



Knowledge and Attitude of Nurses on Implementation of Atraumatic Care among Hospitalized Children in Eastern Nepal: A Cross-sectional Study

Pramila Mahato,¹ Rit Shrestha,² Basant Kumar Karn,³ Amit Kumar Chaudhary,⁴ Rakesh Singh⁵

¹Department of Paediatric Nursing, National Medical College, Birgunj, Nepal

²Medical Student, Nepal Medical College, Jorpati, Kathmandu, Nepal

³Department of Paediatric Nursing, B.P. Koirala Institute of Health Sciences, Dharan, Nepal

⁴General, GI and Laparoscopic Surgeon, Grande International Hospital, Dhapasi, Kathmandu, Nepal

⁵Department of Community Medicine and Public Health, KIST Medical College, Lalitpur, Nepal and Department of Research, Transcultural Psychosocial Organization Nepal, Kathmandu, Nepal

Article History

Received On: 16 Aug, 2022

Accepted On: 09 May, 2023

Funding sources: None

Conflict of Interest: None

Keywords:

Anxiety; Hospitalization; Paediatrics; Psychological distress

Online Access



DOI:

<https://doi.org/10.3126/jnps.v4i2:3.46172>

Abstract

Introduction: The modality and quality of care received during hospitalization affects a child's response to their illness. Thus, any intervention delivered by healthcare providers including nurses must be based on principles of atraumatic care. This study aims to assess the knowledge and attitude of nurses in the implementation of atraumatic care among hospitalized children in a tertiary care center in Eastern Nepal.

Methods: A descriptive cross-sectional study was conducted among 106 nurses in a tertiary hospital from 4th January to 1st February 2020. Ethical approval was received from the Institutional Review Committee. Sampling was done by total population enumeration method. Data was collected using a self-administered three-part questionnaire and analyzed using Statistical Package for the Social Sciences version 11.5 by utilizing descriptive statistics.

Results: The mean knowledge and attitude of nurses towards implementation of atraumatic care among hospitalized children was found to be 14.90 ± 3.90 and 74.74 ± 7.5 respectively. Out of 106 nurses, 73 (68.90%) had adequate knowledge whereas 56 (52.80%) had favorable attitudes towards principles and implementation of atraumatic care, assessed using reliable scales. Variations due to socio-demographic and professional parameters were insignificant.

Conclusions: The study shows that majority of the surveyed nurses had adequate knowledge of the principles of atraumatic care and a favorable attitude towards its application among hospitalized children. However, the measured attitude of nursing practitioners was relatively lower in terms of favorability.

Introduction

Atraumatic care is the philosophy of providing therapeutic care using interventions that reduce psychological and physical distress among children and their families. It aims to accomplish this by identification of aggravating factors, avoiding or reducing separation of child from parents, minimizing pain or evading it altogether and all in all, fostering a healthy partnership between healthcare providers and families.¹ Although modern hospitals provide a safe and healing environment, hospitalization often entails physical and psychological stressors.² Children who are hospitalized

*Corresponding Author

Rit Shrestha,
Medical Student,
Nepal Medical College,
Jorpati,
Kathmandu, Nepal
Email: rithshrestha960@gmail.com

Copyrights & Licensing © 2022 by author(s). This is an Open Access article distributed under Creative Commons Attribution License (CC BY NC)



tend to report anxiety as a common and severe symptom - often accompanied by and correlated to pain. This, in turn, has a negative impact on the child's development and lasting negative consequences.³

As primary caregivers in healthcare settings, nurses should be familiarized with variables that negatively influence reactions so that they can identify the children at risk and pay heed to the ways in which the application of atraumatic care can be enhanced. This is crucial because the amount of stress that any child experiences is related to age, the coping mechanisms employed by the child, the favorability of the ward environment and the autonomy that a child is offered.^{4,5} Arrangements made for children beforehand have been found efficacious in decreasing stress during hospitalization- for instance, ensuring predictability and providing a sense of control will decrease the damaging effects of hospitalization. Predictability can be offered by providing adequate knowledge regarding interventions that are to be carried out, via effective interpersonal communication, use of videos or by play therapy. By making sure that protective mechanisms are employed, the experience of hospitalization, which is deemed traumatizing, can be converted to an experience that is positive and conducive to building of resilience.⁶ Since atraumatic care enhances the quality and modality of care, identifying information gaps and disparities in approach towards this principle is crucial.

This study aims to assess knowledge and attitude of nurses in the implementation of atraumatic care among hospitalized children at a tertiary care center and offers to shed light on the areas that require improvement.

