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Nurses' interventions in the management of urinary incontinence in the elderly: an integrative review

ATUAÇÃO DO ENFERMEIRO NO MANEJO DA INCONTINÊNCIA URINÁRIA NO IDOSO: UMA REVISÃO INTEGRATIVA

ACTUACIÓN DEL ENFERMERO EN EL MANEJO DE LA INCONTINENCIA URINARIA EN EL ANCIANO: UNA REVISIÓN INTEGRATIVA

Vanessa Abreu da Silva¹, Maria José D'Elboux²

ABSTRACT

The objective of this study was to verify the strategies that nurses use to manage urinary incontinence (UI) in the elderly. An integrative literature review was performed on the following databases: WEB OF SCIENCE, MEDLINE, SCOPUS and CINAHL, in the period from 2006 to 2010. A total of 186 articles were located, and after excluding duplicates and performing a careful reading of the full articles, the sample was comprised of seven articles. Most studies utilize an overall approach to urinary incontinence, without characterizing the type or the subjects' claims. Only one study addressed the management of urinary incontinence in the elderly with dementia; another specified the type (hyperactive bladder). Therefore, there is a need for further clinical nursing studies regarding the management of urinary incontinence, aiming to provide scientific evidence to support this practice.

DESCRIPTORS

Aged
Urinary incontinence
Therapeutics
Nursing care
Review

RESUMO

Este estudo teve como objetivo verificar quais são as estratégias utilizadas pelos enfermeiros para o manejo da incontinência urinária (IU) em idosos. Realizou-se um estudo de revisão integrativa da literatura nas seguintes bases de dados: WEB OF SCIENCE, MEDLINE, SCOPUS e CINAHL, no período de 2006 a 2010. Foram encontradas 186 publicações, e, após a exclusão daquelas com duplicidade e a leitura cuidadosa dos trabalhos na íntegra, a amostra constituiu-se de sete artigos. A maior parte das pesquisas aborda a incontinência urinária de uma maneira geral, sem caracterização quanto ao seu tipo ou queixas presentes nos sujeitos da pesquisa. Apenas um trabalho referia-se ao manejo de incontinência urinária em idosos com demência e outro especificou o tipo (bexiga hiperativa). Diante disso, destaca-se a necessidade de realizar pesquisas clínicas sobre o manejo da incontinência urinária realizado por enfermeiros, visando o fornecimento de evidências científicas para o embasamento dessa prática.

DESCRIPTORES

Idoso
Incontinência urinária
Terapêutica
Cuidados de enfermagem
Revisão

RESUMEN

Se objetivó verificar cuáles son las estrategias utilizadas por enfermeros para el manejo de la incontinencia urinaria (IU) en ancianos. Se realizó estudio de revisión integrativa de literatura, en las bases de datos WEB OF SCIENCE, MEDLINE, SCOPUS y CINAHL, en período de 2006 a 2010. Fueron encontradas 186 publicaciones; una vez excluidas las duplicadas y efectuada la lectura integral de los trabajos, la muestra se constituyó de 7 artículos. La mayoría de las investigaciones aborda la IU de un modo general, sin caracterización de tipología o quejas expresadas por los sujetos investigados. Apenas un trabajo se refería al manejo de IU en ancianos con demencia y otro especificó el tipo (vejiga hiperactiva). Frente a eso, se destaca la necesidad de realizar investigaciones clínicas sobre el manejo de la IU realizadas por enfermeros, apuntando a ofrecer evidencias científicas que sirvan de base a esta práctica.

DESCRIPTORES

Anciano
Incontinencia urinaria
Terapéutica
Atención de enfermería
Revisión

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INTRODUCTION

Experts have appointed urinary incontinence (UI) as a public health problem⁽¹⁾, due to its incidence and consequences. Few health professionals research on the theme though, and studies on urinary incontinence are scarce⁽²⁾, especially involving nursing authors.

Urinary incontinence is considered one of the most important and recurring geriatric syndromes⁽³⁻⁴⁾. It is defined as *complaints of any involuntary urine loss*⁽⁵⁾. It is a common problem that can affect people of all age ranges, but its prevalence is higher in the female population and increases as age advances⁽⁶⁻⁸⁾.

It is estimated that urinary incontinence affects about 30% of elderly people living in the community, between 40% and 70% of hospitalized elderly and 50% of elderly living in long-term care facilities⁽⁵⁾.

That is so because the changes deriving from the aging process and health crisis events can enhance the development of urinary incontinence in old age^(6,9). It should be highlighted that the aging process as an isolated phenomenon is not a cause, but induces anatomical and functional alterations predisposing to the problem⁽⁷⁾.

It is known that urinary incontinence negatively affects elderly patients' quality of life and enhances social isolation, in view of the fear of losing urine in public places, embarrassment and activity constraints, besides arousing feelings of low self-esteem, interfering in personal relations and housework⁽⁸⁻¹⁰⁾. Moreover, it is one of the main causes of institutionalization among the elderly⁽¹¹⁾.

Studies show that an individualized nursing care plan decreases the occurrence and consequences of urinary incontinence among elderly people⁽¹²⁾. The fact is that nursing activities in the management of this situation is relatively new in the history of the profession⁽¹³⁾.

Urinary incontinence assessment and management is a nursing specialty called stomal therapy, which comprises care delivery to people with stomas, wounds, anal and urinary incontinence, acknowledge by Brazilian and international nursing entities and scientific societies. Nevertheless, the number of nurses with specific knowledge on this activity area is scarce, as well as scientific production on nursing management of urinary incontinence in elderly patients.

In view of the above, the aim of this study is to verify, through an integrative literature review, the strategies nurses use for urinary incontinence management in elderly patients.

METHOD

In this bibliographic review, the integrative literature review method was applied. The aim of this modality is to join and summarize research results on a given theme, in a systematic and ordered way, thus contributing to deepen the knowledge on the research theme⁽¹⁴⁾.

To develop this research, the following steps proposed in literature were adopted⁽¹⁵⁾:

- Search in an indexed database of studies published on the theme;
- Selective reading of studies and selection of information to be extracted;
- Selection of studies that complied with the defined inclusion and exclusion criteria;
- Presentation and discussion of review findings.

The following question was used to guide the integrative review: what strategies do nurses adopt to manage urinary incontinence in elderly patients?

To refine the research, a sample was defined, which complied with the following inclusion criteria:

- journals indexed in the databases WEB OF SCIENCE, MEDLINE (Literatura Internacional em Ciências da Saúde), SCOPUS and CINAHL (Cumulative Index to Nursing and Allied Health Literature).
- papers in Portuguese, English and Spanish, with abstracts available in the abovementioned databases, published between 2006 and 2010;
- papers indexed by the following DeCS/MeSH descriptors:
 - Idoso – aged – anciano
 - Incontinência urinária – urinary incontinence – incontinencia urinária
 - Terapia – therapy – terapia
 - Enfermagem – nursing – enfermaria
- studies on nursing management of UI in elderly patients.

In the first phase, i.e. the database search, 186 indexed publications were found, as shown in Table 1.

After excluding duplicated publications, 138 studies were obtained and their titles and abstracts were read. Twenty of these initially complied with the inclusion criteria but, after careful reading of the full papers, it was observed that 13 studies did not address nursing management of urinary incontinence. Thus, the sample consisted of seven publications.

...the changes deriving from the aging process and health crisis events can enhance the development of urinary incontinence in old age.

Table 1 – Distribution of number of papers found between 2006 and 2010, according to the reviewed databases - Campinas, 2010

Database	Number of papers published per year				
	2006	2007	2008	2009	2010
	n	n	N	n	n
MEDLINE	16	23	26	17	7
CINAHL	15	9	17	12	3
WEB OF SCIENCE	0	0	2	0	0
SCOPUS	3	15	13	4	4
Total	34	47	58	33	14

RESULTS

Regarding the design of the assessed publications, it was verified that: three papers were reviews, one update, one descriptive study, one study on nursing education about urinary incontinence management and only one randomized clinical trial.

Most papers addressed urinary incontinence in general, without characterized the research subjects' incontinence type or complaints. Only one study discussed urinary incontinence management in demented elderly patients and another specified the type (overactive bladder).

The seven papers included in this review were published in international studies: two in General Nursing journals, two in journals on Geriatrics and/or Gerontology and three in a specific gerontology nursing journal, as shown in Table 2.

Table 2 – Distribution of papers according to journal of publication - Campinas, 2010

Journal	Number of papers
Journal of Clinical Nursing	1
International Journal of Older People	3
British Journal of Community Nursing	1
Archives of Gerontology and Geriatrics	1
Gerontology	1

Table 3 presents a synthesis of the papers included in this integrative review.

Based on the reviewed literature, the main nursing activities in urinary incontinence in elderly patients will be presented next.

Nursing care for urinary incontinence management in elderly patients

Concerning nursing strategies for urinary incontinence treatment, the seven studies address conservative treat-

ment, including physical exercise, behavioral therapy, lifestyle modifications, adjusted according to individual behavior, aimed at reducing the risk factors associated with urinary incontinence development in elderly patients⁽¹⁶⁾.

The optimization of fluid intake is controversial, as some experts suggest that it increases the production of urine and losses. On the other hand, some authors agree that it should be done, as many elderly patients restrict their fluid intake to reduce urine production and, consequently, urinary incontinence^(12,16). Its reduction, however, makes the patient's urine more concentrated, which can contribute to urinary tract infection (UTI) and intestinal constipation, important risk factors for urinary incontinence in the elderly^(18,22).

Measures to reduce intestinal constipation should be employed, as it is known that constipation can lead to fecal impaction, causing sufficient pressure in the rectum to alter the angle of the urethra, resulting in incomplete bladder emptying, incontinence or urinary tract infection⁽²³⁾. Therefore, it should be verified whether the elderly patient's food intake contains adequate fiber levels to contribute to good intestinal functioning.

Another relevant factor to be considered is to advise the elderly patients to reduce the intake of foods that cause bladder irritation, like caffeine, carbonated beverages, pepper and acid foods and drinks^(16,24). The bladder irritation these foods cause increases detrusor instability and enhances urge urinary incontinence⁽¹⁰⁾.

Weight loss is another conservative strategy to reduce episodes, as overweight leads to a chronic increase in intra-abdominal pressure and, consequently, in intra-bladder pressure, which can compromise the function of the lower urinary tract⁽²⁴⁾.

Also, a consensus exists among authors that physical exercise helps to maintain good mobility. It enhances the elderly patients' access to the bathroom and, thus, contributes to reduce involuntary urine loss in case of urge⁽¹⁶⁾.

Also regarding exercise, another extremely important measure is highlighted, which is the strengthening of pelvic floor muscles, also known as Kegel exercises. The adoption of this measure is based on two functions of the pelvic floor muscles, i.e. to support the pelvic organs and help the urethral closing mechanism^(10,17,25). Through these functions, the pelvic floor muscles enhance the reduction of stress and mixed urinary incontinence. Therefore, it is essential for the elderly to recognize, identify and isolate the specific muscles, so as to guarantee the correct performance of the exercise and avoid treatment failure⁽¹⁰⁾.

According to some authors, a pelvic floor muscle strengthening program includes the elderly's identification of the pelvic floor muscles, strength training through the contraction of these muscles, with a view to promoting the reduction of urinary loss episodes⁽¹⁷⁾.

Table 3 – Synthesis of studies selected in the databases – Campinas, SP, 2010

Author/ Year	Study type	UI type	Intervention	Results and Conclusions
2009 ⁽¹⁶⁾	Review	Not specified	-Behavioral Therapies -Lifestyle modifications -Optimization of fluid intake -Physical exercise -Pelvic floor muscle strengthening -Urinary training	-Lifestyle modifications reduce risk factors for UI. -The need for fluid intake management is contradictory. -Studies on physical exercise in elderly patients and UI are limited. -Pelvic floor muscle strengthening reduces both stress and urge urinary incontinence, so that nurses should encourage this practice in the elderly. -Urinary training demands the elderly patients' participation and cognitive integrity. Little evidence exists to support urinary training in cognitively impaired elderly patients.
2010 ⁽¹⁷⁾	Systematic review	Not specified	-Assistance with toilet use -Urinary training -Pelvic floor muscle strengthening -Use of absorbent products -Catheterism	-Assistance with toilet use decreases UI episodes in elderly patients with and without dementia. -Urination training reduces UI episodes in institutionalized elderly patients. -Urinary training positively influenced the reduction of UI episodes, quality of life and urination in the elderly. -Pelvic floor muscle strengthening resulted in a significant reduction of UI in incontinent elderly women. -The use of absorbent products is the most common UI management method among the elderly, but absorbent products do not treat UI. -Catheterism should only be considered for elderly patients with urinary retention.
2010 ⁽¹⁸⁾	Update	Overactive bladder	-Behavioral therapy -Urinary training -Pelvic floor muscle strengthening -Electro-stimulation -Topical estrogen	-Reduced caffeine intake reduces bladder irritability and UI. -Carbonated, alcoholic and citric beverages increase irritated urinary symptoms. -Reduced fluid intake is controversial as it can lead to dehydration, constipation and urine concentration, which increases UI. -Urinary training should be considered the first treatment option for an overactive bladder, but demands the elderly's motivation and cognitive integrity. -Pelvic floor muscle strengthening reduces losses.
2008 ⁽¹⁹⁾	Clinical study	Not specified	-Urinary training -Pelvic floor strengthening	-Reduction of UI complaint in the group that received treatment when compared with the control group. -Behavioral therapy can easily be used as effective UI treatment in institutionalized elderly patients.
2009 ⁽¹²⁾	Intervention involving nurses	Not specified	-Stimulate food intake -Encourage urination in the bathroom -Reduce usage time of wet diapers -Increase fluid intake	-The elderly patients' fluid intake increased after the intervention -The diaper change time of the elderly was reduced -The number of elderly patients using diapers decreased -Reduction of urination and UI episodes at night
2009 ⁽²⁰⁾	Descriptive	Not specified	-Behavioral modification -Lifestyle -Diet -Pelvic floor strengthening	Nursing care was focused on incontinence containment instead of proactive UI management
2008 ⁽²¹⁾	Review	Not specified	-Catheterism -Medication therapy -Behavioral therapy -Use of absorbents and diapers -Fluid intake control	-Need to plan individualized UI management -Fluid intake control is one effective and cheap form of symptom control -Lack of nursing knowledge on the theme -Lack of standardized approach in care assessment

For elderly patients who experience difficulties to identify the pelvic floor muscles to contract, electro-stimulation can be used, as well as biofeedback or the use of vaginal cones⁽²⁶⁾.

Electro-stimulation is an adjuvant measure to strengthen the pelvic floor muscles and, in addition, can be used to treat overactive bladder, with a view to inhibiting detrusor hyperactivity⁽¹⁸⁾.

Bladder training is appointed in the literature as the first treatment option for overactive bladder cases. Before establishing this treatment, however, adequate assessment is needed, and elderly patients should be asked to complete a diary in order to check their urination behavior^(16,18). Many elderly patients only experience urinary loss when their bladder is full. Then, somewhat more frequent urination can impede the urge the distension of the detrusor muscle of the bladder causes and reduce urinary incontinence episodes in some cases⁽²⁴⁾.

Among other possible measures, elderly patients need to be taught to concentrate on pelvic sensations and perform various pelvic floor muscle contractions in case of urinary urge, wait until the urge feeling disappears and then walk to the bathroom normally, so as to avoid urinary losses deriving from the urge⁽²⁴⁾. In addition, the patients are advised to program urination at regular intervals, in the attempt to increase their bladder capacity and reduce urinary loss episodes⁽¹⁷⁾.

It is fundamental to highlight that, for all of these methods, patients need preserved cognitive functions in order to participate actively in these treatment forms^(24,27).

Many elderly patients use absorbents and diapers in the attempt to minimize the embarrassment urinary incontinence causes. It is known that these products play a significant role for the elderly, but their aim is to maintain hygiene, and not achieve cure. Therefore, the elderly patients should be advised to seek more adequate treatment types⁽²⁴⁾.

Intermittent urinary catheterization, for example, can be used in elderly patients with hypocontractility of the detrusor muscle of the bladder and bladder emptying difficulties with urinary retention⁽¹⁷⁾.

This integrative review study revealed a lack of nursing research on urinary incontinence treatment, although this is an important activity area for nurses.

CONCLUSION

Although the growth of the elderly population is an immediate phenomenon and studies appoint the high incidence of urinary incontinence in this population, few studies mention treatment by nurses, despite the proven influence in the lives of elderly patients and their relatives.

In view of this situation, clinical research on urinary incontinence treatment by nurses is needed, so as to provide scientific evidence to support practice, as this is a promising activity area for nurses.

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