

Stress factors of nurses who at facing restraints for elderly patients with dementia

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ABSTRACT

Aim: The purpose of this study was to clarify the stress factors of nurses who at facing restraints for older people with dementia.

Methods

Subjects: Participants were 340 nurses at general wards (excluding wards of emergency, psychiatry, pediatrics, obstetrics, outpatient, operating rooms, and intensive care units). Statistical analysis: The factor structure was confirmed after exploratory factor analysis (maximum likelihood method: promax rotation) to assess construct validity.

Ethical considerations: The questionnaire was designed to ensure privacy and anonymity while allowing participants to complete the form themselves. Participants inserted and sealed the completed questionnaire into an envelope that was provided in advance. The study was conducted with the approval of the ethics committee at Meiji University of Integrative Medicine.

Results and conclusions

To test the validity of item selection and dilemma factors, items were subjected to factor analysis (maximum likelihood method: promax rotation). Of the 30 items, three had a factor loading of 0.45 or a difficulty in interpretation and were thus excluded; the 14 remaining items were used for analysis. Three factors with a characteristic value of 1 were extracted and had a Kaiser-Meyer-Olkin measure value of 0.84 ($p=0.000$). and a cumulative contribution ratio of 60.6%. Explanatory factor analysis revealed three dilemma factors among the 14 items: (a) factor 1: Mental stress; (b) factor 2: Physical stress; (c) factor 3: stress in fear.

Keywords: *stress factors, nurses, restraints, elderly patients with dementia*

1. Introduction

The causes of dementia have not yet been clarified, and there is currently no effective treatment or cure available. However, the healthcare needs of older people with dementia are changing, and are made worse with increasing age. This makes it difficult to care for older people with dementia in hospitals in Japan. At the same time, greater societal awareness of the plight of the older people with dementia patients has placed increased emphasis on delivering high-quality and efficient care to these patients. Nurses, as front-line providers of healthcare, are under enormous pressure to deliver effective and humane service.

Given this background, nurses, particularly those working in general wards, are likely to experience ethical challenges when caring for people with dementia. Several scholarly articles have addressed the challenges and conflicting feelings faced by nurses in restraining elderly patients. The placement of physical restraints by nursing staff members has been accompanied by feelings of frustration, guilt, and ambivalence [1] [2] [3, 4]. Additionally, several trials have demonstrated that physical restraints, rather than protecting the patient, can often in fact cause undue harm [5]. These issues can cause nurses to question their abilities to deliver high-quality care. The stress, anxiety, and indecision

that they experience as a result of this dilemma may thereby lead to poor clinical judgments.

2. Objectives

This study aimed to identify stress-related factors in nurses regarding use of restraints in elderly patients with dementia.

3. Participants

Participant selection was performed using the purposive selection method²¹ at general community hospitals located in midwestern Japan. Patients at these hospitals receive treatment under the medical care insurance program. Participants included registered nurses who worked at hospitals that met the following criteria: (i) had an independent nursing division or department in a hospital under nursing management; (ii) offered continuous training programs for nurses; (iii) had similar employment conditions for nurses; and (iv) were classified as general hospitals. Three hospitals in the Kansai region met these criteria, and 350 nurses working in general adult medicine wards agreed to participate in the study. Nurses in emergency, psychiatry, pediatric, obstetric, and outpatient departments, operating rooms, and intensive care units were excluded. Of the 350 questionnaires distributed, 272 (77.8%) were returned and eligible for analysis (12 additional surveys were returned, but were incomplete). The mean age of participants was 29.7 years (± 7.6 ; range, 21-58), and the mean number of years of nursing experience was 7.6 (± 6.6 ; range, 1-35) (Table 2). The Public Health Services Statistics and Information Department recently reported that 20.4% of nurses working in Japanese general wards were between the ages of 25 and 29 years. The age of participants in this study is comparable to the national average. As a result, the coping strategies identified in this study may be representative of strategies used by the majority of Japanese nurses.

