Factors inherent to the onset of urinary incontinence in the hospitalized elderly patients analyzed in the light of the Donabedian’s triad

Fatores inerentes ao surgimento da incontinência urinária no idoso hospitalizado analisados à luz da tríade donabediana

Factores relacionados al surgimiento de la incontinencia urinaria en el anciano hospitalizado analizados a la luz de la tríade donabediana

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ABSTRACT
Objective: To apprehend the factors related to the onset and/or worsening of urinary incontinence in the hospitalized elderly patient, considering the Donabedian’s triad.
Method: This is a qualitative, descriptive study, conducted with nurses and nursing technicians from a public university hospital. Data were collected using the focus group technique; content analysis was used for treatment and analysis, with subsequent coding of the registration units in the software WebQDA, relating the corpus obtained with the Donabedian’s pillars. Results: The most reported factors related to the onset and/or worsening of urinary incontinence in hospitalized elderly patients were linked to the pillar structure, with emphasis on the attribute human resources, followed by the attributes material resources and physical structure; the second Donabedian’s pillar with the greatest association with the reports was process and, finally, the pillar outcome. Conclusion: The identification of factors related to the outcome investigated in the hospital environment provided the participants with reflection and awareness about the problem, therefore allowing the proposition of measures and interventions to minimize it and ensure safe and quality care to the hospitalized elderly patient.

DESCRIPTORS
Aged; Risk Management; Urinary Incontinence; Hospitalization; Quality of Health Care.
INTRODUCTION

Elderly people hospitalization leads to withdrawal from family and social life, which can lead to isolation, and autonomy and independence restriction to perform basic and instrumental activities of daily living. Such a situation allows the emergence of several risks, mainly those favoring the onset or worsening of important geriatric syndromes, such as: social isolation, iatrogenesis, postural instability, cerebral failure, and urinary incontinence (UI)(2).

Urinary incontinence is defined by the International Continence Society (ICS) as the complaint of any involuntary loss of urine. It is a multifactorial geriatric syndrome and, in situations such as a hospital stay, several modifiable factors may favor its onset or worsening(2). Currently, UI management aimed at reducing its risks is still poorly conducted in hospital settings. Studies have shown that factors related to the environment and the care process, such as poor signaling, inadequate privacy, poor guidance, little encouragement to independence with the use of bathrooms, and indiscriminate use of urinary control devices such as diapers and an indwelling urinary catheter, contribute for the onset or worsening of this syndrome in these places (3-5).

This is so because the current care practice in hospital settings is generally focused on palliative measures, such as the use of absorbent products for urine control after the UI is already present, instead of proactive management, preventive measures, or risk identification. In an aging society, practices such as facilitating access to the bathroom in a timely manner, encouraging independence in personal hygiene performance, as well as the use of devices such as urinals for bedridden elderly patients, can and should take place, and are key components in the promotion of continence, and need to be included and encouraged in the nursing team daily clinical practice(5-6).

Thus, it is possible to associate this problem with the conceptual model by Avedis Donabedian and its pillars: structure, process, and outcome. It is understood that they are related to modifiable risk factors for the onset and/or worsening of UI during elderly people hospitalization, closely linked to the team’s care management and the institutional environment, reflecting on the quality of care(7). The pillar Structure describes the context in which care is provided, including the hospital physical structure, human resources, financing, equipment, and material resources. The pillar Process denotes the entire provision of health care taking place between patients and caregivers. The pillar Outcome, on its turn, refers to the effects of the care provided in a given structure and process, under the health status of patients and populations, represented by the users’ satisfaction and health indicators(7).

Considering the concepts of the Donabedian’s triad in the hospital environment, the following question was asked: what are the factors related to the onset and/or worsening of UI in the hospitalized elderly patient? This study aimed to apprehend which factors are related to the onset and/or worsening of UI in the hospitalized elderly patient, considering the Donabedian’s triad.

METHOD

TYPE OF STUDY

This is a qualitative, exploratory, and descriptive research, product of a study presented at the 8th Ibero-American Congress on Qualitative Research(8), part of a master’s thesis inserted in the matrix project entitled “Cuidado à pessoa idosa durante a hospitalização e transição hospital-domicílio”.

