Psychometric Evaluation of the Chinese Version of the Knowledge and Beliefs About Pain in Elderly Patients With Dementia Questionnaire

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ABSTRACT

Background: The quality of pain management in hospitalized older adult patients with dementia is a crucial issue in healthcare. The knowledge and beliefs of nurses are known to predict their pain management intentions toward this particularly vulnerable patient population.

Purpose: This study was designed to evaluate the reliability and validity of the Chinese version of the Knowledge and Beliefs About Pain in Elderly Patients With Dementia (KBPED-C) questionnaire using a sample of hospital nurses.

Methods: A cross-sectional study was conducted. The 17-item KBPED-C was distributed between September 2013 and August 2014 to 350 nurses working at a hospital in northern Taiwan. Consistency assessment was conducted using Cronbach’s alpha, and construct validity was examined using principal component analysis. Three hundred five nurses (19 men and 286 women) were enrolled using convenience sampling.

Results: The mean age of the participants was 30.8 ± 5.8 years. The Cronbach’s alpha for internal consistency was .86. The item-total correlation was acceptable. The observed content validity was strong, with a content validity index of .86. Construct validity testing revealed a four-factor structure that accounted for 55.2% of the total variance. The four factors of the KBPED-C questionnaire were “general beliefs about pain and aging,” “pain management in the workplace,” “knowledge about pain management in older adult patients with dementia,” and “beliefs about pain in older people.”

Conclusions/Implications for Practice: This preliminary validation study showed the high acceptability, reliability, and validity of the KBPED-C for hospital nurses. Future studies may use this questionnaire to explore the beliefs and knowledge of nurses regarding pain in older adult patients with dementia.

Key Words: belief, dementia, knowledge, pain, validity.

The prevalence of dementia increases rapidly in aging populations. The prevalence of dementia in populations over 60 years old averages about 4.86% (Fiest et al., 2016). Moreover, more than one third of older adult patients aged over 70 years presenting in acute hospital wards have a diagnosis of dementia (Briggs et al., 2017). The prevalence of pain in patients with dementia in the hospital is approximately 57% (Sampson et al., 2015). Therefore, the quality of pain management in hospitalized older adult populations with dementia is a crucial issue. Patients with cognitive impairment, particularly those who are incapable of verbal communication, are more likely to be at risk of insufficient or inadequate pain identification and treatment (Scherder et al., 2009). If pain is not identified and managed appropriately, patients face higher risks of having behavioral and psychological symptoms of dementia (van Dalen-Kok et al., 2015), experiencing poorer quality of life (Hodgson, Gitlin, & Huang, 2014), having longer hospital stays (Chemali & Eslick, 2016), experiencing functional decline, and having more difficulties performing daily activities (Turk, Fillingim, Ohrbach, & Patel, 2016).

The underdetection and undertreatment of pain in older adult patients without cognitive impairment is a challenging issue for nurses who care for this population (Aasmul, Husebo, & Flo, 2016). Pain assessment and management are important care goals in hospitals, and pain is widely recognized as the “fifth vital sign.” With the increasing number of hospitalized patients with dementia, pain assessment and management in these patients have become an emergent care issue recently. Although some valid observational pain assessment tools are

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available (Chow et al., 2016), few studies have explored nurses’ beliefs and knowledge about pain in older adult patients with dementia. Nursing staff play an important role because they spend a substantial amount of their time caring for patients (Rantala, Hartikainen, Kvist, & Kankkunen, 2015). Therefore, the beliefs and knowledge of nurses regarding pain in their older adult patients with dementia should be explored.

As shown by the results of research conducted based on the knowledge, attitude, and practice model, knowledge and attitudes are independent predictors of nurses’ practice of pain management (Alzghoul & Abdullah, 2016). A survey study conducted in hospital settings in Italy indicated that nurses have limited knowledge and unfavorable attitudes regarding the assessment and management of pain (Latina et al., 2015). According to the conceptual framework of the theory of planned behavior (Ajzen, 1991), nurses’ attitudes and perceived norms predict nurses’ pain management intentions toward hospitalized older adult patients who are in pain (Youngcharoen et al., 2016). According to this theory, behavioral beliefs, normative beliefs, and control beliefs tend to guide human behavior (Ajzen, 1991). The term “belief” refers to a personal attitude associated with true or false ideas and concepts. A belief is an internal feeling that something is true, although that belief may be unproven or irrational. Knowledge and belief are different from attitudes. Whereas beliefs may be true or false, knowledge cannot be either. Attitude is the manner in which a person expresses or applies his or her beliefs and values and is expressed through words and behaviors (Anderson & De Silva, 2009).

