

## ABSTRACT

**【Aims of study】** To understand the change in nurses' focus related to the practice of urinary incontinence care before and after participating in a workshop using SSM (Soft Systems Methodology) [1] for learning reinforced emotional reflection.

**【Methods】** The workshop was held across two months for 27 nurses with an experience of 2 or 3 years in three institutions. Before and after the workshop, the nurses were interviewed for 30 minutes to understand their reflections related to urinary incontinence care, which were transcribed verbatim. A text-mining approach [2] was employed using 2,836 sentences, 1,961 types of words, and a total of 18,387 words.

**【Results】** The results of correspondence analysis were before learning, words such as "senior," "possible," and "ward" were used, while after learning, words such as "learn," "think," and "become" were used. Before learning, the words "do" (. 151), "do not" (. 099), "when" (. 099), "go" (. 078), and after learning, the words "think" (. 196), "time" (. 101), "well" (. 082), "something" (. 080), "what" (. 068), and "feel" (. 043) demonstrated co-occurrence.

**【Conclusions】** The urinary incontinence care workshop using SSM may have changed nurses' focus to increased thinking and considering of emotional aspects.

## METHODS

The workshop, composed of five stages on urinary incontinence care including discussion about nurses' expertise in urinary incontinence care, anatomy of lower urinary tract, assessment and care of urinary incontinence, teaching methods for pelvic floor muscle exercises, caring, communication, case studies, and implementation of 7 stages using SSM such as expressing the image of urinary incontinence care in painting for strengthening reflection on the emotional aspect (Figure 1), was held across two months for 27 nurses with an experience of 2 or 3 years in three institutions; before and after the workshop, the nurses were interviewed for 30 minutes to understand their reflections related to urinary incontinence care, which were transcribed verbatim. A text-mining approach [2] was employed using 2,836 sentences, 1,961 types of words, and a total of 18,387 words. Comparisons before and after the workshop were made using correspondence analysis and co-occurrence networks. These analyzes are conducted using the frequency of occurrence. In this study, the frequency of occurrence was set to 60 times or more.


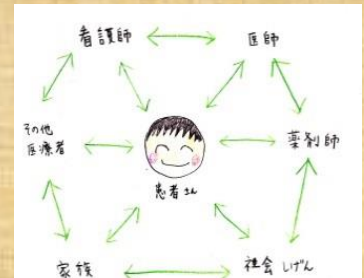
No.9	Before	After
1. Rich Picture		
2. Relevant System	The incontinence of urine care is the device which a patient and medical staff work on together	The incontinence of urine care is the device which all people gathering around a patient work on together.
3. XYZ Analysis Root Definition	The incontinence of urine care feels relieved by unpleasantness disappearing, and a medical person wrestling with a patient for a smile together and is the structure which comes to be able to perform natural excretion	When it is the action that is going to improve that I think unpleasantly and does incontinence of urine care, incontinence of urine reduces it.
4. CATWOE	The person that the victim performs a patient, care The view of the world can send the daily life that felt relieved All the people that the thing supporting is concerned	The object that the victim receives a patient, caring person, care. When there is incontinence of urine, the view of the world cannot feel relieved The action that is going to improve that the thing supporting thinks unpleasantly
5. Conceptual Model	The activity that it is necessary for "a person performing incontinence of urine care to study." I cannot nurse it to perform a nursing process if oneself does not know the incontinence of urine.	The activity that "a nurse studies about incontinence of urine" is necessary "to decide an offer and the care of the knowledge for the incontinence of urine"
6. Comparison Table	The activity that is all necessary gathers, but information necessary for discharge support is insufficient, and I can give an appropriate explanation, or it is not evaluated by a patient. (because lazy)	It is not judged that a nurse studies incontinence of urine between the staff, but study is necessary because a patient demands it.
7. Action Plan	I try to do pelvic floor muscle exercise by oneself.	Is appropriate for a patient; attach knowledge about the incontinence of urine care to be able to instruct it.

