Nursing students’ knowledge and attitudes toward urinary incontinence: A cross-sectional survey

Yan Luo a, Monica Parry b, Yan-Jin Huang a, Xiu-Hua Wang a, Guo-Ping He a,⁎

a Xiang Ya Nursing School, Central South University, PR China
b Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada

ABSTRACT

Background: Nurses must have adequate knowledge to manage the complexities of urinary incontinence. Nursing students are the nurses of the future, yet little is known about urinary incontinence education in undergraduate nursing programs.

Objectives: The aim of this study was (a) to assess the knowledge and attitudes of urinary incontinence held by undergraduate nursing students in China and (b) to explore the relationship between knowledge, attitudes and socio-demographic characteristics.

Design: A cross-sectional survey using cluster random sampling.

Settings: Undergraduate departments of Nursing within the Faculty of Health Sciences at six Universities, located in different areas of China.

Participants: A random selection of 6 faculties with a total of 1313 full time undergraduate nursing students completed the survey.

Methods: Self-reported data were collected using two validated questionnaires, the Urinary Incontinence Knowledge Scale and the Urinary Incontinence Attitude Scale, to access students’ knowledge and attitudes toward urinary incontinence.

Results: Overall urinary incontinence knowledge was poor (49.9%, 15.0/30) and attitudes about urinary incontinence were generally positive (71.7%, 43.0/60). A high level of interest in learning more about urinary incontinence was found. There was a weak correlation between urinary incontinence knowledge and attitudes (r = 0.135, p < 0.01). There was also a significant positive correlation between urinary incontinence knowledge and attitudes and nursing students’ year of study, urinary incontinence education and training, and formal clinical practicum experience in urology (p < 0.05).

Conclusions: Chinese nursing students showed poor urinary incontinence knowledge but generally positive attitudes toward urinary incontinence. This study suggests there is a need to examine urinary incontinence content throughout undergraduate nursing curricula in China.

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Keywords: Urinary incontinence; Attitudes; Knowledge; Nursing students

1. Introduction

Urinary incontinence (UI) is an increasingly prevalent but under-reported and under-diagnosed health problem. In the general population, surveys have found that UI is reported by 7%–37% of women aged 20–39. The incidence increases with age: urinary incontinence affects approximately 44%–57% of women aged 40–60, and 75% of women aged 75 years and older. The prevalence of UI in men is approximately half that in women: urinary incontinence is seen in 11%–34% of older men (Buckley and Lapitan, 2010; Flanagan et al., 2012; Qaseem et al., 2014). Patients often do not seek treatment for UI due to feelings of embarrassment (Nishizawa et al., 2008; Resnick et al., 2006). Prior studies have found that only about a quarter of women with UI symptoms have consulted doctors on this issue, and nearly one third of older people perceived UI as shameful (Cheater et al., 2008; Strickland, 2014; Zhu et al., 2009). Moreover, men tend to be less proactive in health seeking behavior (Newman et al., 2009).

Incontinence is associated with adverse psychological, physical and even social and economic consequences (Laganà et al., 2014). The National Association for Continence (NAFC) reported the psychosocial consequences of UI included depression, isolation, decreased self-esteem, and work-related difficulties (NAFC, 2008). Research found that 47% of men with mixed urinary incontinence had elevated anxiety scores (HADS-A ≥ 8). Anxiety and depression were the highest psychological problem in women with UI (Coyne et al., 2012). Incontinence is not only costly to individuals, but also to employers and the health...
care system. The Canadian Continence Foundation (TCCF) found that incontinence annually costs Canadians more than 8.5 billion dollars (TCCF, 2014). These costs include not only those pertaining to direct treatment, but also include the costs related to the indirect psychosocial effects of the condition, which include extra nursing time, supplies, cleaning and laundry (Ward-Smith, 2009). For example, National Health Service purchases of absorbent products amount to approximately $148 million dollars a year in the UK (Du Moulin et al., 2005).

Many studies found that the beliefs, values, and attitudes of health care professionals (HCP) can contribute to how UI is diagnosed, managed, and treated (Keilman and Dunn, 2010). HCPs are the most predominant HCP to manage UI in community and long-term care settings (Saxer et al., 2008, 2009; Vinsnes et al., 2001); however, many nurses lack knowledge of risk factors, symptoms, prevention, treatment, and UI management strategies. This lack of knowledge is an important barrier to the implementation of effective incontinence treatments (Saxer et al., 2008). Community nurses often view UI as a normal part of the aging process, for which no treatment is needed (Ehlman et al., 2012; Keilman and Dunn, 2010). Nurses in the United States scored 72% correct responses when tested about UI knowledge and nurses in Switzerland scored only 66% correct responses (Du Moulin et al., 2005). Although some nurses consider that it is crucial to extend their knowledge and skill in UI, the majority of nurses have not undertaken any further UI education since graduation from a post-secondary institution (DuBeau et al., 2007; Vinsnes et al., 2001).

