The Knowledge and Attitude of Nurses in the Implementation of Atraumatic Care in Hospitalized Children in Indonesia

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Abstract: Hospitalization can become a crisis that a child encounter, not just from their injury but from the experience. In providing nursing care to pediatric patients, nurses need to concentrate on family-centered care and atraumatic care. However, there is no information how nurses in Indonesia implementing atraumatic care to the hospitalized children. This study aim was to identify the knowledge and attitude of nurses in the application of atraumatic care. This is a quantitative descriptive study, involving all 72 nurses working at the pediatric inpatient ward Dr. Slamet General Hospital Garut Indonesia. The instruments utilized in this research consist of modified questionnaires on nurses’ knowledge and attitude of atraumatic care and its implementation. The data were analyzed by means of frequency distribution and percentages. Results of this study indicated that the knowledge of nurses in the application of atraumatic care on hospitalized children was moderate (50%), and the majority of nurses (89%) displayed supportive attitudes in this respect. It can be concluded that overall, the nurses already have adequate knowledge about atraumatic care, and most of them show favorable attitudes in its performance. However, in order to be optimal in providing care to hospitalized children the hospital must provide atraumatic care training for nurses, and standard operational procedures that can help the nurses to implement atraumatic care and minimize the impact of hospitalized children.

Keywords: Atraumatic care, children, hospitalization, knowledge and attitude of nurses.

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I. Introduction

Hospitalization can become a disquieting and traumatic experience for children (1, 2). The way children react to such situation until reverting to a stable state depends on their age and experience (1). Price and Gwin(3) stated that hospital rules and routines, undergone medical procedures such as bedrest, intravenous (IV) infusion, and other measures greatly disrupt the freedom and independence of children in their developing stages, to the extent that they feel uncomfortable with their condition. Hospitalized children have faced increasingly severe problems year by year, including in the percentage of treated children. In the United States, it is projected that more than five million children have been hospitalized, 50% of whom suffer from hospitalization-related anxiety and stress. In Indonesia, the child hospitalization rate is estimated at 35 per 100,000 (4).

Hospitalization may yield both positive and negative impacts to pediatric patients, that is related to age, past experiences with diseases, children’s acceptance of their circumstances, their coping skills, and the present support system form their parents (1, 5, 6). Previous study conducted by Jannah (7) indicated that hospitalization stress commonly occurs due to anxiety, ominous hospital atmosphere, hospital routines, painful procedures, and fear of death. Rokach(2) explained that hospitalized children commonly display their emotional reactions by crying, showing anger, acting aggressively, staying silent when greeted by nurses, and refusing to eat. Physical reactions that may emerge are sleeping difficulties, digestive problems (nausea, vomiting, stomachache), and unrest during treatment.

In treating children, nurses need to adhere to a nursing philosophy that focuses on family-centered and atraumatic care (5, 8). Atraumatic care is a therapeutic method that does not induce trauma in children and their families, in that the treatment strives to prevent trauma and maximize children’s growth and development throughout their stay at the hospital (5, 8). Hospitalized children may cry or feel anxious, irate, hurt, etc. when undergoing a traumatizing event, which if overlooked could psychologically harm them and hamper their development. Hence, atraumatic care is one form of pediatric nursing that minimizes the detrimental impact of hospitalization.

Hockenberry et al(8) denoted that the essentials which nurses need to perform are, among others: (1) mitigating or curbing the effect of separation from family, (2) raising parents’ ability to control their child’s...
treatment, (3) avoiding or reducing injury and pain as psychological impact, (4) modifying the physical environment. Research conducted by Huff et al. (9) showed that providing atraumatic care to children under hospitalization can decrease the trauma felt by them and their parents. Hence, it can be inferred that how nurses handle children will largely influence their admission process, and thereby the proper intervention has to be determined in order to optimize the care of hospitalized children.

Knowledge as an internal factor of pediatric nurses that is a foundation that pediatric nurses must have when caring for hospitalized children, particularly about the principles of atraumatic care. This knowledge is needed to help pediatric patients during hospitalization in achieving optimal care. One’s knowledge can be obtained from education, experience, and information sources (10). The higher of the education, the more advanced the knowledge and attitude (11)

Attitude is one’s veiled reaction or response towards a stimulus or object (10). Attitude is informed by knowledge. When children are hospitalized, their risk of experiencing trauma escalates and thus calls for suitable intervention. Consequently, pediatric nurses are required to have good knowledge and attitude in order to minimalize the potential damage caused by hospitalization.

