

Transmission of the Techniques of Care by Nurses in Close Contact With the Patient's Living Space: A Case Study of a Visiting Nurse Station in Japan

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ABSTRACT

The purpose of this paper is to identify ways in which visiting nurses transmit the technique of nursing care that they co-create with patients and patients' families. The study period was from 2013 to November 2022. The study site was X visiting nurse station in Nagoya City. The research method consisted of observation and interviews at the visiting nursing station. The nursing care is meaningful in that it takes into account the information on patient's body and social settings to tailor the care that will satisfy the patient. The technique of nursing is unique in the way it develops from nurses' clinical experiences and differs from nurse to nurse. In order to communicate the technique of nursing to fellow nurses, nurses used craft language, body gestures for explanation, demonstration and hands-on body memory.

Keywords: Co-creation, Transmission of the techniques, Craft language

INTRODUCTION

We have been examining home-visit nursing care from the perspective of service research/service design research. We have presented the process of 'co-creation' between visiting nurses and patients to restore/continue the patient's daily life (Otani and Ito, 2021: 503-509); and have examined the work of home nursing care created with the patients and their families as sticky information that is difficult to detach from the context and difficult to transfer (von Hippel, 1994, Otani and Ito, 2021: 503-509). In light of these findings, this paper clarifies how visiting nurses transmit the technique of nursing care co-created with the patient and the patient's family.

The art of home-visit care is based on the basic nursing knowledge and skills taught in university nursing departments, nursing schools and further co-created by the nurse with the patient based on post-clinical experience. The techniques vary from nurse to nurse. Each nurse has his or her own unique set of techniques. Visiting nurses who provide nursing care in patients' homes not only inherit the nursing care that was co-created in their homes but also co-create their own nursing care with their patients.

Regarding the transmission of nursing technique, very few conventional studies in nursing science have analyzed it in terms of co-creation between patients and nurses. For example, in nursing science, P. Benner (2001) conducted participant observation and interviews with 21 pairs of new nurses and their preceptor nurses, 51 nurses with five or more years of experience, 11 new nurses, and five nursing college students to investigate how situational judgment and clinical practice differ between novice and expert nurses. She analyzed the data according to the Dreyfus model (Dreyfus and Dreyfus, 1980), which describes the five stages (novice, advanced beginner, competent, proficient and expert) in which learners acquire and refine skills. She pointed out that nurses acquire nursing skills through practical clinical experience, gaining the ability to see the big picture view and become expert (Benner, 2001). However, the details of how it is to be acquired are not discussed.

The nursing techniques of care that nurse created with the patients and their families is sticky, and also difficult to detach from the context and difficult to transfer, the only way to communicate is to express them with gestures or communicate them verbally, partially using “craft language” (Ikuta, 1990). The “craft language” or “waza” mean a special metaphorical language which is often used in the process of teaching a skill such as Japanese traditional artistic performance, “Waza”. “Waza” is originally a skill in Japanese traditional artistic performances such as Japanese dancing, Noh play, or Kabuki play; but it is also used in martial arts such as karate and judo (Ikuta, 1990: 137). According to Ikuta, teachers of Japanese traditional artistic performances use “craft language” because it allows learners to recall situations and evoke the same sensations in the learner’s body as the teacher (Ikuta, 1990: 138). For example, in the learner master this form of Japanese dancing, instead of a learner master instructing his student to “Keep your right hand up exactly at an angle of 45 degrees,” the master instructs the student to “Hold your right hand up just as if you are trying to catch snow falling from the sky” (Ikuta 1990: 140). Ikuta suggests that although craft language is not a scientific language and is vague and subjective, it facilitates learners’ learning. This is because when instructed to raise the right hand to a certain angle, the learner simply moves the body as instructed, but with the addition of the figurative expression, the motivated learner learns by interpreting the master’s intentions in his or her own way and tries to incorporate the technique into his or her own.

In this paper, we will identify how nurses learn the techniques and how visiting nurses transmit the techniques of nursing. In the research on visiting nurses in Japan, very few studies have been conducted on how visiting nurses communicate their skills and techniques, to the best of our knowledge. This paper seeks to contribute to filling that research gap. This paper furthers the research and analysis conducted on the issues discussed last year.

