Feasibility of Improving Daily Ethical Nursing Practices through Online Workshops Using the Paediatric Nursing Care Model

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Abstract

This study aimed to clarify the feasibility of improving practices in daily ethical nursing through online workshops using the Paediatric Nursing Care Model (PNCM) to obtain feedback. The online workshops were held twice across two weeks for 17 nurses who applied voluntarily. The implementation percentage of PNCM items at the end of the second workshop increased compared with the percentage at the beginning of the first workshop. The increase in the implementation percentage of PNCM items suggests that reinforcement of daily ethical nursing practices is feasible for paediatric nurses working in diverse medical settings. Comments from the participants suggested that the best strategy for online workshops is to provide participants with polite directions and follow-up online regarding the readiness of the various skills learned by the participants.

Keywords: Daily Ethical Nursing; Feasibility; Nurse; Online Workshop; Paediatric Nursing Care Model

Abbreviations

PNCM: Paediatric Nursing Care Model; EWP: Educational Workshop

Introduction

Due to the decreasing birth rate in Japan, hospitals have been centralized in providing paediatric care. Consequently, the number of mixed wards catering to both paediatric and adult patients in rural areas has increased rapidly since 1994 [1]. As a result, some nurses with experience in caring only for adult patients must also care for paediatric patients according to the structure of the health institutes.

Healthcare workers sometimes experience difficulties while caring for children and their families. In addition, healthcare providers have a duty to provide specialized nursing for paediatric patients; however, some nurses may lack adequate paediatric training. Since 1997, the Paediatric Nursing Care Model (PNCM) has been used as the typical daily ethical nursing teaching method.

Workshops in 2012 using PNCM in person for nurses with limited experience in paediatric nursing provided feedback on and improved the model [2].

Educational workshops (EWPs) using the PNCM were continually conducted for 22 nurses with less than five years of experience in paediatric nursing. An initial session consisted of a 30-min face-to-face mini-lecture. During the second and third months, feedback collected by mail asked the nurses to describe changes in their behaviour. Implementation ratings of the PNCM items demonstrated their

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feasibility after the initial session, and daily ethical nursing practices were found to have improved after three months [3]. Furthermore, an EWP for 21 nurses with varied nursing experience was conducted, consisting of an initial face-to-face mini-lecture of about 1.5h and a subsequent program conducted by mail. The findings revealed improvement in daily ethical nursing practices five months later [4].

Following the COVID-19 pandemic, online workshops are often held in the nursing field. For example, Smith [5] used a free online educational resource for nurses delivering care to children and young people with rheumatic disease. In 2021, Maia., *et al*. [6] identified nurses' learning demands for acquiring competence in therapeutic play to build an online course. In 2022, Costa., *et al*. [7] analysed nurses' satisfaction with an e-learning course on neonatal pain assessment. Khot., *et al*. [8] conducted neonatal obstetric emergency-simulation workshops using an online format during the COVID-19 pandemic in India. Zalifsanaiey., *et al*. [9] conducted a case-based e-flipped workshop and an online workshop, comparing the effectiveness of the two intervention methods. In 2022, Johnson., *et al*. [10] reported that teleprecepting prior to COVID-19 was conducted with < 2% of nurse practitioner students; seven months after the initial surge of cases and restrictions, 72% of nurse practitioner students had transitioned to teleprecepting.

Teacher-centred learning, a one-way transfer of knowledge from an expert to a novice through lecture and reading assignments, is not as effective in an adult setting, especially among busy healthcare professionals. An online educational strategy allows busy practicing professionals the opportunity to be able to introduce a learning place into the demands of their daily lives [11]. Nadeau., *et al*. [12] reported that web-based training is a flexible and accessible means of providing information on a sensitive subject; as such, it can promote practices to ensure patients and their families are receiving the best possible care. However, they also suggested that feedback and coaching are ensured by professional attendance and follow-up with nurses, so web-based training is not the best strategy. Furthermore, they found that discussion with other professionals, which reveals that some perceptions, feelings, or experiences are shared, helps change behaviour and attitudes, fostering feelings of cohesion and reduced isolation.

This study conducted an online EWP workshop to provide an opportunity to obtain feedback on the perceptions and experiences of participants and to test whether a program reinforcing the daily ethical nursing practice of paediatric nurses is feasible in the diverse medical settings in Japan.

Objective of the Study

This study aimed to clarify the feasibility of improving daily ethical nursing practices through online workshops using PNCM as feedback.

Materials and Methods

Participants

Nurses working in paediatric departments of about 225 medical institutions across western Japan were informed by mail about the online workshops. A total of 17 nurses applied voluntarily and participated in the workshop. No limitations were set for the nursing experience or age of the participants.

Online workshops and data collection

The online workshops were held twice across two weeks in 2021 - 2022. Each session consisted of a 90-min online lecture and an interactive session with participants and a lecturer on an online platform. Before the second workshop, participants were asked to complete an online retrospective form on practical examples of the PNCM items. Their practices were introduced to the participants in the second workshop. The nurses' cognition of daily ethical nursing implementation was evaluated based on the responses mentioned in the online form, the implementation percentage of the 24 PNCM items in the first workshop, and the feasibility of implementing the same items at the end of the second workshop. After the second workshop, participants were asked to provide comments voluntarily about the workshop on the online form.

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Analysis

Each item of the PNCM checklist was rated on the 4-point Likert scale ("always" to "never") and recorded in Microsoft Excel (Microsoft Corporation, Santa Rosa, CA). For the implementation rating scale, preliminary tests (n=39) were conducted to assess item consistency (Cronbach's α = .973). Participants' ratings for each point were compared with the implementation ratings from the first workshop and the feasibility of implementation ratings at the end of the second workshop. The distribution of values of each item was compared, and the Mann-Whitney U test was performed using SPSS Ver. 29 (IBM, Chicago, IL). Descriptive data on the participants' comments regarding this workshop were analysed qualitatively and categorized.

Ethical considerations

At the beginning of the workshop, the study purpose was explained to the participants, who provided their informed consent to participate. The participants were assured of anonymity. This study was approved by the research ethics review committee of the Prefectural University of Hiroshima (18MH002-01).

Results

Outline of participants

A total of 17 nurses participated in this workshop; 16 provided valid responses in the first session, and all 17 provided valid responses in the second session. The participants' characteristics are shown in table 1.

Paediatric nursing experience	n	Overall nursing experience	n
1-3 years	2	1-3 years	0
4-6 years	4	4-6 years	1
7-10 years	8	7-10 years	4
11-20 years	2	11-20 years	8
Over 21 years	0	Over 21 years	3
Unknown	1	Unknown	1
Total	17	Total	17

Table 1: Characteristics of participants.

All participants were employed in hospital nursing, so they could access the online media easily and completed both sessions of the workshop. They reported their practical examples through the online retrospective form, following the PNCM items until the second workshop. The practical examples included children aged 1 - 14 with asthma-like bronchitis, cryptorchidism, epilepsy, Kawasaki disease, leukaemia, orthopaedics therapy, and those undergoing surgery; they also included administering an enema, blood sampling, intravenous drip, and orally taken medicine.

Changes in participants' cognition from the first session to the second session

The total number of PNCM items rated as feasibly implemented at the end of the second workshop increased compared to the implementation ratings from the first workshop. A comparison of the response ratings showed that the total percentage of participants who reported that they would "rarely" or "never" implement the PNCM items at the end of the second workshop was reduced compared to that before the workshop, from 14.8% to 3.9 and 4.9% to 0%, respectively. Accordingly, the percentage of participants who reported that they "always" implement the PNCM items at the first workshop was 41.9%, but those who reported that they would feasibly "always" implement the PNCM items at the second workshop increased to 65.4% (Table 2).

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	Implementation at the 1st workshop (n = 16)	%	Feasibility at the end of the 2nd workshop (n = 17)	%
Always	161	41.9	267	65.4
Almost always	147	38.3	125	30.6
Rarely	57	14.8	16	3.9
Never	19	4.9	0	0.0
Total	384	100.0	408	100.0

Table 2: *Comparison of the responses at the first and second workshop.*

The percentage of "always" responses for feasibly implementing the PNCM items at the end of the second workshop increased by 23% compared with the implementation percentage at the first workshop. Five items (numbers 2, 3, 7, 21, and 22) showed significant differences (Figure 1). For item #2, 31.3% of participants reported "always" at the first workshop, increasing to 70.6% at the end of the second workshop. For item #3, the percentage of participants reporting "always" increased from 6.3% to 23.5%. For item #7, "always" responses increased from 6.3% to 52.9%. For item #21, "always" responses increased from 37.5% to 76.5%. For item #22, the percentage of participants reporting "always" increased from 43.8% to 88.2%.

PNCM items

The PNCM comprised the following 24 items:

(1) You greet children and introduce yourself to them, informing them that you are the nurse in charge.