Methods

This cross-sectional study was conducted at B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal, among registered nurses. The study was initiated after receiving ethical clearance from the Institutional Review Committee of BPKIHS in October 2019. Informed written consent was taken from all the participants and they were provided with information about the purpose of data collection as well as the right to refuse their participation in the study. The confidentiality of all participants has been ensured and the collected data has been kept among the authors. A sample that involves an entire staff of 106 nurses was selected using total population enumeration method.

Data was collected from 4th January 2020 to 1st February 2020 using a pretested questionnaire having three parts. The questionnaire was pretested among 10 nurses and the analysis of the pretest data indicated that both parts of the questionnaire (knowledge and attitude) was reliable with an acceptable value of Cronbach alpha 0.80 and 0.92 respectively. The first part of the questionnaire assessed the socio-demographic and professional profile of participants

(Age, level of education, designation, current area of clinical practice, total nursing experience after completion of study, duration of work in paediatric unit and maternal and child health ward, if training related to atraumatic care had been provided), the second part assessed the knowledge of participants using a set of 20 multiple choice questions and the third part assessed the attitude of participants using a five-point Likert's scale comprising of 20 items.

The assessment of knowledge was done by assigning a score of 1 for each multiple choice question that was correctly answered while marks were not deducted for wrong answers. The overall scoring range was 0 to 20, which was classified into two groupings: a score ranging from 14 to 20 was categorized as adequate knowledge and a score ranging from 0 to 14 was categorized as inadequate knowledge.⁷ The third part of the questionnaire, which assessed the attitude of nurses towards the implementation of providing atraumatic care among hospitalized children, had 20 positive and negative statements. The responses for each of these statements had responses that corresponded to a Likert scale of 1 - 5, with the options of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD). For affirmative statements, SA = 5, A = 4, N = 3, D = 2, and SD = 1, and for negative statements, SA = 1, A = 2, N = 3, D = 2 and SD = 1 was assigned for each selection. The total score was the sum of the scores of the items was 100. The scores thus obtained were classified into one of two groups- favorable attitude and unfavorable attitude. Since the classification utilizes a cut-off point with a theoretical mean of 75, a score of at least 75 was considered a favorable attitude while less than 75 was considered an unfavorable attitude.⁸ The obtained data was entered in Microsoft Excel 2010 and then imported to Statistical Package for the Social Sciences (SPSS) version 11.5.

Results

Of the 106 respondents; 55 nurses (51.90%) were more than twenty - five years age old. Most of them; 77 (72.60%) had educational qualifications below bachelor's level. Majority of respondents i.e. 94 (88.70%) were staff nurses and auxiliary nurse-midwifery (ANM). Most of the nurses 59 (55.70%) were currently working in paediatric and Maternal and Child Health (MCH) wards. More than half i.e. 58 (54.70%) had less than five years of experience in a hospital after completion of their study and more than half 55 (51.90%) of the respondents had served at the pediatric unit and MCH ward for three or more years. Majority of the nurses; 79 (74.50%) had not undertaken any training on atraumatic care. These socio-demographic and professional characteristics are presented in Table 1.

The findings showed that 73 nurses (68.90%) had adequate knowledge, whereas 33 (31.10%) had inadequate

knowledge. Similarly, 56 nurses (52.80%) had a favorable attitude, and the remaining, 50 (47.20%) did not have a favorable attitude towards implementing atraumatic care. The mean knowledge and attitude of nurses towards implementation of atraumatic care among hospitalized children are presented in Table 2.

Table 1 - Socio-demographic and Professional characteristics of respondents, expressed as numbers and percentages

(N = 106)

Variables		Frequency (f)	%
Age	≤ 25 years	51	48.10
	> 25 years	55	51.90
Education level	Below bachelor	77	72.60
	Bachelor and above	29	27.40
Designation	Staff nurse and ANM	94	88.70
	Senior staff nurse and nursing officer	12	11.30
Currently working clinical area	Paediatric ICU and paediatric ER	47	44.30
	Paediatric and MCH ward	59	55.70
Total nursing experiences after completion of study	< 5 years	58	54.70
	≥ 5 years	48	45.30
Duration of work in the pediatric unit and MCH ward	< 3 years	51	48.10
	≥ 3 years	55	51.90
History of training received on atraumatic care	No	79	74.50
	Yes	27	25.50

Table 2 - Nurses' knowledge and attitude of atraumatic care

(N = 106)

		Frequency (%)	Mean ± SD
Knowledge	Adequate	73 (68.90)	14.90 ± 3.90
	Inadequate	33 (31.10)	
Attitude	Favorable	56 (52.80)	74.74 ± 7.5
	Unfavorable	50 (47.20)	

Variations in the adequacy of knowledge and favorability of attitude of nurses across age groups, education levels, designation, current area of clinical practice, total nursing experience, duration of work in paediatric and MCH ward, history of training related to atraumatic care were noted (Table 3 and Table 4).