METHOD

The investigation took place at the visiting nurse station X in Nagoya city. This visiting nursing station was established in 1995. This medical corporation has a visiting nursing station X, two clinics, a day care, and day care

services for severely mentally and physically handicapped children. Monthly visits amount to around 130 cases. Studies of this nursing station was conducted through participant observation and interviews.

The interviewees were eight visiting nurses from visiting nurse station X. Three nurses were in their 60s with more than 40 years of work experience, three were in their 50s with more than 30 years of work experience, and one each in their 40s and 30s with more than 20 and 10 years of work experience, respectively. This paper focuses on semi-structured interviews conducted with three, nurses A, B, and C. In addition, a verbatim transcript of the nurses' meetings were created, and analyzed using SCAT (Steps for Coding And Theorization), which is a qualitative data analysis method.

In addition to these nurses, there were 2 clerical staff, 2 physical therapists, 1 occupational therapist, and 2 speech therapists.

RESULT AND DISCUSSION

For this paper, interviews were videotaped and recorded with a voice recorder. We then created transcripts of their contents. The transcripts were analyzed using Steps for Coding and Theorization (SCAT). SCAT is a method of analyzing qualitative data, developed by Takashi Otani (2019), and is similar to the affinity diagram method and the Grounded Theory Approach (GTA). SCAT describes segmented data in a matrix. Then, for each, it devises a code in the following order: 1) Noteworthy words or phrases from the text, 2) paraphrases, 3) concepts that explain in addition to the context, and 4) themes and construct concepts which emerged from it (T. Otani 2019: 271). The results of the SCAT analysis revealed the following two characteristics of how nurses learn the techniques of nursing care which are stored in the body and how visiting nurses transmit the techniques of nursing.

The Unique Techniques of Nursing Created From Clinical Experiences

Semi-structured interviews were conducted with veteran nurses A, B, and C, who had more than 30 years of clinical experience and 20 years of visiting nursing experience. Three nurses were asked questions about their techniques of nursing (Table 1).

Nurse A is an administrator of this visiting nursing station. After graduating from nursing school, she worked at a general hospital. While working at the hospital, she met Nurse I who was working at the hospital. When Nurse I established this visiting nursing station, she decided to work here.

After she graduated from nursing school, Nurse B worked at a general hospital for a year. She then enrolled in a junior college to become a certified school nurse. After graduating from the junior college, she worked at this visiting nursing station, founded by Nurse I. She currently works at a nursing home that is an affiliate of this visiting nursing station.

After graduating from nursing school, Nurse C worked at a general hospital for 25 years. She met Nurse I at a pub she was familiar with. As she talked about nursing with Nurse I, she became interested in working here and took on a job at this visiting nursing station. She is currently working at another visiting nurse station that is affiliated with this home visiting nurse station.

Table 1. Concept of nursing.