Belief is an important predictor of nurses’ intentions and behaviors toward issues such as pain assessment and management (Ajzen, 1991). Therefore, to improve pain management in hospitalized older adult patients with dementia, gaining insight into nurses’ beliefs regarding pain in this patient population is important for developing educational in-service programs and training plans to improve quality of care. Thus, a related questionnaire for nurses would be very useful.

A literature review yielded a questionnaire on knowledge and beliefs about pain in elderly patients with dementia (KBPED), which was designed to address nurses’ beliefs regarding pain in older adult patients with dementia (Zwakhalen, Hamers, Peijnenburg, & Berger, 2007). The development of the KBPED was not based on any conceptual framework, but rather, the questions were developed based on references from the literature and from pain-related questionnaires. The KBPED contains 17 items that are scored on a 5-point Likert scale, with four factors identified based on the results of principal component analysis (PCA; Zwakhalen et al., 2007). According to the responses of 123 nursing home staff members in the Netherlands, the construct validity and reliability of the KBPED questionnaire are good, with a Cronbach’s alpha value of .782. A four-factor solution accounted for 54.4% of the variance. These four factors are (a) knowledge of pain-related experience in older versus younger populations, (b) pain management in the ward, (c) pain medications, and (d) pain and pain treatment in older adults (Zwakhalen et al., 2007). The main objective of the KBPED was to investigate the knowledge and beliefs of pain in older adult patients with dementia. The older adult patients with dementia represent an older population experiencing cognitive impairment. Therefore, the KBPED also included several broader items that focused on older populations (Zwakhalen et al., 2007).

Aged populations with dementia are increasing rapidly in Taiwan. Physical and psychological problems as well as accidents are known and significant risk factors for emergency admissions and hospitalization in patients with dementia (Soril, Leggett, Lorenzetti, Noseworthy, & Clement, 2016). Moreover, accident events such as falls are more likely to cause pain in patients with dementia than in other patient populations. A study indicated that nearly 50% of patients with dementia had at least one pain-related diagnosis in Taiwan (Lin, Li, Chou, Chen, & Lin, 2018). Therefore, hospital nurses who had an opportunity to care for older adult patients with dementia were targeted in this study. Our review of the literature revealed no Chinese versions of the KBPED. In addition, although the KBPED has been given to nurses working in nursing homes, the content of this questionnaire may also be suitable for hospitalized older adult patients with dementia. In addition, hospital nurses must have a strong base of knowledge regarding pain in older adult patients with dementia because of its high prevalence in this population. Therefore, the current study was conducted to evaluate the psychometric properties of the Chinese version of the KBPED (KBPED-C) in the context of hospital nurses.

**Methods**

**Study Design**

First, the researchers obtained permission to use the KBPED from the original author, Dr. Zwakhalen. The English version of the KBPED was then translated into a traditional Chinese version by a translator who was aware of the objectives of and concepts involved in this study. To evaluate the content validity of this questionnaire, five experts, including three assistant professors in nursing schools and two hospital nursing managers with master’s or doctoral degrees, rated the content equivalence and semantic equivalence of each item. Each of the experts had considerable clinical experience in dementia care and pain management. Each questionnaire item was rated on a 4-point scale for content equivalence and semantic equivalence: 4 = highly relevant, 3 = quite relevant, 2 = somewhat relevant, and 1 = not relevant. The content validity index (CVI) was used to determine content validity, and the average CVI score for individual items in the questionnaire was calculated. Subsequently, a cross-sectional, descriptive survey was conducted to test the internal reliability and construct validity of the KBPED-C.