According to a preliminary study, information and preparation for children and parents prior to hospitalization have not been fully provided by nurses, resulting in such reactions from children as waiting, screaming, writhing, hitting, and refusing to enter the child care room. Conversely, in several cases involving regular patients, transpiring reactions were tackled well. Meanwhile, psychological approach to children before treatment has also not entirely been made, prompting children’s tendency to lose control, such as isolating themselves and acting uncooperatively against the care they are about to receive.

There is no study in Indonesia in evaluating knowledge and attitude of nurses regarding atraumatic care and its implementation, to the extent that the aims of the study was to identify the knowledge and attitude of nurses in the application of atraumatic care, as a contribution to the advancement of pediatric nursing care services in Indonesia, particularly in Garut.

II. Methods

This study employed a quantitative descriptive design with a total sampling technique, generating a sample that involves the entire staff of 72 nurses working in the pediatric ward of Dr. Slamet General Hospital Garut from May until June 2018. The instruments used to gather data in this research was a questionnaire for demographic data, one about the knowledge of nurses concerning atraumatic care, modified from that of Amni (12) and another on the attitude of nurses in giving atraumatic care, adjusted from that of Utami (13) with a reliability test result of 0.941.

The knowledge questionnaire contains 20 questions with an overall score ranging from 0 to 20 classified into three categories, which are good knowledge (14-20), fair knowledge (7-13), and poor knowledge (0-6). The questionnaire on attitude covers 30 closed-ended questions with the options of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). The questions are arranged with a Likert scale of 1-4. For favorable questions, the scores are designated as SA = 4, A = 3, D = 2, SD = 1, while the values for the responses to unfavorable questions are SA = 1, A = 2, D = 3, SD = 4. The classification utilizes a cut-off point with a theoretical mean of 60, so that a score of at least 60 indicates supportive attitude while a score over 60 represents unsupportive attitude. The study has gained Ethical Approval from the Research Ethics Committee UniversitasPadjadjaran with reference number 323/UN6.KEP/EC/2018 as well as permission from Director of Dr. Slamet General Hospital Garut.

III. Results of the study

The demographic data showed that of the 72 respondents, 34 nurses (almost 50%) were between 36 and 45 years old, 51 (70%) were female, and 29 (40%) have completed higher education in nursing. Furthermore, nearly half of them, or 35 participants, earned 1.5 to 2.5 million rupiahs per month on average, over half (38 nurses) had experience working in a hospital for more than ten years, but the 58% majority (42 nurses) had served at the pediatric ward for less than five years. Most conspicuously, however, virtually every participant (70 nurses or 97%) in this survey had not undertaken any training on atraumatic care.

It can be seen from the frequency distribution in Table 1 that 36 nurses (50%) have sufficient knowledge, whereas 29 (40%) have extensive knowledge, and only seven of the respondents (10%) showed inadequate knowledge.
The Knowledge and Attitude of Nurses in the Implementation of Atraumatic Care in ....

Table 1. Nurses’ Knowledge of Atraumatic Care on Hospitalized Children at Dr. Slamet General Hospital Garut (N=72)

<table>
<thead>
<tr>
<th>Knowledge of Nurses</th>
<th>f</th>
<th>%</th>
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<tbody>
<tr>
<td>Good (score 14-20)</td>
<td>29</td>
<td>40</td>
</tr>
<tr>
<td>Fair (score 7-13)</td>
<td>36</td>
<td>50</td>
</tr>
<tr>
<td>Poor (score 0-6)</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

More specifically, the distribution of the respondents’ answers in Table 2 describes that practically all the participants (99%) have grasped the definition of atraumatic care, and 92% are aware of its purpose. Most of the nurses (78%) know how to decorate the room according to atraumatic care principles, and 88% comprehend the use of play for children in the hospital.

