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THE CORRELATION OF THE NURSES' CARING BEHAVIOR WITH PARENTS' ANXIETY LEVEL RELATED TO INVASIVE PROCEDURES TO PEDIATRIC PATIENTS

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ABSTRACT

Keywords:

anxiety caring behavior hospitalization invasive procedures pediatric patient

Hospitalization causes pediatric patients to have received various treatments in the hospital such as invasive procedures. Hospitalization results in anxiety either to children or parents. Parental anxiety could be decreased by nurses' caring behavior. This research aimed to analyze the correlation between nurses' caring behavior with parents' anxiety levels related to an invasive procedure to pediatric patients in RSUD dr. Haryoto Lumajang. The research design was correlational descriptive with a cross-sectional approach. Purposive sampling was used with criteria of parents who have experienced accompanying invasive procedures in children with a minimum stay of a day. A total of 112 parents with a hospitalized child were included with purposive sampling technique. This study showed that participants had high perceptions of caring behaviors and 91% of parents had no anxiety. The result of Kendall tau b correlation test showed that p-value 0.036 (alfa = (0.05) and teta = -0.164. This study found that nurses' caring behavior correlated to parents' anxiety level related to an invasive procedure to pediatric patients in RSUD dr. Haryoto Lumajang. The correlation results showed a very weak relationship, however the higher nurses' caring during hospitalization may lower parents' anxiety because of an invasive treatment. This study indicated that nurses' caring behavior can reduce parents' anxiety. The application of caring behavior should be improved, particularly in pediatric nursing. As a result, caring as the essence of nursing can be achieved.

BACKGROUND

Children have unique characteristics that differ from adults. Children are individuals who are in a period of growth and development towards the process of maturity that occurs from conception to adolescence (Arief et al., 2016). Hospitalization process toward children often needs invasive procedures, for instance, injection, infusion, or other invasive procedures causing fright to the children. This could innate trauma that would follow until adolescent ages (Pulungan et al., 2018). Hospitalization process toward children can cause anxiety, both for children and parents. The factors that affected the anxiety of the parents could occur when their children were having invasive procedures (Kozlowaki et al, cited in

Mulyani, 2018). The nurses are one of the health workers who have main task to provide health services based on the skills and abilities occupied in some positions. One of the skills of nurses is medication administering through invasive procedures. Invasive procedures are the procedures that only doctors are allowed to do; however, it can be processed by the nurses through the designation of the authority from the doctors according to constitution number 38 of 2014 in article 32 (1) about nursing (Purnawan, 2017). The various numbers of both medical and psychological problem threatening children are also affecting anxiety toward the parents. The anxiety felt by the parents while accompanying their children in hospitalization procedures could be in the form of fear, guilt, anger, disappointment, and sadness feeling

(Fadila, 2018).

The result of a research conducted by Apriany (2013), about the parents' level of anxiety in children's chamber of RSUD B class Cianjur showed middle to the high level of anxiety. The other research conducted by Audina, Onibala, & Wowiling (2017) stated that severe anxiety of parents affected by the period length of the children hospitalization was 52.3%, 50% were affected by children's disease diagnostic with complication, and severe anxiety based on the level of parents' education showing the highest score was parents with senior high school as the last education were approximately 70.8%

The nursing services take crucial roles in solving hospitalization stress of both children and parents. The intervention can be done is applying atraumatic care principles, which is therapeutic care. Therapeutic care provided a contented environment by the health workers in purpose to decrease both the physical and psychological stress (de Breving et al., 2015). The other intervention used as the principle in nursing services toward children is applying family-centered care. These children's care process is done by using parents and family approach with a win-win solution for the health services providers, patients, and family. Cimke & Mucuk (2017) stated that family support to children patients became a significant factor in deciding the children's reactions to health issues and nursing. Those interventions are the manifestation and parts of caring behavior of nurses. Nursing services became one of the health services forms which were unique because of the nursing philosophy based on humanism, holism, and care. Caring was the foundation and core of nursing practice (Watson, cited in Firmansyah et al. 2019). Caring behavior included caring activities, respecting the patients to provide sincere attention (Basford and Slevin, cited in Dewi 2014).