Table 3 - Knowledge of atraumatic care for hospitalized children across different socio-demographic variables

(N = 106)

Variables	Category	Adequate Knowledge	Inadequate Knowledge
		F (%)	F (%)
Age	≤ 25 years	33 (31.13)	18 (16.98)
	> 25 years	40 (37.74)	15 (14.15)
Education level	Below bachelor	51 (48.11)	26 (24.52)
	Bachelor and above	22 (20.75)	7 (6.60)
Designation	Staff nurse and ANM	62 (58.49)	32 (30.19)
	Senior staff nurse and nursing officer	11 (10.38)	1 (0.94)
Currently working clinical area	Paediatric ICU and pediatric ER	36 (33.96)	11 (10.38)
	Paediatric and MCH ward	37 (34.91)	22 (20.75)
Total nursing experiences after completion of study	< 5 years	38 (35.85)	20 (18.87)
	≥ 5 years	35 (33.02)	13 (12.26)
Duration of work in pediatric unit and MCH ward	< 3 years	33 (31.13)	18 (16.98)
	≥ 3 years	40 (37.74)	15 (14.15)
History of training received on atraumatic care	No	52 (49.06)	27 (25.47)
	Yes	21 (19.81)	6 (5.66)

Table 4 : Attitudes of atraumatic care for hospitalized children across different socio-demographic variables (N = 106)

Characteristics / Variable	Category	Favorable Attitude	Unfavorable Attitude
		(%) f	(%) F
Age	≤ 25 years	(24.53) 26	(23.58) 25
	> 25 years	(28.30) 30	(23.58) 25
Education level	Below bachelor	(39.62) 42	(33.01) 35
	Bachelor and above	(13.21) 14	(14.15) 15
Designation	Staff nurse and ANM	(44.34) 47	(44.34) 47
	Senior staff nurse and nursing officer	(8.49) 9	(2.83) 3
Current area of clinical practice	Paediatric ICU and paediatric ER	(27.36) 29	(16.98) 18
	Paediatric and MCH ward	(25.47) 27	(19.81) 21
Total nursing experiences after completion of study	< 5 years	(27.36) 29	(27.36) 29
	≥ 5 years	(25.47) 27	(19.81) 21
Duration of work in pediatric unit and MCH ward	< 3 years	(21.70) 23	(26.42) 28
	≥ 3 years	(31.13) 33	(20.75) 22
History of training received on atraumatic care	No	(36.79) 39	(37.74) 40
	Yes	(16.04) 17	(9.43) 10

Discussion

Preventing or minimizing the child’s separation from the family, promoting a sense of control and avoiding or lessening bodily injury and pain are the principles on which the foundation of atraumatic care is built. Nurses are directly involved in promoting health and well-being of children and their families, so it is crucial that they understand the importance of and employ atraumatic approach to care.⁹ This necessitates the implementation of an approach that is essentially atraumatic. The present study was centered on assessing the knowledge as well as attitude of nurses on the principles and implementation of atraumatic care among hospitalized children in Eastern Nepal.

Majority of respondents (68.90%) had adequate knowledge and a little more than half (52.8%) had favourable attitude

towards atraumatic care. Similar studies, which assess the levels of knowledge and favorability of attitude, have been carried out in Indonesia. Comparable findings were obtained in one such study, in which 67.7% participants were found to have adequate knowledge.¹⁰ Another study found that 50% respondents had good knowledge of atraumatic care and 89% displayed supportive attitude towards atraumatic care.⁷ The reason for the difference in knowledge and attitude may be due to differences in a study setting, the difference in sample size, different instruments used, and the difference in the outcome rating they used.

Children have limited coping abilities and coupled with immature cognitive development, they show signs of distress with more severity when they are ill and require hospitalization.¹¹ 30% of children develop psychosocial issues as a result of short or long-term hospitalization.¹² Hence, it is crucial to make the hospital environment as less daunting as possible using the principles of atraumatic care. Allowing and encouraging parental presence as well as incorporating play therapy and art therapy has been found to be useful.^{13,14} Moreover, factors associated with healthcare providers also influence the implementation of atraumatic care principles. For instance, more experienced nurses have a better understanding of the needs of patients and better decision-making skills, which improve with practice.¹⁵ It is obvious that caring for hospitalized children, especially ones who are critically ill, may often be psychologically draining.¹⁶ Thus, it is important that nurses are provided with a physical and professional environment that is conducive to the application of atraumatic care-creating a better bed space and fostering compassion as well as balance in the workplace can be helpful.¹⁷

The current study has shown that although strong, the knowledge and attitude of nurses working on implementing atraumatic care still has potential for growth. Nurses should be oriented with key elements and practices of atraumatic care in hospital settings on a timely basis. Similarly, incorporation of subjective and objective approaches of atraumatic care in the curriculum of nurses would be beneficial, which would increase their competence and ultimately raise the quality of pediatric nursing services. Further research concerning hindrances or obstacles in implementing atraumatic care in hospital settings is required.