Speaker	Text	(1) Notable words in the text	(2) Rephrasing words in the text	(3) Extra-textual concepts such as explaining the left	(4) Themes and Concepts
Nurse A	I support the decisions made by the users and their families. I try to give patients information in a way that is easy to understand. I value information obtained through the five senses. I think that the sensibility that one gets from one's upbringing influences one's nursing.	support the decisions made by the users and their families. The five senses are valued. I believe that the sensibility I developed in my upbringing influences my nursing.	Emphasis on the user and family's right to make decisions; Nursing and the five senses; Sensitivity and nursing.	Emphasis on the user and family's right to make decisions; Sensitivity and nursing.	Elements necessary for nursing: obtaining information through the five senses, Emphasis on the user and family's right to make decisions, sensibility that one gets from one's upbringing.
Nurse B	I look at the atmosphere of the patient's home and imagine the life of the patient and his family. It's a sense. I think I am a product. I value the senses I have developed in my life. The PDCA cycle (Plan, Do, Check, and Action) is reframed as the PDCRA (reconfirmation) cycle. On the morning of my visit to a patient's home, I call the patient. I listen to the sounds of life over the phone and determine if they are the same as usual. I use the senses I have developed in my life in nursing.	I am a product. PDCRA cycle. On the morning of my visit to a patient's home, I call the patient. I listen to the sounds of life over the phone and determine if they are the same as usual. I use the senses I have developed in my life in nursing.	I am a product. Confirm the PDCRA cycle. Confirm the patient's and family's wishes repeatedly. Check for any deviations from the routine by sensing the atmosphere of the patient's home. Focus on tactile sensations.	I am a product. PDCRA cycle. Confirm the patient's and family's wishes. Check for any deviation from the routine by sensing the atmosphere of the patient's home. Focus on tactile sensations.	Elements necessary for nursing: fulfilling the wishes of the patient and family, checking nursing with the PDCRA cycle, and using the senses developed in life in nursing.
Nurse C	I believe that nursing is a collaborative team effort where opinions are exchanged on any small matters. The final decision is made by the patient and family. I cannot do nursing without verbalization. I can practice nursing when I get information, analyze it, make a nursing plan, think it over, and formulate a thought.	Nursing is a collaborative team effort where opinions are exchanged on any small matters. The patient or family has the right to make the decision. I can practice nursing when I get information, analyze it, make a nursing plan, think it over, and formulate a thought.	It is important to collaborate as a team, analyze information, make a nursing plan, ponder, formulate thoughts, verbalize nursing and practice.	Collaborate as a team, analyze information, make a nursing plan, ponder, formulate thoughts, verbalize and practice.	Necessary elements of nursing: collaborate as a team, analyze information, make a nursing plan, ponder, formulate thoughts, verbalize and practice.
Storyline	Common points were the emphasis on using the five senses to obtain information and on presenting information to patients and their families to help them make choices. Nursing methods and approaches differed.				
Further investigation	The three have different backgrounds and experiences. Their ideas of nursing are unique. They are all different.				

Nurse I, who appeared in three of the stories, was one of the members who founded the visiting nurse station. Unfortunately, she passed away in 2021.

The three nurses had different careers and each nurse had the unique techniques of nursing care. The characteristics of the nursing techniques that emerged from clinical experience differed from nurse to nurse. The essential factor in nursing, a common point shared among the three interviewees was obtaining information using all five senses and respecting the choices made by patients and their families.

Delivering Information Through Craft Language and Gestures

We analyzed the visiting nurse's morning assignments for two days in October 2021. We analyzed the visiting nurses' morning meeting on October 11, 2021 and October 30, 2021; five nurses participated in the October 11, 2021 appointment and three nurses participated in the October 30, 2021 appointment. Through the meeting, nurses shared symptoms and how to handle patients with special needs; whose condition had suddenly changed last night, or those who had an emergency call. The meeting began at 8:30 and lasted about 20 minutes. The meeting was videotaped and a verbatim transcript of the contents was made. Two scenes were selected for this section. The first is a scene in which Nurse D explains the physical condition of Mr. O (Table 2). Nurse D is in her 40s and has over 20 years of nursing experience. But at that time, she had been working at this visiting nurse station for three months. Nurse A is in her 60s and has been a visiting nurse for more than 30 years, and Nurse E is in her 50s and has been a visiting nurse for more than 20 years. Mr. O is a man in his 70s who is paralyzed on the right side of his body due to a cerebral hemorrhage.

Nurse D thought something was wrong with Mr. O's urine output after analyzing a variety of information about his urinary output, including a person's daily urine output, bladder function, indwelling urinary catheter performance, Mr. O's medical condition, his progress since cerebral hemorrhage, amount of food and fluid intake, how he spent the day, and the medications he was taking. She called the administrator, Nurse A, to inform her of the situation and asked Nurse A to come to Mr. O's home to look at the situation. Nurse D described the flow of urine, using the example of flowing water. She imagined how the water flowed only a little, and described it in onomatopoeia (*choro choro*) with a little trickle. Nurse A valued the five senses, especially the sense of touch; remembering Mr. O's past physical data, Nurse A touched Mr. O's body and thought that there might be a lesion inside his bladder. She then explained them to Nurse D and advised her to carefully insert and change the catheter without touching anything inside the bladder.

During this meeting, Nurse F heard Nurse D's and Nurse A's reports and analyzed Mr. O's condition as she knew it; and made the remark that he was not in pain when he was discharged. Hearing this, Nurse A responded that she suspected that there might be a lesion in Mr. O's bladder; Nurse A and Nurse F knew that Mr. O was not usually in pain. Nurses learn the basics of how to place an indwelling urinary catheter in the bladder using a model doll as

Table 2. Contents of SCAT analysis scene on October 30, 2021.

Speaker	Text	(1) Notable words in the text	(2) Rephrasing words in the text	(3) Extra-textual concepts such as explaining the left	(4) Themes and Concepts
Nurse D	The catheter was very cloudy. It was the day of the catheter exchange, so I changed it. There was only a little outflow (choro choro: Onomatopoeia) of urine. His wife was also worried. The urine that was flowing was clean without cloudiness, but I was worried, so I asked Nurse A to take a look at it. I imagined I was avoiding something, and when I changed the position of the catheter a little and it flowed a little. But not a lot of urine flowed. He's in a lot of pain, isn't he?	Significant turbidity in the urinary catheter. The catheter was replaced, but only a little urine flowed (choro choro: Onomatopoeia). His wife was also worried. The urine that flowed was not cloudy, but I was concerned. Nurse A checked his condition.	The urine in the urinary catheter was markedly cloudy. The catheter was changed and some urine flowed. His wife was also worried. Nurse D decided to have Nurse A analyze this situation. I explained the situation to Nurse A. Nurse A is worried about Mr. O's urinary pain.	Nurse D wondered why Mr. O's urine output was low and the urine in the urinary catheter was cloudy. But she didn't know why. Nurse A confirmed it.	Nurse D expressed the urine flow rate in craft language and informed the other nurses of the situation.
Nurse A		pain		Nurse A observed Mr. O's condition at her home and compared it with F's previous condition, and worried about Mr. O's pain when he urinated.	
Nurse F	When he was discharged from the hospital he was not in pain.	He was not in pain after he left the hospital.	Nurse F is also concerned about Mr. O's pain during urination.	Nurse F also heard about the symptoms and progress and was concerned about Mr. O's pain during urination.	
Nurse A	Yes, I think it might be some type of disease.	I think it might be some type of disease.	Nurse A listened to Nurse F's opinion and thought that something might be going on with Mr. O's bladder.	NurseA suspected that there might be a lesion in Mr. O's bladder.	
Storyline		If the new nurse felt that the patient's reaction was not clear/the result may be unusual, she communicated the situation to the veteran nurse and consult with her. The new nurse then received advice and imagined the situation, acquired the technique of nursing.			
Further investigation		Because the veteran had much of the experience the newcomer has faced, the veteran could recall the situation when the newcomer expressed the situation.			

Table 3. Contents of SCAT analysis scene on October 11, 2021.

Speaker	Text	(1) Notable words in the text	(2) Rephrasing words in the text	(3) Extra-textual concepts such as explaining the left	(4) Themes and Concepts
Nurse E	(Working on breathing rehab herself) I'm doing exercises to stretch here. Should I twist it a little more?	I am doing an exercise to stretch this area, should I twist it a little more?		Nurse E is checking and simulating her own behavior during the visit.	
Nurse A	Oh, what time do you leave today?			Nurse A confirmed the departure time with Nurse E.	
Nurse E	9:30 AM.				
Nurse A	Then let's do it together before you leave. (They moved to an open space together, and Nurse A conducted respiratory rehabilitation with Nurse E, explaining the process to her.)		Before visiting Ms. P's home, Nurse A was to lecture Nurse E on how to perform respiratory rehabilitation.	Nurse A thought it would be easier for Nurse E to learn how to perform respiratory rehabilitation if she experienced the rehabilitation herself.	Before leaving for the visit, Nurse E received upper body stretches and massages to learn those tricks.
Storyline	The technique of nursing was practiced through body memory in the visiting nurse's body; Nurse E learned the technique of respiratory rehabilitation which was evoked in Nurse A's body through hands-on experience.				
Further investigation	The technique of nursing produced by visiting nurses is stored in the body of the nurse, who expresses the information with gestures and communicates it to other nurses.				

a nursing student. In clinical practice, depending on the patient's condition, body type, physical characteristics unique to that patient, and the way the patient spends his or her day, there are different points to consider when placing an indwelling urinary catheter and when observing the patient. After listening to Nurse A and F, Nurse D was able to imagine the inside of Ms. O's bladder again, gain a sense of what to expect when caring for Ms. O's indwelling urinary catheter.