POPULATION AND SCENARIO

The research was carried out in an inpatient unit with a profile of care for Internal Medicine patients at a public university hospital in the city of Salvador, Bahia, Brazil. Regarding the physical structure, it is a unit with twenty-three beds, with three being separate rooms for patients under contact precautions, and twenty distributed in seven wards. Each ward has a bathroom, totaling ten bathrooms for patients in the unit. The bathrooms have grab bars in the shower and toilet area and are shared by patients. In the contact precaution room, the bathroom is exclusive. There are also material resources such as two wheelchairs and two hygienic chairs to help people with mobility difficulties to go to the bathroom. The research participants were nurses and nursing technicians working in direct assistance to patients in the unit(8).

SELECTION CRITERIA

Of the 23 nursing technicians and nine nursing assistants working at the unit, ten professionals participated in data collection, four nurses and six nursing technicians. The following inclusion criteria were used: to perform fixed activities in the sector, to have at least one year of experience, and to be present on the day of collection. To delimit the number of participants, an approach of the researcher to the field and the presentation of the proposal to the professionals eligible to participate in the proposed Focus Group (FG) meetings(8) was required.

DATA COLLECTION

Data collection took place from October to November 2018, using the FG technique. For a more in-depth discussion, the proposal was divided into four meetings, with two different groups of five professionals. Thus, each group had the opportunity to participate in two meetings. The FG meetings were held in the hospital’s training room, by prior appointment, allowing privacy for the meetings, with no interruptions or noise. The participants sat in a circle, which provided an adequate and favorable environment for dialogue.

The first and second FG meetings, with two different groups of five professionals, took place on October 9 and 23, with an average duration of 66 minutes. For methodological rigor required in the discussions(8), the meetings were conducted by the researcher, who had the role of moderator, and three more volunteers who were in charge...
of observing, recording the discussions, controlling the time, organizing the delivery of badges and consent form, and filing this term.

At the beginning of these two meetings, the subjects completed a characterization questionnaire identifying their badge color, sex, age, and educational profile. The meeting started with the explanation of the dynamics of the meetings, of Avedis Donabedian’s theory related to the object of study, and of the objective of the research. The purpose of these meetings was to discuss the hospitalization factors that could favor the onset or worsening of UI in the elderly patient, as well as the group’s knowledge regarding this geriatric syndrome and its risk factors. For this, the moderator followed a previously elaborated script, containing a clinical case used to reflect on the theme and guide the triggering questions that would be used in these and in the next workshops.

The clinical case told the story of a healthy and independent elderly woman, who did all her activities at home, and who fell, fractured her femur, and underwent surgery, requiring admission to hospital for fifteen days. During these fifteen days, geriatric diapers were placed and the elderly woman became dependent on this device, returning home still in their use, which impaired her functional capacity, autonomy, and independence.

From then on, the discussion started, through the questioning: “Thinking about this case, and about other elderly patients seen in your care experience, what are the factors of hospitalization, covering both the structure and the care process, that you believe influence the outcome/result of UI in the elderly?”.

The third and fourth FG meetings were on November 6 and 21, 2018, lasting an average of 52 minutes, and having the same people from the first and second meetings. Initially, the most relevant points from the previous discussion were raised by the moderator, recalled and validated by the participants. Then, the discussion started, guided by the following questions: “What nursing interventions do you believe can prevent the onset of UI in hospitalized elderly people or improve this function in those who already have the problem when hospitalized? and “What measures could be adopted or incorporated into your care, to alleviate the problem or encourage the care from the nursing team to promote urinary continence in hospitalized elderly people?”.

Based on the guiding questions, there was an active participation of the group reporting situations related to the investigated outcome.

**Data analysis and treatment**

The analysis was supported by Bardin’s content analysis. Initially, there was a complete transcription of all the content recorded at the meetings. Subsequently, there was a thorough reading and material exploration, the points that converged to the proposed objective were identified, are the participants’ reports were related to each pillar of Donabedian’s theory (structure, process, and outcome). Then, the categories were defined: structure with the subcategories human resources, material resources, and physical structure; the category process and the category outcome.