Figure 1. Excerpt from a study sheet of the workshop using 7 stages of SSM

## RESULTS

The results of correspondence analysis before and after learning are shown in Figure 2. Uncategorized words are shown above and below at point 0 of dimension 1; these comprised frequently occurring words such as "patient," "little," "time," "urinary," that were similar for both before and after. The words used before and after learning are arranged at the right and left points of dimension 1 as per their occurrence; for instance, before learning, words such as "senior," "possible," and "ward" were used, while after learning, words such as "learn," "think," and "become" were used. The result of co-occurrence network is shown in Figure 3. The larger the circle, the higher was the frequency of occurrence, and the thicker the dotted line, the stronger was the co-occurrence. Not considering the period before or after learning, "patient" (Jaccard index .187) appeared with a frequency of 594. Before learning, the words "do" (. 151), "do not" (. 099), "when" (. 099), "go" (. 078), and after learning, the words "think" (. 196), "time" (. 101), "well" (. 082), "something" (. 080), "what" (. 068), and "feel" (. 043) demonstrated co-occurrence.

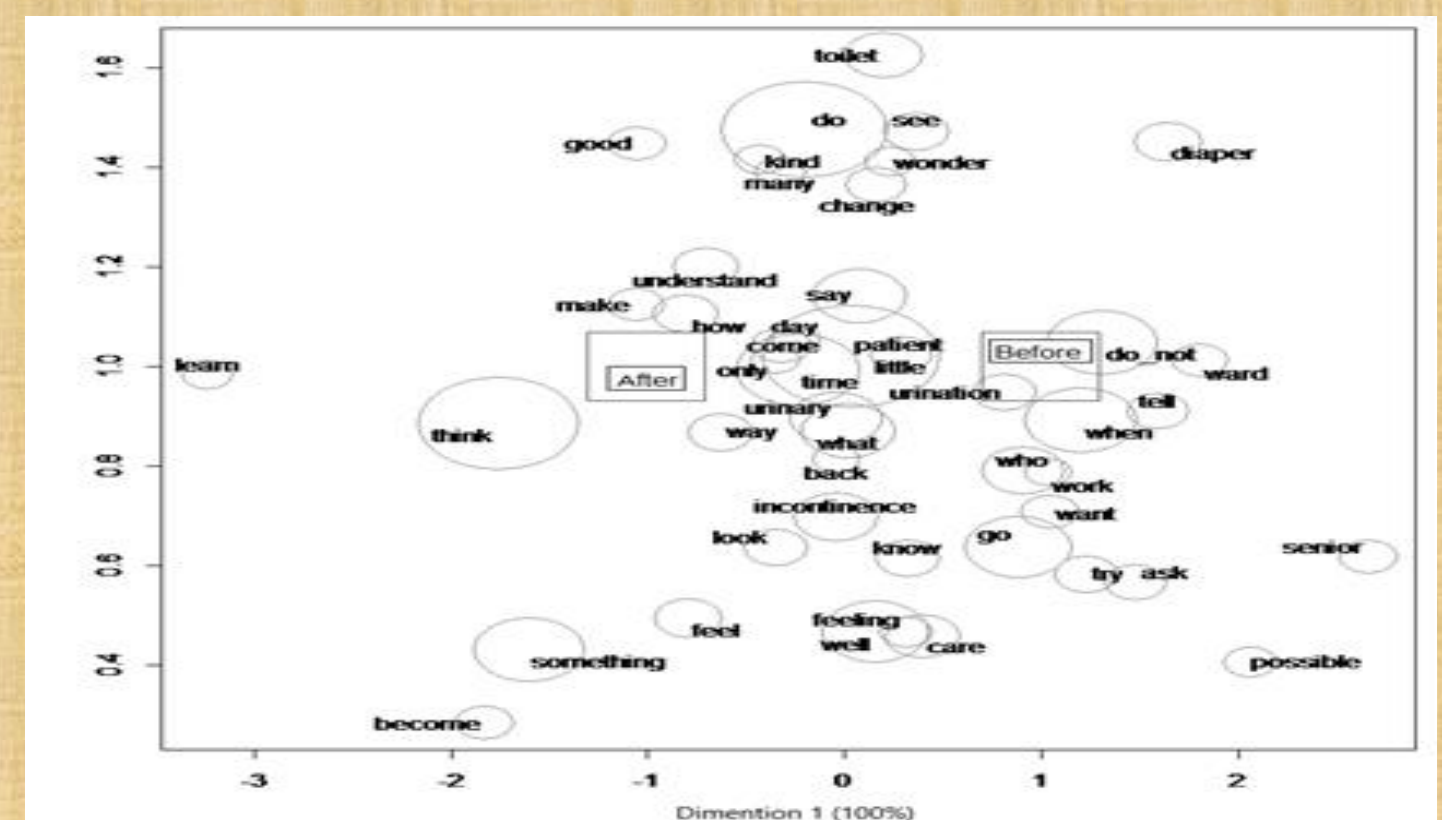


Figure 2 Results of correspondence analysis

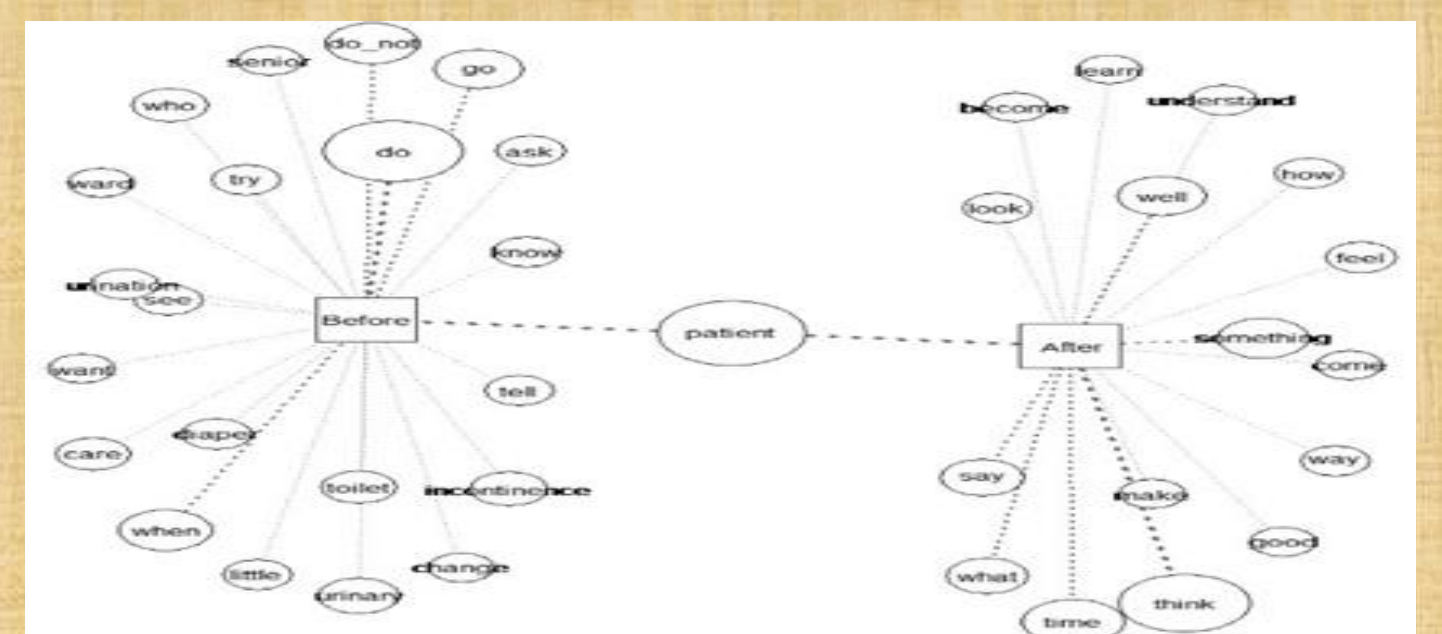


Figure 3. The result of co-occurrence network