4. Methods and Statistical analysis

Questionnaire

A draft questionnaire was developed based on stress theory and tested in 10 nurses with experience working in general community hospital wards. The results were used to modify and improve the questionnaire, which was revised for use in this study. Participant education sheets with details about the study objectives and questionnaire retrieval were distributed to nursing managers at the targeted hospitals/wards. A letter was sent to individual nurses containing definitions of the terms "physical restraint" and "ethical dilemma" and information about how to fill out the questionnaire,

response deadline, and study objectives. The mailing addresses of the study investigators were provided so that participants could ask questions or share concerns if necessary.

Variables

The 30-item job stress scale by Miyaki et al. was used [6] to estimate the stress of nurses working in a general hospital ward, specifically concerning use of restraints in elderly patients with dementia.

Ethical considerations

The questionnaire was designed to ensure privacy and anonymity. Study participants returned the completed questionnaire in sealed envelopes to the nurse in charge of their ward within one month after the survey was distributed. The head nurse bundled and returned the sealed envelopes to the study headquarters. The ethics committee at Meiji University of Integrative Medicine approved the study.

Statistical analysis

Internal consistency and reliability of each survey item was examined using Cronbach's coefficient, with criteria set at 0.6. Construct validity was assessed using factor analysis. Factor structure was confirmed following exploratory analysis using the maximum likelihood method (promax rotation). Sample validity criteria for factor analysis were based on a Kaiser-Meyer-Olkin value of 0.6 and a cumulative contribution ratio of 60%. Inclusion of items was applied using a factor loading of 0.4 without difficulties in interpretation.

5. RESULTS AND CONCLUSIONS

Of the 30 items evaluated, three had a factor loading of 0.45 or were difficult to interpret and were thus excluded. A total of 14 items were analyzed. Three factors with a characteristic value of 1 and a Kaiser-Meyer-Olkin value of 0.84 ($p=0.000$) were extracted, with a cumulative contribution ratio of 60.6%. Explanatory analysis revealed the following three factors associated with use of restraints: (a) mental stress, (b) physical stress, and (c) stress due to fear. Nunnemann et al. highlighted the burden, problems, and needs of caregivers of patients with frontotemporal lobar degeneration (FTLD) through a systematic review. Burden was higher in FTLD caregivers than in caregivers of patients with Alzheimer's disease and was correlated with neuropsychiatric symptoms [7]. Cheng et al. reported that caregivers of patients with dementia and Alzheimer's

disease are highly stressed and at risk for developing physical and psychiatric conditions [8]. Navab et al. also studied the potential for future suffering in caregivers in Iran [9]. The results of this study are similar to the factors reported in previous studies. This study shows that nurses who use restraints in elderly patients with dementia experience several stress-related factors.

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REFERENCES

- [1] DiFabio, S., *Nurses' reactions to restraining patients*. Am J Nurs, 1981. **81**(5): p. 973-5.
- [2] McHutchion, E. and J.M. Morse, *Releasing restraints--a nursing dilemma*. J Gerontol Nurs, 1989. **15**(2): p. 16-21.
- [3] Stilwell, E.M., *Nurses' education related to the use of restraints*. J Gerontol Nurs, 1991. **17**(2): p. 23-6.
- [4] Strumpf, N.E. and L.K. Evans, *Physical restraint of the hospitalized elderly: perceptions of patients and nurses*. Nurs Res, 1988. **37**(3): p. 132-7.
- [5] Evans, L.K. and N.E. Strumpf, *Tying down the elderly. A review of the literature on physical restraint*. J Am Geriatr Soc, 1989. **37**(1): p. 65-74.
- [6] Miyaki, K., et al., *Folate intake and depressive symptoms in Japanese workers considering SES and job stress factors: J-HOPE study*. BMC Psychiatry. **12**(1): p. 33.
- [7] Nunnemann, S., et al., *Caregivers of patients with frontotemporal lobar degeneration: a review of burden, problems, needs, and interventions*. Int Psychogeriatr. **24**(9): p. 1368-86.
- [8] Cheng, S.T., et al., *A benefit-finding intervention for family caregivers of persons with Alzheimer disease: study protocol of a randomized controlled trial*. Trials. **13**: p. 98.
- [9] Navab, E., R. Negarandeh, and H. Peyrovi, *Lived experiences of Iranian family member caregivers of persons with Alzheimer's disease: caring as 'captured in the whirlpool of time'*. J Clin Nurs. **21**(7-8): p. 1078-86.