(2) One of the physicians, nurses, or parents provides children with explanations of medical examinations/procedures or confirms them in advance.

(3) You ask children in advance when they want to be informed about medical examinations/procedures.

(4) You inform children about when medical examinations/procedures will be conducted.

(5) When deciding whether parents should accompany their children (at the time of providing explanations/conducting medical examinations and procedures), you take into consideration the requests of children and their parents.

(6) You ensure that both parents and children know where the parents will wait.

(7) You provide parents with explanations and describe the content of the methods prescribed for children.

(8) You explain medical examinations/procedures (including their purposes and methods) to children, using easy-to-understand expressions, even when their parents are present.

(9) If children resist, you wait patiently until they change their minds.

(10) You do the best you can to prevent children from being fearful.

(11) You provide children with explanations and talk to them at each stage of medical examinations/procedures.

(12) You appropriately respond to children's questions and remarks.

(13) When children cry, you implement other appropriate measures instead of forcing them to obey.

(14) You allow children to bring in their favourite things.

(15) You distract children's attention away from medical examinations/procedures in cases of distress.

(16) When it is taking longer than expected to conduct medical examinations/procedures, you inform parents of their progress.

(17) You avoid chatting with other health care professionals about topics not related to medical examinations/procedures.

(18) When medical examinations/procedures have not yet been completed, you avoid using expressions that may cause children and their parents to mistakenly believe that they have been completed.

(19) You verbally inform children and their parents that medical examinations/procedures have been completed.

(20) You praise children for having been brave.

(21) You acknowledge the feelings of parents, saying, "You must have been worried".

(22) You encourage parents to praise their children for having been brave.

(23) After medical examinations/procedures have been completed, you provide children with instructions to be followed.

(24) You check the responses of children following the implementation of medical examinations/procedures.

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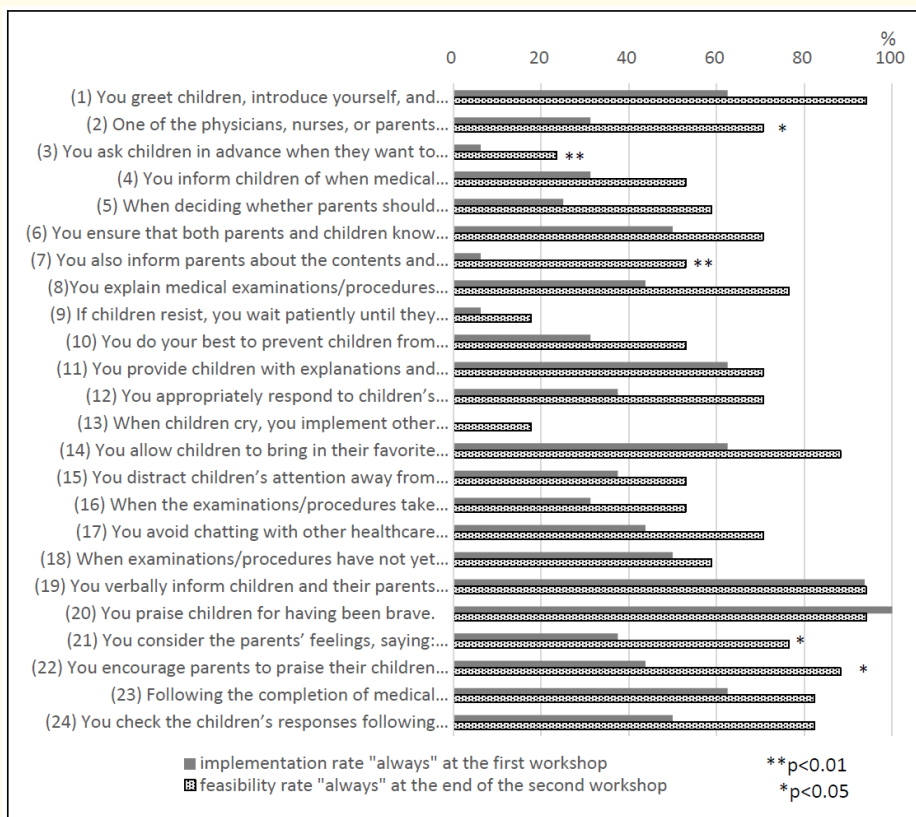
Figure 1: *Comparison between the number of participants who answered "always" regarding implementation at the first workshop and feasibility of implementation at the second workshop.*

For item #13, the percentage of participants who reported "always" was not significantly different but increased from 0% to 17.6% from the first workshop to the end of the second. Although there was no significant difference regarding the implementation of item #20, the percentage of participants who reported "always" decreased slightly from 100% to 94.1%. For item #19, the percentage of participants who reported "always" was similar between the first and second workshops: 93.8% and 94.1%, respectively.