Teachers of Japanese traditional artistic performances use "craft language" because it enables learners to recall situations and evoke the same sensations in their bodies as the teacher does. In this situation, the veteran explained to the newcomer so that the newcomer could imagine what was going on in the bladder. Although not necessarily craft language, the veteran used the equivalent figurative language. The newcomer listened to the veteran further analyze the information and learned how to interpret it. And the newcomer acquired the knack of nursing.

The second is a scene in which Nurse E asked Nurse A about the respiratory rehabilitation of Ms. P (Table 3). Nurse E is in her 60s and has over 40 years of nursing experience, but at this time she had been employed at this visiting nurse station for two years. Ms. P is a woman in her 70s who has lung cancer and breast cancer. She is suffering from respiratory failure, which is interfering with her daily life.

Nurse E asked Nurse A, who was familiar with Ms. P's condition, about the respiratory rehabilitation to be performed on her. Nurse A thought that it would be easier to have her experience the rehabilitation rather than explain it in words, so she conducted the rehabilitation in an open space at the visiting nursing station to Nurse E.

The nurses explained how they responded to a patient' and the nursing care they co-created with the patient through information sharing. Nurses who seek information can easily imagine the situation by receiving information through gestures and learning through actual experience. The techniques of nursing care that were co-created with patients were demonstrated and lectured by nurses who possess these techniques, and the nurses who received the explanations learned the knack of nursing through their body senses.

CONCLUSION

The following two characteristics were found to characterize the way visiting nurses communicate the technique of nursing care that they co-created with patients and their families at patients' homes.

(1) Each nurse working in a clinical setting has different experiences and backgrounds. The technique of nursing created from their clinical experience was unique, and its characteristics differed from nurse to nurse. Nurses co-created their original technique of nursing in patients' homes based on the foundation of nursing skills they learned in school education and their clinical experiences.

(2) The nurses expressed the situation using the "waza", craft language, through demonstrations from nurses who have the craft and received lectures

and acquired it through body memory. When new nurses felt that a patient's reaction was not clear/the result might be unusual but could not be explained well, they used the craft language to communicate the situation to the veteran nurses and consulted with them. Because the veteran had experienced much of what the new nurse had experienced, the veteran was able to recall the situation when the new nurse expressed the situation through craft language. This process was established because the information about the patient and the meaning of that information was shared within the visiting nursing station. The veteran explained the information using craft language so that the newcomer could imagine what was going on inside the patient's body. The newcomer listened to the veteran further analyze the information and learned how to interpret it.

The techniques of nursing generated by visiting nurses were stored in the body of the nurse and were sometimes difficult to explain in words. The techniques of nursing could be experienced by the recipient of the information or expressed with gestures by the person transmitting the information to other nurses. The newcomer imitates the technique of nursing of the veteran nurse and through repeated practice, makes meaning of the technique of nursing, and generates his or her own technique of nursing. They then taking into consideration the context of the patient's condition, physical characteristics, and the patient's preferred style of care, to arrange nursing care to suit or satisfy the patient, based on the fundamentals of nursing skills learned in schooling. In order to transmit the techniques of nursing, the nurses used craft language and gestures to explain and transfer the techniques of nursing to their colleagues.

In this paper, we found that the techniques of nursing generated by visiting nurses were stored in the body of the nurse. The technique of nursing created from their clinical experience was unique, and its characteristics differed from nurse to nurse. It is a future task to conduct a detailed study on how such nursing practices are accumulated in a visiting nurse station.

ACKNOWLEDGMENT

The authors would like to acknowledge to patients, their families, and nurses of Visiting Nurse Station X. This work was supported in part by JSPS KAKENHI Grant Numbers JP 18H00782/22H00770.

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