**Participants and Data Collection**

According to a previous survey report, dementia diagnoses are underreported in general hospital settings (Crowther,
In this study, convenience sampling was used to recruit participants from a hospital in northern Taiwan with nearly 550 nurses on staff. The recruitment criteria were (a) having a nursing license and (b) having experience in clinical nursing. The exclusion criterion was working in pediatrics and obstetrics wards, which rarely care for older adult patients. A demographic datasheet and the KBPED-C were distributed to the 350 nurses who consented to participate in this study. Studies have indicated that, if the commonality among factors is low, the sample size required for factor analysis is 200 participants. In this study, the sample size, at a subject-to-item ratio of 20:1, was determined as adequate for conducting factor analysis (MacCallum, Widaman, Zhang, & Hong, 1999). The data were collected from September 2013 to August 2014. All of the participants provided informed consent and completed the questionnaire anonymously.

### Instrument

The KBPED-C contains 17 items, with each item rated on a 5-point scale (1 = completely disagree, 2 = disagree to some extent, 3 = no opinion, 4 = agree to some extent, and 5 = completely agree). Demographic data included information on the participants’ age, gender, educational level, years of nursing work experience, current work unit, and experience in dementia care.

### Ethical Considerations

This psychometric evaluation was part of a study that was designed to evaluate the effectiveness of the KBPED-C questionnaire. The study protocol was approved by the university hospital institutional review board (CSMUH No. CS12188).

### Data Analysis

Cronbach’s alpha was used to determine the internal consistency reliability of the questionnaire. The item analysis, including comparisons of extreme groups (top and bottom 27%) and corrected item correlation (item-to-total), was used to test the discrimination and homogeneity of items. The construct validity of the KBPED-C was established using exploratory factor analysis with PCA. After confirming the factor ability of the data by using the Kaiser–Meyer–Olkin measure of sampling adequacy (> .8) and Bartlett’s test of sphericity (p < .05), a PCA with eigenvalue ( > 1.0) followed by varimax rotation was used to determine the appropriate number of interpretable factor solutions. The responses were calculated as percentages of agreement with each item. All of the data were analyzed using IBM SPSS Version 20.0 (IBM, Inc., Armonk, NY, USA).

### Results

Content equivalence was evaluated by summing the percentages of agreement for all of the questionnaire items that were rated either 3 or 4. In the KBPED-C questionnaire, the CVI score of content equivalence was 1.0 and that of semantic equivalence was .98 for all of the items.

### Table 1

**Demographic Characteristics of the Participants (N = 305)**

| Variable | n  | %    |
|----------|----|------|
| Age (years; M and SD) | 30.8 | 5.8  |
| Work experience (years in nursing) | 8.6 | 5.7  |
| Gender | | |
| Male | 19 | 6.2  |
| Female | 286 | 93.8 |
| Nursing license | | |
| Licensed practical nurse | 76 | 24.9 |
| Registered nurse | 229 | 75.1 |
| Education | | |
| Junior college or below | 178 | 58.4 |
| University or above | 127 | 41.6 |
| Unit | | |
| General ward | 220 | 72.1 |
| Emergency and critical care | 54 | 17.7 |
| Psychiatric/neurology ward | 31 | 10.2 |
| Experience in providing dementia care | | |
| No | 179 | 58.7 |
| Yes | 126 | 41.3 |

### Table 2

**Item Analysis of Each Questionnaire Item (N = 305)**

| Item | Corrected Item–Total Correlation | Cronbach’s α of Item Deleted | t Test for Extreme Groups |
|------|---------------------------------|-----------------------------|--------------------------|
| 1    | .540                            | .849                        | −10.91***                |
| 2    | .572                            | .847                        | −10.69***                |
| 3    | .451                            | .853                        | −6.95***                 |
| 4    | .423                            | .854                        | −6.33***                 |
| 5    | .554                            | .848                        | −10.03***                |
| 6    | .591                            | .846                        | −10.04***                |
| 7    | .441                            | .853                        | −6.70***                 |
| 8    | .394                            | .855                        | −6.79***                 |
| 9    | .576                            | .847                        | −10.23***                |
| 10   | .626                            | .845                        | −12.45***                |
| 11   | .527                            | .849                        | −8.93***                 |
| 12   | .533                            | .849                        | −10.81***                |
| 13   | .693                            | .840                        | −14.80***                |
| 14   | .569                            | .847                        | −10.65***                |
| 15   | .585                            | .847                        | −11.42***                |
| 16   | .615                            | .845                        | −13.05***                |
| 17   | .617                            | .845                        | −11.93***                |

**p < .001.**
In total, all 305 of the nurses (19 men and 286 women) completed the questionnaire. The mean age was 30.8 ± 5.8 years, and mean work experience was 8.6 ± 5.7 years. Furthermore, 75.1% were registered nurses, 41.6% had a bachelor’s degree or higher education, 72.1% worked in the general wards, and 41.3% had experience in dementia care (Table 1).