Participants' comments on the workshop

The comments regarding the workshop after the second workshop were divided into seven categories (Table 3). Participants indicated that the workshop contents were valuable, and they would use them for their nursing practice and education among new nurses by affirming, "I wish to use the contents and PNCM items in the clinical setting". Participants indicated "What I value and how to provide nursing care every day" and "It is important to acknowledge the feelings of parents" through learning about the work at other facilities by affirming, "I could learn and realize what is important". Although some participants were not accustomed to an online tool, some felt that the PNCM theoretically based learning was an excellent opportunity for reflection.

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- **I wish to use the contents and PNCM items in clinical setting**
  - The words used for blood sampling and implementation of some procedures would be very helpful for me.
  - There are some ideas that can be useful for reference in nursing implementation, and I would wish to use them in practice.
  - I would also like to make use of it for the training of new nurses.
  - I was able to reflect theoretically, and the content was useful for my own nursing and the education for new nurses.
  - The content was a factor in decision making, such as how to restrain when children resist a procedure and the parents are present in the room in which children are undergoing the procedure, so I would like to make use of it in future nursing.
  - The workshop was easy to understand. I hope to make use of what I learned this time.
  - I think I can remember this training when I have trouble getting involved and use the 24 PNCM items and educational theories.
  - I would practice with PNCM in mind every day.
  - I learned about the method of involvement with child patients and their parents, I would make use of it.
- **I could learn and realize what is important**
  - I could think what I value and how to provide nursing care every day again.
  - When the nursing students came to our hospital for the paediatric nursing practice, they did not know that there were "24 Paediatric Nursing Care Models". I was surprised because I had never acknowledged the feelings of parents, saying "You must have been worried", but it is important.
  - I was able to learn about the work at other facilities.
  - Since the paediatrics department had merged, I often had to worry about how to involve to the child patient, but I learned that child crying is not a failure, and I felt that I could be more confident in working with child patients.
  - Depending on the child's development, I realized that it is meaningful to explain about the procedure for a child patient, such as about restrain a child at the procedure and the presence of parents in treatment room.
  - In paediatrics, I was reminded that nursing and involvement not only for children but also for parents are important.
- **I could understand easily, deeply**
  - Instruction of the workshop gave me a lot of analogies, so it was easy to understand.
  - I could make my paediatric nursing knowledge deeply.
  - I understood most of the contents, but there were some difficult contents. /I understood well.
- **It was good opportunity of reflection**
  - It was good to be able to reflect on the case. /Useful for reflection of paediatric procedures
  - I was able to reflect theoretically.
- **I wanted to learn more**
  - I wanted to learn a little more about correspondence to the procedure and examination for children.
  - I am interested in children's human rights and ethics, and would wish to take a course on such topics.
- **I could learn theoretically**
  - I was able to theoretically reflect on what I always do.
  - I am glad that I was able to think about it in connection with theory.
- **I was not used to online tool**
  - I wanted to know about using online forms in advance.
  - I was not used to online workshop and could not communicate well with other students.

Table 3: *Categories of participants' comments on the workshop.*

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Discussion

The feasibility ratings of the PNCM items at the end of the second workshop improved compared with the implementation ratings at the beginning of the first workshop. Positive ratings of the feasibility of PNCM items suggest a reinforcing effect on implementing daily ethical nursing practices for paediatric nurses working in diverse medical settings. Before the COVID-19 pandemic, EWP using PNCM face-to-face increased the implementation ratings of the PNCM items five months later [4]. In this online workshop, five items (numbers 2, 3, 7, 21, and 22) showed significant rating increases. In contrast, the percentage of participants who reported "always" at the first workshop decreased at the end of the second for item #20. Ratings for item #15 suggested a positive change at the end of the second workshop. The workshop supplied the same educational content using PNCM items each time, and the outcome suggested the same positive changes.

While some items showed negative change, a different item was indicated each time. Participants of the workshop have different experiences and career backgrounds; therefore, it is thought that the elements that effectively inspired each participant were different. The category "I could learn and realize what is important" showed diverse answers before participation; for example, one participant stated, "I had never acknowledged the feelings of parents", and other participants stated, "Since the paediatrics department had merged, I often had to worry about how to involve to the child patient".