## Interpretation of results

Regardless of the presence or absence of learning, the focus of nurses was devoted to the "patient." Changes in focus before and after learning were based on whether a "do" and "do not" organizational culture in "ward" and "senior" were "possible." After learning, as a result of "learn" and "thinking," the nurses came to focus on "something," which was "become." It was observed that the learning led to opposing "ward" and "senior." This result indicated the need examine the organizational culture of the ward in order to establish better urinary incontinence care. Moreover, before learning, the focus was on "when" to "change" "diapers," but after learning, the focus shifted to a more positive emotional aspect like "good," "well," and "feel." The nurses' mental state during urinary incontinence care greatly affects the physical and mental condition of the patient. Being able to reflect on nurses focusing on their own emotions is extremely useful in analyzing patients and situations [3]. SSM [2] comprises the function to promote control of the mind by enabling nurses to easily express their negative feelings.

## CONCLUSIONS

The urinary incontinence care workshop using SSM may have changed nurses' focus to increased thinking and considering of emotional aspects.

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## REFERENCES

1. Checkland P, Scholes J (1990), Soft Systems Methodology in Action, John Wiley & Sons, Ltd., Sussex, UK.
2. Higuchi K (2016), A Two-Step Approach to Quantitative Content Analysis: KH Coder Tutorial Using Anne of Green Gables (Part I), Ritsumeikan Social Science Review, 52(3): 77-91.