Although the study findings are novel in the context of Nepal, there are some limitations of the present study. The study was conducted only among the nurses of one hospital and study design being cross-sectional in nature, the findings of the study need to be interpreted cautiously as it could not establish causal inferences.

Conclusions

Around two-thirds of respondents had adequate knowledge on the implementation of atraumatic care among hospitalized children while only around half of the surveyed nurses had a favorable attitude towards its application. This can be improved by inclusion of courses related to atraumatic care in undergraduate curriculum of nursing in Nepal, increasing hands-on experience and organizing training sessions for both new and experienced nurses.

Acknowledgments

Hereby, we extend our gratitude to all the respondents who took part in this research project.

References

1. Furdon SA, Pfeil VC, Snow K. Operationalizing Donna Wong's principle of atraumatic care: pain management protocol in the NICU. *Pediatr Nurs*. 1998 Jul-Aug;24(4):336-42. PMID: 9849266.
2. Schlegelmilch M, Punja S, Jou H, Mackie AS, Conway J, Wilson B, et al. Observational Study of Pediatric Inpatient Pain, Nausea/Vomiting and Anxiety. *Children (Basel)*. 2019 May 3;6(5):65. DOI: 10.3390%2Fchildren6050065
3. Gomes GL, Fernandes MD, Nóbrega MM. Hospitalization anxiety in children: conceptual analysis. *Rev Bras Enferm*. 2016 Sep-Oct;69(5):940-945. Portuguese, English. DOI: 10.1590/0034-7167-2015-0116
4. Coyne I. Children's experiences of hospitalization. *J Child Health Care*. 2006 Dec;10(4):326-36. DOI: 10.1177/1367493506067884
5. Kirkby RJ, Whelan TA. The effects of hospitalisation and medical procedures on children and their families. *J Fam Stud*. 1996 Apr 1;2(1):65-77. DOI: 10.5172/jfs.2.1.65
6. Bonn M. The effects of hospitalisation on children: a review. *Curationis*. 1994 Jun;17(2):20-4. DOI: 10.4102/curationis.v17i2.1384
7. Mediani HS, Hendrawati S, Shidqi N. The Knowledge and Attitude of Nurses in the Implementation of Atraumatic Care in Hospitalized Children in Indonesia. *IOSR-JNHS*. 2019;8(1):51-6. DOI: 10.9790/1959-0801072840
8. Yadav N, D'Souza VL, Geethamani T. Assessment of knowledge and attitude among college students toward umbilical cord blood and its banking. *NJHS*. 2021 Jul 30;1(1):1-7. DOI: 10.3126/njhs.v1i1.38493
9. Hockenberry MJ, Wilson D. *Wong's essentials of pediatric nursing9: Wong's essentials of pediatric nursing*. Elsevier Health Sciences; 2013.
10. Santoso T. Pengetahuan Perawat Tentang Atraumatic Care di RS PKU Muhammadiyah Yogyakarta (Doctoral dissertation, Universitas Muhammadiyah Yogyakarta).
11. Wang YL, Lo LH. [Therapeutic play]. *Hu Li Za Zhi*. 2006 Jun;53(3):79-83. Chinese. PMID: 16767627.
12. Robb SL. The effect of therapeutic music interventions on the behavior of hospitalized children in isolation: developing a contextual support model of music therapy. *J Music Ther*. 2000 Summer;37(2):118-46. DOI: 10.1093/jmt/37.2.118
13. Handayani A, Daulima NHC. Parental presence in the implementation of atraumatic care during children's hospitalization. *Pediatr Rep*. 2020 Jun 25;12(Suppl 1):8693. DOI: 10.4081/pr.2020.8693
14. Bacus IP, Mahomed H, Murphy AM, Connolly M, Neylon O, O'Gorman C. Play, art, music and exercise therapy impact on children with diabetes. *Ir J Med Sci*. 2022 Jan 17. DOI: 10.1007/s11845-021-02889-5
15. Fitzgerald DC. Aging, experienced nurses: their value and needs. *Contemp Nurse*. 2007 Apr;24(2):237-42. DOI: 10.5172/conu.2007.24.2.237
16. Barrere C, Durkin A. Finding the right words: the experience of new nurses after ELNEC education integration into a BSN curriculum. *Medsurg Nurs*. 2014 Jan-Feb;23(1):35-43, 53. PMID: 24707667.
17. Olausson S, Ekebergh M, Osterberg SA. Nurses' lived experiences of intensive care unit bed spaces as a place of care: a phenomenological study. *Nurs Crit Care*. 2014 May;19(3):126-34. DOI: 10.1111/nicc.12082