The category "I wish to use the contents and PNCM items in a clinical setting" showed usefulness not only for a participant's own nursing practice but also for the training of new nurses. Farcing., *et al*. [13] conducted e-learning training of paediatric nursing burn care for novice nurses; feasibility was achieved, and participants had high satisfaction. In addition, the result showed that feasibility could be achieved using an online platform and online training centres; participants could complete at work or home, which was convenient during the pandemic. Online platforms can be excellent e-learning tools for healthcare providers, especially nurses with variable and busy work schedules.

The categories "I could understand easily and deeply", "I could learn theoretically", and "It was a good opportunity for reflection" were thought to lead to "I would practice with PNCM in mind every day" and "I wanted to learn more". This result clarifies that they are essential elements of the workshop; PNCM is easy-to-understand, theory-based learning, which provides an opportunity for feedback (Figure 2). Beckett [14] conducted a study on cognition for e-learning among children's nurses. The results showed that when nurses engaged in e-learning as mandatory training, they were influenced by the content of its modules, and they took the opportunity to develop and engage with e-learning that is specific to their area of practice, which may increase its value. Galacio [15] reported that the online learning module for nurse practitioners expanded the participants' competencies in specific areas of informatics. In addition, Stevens., *et al*. [16] studied nurses' perceptions of e-learning in a hospital setting, showing that e-learning could be a valuable method of continuing education for nurses. Because some unsatisfactory learning elements have poor design and technical difficulties, and meaningful learning elements have enjoyable, accessible, convenient, and supportive features, ongoing improvement of e-learning methods is necessary. One of the categories, "I was not used to an online tool", suggested that the best strategy for feedback while conducting an online workshop was to prepare polite directions and follow up on the various online skills learned by the participants.

Conclusion

This study aimed to clarify the feasibility of improving daily ethical nursing practices through online workshops using PNCM as feedback. The feasibility ratings of PNCM items at the end of the second workshop increased compared with the implementation ratings at the beginning of the first workshop. Positive ratings of the feasibility of PNCM items suggest a reinforcing effect on the daily ethical nursing practices for paediatric nurses working in diverse medical settings. The participants' comments suggested that the best strategy for feedback in online workshops was to prepare polite directions and to follow up on various online skills learned by the participants.

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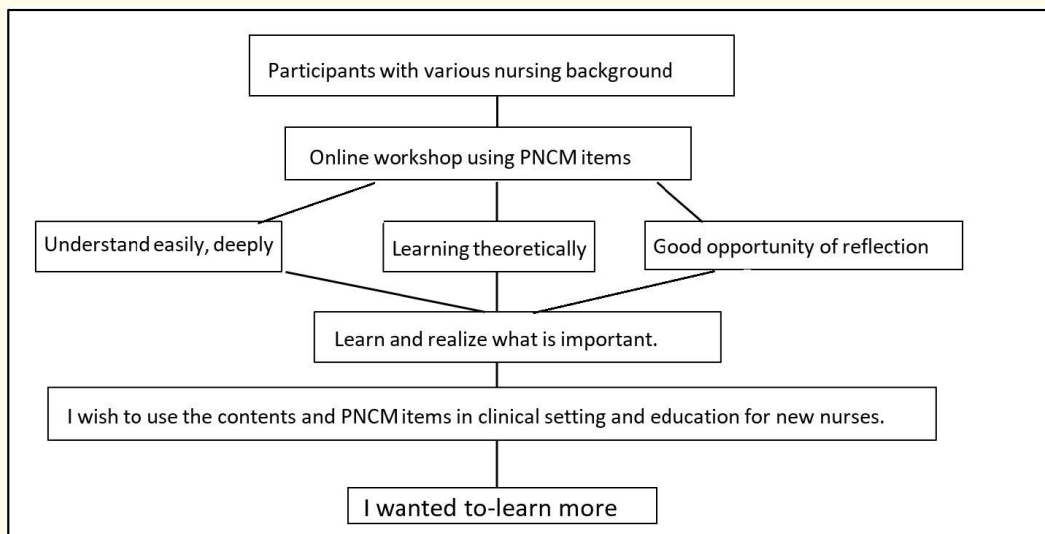
Figure 2: *The structure of participants' cognition through the online workshop using PNCM.*

Acknowledgement

Conflict of Interest

The authors declare that there is no conflict of interest.

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