To assist in the separation of the registration units in each pillar of Donabedian’s theory, the software for the analysis of qualitative research WebQDA was used, allowing the registration units coding. Following this coding, the exact frequency of the speeches of each participant in relation to each category and subcategory defined a priori was obtained. The frequencies found by the software were exported to the Excel spreadsheet, and were presented through tables and graphs.

**Ethical aspects**

In compliance with the guidelines and rules governing Brazilian research that involves human beings (Resolutions Nos. 466/2012 and 510/2016 of the National Health Council), the research was submitted to the appreciation of the Research Ethics Committee of the Escola de Enfermagem da Universidade Federal da Bahia and approved by the opinion number 2.699.510.

To preserve the participants’ anonymity, color badges were given and each person started identifying him/herself with his/her corresponding color. After signing the free and informed consent form, the discussion recording taking place at the meetings was authorized.

**RESULTS**

Regarding the participants’ profile, half of them were between 31 and 35 years old; the time of education varied a lot, with four of them having finished the undergraduate degree 10 to 15 years before, three of them between two to five years before, two more than five years before, and one between five and ten years before; most of them had little time of work at the unit researched (seven with less than two years of work there). Regarding the sex, six of the ten participants were male. When questioned about participation in any course or training in which the topic of UI was addressed, six of the participants reported never having attended any training addressing the theme, corroborating the need for visibility of the problem. All four who reported having participated in some type of training related to the theme, stressed that this was not provided by the hospital, but in external courses.

Regarding the analysis of the corpus obtained in the FG meetings, it allowed coding the registration units, relating them to each pillar of the Donabedian’s triad, and showed a higher frequency of speeches related to the pillar Structure. The second most prominent component of the triad was the process, reported by the participants’ statements when describing the operationalization of team care actions that could influence the outcome investigated. Finally, the pillar Outcome showed less frequency, being approached as the nursing care outcome that the team offers or does not offer for the prevention, promotion, or rehabilitation of the urinary continence of the hospitalized elderly person, as shown in Figure 1.
Factors inherent to the onset of urinary incontinence in the hospitalized elderly patients analyzed in the light of the Donabedian’s triad

The participants highlighted the impact of the quantity and quality of human resources to offer care to hospitalized elderly people, especially at night.

In the public hospital, it is more difficult for the nursing staff to be present to advise or refer this patient to self-care, to go to the bathroom. And sometimes, you end up performing some processes like leaving a diaper and saying, especially at night, let go in the diaper (Blue).

Regarding material resources, the participants reported on their quantity and quality, especially those needed to stimulate and assist the elderly person with the independent use of bathrooms.

We have this difficulty with the amount of materials, and also with maintaining what we already have, the bath chairs, they do not undergo proper maintenance, the wheels are locked, and there is no footrest.

As for the physical structure, it was evident that the inadequate lighting at night, the deficient structure of the bathrooms, and their ergonomics hinder the encouragement for independence in the safe use of bathrooms by the elderly.

We also have difficulties in the bathroom structure, it is not ergonomic, neither for the patient to use, nor for us to assist, there are door stops, walls narrowing the space for the chair, the patient enters very tightly, there is no possibility of maneuvering the chair (Red).

I think the question of lighting, as it is a shared room, in the sense of not wanting to disturb other patients in the same room and turning light on, since there are no individualized uplighters, often so as not to disturb the sleep of the other patient, he/she ends up letting go on the bed, in the diaper (Blue).

Regarding the pillar Process, the participants reported the lack of recognition of UI, which often goes unnoticed during care, and in the planning of actions/interventions by the nursing team in the hospital environment.

We also end up associating with age, the fact of being an elderly person, so it is already understood that there is sphincter relaxation and, sometimes, we think it is normal (Green).

I was here thinking about incontinence and the first thing that came to mind was wearing a diaper. This shows how we are not focused on incontinence. Our focus is really based on continence, incontinence goes unnoticed and is still a nursing problem (Black).