Table 2. Frequency Distribution of Nurses’ Knowledge about Atraumatic Care on Children Hospitalized at Dr. Slamet General Hospital Garut (N=72)

<table>
<thead>
<tr>
<th>No</th>
<th>Statement</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Definition of atraumatic care</td>
<td>71</td>
<td>99</td>
</tr>
<tr>
<td>2</td>
<td>Purpose of atraumatic care</td>
<td>66</td>
<td>92</td>
</tr>
<tr>
<td>3</td>
<td>Benefit of atraumatic care</td>
<td>50</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Principal items of atraumatic care</td>
<td>31</td>
<td>43</td>
</tr>
<tr>
<td>5</td>
<td>Atraumatic care principle about rooming in</td>
<td>53</td>
<td>74</td>
</tr>
<tr>
<td>6</td>
<td>Atraumatic care principle of providing information about the child’s state and what parents can do</td>
<td>51</td>
<td>70</td>
</tr>
<tr>
<td>7</td>
<td>Atraumatic care principle of administering local anesthetic drugs such as lidocaine and a eutectic mixture of local anesthetics (EMLA) before parenteral injection</td>
<td>36</td>
<td>50</td>
</tr>
<tr>
<td>8</td>
<td>Atraumatic care principle of room décor, e.g. curtains and wall accessories bearing images of flowers or funny animals</td>
<td>56</td>
<td>78</td>
</tr>
<tr>
<td>9</td>
<td>Atraumatic care principle of arranging the pediatric care room to make the patient feel at home</td>
<td>19</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>Atraumatic care principle of giving information to parents about types of toys that can be brought to the hospital</td>
<td>35</td>
<td>49</td>
</tr>
<tr>
<td>11</td>
<td>Atraumatic care principle of pre-procedure psychological preparation of the child and empathetic attitude</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>12</td>
<td>Atraumatic care principle of using bright paint colors on the room walls</td>
<td>53</td>
<td>74</td>
</tr>
<tr>
<td>13</td>
<td>Atraumatic care principle of keeping contact by facilitating meetings with teachers, schoolmates, and whoever the child desires</td>
<td>49</td>
<td>68</td>
</tr>
<tr>
<td>14</td>
<td>Atraumatic care principle of preparing the child and parents for hospitalization by health education activities for parents</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>15</td>
<td>Atraumatic care principle of providing games to the child before performing intervention</td>
<td>44</td>
<td>61</td>
</tr>
<tr>
<td>16</td>
<td>Principle of child play in the hospital</td>
<td>63</td>
<td>88</td>
</tr>
<tr>
<td>17</td>
<td>Atraumatic care principle of wearing nonconventional multicolored nurse outfits</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>18</td>
<td>Atraumatic care principle of involving parents to participate in treating the child</td>
<td>27</td>
<td>38</td>
</tr>
<tr>
<td>19</td>
<td>Atraumatic care principle of conducting special preparation for the child before an effective surgical measure</td>
<td>46</td>
<td>64</td>
</tr>
<tr>
<td>20</td>
<td>Pediatric pain assessment steps</td>
<td>32</td>
<td>44</td>
</tr>
</tbody>
</table>

In contrast, the majority of respondents (74%) had no knowledge of the atraumatic care principle of arranging the child care room to make the child feel at home, and 79% nurses failed to grasp the principle of psychological preparation for the child before any procedure and the empathetic attitude of nurses. Three-quarters of the participants did not know the atraumatic care principle of the preparation of children and their parents prior to hospitalization, and 56% nurses gave the wrong answer to the question about the stages of child pain assessment.

Table 3. Nurses’ Attitude in Performing Atraumatic Care on Hospitalized Children at Dr. Slamet General Hospital Garut (N=72)

<table>
<thead>
<tr>
<th>Attitude of Nurses</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive (score ≥60)</td>
<td>64</td>
<td>89</td>
</tr>
<tr>
<td>Unsupportive (score&lt;60)</td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>

According to the frequency distribution in Table 3, a large majority of the participants (89%) gave favorable attitude in applying atraumatic care, while only eight of them (11%) were not supportive in this respect.
The distribution of nurses’ attitude in the implementation of atraumatic care resulting from this study demonstrated that 50 respondents (69%) strongly agreed to introducing themselves to children and their parents before providing nursing care and 44 nurses (61%) declared their firm support to regular child care control. As many as 62 participants (86%) subscribed to the active involvement of parents in treating children during their stay at the hospital, and 57 nurses (79%) concurred that providing psychological support to children and parents prior to treatment can decrease their anxiety.