The Cronbach’s alpha value derived for the internal consistency analyses of the questionnaire was .86. After comparing the mean scores of the extreme top and bottom groups, all of the items of the questionnaire showed significant differences (p < .001). For all items of the questionnaire, the estimated corrected item–total correlation ranged from 3.94 to 6.93 (Table 2).

The PCA results revealed a four-factor structure underlying the 17 questionnaire items (Table 3). Items 4, 6, and 14 of the factor loading were included in the categorized factor group based on their highest factor loading score. The four-factor solution accounted for 55.2% of the total variance. The first factor (Items 1–5) accounted for 8.4% of the variance, the second factor (Items 7–9) accounted for 6.7%, the third factor (Items 6 and 10–14) accounted for 30.6%, and the fourth factor (Items 15–17) accounted for 9.5%. The four factors of the KBPED-C were named respectively based on their item content: “general beliefs about pain and aging” (Factor 1), “pain management in the workplace” (Factor 2), “knowledge about pain management in older adult patients with dementia” (Factor 3), and “beliefs about pain in older people” (Factor 4).

Table 4 presents the responses of the participants to the 17 items of the questionnaire. After excluding the “no opinion” responses to items, the percentages of “agreement” responses were higher than those of “disagreement” responses for all of the items except for Items 6, 10, 13, and 15.

**Discussion**

The results of this study indicate that the psychometric evaluation of the KBPED-C is valid for use with hospital nurses in Taiwan. The internal consistency of the KBPED-C was assessed as high. The Cronbach’s alpha values for this study approximately ranged from .7 to .9. Higher Cronbach’s alpha values may reflect unnecessary duplication of content across items and thus indicate redundancy rather than homogeneity (Streiner, 2003). The item analysis in this study indicated that no concerns related to redundant content or duplicate items affected the KBPED-C.

The translated KBPED-C questionnaire had good content validity. The advantage of the current study over previous

### TABLE 3.

**Factor Structure of the Chinese Version of the Knowledge and Beliefs About Pain in the Elderly With Dementia Questionnaire**

| No. | Content                                                                 | Factor 1 | Factor 2 | Factor 3 | Factor 4 |
|-----|-------------------------------------------------------------------------|----------|----------|----------|----------|
| 1   | Older people experience pain less intensely than younger people.        | .535     |          |          |          |
| 2   | Pain medication works better in young people than in the elderly.       | .670     |          |          |          |
| 3   | Pain medication works longer in the elderly than in young people.       | .735     |          |          |          |
| 4   | Pain medication has more side effects in the elderly than in younger people. | .556 |          |          |          |
| 5   | Dementia patients experience less pain than nondementia patients.       | .594     |          |          |          |
| 6   | Assessing pain in a dementia patient is a matter of guessing.           |          | .518     |          |          |
| 7   | Where I work, pain is assessed correctly.                               |          | .804     |          |          |
| 8   | Where I work, pain is treated correctly.                                |          | .855     |          |          |
| 9   | Where I work, much attention is given to pain in dementia patients.     |          | .641     |          |          |
| 10  | Pain medication should only be administered to patients suffering from severe pain. |          | .704     |          |          |
| 11  | Patients are often prescribed too much pain medication.                 |          | .415     |          |          |
| 12  | It is better to administer pain medication “when necessary,” rather than according to a fixed schedule. |          | .419     |          |          |
| 13  | Administering pain medication should be postponed as long as possible, because dementia patients should receive as little pain medication as possible. |          | .738     |          |          |
| 14  | A dementia patient should first report pain before receiving the next dose of pain medication. |          | .488     |          |          |
| 15  | Pain is part of the aging process.                                      |          |          | .653     |          |
| 16  | Older people are more likely to be affected by pain than younger people. |          |          | .755     |          |
| 17  | Pain medication, if administered in large quantities, easily leads to addiction among the elderly. |          |          | .776     |          |

Note. Factor loadings > .40 are presented. Extraction method: principal component analysis; rotation method: varimax rotation.
studies is its use of a sample size that is sufficiently large for a factor analysis. In this study, the four-factor solution accounted for 55.2% of the total variance, which is similar to that of the original questionnaire (54.4%; Zwakhalen et al., 2007). Furthermore, because the values for the factor correlation matrix that were obtained after performing oblique rotation all fell below .32 (Brown, 2009), the authors used varimax rotation, which assumes that the factors are not correlated. The analysis of the results of the varimax rotation generated findings that were significantly similar, with the exception of Item 6, to those of a previous study of the KBPED questionnaire. Subsequently, Item 6 was classified under the third factor in this study because the factor loadings for the third factor were slightly higher than those for the first factor.

The four factors were renamed differently from the KBPED to appropriately classify the KBPED-C items. The items of the first factor (Items 1–5) explored nurses' beliefs about whether pain experience differed among different populations (e.g., older individuals, younger individuals, people with/without dementia). This comparison included general attitudes toward pain and aging. Thus, the factor was called “general beliefs

### TABLE 4.
**Responses of Nurses to the 17 Items of the Chinese Version of Knowledge and Beliefs About Pain in the Elderly With Dementia Questionnaire (N = 305)**

| No. of Item | Factor | Completely Disagree (%) | Disagree to Some Extent (%) | No Opinion (%) | Agree to Some Extent (%) | Completely Agree (%) |
|------------|--------|-------------------------|----------------------------|---------------|-------------------------|---------------------|
| 1          | Older people experience pain less intensely than younger people. | 10.2 | 26.6 | 8.2 | 40.7 | 14.4 |
| 2          | Pain medication works better in young people than in the elderly. | 7.2 | 26.2 | 12.1 | 45.2 | 9.2 |
| 3          | Pain medication works longer in the elderly than in young people. | 6.6 | 29.5 | 14.1 | 38.7 | 11.1 |
| 4          | Pain medication has more side effects in the elderly than in younger people. | 3.6 | 12.8 | 10.5 | 53.8 | 19.3 |
| 5          | Dementia patients experience less pain than nondementia patients. | 8.2 | 22.3 | 24.9 | 38.7 | 5.9 |
| 6          | Assessing pain in a dementia patient is a matter of guessing. | 22.3 | 25.9 | 18.0 | 30.5 | 3.3 |
| 7          | Where I work, pain is assessed correctly. | 3.9 | 13.4 | 26.9 | 41.0 | 14.8 |
| 8          | Where I work, pain is treated correctly. | 2.6 | 11.8 | 21.0 | 49.2 | 15.4 |
| 9          | Where I work, much attention is given to pain in dementia patients. | 8.5 | 18.0 | 38.0 | 28.9 | 6.6 |
| 10         | Pain medication should only be administered to patients suffering from severe pain. | 36.8 | 25.6 | 8.5 | 23.0 | 6.2 |
| 11         | Patients are often prescribed too much pain medication. | 6.2 | 21.0 | 20.3 | 40.0 | 12.5 |
| 12         | It is better to administer pain medication “when necessary,” rather than according to a fixed schedule. | 8.2 | 21.6 | 11.1 | 44.3 | 14.8 |
| 13         | Administering pain medication should be postponed as long as possible, because dementia patients should receive as little pain medication as possible. | 27.2 | 31.1 | 13.4 | 24.6 | 3.6 |
| 14         | A dementia patient should first report pain before receiving the next dose of pain medication. | 8.9 | 23.6 | 23.6 | 36.4 | 7.5 |
| 15         | Pain is part of the aging process. | 20.7 | 23.9 | 18.0 | 29.8 | 7.5 |
| 16         | Older people are more likely to be affected by pain than younger people. | 12.8 | 19.7 | 18.0 | 39.3 | 10.2 |
| 17         | Pain medication, if administered in large quantities, easily leads to addiction among the elderly. | 9.5 | 17.7 | 14.1 | 38.0 | 20.7 |
about pain and aging.” The second factor included three items that reflect nurses’ thoughts on pain management in the workplace (hospitals). The third factor included the largest number of items of the questionnaire, addressing knowledge on pain in older adults with dementia. Because this factor assesses the common knowledge deficits related to pain medication, this factor was called “knowledge about pain management in older adult patients with dementia” to distinguish the items that reflected beliefs about pain.

The contents of items in the fourth factor were similar to those of the first factor. However, the three items in this factor (Items 15–17) focused on older people only. Therefore, the fourth factor was called “beliefs about pain in older people.” The item classification of the KBPED-C was not appropriate because of theme overlap between the first and fourth factors, the potentially overly broad range of patients covered by the questionnaire (Zwarkhalen et al., 2007), and the inclusion of the belief and knowledge concepts. Furthermore, few items on the KBPED-C addressed the pain assessment knowledge and skills of nurses with regard to treating patients with dementia.

According to the studies in the literature that were referenced for the development of the original questionnaire, the suitable response for the KBPED-C questions was “disagree,” with the exception of Items 7–9. As indicated by a review article, older adult individuals feel pain based on the type of stimulus applied, with various conditions being dependent on individual characteristics. Therefore, in this population, pain cannot be summarized as “increased or decreased pain sensitivity” only (Molton & Terrill, 2014). A prior meta-analysis indicated that persons with dementia had a significantly lower prevalence of self-reported and observed pain than those without dementia. However, the prevalence rates of any painful condition in residents with and without dementia were similar (Tan et al., 2015). Furthermore, there remains a lack of consensus among neurologists examining pain in patients with dementia regarding the notion that patients with dementia experience less pain than patients without dementia (Álvaro González, 2015). There is conflicting evidence from neuropathological, experimental, and clinical research on the impact of dementia on pain processing and perception (Achterberg et al., 2013) that may cause nurses to have different knowledge and beliefs regarding pain in older adult patients with dementia.

According to the research evidence, recommended approaches to geriatric pain involve the use of a collaborative interprofessional team approach that fully considers each patient’s pain experience (Guerriero, Bolier, Van Cleave, & Reid, 2016), including patients with dementia. After adequate pain assessment, including the assessment of cognitive and sensory impairment, health providers should select the appropriate analgesic after considering the pain etiology and the physiology of aging and comorbidities. In addition, treatment should be initiated at low doses, and preemptive strategies should be employed to minimize adverse effects (Malec & Shega, 2015). No specific risk for the adverse effects of analgesics has been described in patients with dementia (Rantala et al., 2015). Although the evidence for efficient treatment with analgesics is limited, evidence is gradually increasing regarding the potential effectiveness of the “stepped treatment” approach. A comprehensive approach supported by the more effective training of health providers is required to overcome the inadequate management of pain in dementia cases (Achterberg et al., 2013).

Although pain is an important quality index for nursing care, the findings of this study implied that most of the participants may have inappropriate beliefs and knowledge regarding the practice of nursing care for pain in older adults with dementia. The gap in nursing knowledge and inaccurate beliefs about pain in dementia are the barriers to adequate pain management in dementia care (Bruneau, 2014). Unlike a previous study (Fry, MacGregor, Hyland, Payne, & Chenoweth, 2015), most of the participating nurses in this study could not confidently assess pain in patients with dementia. Among older adult patients, those with cognitive impairment are particularly vulnerable. Therefore, nursing education, practice, and research should not only focus on older adult patients but also on older adult patients with dementia. Before other new questionnaires are developed, education and training programs may incorporate the content of the KBPED-C to evaluate nurses’ knowledge and beliefs. Further study should target the development of a questionnaire that is focused on promoting more comprehensive knowledge of pain assessment and treatment for patients with dementia.

This study was affected by several limitations. First, the translation process did not include back-translation by an independent translator, which may have limited the improvement in reliability and validity. Second, the test–retest reliability of the questionnaire was not assessed, which may limit the reliability of the KBPED-C for repeat measurements. Finally, this study recruited only nurses from one hospital, which may limit the generalizability of the findings and inferences.

Conclusions

This preliminary validation study of KBPED-C indicates acceptable reliability and validity. The results reveal that at least one third of nurses may hold inappropriate beliefs about pain in older adult patients with and without dementia. Therefore, pain management education and training programs will be necessary to enhance pain management in older adult patients with dementia. In particular, in-service education and training to improve nurses’ knowledge and to establish appropriate beliefs regarding pain in older adult patients with dementia are required. Finally, KBPED-C is an acceptable tool for assessing nurses’ knowledge and beliefs regarding pain in older adult patients with dementia. However, given our evolving and improving evidence-based understanding of pain care in patients with dementia, new questionnaires should be specifically developed to improve pain care in patients with dementia.
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