According to the research conducted by Firmansyah et al. (2019) about caring behavior of nurses in inpatient rooms, RSAU DR. M Salamun Bandung indicated that caring behavior was sufficient for approximately 52.1%. Fatoni (2018) also claimed that the caring frequency of nurses in RSUD dr. Soediran Mangun Sumarso Wonogiri was 57% for the excellent level and 43% of nurses had fewer levels of the caring level. In the research above, it was concluded that better nurses caring behavior could decrease the level of children's anxiety. The decreasing anxiety felt by the children can make the parents become loosen up in accompanying the children. Therefore, the level of the parents' anxiety can decrease too. Therefore, this study aims to identify if there is a correlation between nurses' caring behavior with parents'anxiety when the children accepting invasive procedures in their hospitalization.

METHODS

The study design was correlational descriptive with a cross-sectional approach. In this study, the researcher analyzed the correlation between nurses' caring behavior with parents' anxiety levels related to an invasive procedure to the child. The population of the research included all parents who accompany invasive procedures in children's hospitalization in RSUD dr. Haryoto Lumajang. Purposive sampling was used with criteria of parents who accompanying invasive procedures in children with a minimum stay of 1 day. A total of 112 parents with a hospitalized child were included. The sample size was taken by power analysis using the G*power application (Bucco, 2015).

The data collection was conducted from 30 December 2019 to 09 January 2020 at the children's room namely Bougenville room at RSUD dr. Haryoto Lumajang. Before conducting data, the researcher submitted a research permit through several stages aimed at obtaining a research permit from RSUD dr. Haryoto Lumajang. The researcher also coordinated with the head of the Bougenville room. Then, the researcher determined the samples of the study, they are child's parents that accompany child's invasive procedures. The instruments used the Caring Behavior Inventory (CBI-24) developed by Wu, et al. (2006) to identify parents' perception of nurses' caring behavior (Zulkarnaen, 2017) and Zung Self-Rating Anxiety Scale (ZSAS) to determine the level of parental anxiety (Nursalam, 2015). The researcher modified the two questionnaires that consisted of 24 statements for CBI-24 and 20 statement items for ZSAS. Therefore, previously the researcher has tested the validity and the reliability of all statements.

Univariate analysis was carried out to describe the respondents' characteristics included the age of parents, the number of days child has been in hospital, the gender of parents, last education of parents, and frequency of child's hospitalization. It was also to describe nurses' caring behavior that used mean and standard deviation and parents' anxiety that divided into 4 levels. Meanwhile, the Kendall tau b (alfa = 0.05) analysis was performed to investigate the relationship between the nurses' caring behavior and parents' anxiety level related to invasive procedures to their child. The ethics feasibility test was conducted on the Research Ethics Committee of the

Respondents Characteristics	Frequency (n=112)	Percentage (%)	
1. Age (year) (mean)	32.14		
2. Number of days child in hospital (day) (mean)	2.63		
3. Parents who accompany child's invasive procedures			
a. Father	36	32.1	
b. Mother	76	67.9	
4. Education			
a. Elementary school	42	37.5	
b. Junior high school	28	25.0	
c. Senior high school	24	21.4	
d. College	18	16.1	
5. Childcare frequency			
a. First time	56	50	
b. >1 time	56	50	

Table 1. Respon	dents Characteristics	s in RSUD di	r. Haryoto I	Jumajang
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Table 2. Nurses' Caring Behavior, Parents' Anxiety Level, and The Correlation Test Result between Nurses' Caring Behavior and Parents' Anxiety Level Related to Procedures Invasive to Child Patients in RSUD dr. Haryoto Lumajang

Variable	Frequency (n = 112)	Percentage (%)	p-value	(τ)
Nurses' caring behavior (Mean±SD)	129.87±11.9		0.036	-0.164
Anxiety Level :				
Normal range	91	81.3		
Mild anxiety level	17	15.2		
Moderate anxiety level	4	3.6		
Severe anxiety level	0	0		

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RESULTS

The validity and reliability test results on the CBI-24 questionnaire obtained Pearson product-moment correlation test results ranging from 0.37 to 0.73 and the Cronbach alpha value of 0.92. Whereas in the ZSAS questionnaire, the validity test results obtained were 0.39 - 0.81 and the reliability value was 0.90. Therefore, all statements in the questionnaire were declared valid and reliable.