On the contrary, over 50% of the respondents, or 38 of them, expressed their opposition to forbidding parents from making decisions on their children’s care, but fewer than half (31 participants) did not consent to allowing parents to select the food that their children like. Similarly, 32 nurses (44%) were keenly against prohibiting parents from accompanying their children during nursing measures, and 23 (32%) heavily objected to letting child patients cry without any soothing attempt whilst others are resting or sleeping.

IV. Discussion

Results of this study indicated that there were 36 participants or 50% with adequate knowledge, 29 nurses (40%) with considerable knowledge, and merely seven (10%) with insufficient knowledge about atraumatic care on hospitalized children at Dr. Slamet General Hospital Garut.

The proportion of respondents who gave an incorrect response to question item no. 9 relating to the atraumatic care principle of homelike child care room setup (74%) may reflect the lack of hospital facilities that enable the modification of the physical setting to be more child-friendly. Norton-Westwood (2012) stated that with a child’s room layout akin to one at home, it is expected that the children will be able to improve their coping strategy during hospitalization.

Regarding question item no. 14, the ignorance of 75% of the nurses about the atraumatic care principle of children and parents’ preparation prior to hospital care possibly suggests the inadequate attention of nurses towards children and parents before. This contrasts the finding of Jaaniste et al. as cited in Gordon et al., (14) that preparation by supplying accurate information can help reduce the uncertainty, increase the coping ability, minimize the stress, optimize the outcome of medication, and shorten the recuperation time of the child patient. Comparably, research conducted by Claar, Walker and Barnard(15) proved that clear-cut information given to a child before undergoing a procedure usually yields more effective results (decreased stress and better adaptation) prior and subsequent to the action.

In addition, 40 respondents (56%) wrongly answered question item no. 20 concerning the process of pediatric pain assessment, probably because there had been no available standard operational procedure (SOP) of atraumatic care that can support nurses in providing nursing care to children, particularly atraumatic care.

On the contrary, it is evident that almost every participant rightly answered question item no. 1 on the definition of atraumatic care (99%), no. 2 on the aims of atraumatic care (92%), and no. 16 on the purpose and principles of child play in the hospital (88%). In general, nurses in this current study have understood the fundamentals in performing atraumatic care in order to avert and diminish physical and psychological harm in children and their parents.

This study corroborates with previous study by Nusni(16), which identified that a large majority of respondents (75%) simply had fair knowledge whereas none of them retained good knowledge. Similarly, other study conducted by Rahmah and Santosoi(4) found that 67.7% or most of the nurses bore reasonable knowledge whilst 32.3% exhibited proper knowledge. Meanwhile, Surastiningisih and Hayati(17) acquired different findings, in that 57% participants held poor knowledge concerning atraumatic care. The researchers have cited possible underlying factors such as education, tenure, and dearth of trainings or seminars on atraumatic care attended by the respondents or socialized in previous learning. (17)

Our research also delineated that the attitude of 89% of the participants favors atraumatic care, implicating that the overall attitude of nurses in Dr. Slamet General Hospital Garut supports the application of atraumatic care.

On the other hand, the unaccommodating attitude towards atraumatic care expressed by eight respondents (11%) is echoed by answers to question item no. 2 of the attitude questionnaire, to which 28% gave the wrong answer on the stage of separation between child and parents and how far the child could tolerate the absence of parents. Moreover, on item no. 9, 33% refused to permit children to play under hospitalization, and, on item no. 14, 43% were unwilling to let parents choose the meal preferred by their child providing that it does not threaten the child’s condition.

Nonetheless, most participants (70%) expressed their keen willingness to introduce themselves to the child and parents before treatment, as represented by attitude question item no. 3. It is also notable from item no. 2 that a small fraction of respondents (11%) stated their comprehension of the separation phase between the child and parents, and the extent to which the former is able to cope without the presence of the latter. Generally, the majority of nurse respondents have already had supportive attitude in lowering or restricting the negative effect of parting from family, as implied by their responses to items no. 1-6 on the atraumatic care
principle in question. This is in line with findings from the earlier study by Kurnia and Waluyanti (18), where 73% nurses acted according to the principle of limiting the harmful impact of being away from family.