Regarding the pillar Outcome, it was evident that some care actions performed in this setting influence the maintenance of urinary continence in the elderly and the perception of professionals. However, these are specific, non-standardized, and non-systematized actions, and are performed by some professionals and not by others.

Besides giving a diaper, a urine bottle, you need to provide comfort. A patient who has impaired mobility, had his/her life at home, of going to the bathroom, he/she is not used to staying in a bed, relieving him/herself in a diaper with someone cleaning him/her. If we have the means to facilitate it, it is much better than conditioning the patient to wear a diaper and to be bedridden and dependent (Green).

I think that education is the key to reduce this use of diapers; and education in the sense of really explaining what the harm is. It is not difficult to find patients with a low level of education here, who have never heard of and do not even know what a urine bottle is (Orange).

DISCUSSION

Regarding the participants’ characterization, although being notorious that nursing is a profession exercised mainly by women, most of the participants in this study were male; in fact, male participation in current nursing represents a constant growth, which has been gradually confirmed; as for the educational profile, there is an enormous gap between the guidelines based on the National Health Care Policy for the Elderly, instituted in 2006, and its operationalization in clinical practice. It is very common to hear professionals, even those who took the degree recently, report that, in their training process, certain themes were not prioritized or addressed, and this is even more common among those who majored in an older time, when such guidelines did not even exist. This fact emphasizes the need and importance of continuing education in health care and of the prioritization and inclusion...
of themes aimed at the care of the elderly in the permanent education programs of the institutions, mainly of the hospital institutions.

The analysis of the discursive content of the FG meetings evidenced that the pillar Structure was more frequent in the participants’ speeches, with professionals addressing the personnel shortage and the dimensioning of the nursing team (human resources). Although the participants report an adequate number of professionals and number of patients seen at the unit, it is emphasized that the Federal Nursing Council’s Resolution No. 543/2017 proposes the assessment of the clientele’s dependency profile regarding the assistance complexity, recommending the adoption of a patient classification system (SCP – Sistema de Classificação de Pacientes) in hospital institutions. Therefore, in addition to the number of patients, their dependence degree shall be considered to properly calculate the size of the nursing team.

A study revealed that the nursing team undersizing was a statistically significant factor for the decision of whether to use urinary control devices, such as geriatric diapers, in elderly people with mobility restrictions, which can establish an undetermined cycle of causality, that is, incontinence determines the need for diapers, in the same way that the use of diapers in the elderly with preserved spontaneous elimination can lead to incontinence, this due to the lack of stimulus in the eliminations and sphincter controls, thus leading to a vicious circle.

Therefore, it is important to alert managers to adjust the number of nursing staff to meet the growing demand of hospitalized elderly people, so that it is possible to favor the maintenance of these patients’ functionality, and it is also essential to invest in the qualification of the team focused on this care, both for elderly patients and their family members/caregivers, also providing a safe transition to home.

With regard to material resources and physical structure, reported by the participants, the importance of paying attention to the care macroprocess is highlighted, considering not only the assessment of indicators of the care itself, but also the environment surrounding it and the availability of resources required for the professional to offer care, especially in view of the intrinsic vulnerability and fragility of the elderly person. It is perceived that nursing professionals consider the environment and the available resources as an essential condition for individualized and timely care and attention to the hospitalized elderly person, and say that they are affected by the deficiency in environmental planning and physical structure.

Besides human resources – even with a sufficient number of professionals and nurses aware and qualified to offer the care required by the hospitalized elderly person at risk of this outcome - if the professionals do not have the means to provide the care, in an adequate and safe environment, such care will be impaired, especially due to the fear of falls. In the case of public health system and countries with scarce resources for the health area, the discussion and reflection related to the management of human and material resources needed to meet the growing demand of hospitalized elderly people become even more urgent and necessary.