In this research, the researcher has explained the purpose and benefits of the study to 115 prospective respondents. 3 of them refused to participate because of their child conditions, while the 112 others agreed and signed the consent form. From one child, there were questionnaires filled out by father, mother, or two of them. Descriptives analysis was done to describe 112 respondents' characteristics.

Based on table 1 above, the age of child's parents ranged from 18 - 74 years with an average age of 32.14 years. Then also obtained the length of stay of childcare ranged from 1 - 8 days with an average length of stay of 2.63 days. Further based on categorical data, showed most of 67.9% respondents was mother, most of 37.5% respondents had primary school in last education level, and childcare frequency describes that 50% respondents were their first time to accompany child' hospitalization.

As shown in Table 2, mean score of the parents' perception of nurses' caring behavior was 129.87 (SD = 11,9) with minimum-maximum score 78 - 144. On the other hand, parents' anxiety level showed that 81.3% of 112 respondents are under normal range and no incidence of severe anxiety levels overall parents' patients. Finally, this table also showed the result of Kendall tau b correlation analysis showed statistically (p = 0.036) and very weak correlation (teta =-0.164) with a negative relationship between nurses' caring behavior and parents' anxiety level related to invasive procedures to child patients. So, the alternative hypothesis (Ha) is accepted, where higher nurses' caring behavior will reduce parents' anxiety levels.

DISCUSSION

Nurses' Caring Behavior Based on Parents' Perceptions in RSUD dr. Haryoto Lumajang

Nurses' caring in this study belonged to parents' perception of nurses' behavior when conducting invasive procedures in a child's hospitalization. Parents who accompany the child's invasive procedures perceive the caring of nurses was almost good. This is consistent with the research of Thomas et al. (2019), he found that patients had positive perceptions of nurses' caring behavior with a total mean score of 114.48 and the maximum score was 135. The other research conducted by Afaya et al. (2017) who also identified nurses' caring behavior according to patients, concluded that patients had a very high perception. Bucco (2015) also revealed in his study that overall of patients had a positive perception of nurses' caring behavior. From those results, it can be concluded that most objects of nursing services (patients or families) had a good perception of nurses' caring. Therefore, it must be improved to achieve caring as the core of nursing.

Nurses' caring behavior can be influenced by internal factors like nurses' minds or external factors like patients, patients' families, and peers. Based on respondent characteristics, the mean score of parents' age was 32.14. This is included in the early adult category. In this age, parents had objectively to assess nurses' behavior. According to Hartarto (2014), the older person will be feelings of loneliness, weakness, always want to be noticed. Therefore, there was a possibility that the nurses had implemented caring well, but the patients or families still feels lacking. So, nurses must show their caring well, full of attention, and fulfill all of parents needs.

The education can also influence parents' perception of nurses' behavior while performing invasive procedures to the child. Most of respondents were graduate from elementary school and at least graduate from college. Higher education would be more exposed to information about health services standards. Hartarto (2014) stated that parents with a high educational background will be expecting to get standards services' care. Such as better services, hearing for their opinion, more to be noticed, and expecting to know better about the disease. While patients or families who had low educational backgrounds wouldn't be too hopeful for high care because they more trusted caregivers. According to the researcher, education can influence the parents' perception because the educational level determines their knowledge about health or health services.