In regard to attitude question items no. 7-12, 14, 16 and 17 relating to the atraumatic care principle of improving the capability of parents in overseeing care of their child, most of the respondents (61%) declared their strong approval to regular child nursing control in answering item no. 8. However, on item no. 10, more than half (53%) stood against giving the chance to parents to take decisions on the treatment of their child. On the whole, the majority nurses in current study have upheld favorable attitude in increasing the parents’ capacity to control their child’s nursing, but there is room for improvement, particularly in presenting the opportunity to parents to make decisions in this respect. Nurses play the role of educators, both directly by providing health education to parents and indirectly by assisting parents or children in understanding their medication and care (19).

Meanwhile, among the responses to attitude question items pertaining to the atraumatic care principle of preventing or reducing injury and pain as a psychological impact, namely items no. 13, 15, and 18-24, 82% of all participants agreed with item no. 24 to install bedrails so that the pediatric patient does not fall over. Conversely, almost two-fifths of respondents fervently conformed to item no. 15 in not permitting parents to take their child for a walk around the patient’s room when the child feels bored, since there is probably no hospital amenity with which children can play. This parallels with the study of Kurnia and Waluyanti (18) where 65.7% nurses apply behavior that comply with the principle of curbing injury and the psychological effect of pain.

Furthermore, this research depicted that in terms of the atraumatic care principle of modifying physical environs (attitude question items no. 25-30), 64% respondents concurred with item no. 27 to adorn the child care room with child nuances, such as brightly colored walls laden with pictures, etc. In contrast, a small percentage (18%) opposed item no. 28 in sporting a neat, fitting and colorful uniform to better the nurse’s interaction with pediatric patients and their parents. Likewise, findings from Rahmah and Santoso (4) demonstrate that nurses have not been able to exhibit attitude in favor of adjusting the physical milieu, perhaps stemming from the limited hospital features that enable nurses to realize this principle.

By and large, this study corroborates that of Dianto(20) in which 87.1% nurses endorse the implementation of atraumatic care at the PKU Muhammadiyah hospitals in Bantul and Yogyakarta, and reinforces that of Nusni (16) where 28 respondents (77.8%) display fairly helpful attitude to atraumatic care principles, despite only three respondents with good attitude (8.3%).

All these findings insinuate the need for standard operational procedures (SOP) that sustain the performance of atraumatic care in the hospital. Nonetheless, Dr. Slamet General Hospital Garut has yet to enact an atraumatic care policy in child care along with its SOP. An experimental study by de Breving, Ismanto, and Onibala (21) summarized that the intervention group had a greater average anxiety score prior to atraumatic care (39.82) than the control group (37.24), yet following the application of atraumatic care the intervention group’s mean score (29.59) was less than that of the control group (39.1), proving that the intervention of atraumatic care potentially suppresses the anxiety level of hospitalized children. Hence, in order to obtain outcomes in accordance with atraumatic care principles, it is necessary for nurses to recognize how far their knowledge aligns with their attitude in providing nursing care to children, especially in performing atraumatic care. It follows that pediatric nurses are required to possess good knowledge and attitude to minimize detriments plausibly brought about by hospitalization.

V. Conclusion and recommendations

Based on the findings of this study, it can be concluded that 50% of them had fair knowledge and about 40% had good knowledge, whereas the remainder lacked the necessary knowledge. In relation to attitude, the overwhelming majority of nurses (89%) support the intervention of atraumatic care, while only about 11% showed unfavorable attitude on this matter. In general, the nurses already have adequate and considerable knowledge concerning atraumatic care, and most of them demonstrate attitude that endorses the implementation of atraumatic care. The nurse respondents were also capable of performing atraumatic care, although its realization has been suboptimal. This probably owes to a shortage of external supporting factors, such as facilities, infrastructure, etc., which are required in providing atraumatic care at the hospital in order to minimize the anxiety of hospitalized children.

Through this study, it is advisable for Dr. Slamet General Hospital Garut to facilitate nurses for the provision of atraumatic care in treating child patients at the pediatric ward by procuring the necessitated facilities, assigning nurses to undergo training on atraumatic child care in particular, and establishing SOP for atraumatic care. The researchers also suggest that nurses must pay closer attention to physical and psychological conditions of children and parents. It is needed to help the children attain optimal recovery. Additionally, the researchers recommend educational institutions to upgrade the curriculum of atraumatic care as a basic principle of pediatric nursing in order to achieve pediatric nursing competence and ultimately raise the quality of pediatric
nursing care services. For further research, it is advised to look further into obstacles in implementing atraumatic care in hospitalized children in Indonesian hospitals.

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