivariate analysis

Table 2. Bivariate analysis

	Anxiety				
	Mild		Moderate		*p*-value
Variable	n	%	n	%	
Hospitalization					
- ≤ 3 days	39	22,5	60	34,7	0,037
- > 3 days	41	23,7	33	19,1	
Experience					
- Ever	31	17,9	50	28,9	0,049
- Never	49	28,3	43	24,9	
Gender					
- Male	49	28,3	48	27,7	0,204
- Female	31	17,9	45	26,0	
Age					
- 2-3 years old	30	17,3	51	29,5	0,023
- 4-5 years old	80	28,9	42	24,3	
Type of Disease					
- Not Chronic	73	42,2	83	43,0	0,660
- Chronic	7	4,0	10	53,8	
RMW					
- < RMW	55	31,8	44	25,4	0,046
- > RMW	25	14,5	49	38,3	

RMW = Regional Minimum Wage

In this study, the majority who undergoing hospitalization ≤ 3 days experienced moderate anxiety as many as 60 people (34.7%), while > 3 days experienced mild anxiety, namely 41 people (23.7%) where there was a significant relationship between hospitalization and anxiety (Table 2). However, there was no significant effect between gender and type of illness on anxiety in children.

3.3 Multivariate analysis

Table 3. Multivariate analysis

Variable	*p-value*	OR	CI Lower	Upper
Hospitalization < 3 days	0,083	1,779	0,926	3,404
RMW >RMW	0,014	2,258	1,181	4,319
Child's age 2-3 years old	0,029	2,063	1,083	3,931
Experience Never	0,058	1,862	0,979	3,542
Gender Female	0,350	1,359	0,713	2,592

In this study, researchers also calculated how risky the independent variables and external variables affected the dependent variable using logistic regression analysis. This analysis found that >RMW (Regional Minimum Wage) (OR 2.258, CI=1.181-4.319) and children aged 2-3 years (2.063, CI=1.083-3.91) are at risk of experiencing anxiety (Table 3).

4 Discussion

Hospitalization is a process of organizing or carrying out urgent care that requires the child to stay in the hospital to undergo therapy [7]. Hospital anxiety is divided into three stages: the protest phase, characterized by sobbing, screaming, and calling out to the nearest person, such as a parent. The liberation stage, when children begin to accept separation, become concerned with those around them, and form positive relationships with others. Finally, at the breakup stage, children will become stressed, cry less, be less active and show little interest in playing. Consistent with this study when there was a relationship between hospitalization and anxiety (Table 2). While children view the hospital environment and medical procedures as an anxiety-inducing threat, short- and long-term hospitalization is a crisis that children face. This is also related to the experience of children who were first admitted to the hospital with severe anxiety levels compared with those who were hospitalized [8]. Fosson (2009) states that children admitted for the first time have higher levels of anxiety than children admitted regularly [9]. Anxiety in children is also influenced by the age of the child, when the child is not yet able to accept and perceive illness and the unfamiliar environment.

The environment and unfamiliar people for children aged 3-5 years can reduce motor perception, verbal behavior and encourage aggressive children and children`s emotional behavior. Young children were more likely to experience distress after medical treatment than older children. In addition to the child's experience and age, the parental RMW (Regional Minimum Wage) also influenced the child's anxiety (Table

1). There was a significant relationship between family income and children's anxiety. The socioeconomic status of the parents influenced the onset of anxiety 18% compared with the children of low socioeconomic status parents 16% [10]. Nishikawa`s research (2010) found that children from high socioeconomic backgrounds were associated with overprotective parenting which results in lower stress tolerance, so they were more likely to experience mental health disorders such as anxiety and depression [11].

Therefore, it is necessary to pay attention to children, especially when undergoing hospitalization, which is not only seen from the physical aspect. In 2015 the World Health Organization (WHO) set standards by prioritizing improving the quality of care for women and children (aged 0-15 years) where each health service meets the physical, psychosocial, developmental, communication and cultural needs of children. Where every health service ensures that health facilities and services are friendly to children, youth and families (2018).

5 Conclusion

Hospitalization for children aged 2-5 years can cause anxiety, where children at younger ages (2-3 years) and with parents' income > RMW (Regional Minimum Wage) are at risk of experiencing anxiety.

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