Another factor that influences parents' assessment of nurses' behavior was the length of stay the children in hospital. In this study, the mean score of the number of days respondents had accompanied child hospitalization was 2.63 and the mean score of parents' perception of nurses' caring showed almost maximum. This is consistent to research that conducted by Afaya et al. (2017) which concluded that time can affect patients' perceptions of nurses' caring behavior. The research conducted by Thomas et al. (2019) also stated that treatment time can significantly affect patients' perceptions about care. Prolonged treatment will increase the intensity of interaction either to parents or nurses. Those increasing parents' perceptions of nurses caring.

Parents' Anxiety Level Related to Invasive Procedures to Child Patients in RSUD dr. Haryoto Lumajang

The result showed that the majority of parents who accompanied child's invasive procedures didn't have anxiety about 91 respondents (81.3%) and there were no parents who had severe anxiety. In contrast to the research of Fazli and Kavandi (2015) that almost 50% of parents didn't have anxiety when accompanying the child's hospitalization. The research by Nurmi (2016) also showed that parents' anxiety level was mostly in the category of moderate anxiety (53.3%) and 35.6% of parents had severe anxiety. From the results of these studies, it can be concluded that parents' anxiety who accompanies child's hospitalization range in the normal to severe anxiety.

Many factors can affect the parents' anxiety level. According to Calbayram et al. (2017), parents' age was one of the factors that can influence anxiety levels. In this study, the average parents' age was 32.14 years. According to the Ministry of Health cited in Al Amin (2017), that age is included in the early adult category. Age can be related to one's life experience. Kaplan and Sadock cited in Maulidia et al. (2016) said that age determines the amount of experience to get a feel of anxiety. That statement was contrary to the results. In this study, the results were obtained that although the mean age of the respondents was early adulthood, the anxiety level was mostly of not being anxious/normal. The researcher assumed that many factors can influence parental anxiety, such as the frequency of child hospitalization.

Based on the respondents' characteristics, 50% of parents had accompanied their child to get invasive procedures. This is consistent with the research conducted by Maulidia et al. (2016) that one of the parents' anxiety factors was their first experience to bring their children to the hospital. Another study conducted by Calbayram et al. (2017) also showed that the father's anxiety was caused by the child's previous hospitalization. The researcher assumed that parents who not being anxious about their children's invasive procedures because they feel accustomed to accompanying repeated child's invasive actions as one of the health services. Parents' experience can increase their knowledge about the procedures and reduce concerns about unwanted things that can happen to their children.

Gender can also affect anxiety levels. The results showed that more than half of the parents who accompanied child's hospitalization were the mother. According to Stuart (2016), women more easily get anxious than men when their child getting sick because women had a higher emotional level. This contradicts the results of this study that which showed that the majority of respondents were women, but the majority of parents not being anxious. In this study, 15 children were accompanied by their father, 55 children who accompanied by their mother, and 21 children were accompanied by their parents, either father or mother. Fauziah et al. (2016) stated that the family and the nurses' support can influence the parents' anxiety level while they face the child's hospitalization. Based on that statement, the researcher assumed that the level of maternal anxiety that accompanied a child's hospitalization can also be reduced by the support from their husband at beside them. So the results that found in this study that the majority of respondents was mother, but the anxiety level was mostly in the normal category/ not being anxious because of their husband support.

Another thing that can affect parental anxiety was the number of days children in the hospital. This study found that the mean of child' length hospitalization was 2.63 days. Audina et al. (2017) said that the length of stay of the child in the hospital could influence the level of parental anxiety. This is consistent with the results of research by Stremler et al. (2017) which showed that there was a relationship between the length of the child's stay with parental anxiety level. According to the researchers, the intensity of parents' exposure to nurses' behavior can be increased over time that can affect parents' perception of nurses. So, the parents will trust the nurses and their anxiety level decreases too.