Over the past decades, many national UI guidelines have been published. These guidelines encourage undergraduate nursing programs to include UI assessment and management in their curricula (Qaseem et al., 2014; Thirloff et al., 2011). The Canadian Continence Foundation recommends governments to increase incontinence education to both HCP and the public (TCCF, 2014). The National Organization for Nurse Practitioner Faculties (NONPF) outlines competencies for nurse practitioners educated in accredited programs in the United States, including the identification and management of incontinence (Crabtree et al., 2002). Graduates need to enter the workforce prepared to provide basic continence knowledge (Karlowicz and Palmer, 2006). Despite this goal, enough is not known about current undergraduate nursing students’ knowledge and attitudes about UI.

The Chinese Academy of Social Sciences (CASS) report that the national population in China aged 60 and older had reached 194 million by the end of 2012 (Wu and Dang, 2013). It is expected that the prevalence of UI will increase over the next decade, as the proportion of people older than 60 years escalates. The associated cost is also expected to rise with the increasing number of people with UI. Researchers report that the overall prevalence rate of UI was 30.9% in China (Zhu et al., 2009). Although a number of studies have evaluated the knowledge, attitude and practice of nurses, there is still little known about the current status in nursing students. Measuring the level of nursing students’ knowledge and attitudes toward UI can be an important step in providing evidence for the need to enhance UI-education in undergraduate nursing curriculum. The aim of this study was to assess the knowledge and attitudes of UI among undergraduate nursing students in six universities, located in different areas of China.

2. Methods

2.1. Study Design

From April to July 2014, a cross-sectional research survey of Chinese undergraduate nursing students was completed to gather self-report data of UI knowledge and attitudes at six universities.

2.2. Sample

In 2012, there were 169 undergraduate nursing programs in six regional areas (Northwestern, Southwestern, Northern, Eastern, Northeastern and Southern) of China (Wang et al., 2013). The undergraduate nursing program in China is a four to five year educational program, including three to four years at the university in coursework and one year spent in the hospital or community gaining clinical experience. Nursing programs were sampled through a stratified cluster sampling process. First, programs were stratified into six regional areas. Second, within each region, simple random sampling was performed using a random number generator. Prior to participant recruitment ethics approval and permission to contact students were obtained from each of the six universities. Two trained researchers were responsible for recruiting participants, advertising, and collecting the survey. Using convenience sampling, students enrolled full time in nursing courses (e.g., Principles of Nursing, Nursing Ethics, Research, Fundamentals of Nursing, Community Health Nursing, Acute Care Nursing, and Mental Health Nursing) in either first, second, third, or fourth year in an undergraduate nursing program in each participating university were invited to participate in the study by their course instructors. Interested students were given detailed information about the study by the principal investigator. Students were provided written information about the study (e.g., purpose, data collection procedures, risks, benefits, and confidentiality) and an opportunity to ask questions; those who voluntarily agreed to participate in this study, signed the consent form. After consents were obtained, course instructors administered and collected the questionnaires in the classrooms. To ensure confidentiality and anonymity, no personal identifiers were attached to the data. A code number was assigned to each participant and data were secured in a locked file. Participants were informed that study findings would be reported as group results for dissemination.

2.3. Instrumentation

Baseline demographic data was obtained using the demographic questionnaire. Knowledge and attitudes of undergraduate nursing students were assessed using the Urinary Incontinence Knowledge Scale (UIKS) and the Urinary Incontinence Attitude scale (UIAS).

2.4. Demographic Data

The nursing students’ demographic questionnaire included items related to age, gender, year of study, UI education and training, formal clinical practice experience in urology, informal UI caregiving experience for family or friends, and interest in learning more about UI.

2.5. Urinary Incontinence Knowledge Scale (UIKS)

The UIKS was developed by Yuan and Williams (2010); for use with students, HCP, and the general public. The UIKS consists of 30 items reflecting six subscales expressing the most relevant aspect of UI: (a) risk factors, (b) symptoms, (c) impacts, (d) prevention, (e) treatment and (f) management with dichotomous choices (correct = 1; false or do not know = 0). A score is calculated by summing the correct response for each item, yielding subscale scores ranging from 0 to 5 and total scores ranging from 0 to 30. Higher scores represent greater knowledge. The internal consistency reported by Yuan & Williams, was found to be sufficient (Cronbach’s alpha: 0.72 for nurses), and reported to be 0.69 in community health nurses in South Korea (De Gagne et al., 2015).

2.6. Urinary Incontinence Attitude scale (UIAS)

The UIAS was also developed by Yuan, Williams and associates (Yuan et al., 2011); for use with students, HCP, and the general public. The UIAS consists of 15-items that measures attitudes toward UI. The questionnaire has three subscales: (a) lower urinary tract symptoms and prevention, (b) treatment, and (c) management. Each item on the UIAS is scored on a 4-point Likert scale with the following responses: