

Research Article

Analyses of Factors Associated with Parents' Post-Hospitalization Anxiety Level of Pre-School Children in Lhokseumawe City

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Abstract: Objectives: To the aim of this study is to analyses the factors associated with parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe City. This study is of quantitative. This study was conducted in Lhokseumawe City. The samples were 116 individuals. **Methods:** Univariate quantitative analysis, bivariate using chi-square and multivariate using double logistic regression on reliance level of 95% ($\alpha=0.05$). **Results:** The study showed variables affecting parents' post-hospitalization anxiety level of pre-school children namely mothers' age ($p=0.000<0.05$), health factor ($p=0.000<0.05$) and parent's stress ($p=0.000<0.05$). The variables not affecting were education ($p=0.450>0.05$), income ($p=0.447>0.05$) as well as parent's strategy and coping source ($p=0.216>0.05$). **Conclusions:** The most dominant affecting variable is parent's stress level and education factors. It is expected that this study can be a reference source for future researchers in conducting other researches on parent's post-hospitalization anxiety of pre-school children.

Keywords: Mother's age, education, income, health factor, strategy and coping source, parent's stress and anxiety level

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INTRODUCTION

Medication and treatment in hospital can be one of the stress causes and traumatic experience for pre-school children. Anxiety towards disease and medication is the first component of crisis faced by pre-school children. Anxiety due to medication and treatment procedures may be occurred to pre-school children because they are afraid of pain which might resulted from the medication (Ghabeli, Moheb, & Nasab, 2014).

The Ministry of Women Empowerment and Child Protection (KPPPA, 2018) revealed that 3.21 per cent of children in Indonesia experienced health complaint and inpatient in 2018. The children percentage experiencing health complaint and inpatient in big cities is 3.80 per cent, relatively higher than in rural area which is 2.59 per cent. As for gender, there is no significant difference between boys and girls experiencing inpatient.

The number of toddler undergoing inpatient in various health service facilities in Aceh Province in 2018 reached 1,003 cases and 71% of them were pre-

school children (Aceh, 2016). While the number of toddler undergoing inpatient in hospital within the area of Lhokseumawe City was 562 cases (Dinkes, 2018).

Long-term effect of anxiety due to the hospitalization of family members especially parents, is experiencing anxiety for months or years after the hospitalization. Symptom prevalence consistent with post-hospitalization anxiety is estimated to be 10-14% in parents of the children with condition potentially threatening their lives (Franck *et al.*, 2015).

The research conducted by Franck *et al.*, (2015) indicating the predictor of parent's post-hospitalization anxiety after their children undergoing treatment showed that three months after being discharged from children's hospital, 32.7% of the parents reported some anxiety symptoms. The research of Rodriguez-Rey *et al.*, (2018) also focused on the significant anxiety and depression of parents after their children undergoing critical treatment in hospital. This research concluded that 23% of parents reported a clinically significant anxiety symptom, 21% reported moderate-high anxiety and 9% reported moderate anxiety.

Bronner, Knoester, Bos, Last, and Grootenhuis (2008) in their research also reported that more than one third (34.5%) of children have post-hospitalization anxieties. Anxiety on mothers is the dominant predictor for children’s anxieties. This study showed that most of the children experiencing persistent anxiety after PICU treatment. Zatzick *et al.*, (2007) also conducted a research related to post-hospitalization anxiety. This research showed that across United States, more than 20% of children have consistent anxiety symptom 12 months after inpatient in hospital.

Gomes, Fernandes, and Nobrega (2016) said that parent’s post-inpatient anxiety is affected by the previous inpatient experience, separation with home situation, unknown environment (hospital), ignorance about procedure and experience of invasive procedure. Tiederman (2017) in his research said that the factors related to parent’s anxiety after children’s hospitalization are treatment period, age, gender and previous treatment.

Based on the description above, it is known that there are many factors affecting parent’s anxiety after their children undergoing treatment in hospital. Hence, the writer was interested to analyse the factors associated with parent’s anxiety level of pre-school children after hospitalization in Lhokseumawe City.

RESEARCH METHOD

Design

The design of this research was correlational quantitative with cross-sectional study approach that

every research subject was only observed once and the measurement was performed to the character status or subject variable during check-up so that it can be clearly recognized the factors associated with parent’s anxiety level of the pre-school children in Lhokseumawe City.

Population and Sample

The population in this research was parents (mother) of the pre-school children who have experienced treated in hospital as much as 116 mothers. Total sampling method was used. All parents (mother) of the pre-school children who have experienced treated in hospital were made as the sample in this research.

Statistical Analyses

Data analyses was performed with univariate analyses/univariate descriptive analyses/ descriptive was conducted by presenting the descriptive value (average, standard intersection, minimum/maximum value, and median) as well as presenting frequency distribution. To test hypotheses in order to determine the relation between independent and dependent variables, a statistical test or Chi Square test was conducted. Multivariate analyses was conducted to investigate the most influential independent variable on dependent variable. Multivariate analyses used was prediction model logistic regression, with 95% reliance level and used a method to determine the odds ratio of polycontom category variable with one of the categories as the comparison through chi square method (Dahlan, 2011).

RESULT

Table 1. Respondents’ Frequency Distribution Based on Mother’s Age in Lhokseumawe

No	age	Number (f)	Percentage (%)
1	Young Adult	53	45.7
2	Middle Adulthood	38	32.8
3	Late Adulthood	25	21.6
Total		116	100.0

Table 1 indicated that most of the respondents are categorized as young adult with 53 individuals

(45.7%), a small number of respondents are included in late adulthood with 25 individuals (21.6%).

Table 2. Respondents’ Frequency Distribution Based on Last Education in Lhokseumawe

No	Education	Number (f)	Percentage (%)
1	Basic (SD and SMP)	16	13,8
2	Secondary (SMA)	54	46,6
3	High (DIII and SI)	46	39,7
Total		116	100.0

Table 2 above showed that most of the respondents are of secondary education (SMA) with 54 individuals (46.6%), a small number of them are of

basic education (SD and SMA) with 16 individuals (13.8%).

Table 3. Respondents' Frequency Distribution Based on Family Income in Lhokseumawe

No	Income	Number (f)	Percentage (%)
1	Low	50	43,1
2	Midle	54	46,6
3	High	12	10,3
Total		116	100.0

Table 3 showed that most of the respondents are included in middle income with 54 individuals (46.6%), a small number of respondents have high income with 12 individuals (10.3%).

Table 4. Respondents' Frequency Distribution Based on Health and Hospitalization Factors of pre-school children in Lhokseumawe

No	Health Factor	Number (f)	Percentage (%)
1	Less	62	53,4
2	Good	54	46,6
Total		116	100.0

Table 4 showed that most respondents' health factor is included in less with 62 individuals (53.4%), a small portion of them are included in good with 54 individuals (46.6%).

Table 5. Respondents' Frequency Distribution Based on Parents' Strategy and Coping Source in Lhokseumawe

No	Strategy and Coping Source	Number	Percentage (%)
1	Negative	36	31,0
2	Positive	80	69,0
Total		42	100.0

Table 5 showed that most respondents have positive strategy and coping source with 80 individuals (69.0%), a small portion of them have negative strategy and coping source with 36 individuals (31.0%).

Table 6. Respondents' Frequency Distribution Based on Parents' Post-Hospitalization Stress in Lhokseumawe

No	Parent's Stress	Number	Percentage (%)
1	High	23	19,8
2	Moderate	80	69,0
3	No stress	13	11,2
Total		116	100.0

Table 6 showed that Parents' Post Hospitalization Stress mostly are included on moderate category with 80 individuals (69.0%) and a small portion of them are included in no stress with 13 individuals (11.2%).

Table 7. Respondents' Frequency Distribution Based on Parents' Post-Hospitalization Anxiety Level of the Pre-School Children in Lhokseumawe

No	Anxiety Level	Number (f)	Percentage (%)
1	High	27	23,3
2	Moderate	53	45,7
3	Low	36	31,0
Total		116	100.0

Table 7 showed that most respondents have moderate anxiety level with 53 individuals (45.7%), a small number of them have high anxiety level with 27 individuals (23.3%).

Table 8. Cross Tabulation between Mother's Age and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Mother's Age	Anxiety Level						Total	%	p
	High	%	Moderate	%	Low	%			
Young Adult	17	14.7	29	25.0	7 (6,0)	6,0	53	45.7	0.000
Middle Adulthood	9	7.8	24	20.7	5	4.3	38	32.8	
Late Adulthood	1	0.9	0	0.0	24	20.7	25	21.6	
Total	27	23.3	53	45.7	36	31.0	116	100	

Table 8 showed that from 53 respondents categorized as young adult, the majority of anxiety level is in moderate category with 29 individuals (25.0%). From 38 respondents categorized as middle adulthood, the majority of anxiety level is in moderate category with 24 individuals (20.7%). From 25 respondents categorized as late adulthood, the majority of anxiety level is in low category with 24 individuals (20.7%).

The result of bivariate test using Chi-square, it was obtained the p-value of $0.000 > 0.05$ meaning that there is a significant relation between mother's age and parents' post-hospitalization anxiety level of the pre-school children in Lhokseumawe.

Table 9. Cross Tabulation between Mother's Education and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Education	Anxiety Level						Total	%	p
	High	%	Moderate	%	Low	%			
Basic	2	1.7	10	8.6	4	34	16	13.8	0.450
Secondary	13	11.2	26	22.4	15	129	54	46.6	
High	12	10.3	17	14.7	17	14.7	46	39.7	
Total	27	23.3	53	45.7	36	31.0	116	100	

Based on table 9, it showed that from 16 respondents having low education the anxiety level majority is in moderate category with 10 individuals (8.6%). From 54 respondents having secondary education, the anxiety level majority is in moderate category with 26 individuals (22.4%). From 46 respondents having high education, the anxiety level

majority is in moderate and low categories with 17 individuals (14.7%).

The result of bivariate test using Chi-Square, it was obtained the p-value of $0.450 > 0.05$ meaning that there is a relation between mother's education and parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe.

Table 10. Cross Tabulation between Family's Income and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Income	Anxiety Level						Total	%	p
	High	%	Moderate	%	Low	%			
Rendah	13	11.2	24	20.7	13	11.2	50	43.1	0.447
Menengah	10	8.6	23	19.8	21	18.1	54	46.6	
Tinggi	4	3.4	6	5.2	2	1.7	12	10.3	
Total	27	23.3	53	45.7	36	31.0	116	100	

Based on table 10, it showed that from 50 respondents having low income, the anxiety level majority is in moderate category with 24 individuals (20.7%). From 54 respondents having moderate income, the anxiety level majority is in moderate category with 23 individuals (19.8%). From 12 respondents having high income, the anxiety level

majority is in moderate category with 6 individuals (5.2%).

The result of bivariate test using Chi-square, it was obtained the p-value of $0.447 > 0.05$ meaning that there is no relation between mother's income and parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe.

Table 11 Cross Tabulation between Health and Hospitalization Factors and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Health Factor	Anxiety Level						Total	%	p
	High	%	Moderate	%	Low	%			
Less	27	23.3	35	30.2	0	0	62	53.4	0.000
Good	0	0	18	15.5	36	31.0	54	46.6	
Total	27	23.3	53	45.7	36	31.0	116	100	

Based on table 11, it showed that from 62 respondents having health factor in 'less' category, the

anxiety level majority is in moderate category with 35 individuals (30.2%). From 54 respondents having health

factor in 'good' category, the anxiety level majority is in low category with 36 individuals (31.0%).

there is a significant relation between health and hospitalization factor and parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe.

The result of bivariate test using Chi-Square, it was obtained the p-value of $0.000 < 0.05$ meaning that

Table 12. Relation Cross Tabulation between Parents' Strategy and Coping Source and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Strategy and Coping source	Anxiety Level						Total	%	ρ
	High	%	Moderate	%	Low	%			
Negatif	12	10.3	15	12.9	9	7.8	36	31.0	0.216
Positif	15	12.9	38	32.8	27	23.3	80	69.0	
Total	27	23.3	53	45.7	36	31.0	116	100	

Based on table 12, it showed that from 36 respondents having negative strategy and coping source, the anxiety level majority is in moderate category with 15 individuals (12.9%). From 80 respondents having positive strategy and coping source, the anxiety level majority is in moderate category with 38 individuals (32.8%).

The result of bivariate test using Chi-Square, it was obtained the p-value of $0.216 < 0.05$ meaning that there is a significant relation between strategy and coping source and parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe.

Table 13. Relation Cross Tabulation between Parents' Post-hospitalization Stress and Parents' Post-Hospitalization Anxiety Level of the Pre-school Children in Lhokseumawe

Parents' Post-Hospitalization Stress	Anxiety Level						Total	%	ρ
	Berat	%	Sedang	%	Ringan	%			
High	14	12.1	8	6.9	1	0.9	23	19.8	0.000
Moderate	13	11.2	45	38.8	22	19.0	80	69.0	
No Stress	0	0.0	0	0.0	13	11.2	13	11.2	
Total	27	23.3	53	45.7	36	31.0	116	100	

Based on table 13, it showed that from 23 respondents having high stress level, the anxiety level majority is in high category with 14 individuals (12.1%). From 80 respondents having moderate stress level, the anxiety level majority is in moderate category with 45 individuals (38.8%). From 13 respondents having low stress level, all of them have moderate anxiety level.

The result of bivariate test using Chi-Square, it was obtained the p-value of $0.000 < 0.05$ meaning that there is a significant relation between parents' post-hospitalization stress and parents' post-hospitalization anxiety level of pre-school children in Lhokseumawe.

Table 14. The Result of Double Logistic Regression Test Phase One

Variable	Regression Coefficient	T _{count}	Sig
Mother's Age	0.190	3.301	0.001
Health factor	0.802	8.545	0.000
Strategy and coping source	0.091	1.044	0.299
Parents' stress	0.345	4.193	0.000

Based on table 14, it indicated that from 4 variables testes by double logistic regression phase one there is 1 variable having p-value > 0.05 and the biggest one is strategy and coping source ($p=0.299$).

Afterwards, the strategy and coping source variable is excluded from logistic regression modelling phase two, the result is as follows:

Table 15. The Result of Double Regression Test Phase Two

Variable	Regression Coefficient	T _{count}	Sig
Mother's age	0.185	3.221	0.002
Health factor	0.816	8.788	0.000
Parent's stress	0.347	8.219	0.000

Based on table 15, it indicated that from 3 variables testes by double logistic regression phase two, it can be seen that the variable has p-value > 0.05 and the biggest one is mother's age (p=0.002) so that the

mother's age variable is excluded from logistic regression modelling phase three, the result is as follows.

Table 16. The Result of Double Regression Test Phase Three

Variable	Regression Coefficient	T _{count}	Sig
Health factor	0.909	9.895	0.000
Parents' stress	0.409	4.913	0.000

Based on table 16, it showed that from 2 variables tested by double logistic regression phase two, it can be seen that both variables have p-value < 0.05 and equal (0.000).

Based on the double logistic regression test, the significant value of the model obtained in total is 0.000 < 0.05 meaning that the three variables made as model in this research have significant influence on parents' post-hospitalization stress and parents' post-hospitalization anxiety level of pre-school childrent.

DISCUSSION

Although research by spreading questionnaires have been widely accepted and the respondents are willing to be involved in this research, but still there are a lot of limitations in this research. Specifically, the instrument sample size of the research and implementation period are the limitations in this research. The instrument used in which the original version of the instrument is in English. The writer translated it to bahasa Indonesia through a language institution service. There is a possibility that the translation will result in a slightly different meaning from the original language.

The limitation from the aspect of sample size is the sample quantity which is not too many due to the limitation on the existing enumerator service. Then, there is a limitation of time, in which the questionnaire distribution will disturb the daily activities of mothers by visiting their houses.

CONCLUSION

There is a significant relation between mother's age and parent's' post-hospitalization anxiety level of pre-school children. There is no relation between mother's education and parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019. There is no relation between mother's income and parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019. There is a significant relation between health and hospitalization of the pre-school children and parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019. There is no significant relation between strategy and coping source

and parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019. There is a significant relation between parents; post-hospitalization stress and parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019. The most dominant factor affecting parents' post-hospitalization anxiety level of pre-school children in Lhkseumawe City in 2019 are parents' stress and children's health factors.

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