The Association Between Nurses' Caring Behavior and The Level of Parents' Anxiety

The result of the correlation assessment indicates the connection between nurses' caring behavior and the level of parents' anxiety while the invasive procedures engaged toward children patients in RSUD dr. Haryoto Kabupaten Lumajang. This is conformable to the research conducted by Fatoni (2018), concluding the relationship between nurses caring and the level of childrens' anxiety while hospitalizing. The other research conducted by Dewi (2014) also indicated the significant connection between nurses' caring behavior and the level of patients' anxiety because of hospitalization. From those results, it can be concluded that nurses' caring behavior can affect the level of parents' anxiety accompanying their children in invasive procedures.

Hospitalization process toward children can innate anxiety, both for children and parents. The anxiety of parents was affected by some factors, such as accompanying their children in invasive procedures: infusion, blood sampling, drug injection, and other invasive procedures (Kozlowaki et al, cited in Mulyani, 2018). Fadila (2018) stated that parents' anxiety could be manifested in fear, guilt, and sadness felling. The role of the nurses is very important to minimize parents' anxiety to make the nursing toward their children can be done well.

In this research, it also indicates that the correlation between the variables, for instance, caring behavior and parents' anxiety level goes to negativity. This means that if the frequency of nurses' caring behavior gets higher, then the level of parents' anxiety accompanying their children in invasive procedures will decrease. This result is conformable to the research conducted by Maulidia et al. (2016) which identified caring application toward parents' anxiety level while their children were hospitalized. The nurses' caring behavior significantly could increase the level of parents' anxiety while accompanying their children's hospitalization from approximately 35.10 becoming 32.27. The nursing services based on caring provides beneficiary to decrease parents' anxiety of the children

The researcher assumes that nurses' caring behavior can be manifested in emotional support, providing attention, giving information related to the disease of the children, and abilities and skills of the nurses to do the accomplishment toward the children. The application of nurses' caring behavior can increase the conviction of the parents to the nurses relating to the treatment done by them to their children; therefore, parents' anxiety will decrease. This is also supported by the research conducted by Laura et al. (2017). Laura stated that giving support, involving the nursing process, providing detail information related to the disease of their children were also able to decrease the anxiety of the parents. Giving information related to the condition of their children and things that should be done immediately could decrease the anxiety of the father (Calbayram et al., 2017). The most common necessitates needed by the parents while accompanying the invasive procedures of their children during hospitalization are information about the diseases of the children, the disquiet of children's condition in the future, and emotional support.

The result of the study also indicates the power of the correlation between caring behavior and the level of parents' anxiety accompanying invasive procedures of their children during hospitalization is very weak. That result is caused by other factors that are able to affect the decreasing anxiety of the parents besides the factor of nurses' caring behavior. Calbayram et al. (2017) stated that the causes of parents' anxiety during accompanying their children hospitalization were the children's disease, the medication, and procedures undertaken by the children, the convenience and safety of the children that were worried because they were in strange places and new for their children. Some other factors that could affect the anxiety of the parents while accompanying their children hospitalization were being the first time of the parents to hospitalize their children, worrying about the expense and the condition of their children, and the invasive procedures toward their children (Maulidia et al., 2016). Other research conducted by Fauziah et al. (2016) also claimed that external factors, such as support from family and nurses, also provided the role to decrease in parents' anxiety while accompanying their children's pre-surgery. The researcher assumes that the decrease of parents' anxiety in RSUD dr. Haryono Lumajang in not only affected by the nurses' caring behavior but also some other factors from the parents or another factor from the outside. On the other hand, the nurses should

notice maintain and increase caring behavior in every nursing process of the children.

Our findings have limitations. There wasn't identify a child's age. Besides, the number of samples in this study wasn't based on the number of pediatrics patients. So, the data collection that conducted using a questionnaire was filled by mothers only, fathers only, and both of them (father and mother).

CONCLUSION

According to the findings of the study and discussion in the previous section, it can be concluded that nurses' caring behavior correlated to parents' anxiety level related to an invasive procedure to child patients in RSUD dr. Haryoto Lumajang. The correlation results show a very weak relationship, but higher nurses' caring behavior lesser parents' anxiety.

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