This fact is of extreme concern when it comes to the current reduction of the health budget for the Brazilian Public Health System after the implementation of the Constitutional Amendment (EC – Emenda Constitucional) No. 95 in 2016, which established the constitutional limitation of public expenditures for up to two decades, an international unprecedented fact. The amendment EC No. 95 overlooks the population’s health needs, the impact of population growth, the demographic transition, the necessary expansion of the public network, among other aspects that will affect mainly the pillar Structure of public health services and of the fulfillment of the population needs. “Social expenditures have been disconnected from any growth in revenue over the next 20 years. Thus, even if the federal revenue increases, there will be no more investments in the social areas.”

With regard to the demands of the elderly population, in contrast to what happens in other sectors that are already aware of the peculiar needs of the patient, such as Pediatrics, Obstetrics and Gynecology and, more recently, for people with morbid obesity, there are few hospitals that provide spaces and material resources directed exclusively to the elderly. The hospital environment is considered fragile for the care for these people.

Regarding the pillar Process, the non-recognition of UI and the deficit regarding the risk approach, and nursing actions and interventions related to the problem were evident on the participants’ speeches. Assuming that the systematization of nursing care is made operational by the nursing process, and this latter has, as a first step, the raising of problems, one can consider the fact that, when the hospitalized elderly people’s UIs are not recognized as a problem that has to be addressed by the nursing team, but are seen as a normal consequence of aging, interventions that can reverse the situation are not planned, executed, or evaluated.

Studies reveal similar results in which most professionals interviewed consider the hospitalized elderly people’s UIs a pre-existing condition, resulting from advanced age. Therefore, the use of diapers is established without prior assessment and certain criteria. Given these beliefs, the professionals analyze that the continence situation of these people cannot be changed or rehabilitated by interventions during hospitalization. This imaginary about the elderly person influences both the team and the caregivers at home and the elderly person who does not recognize, does not complain, and often does not report the problem of incontinence. Therefore, to promote change to this paradigm, the problem shall be given more visibility.

Thus, presenting actions aimed at professional training is an interesting way to elicit behavior changes, such as providing undergraduate nursing students with specific knowledge directed to the care of the elderly, since it is differentiated care, and is usually overlooked. Continuing education shall be highlighted as an important way to complement and update these professionals’ knowledge, so that they can act and exercise their functions with greater property and better quality.
Regarding the pillar Outcome, as in this research, a study carried out in Portugal aiming to assess which aspects shall be integrated to assess the quality of care provided by rehabilitation nurses in inpatient units of an internal medicine clinic, based on Donabedian's triad, also found the Donabedian's pillar Outcome as the least addressed by the participants. In these professionals' narratives, the authors observed the absence of care results measurement and evaluation, the same happening in the present study. It is worth mentioning that measuring results is only the first step in a series of activities to assess the quality of care(19).

To measure the quality of care, the most appropriate instruments shall be selected, such as validated scales, audits, or continuous assessment of favorable or unfavorable outcomes, such as the emergence of disabilities in vulnerable people during hospitalization. To make corrections, it is necessary to look back, down to the process that led to the unwanted results, to reach aspects of the structure that have been responsible for or contributed to them(20).

During the FG meetings, the participants' speech show that, even with the recognition and awareness of some professionals, who report having an established “culture” and a different look at these issues of vulnerability of the hospitalized elderly, the existence of protocols and a standardization of actions for safe and systematic professional practice is required. Regarding UI management in hospital settings, there is still a lack of instruments to guide such practice, and further studies related to the theme are necessary and recommended to allow mainly the construction and validation of evidence-based instruments and protocols for this purpose, especially with regard to incontinence.

It is worth recognizing that new practices are not easy to introduce within an organization. It is necessary to understand the processes and raise the awareness of those involved so that there is recognition and a willingness to change attitudes(20). The results of the study bring contributions to the nursing clinical practice, as the experience obtained in the FG meetings was important because it provided the team with reflection on their care practice, encouraging them to rethink their behaviors and find ways to better quality care, recognizing and managing UI risk. Such results can also apply to other scenarios that have the same problems and risk factors as the investigated outcome. In addition, this warning can be addressed to other actors of the health team working in the hospital setting, as the change in attitude and adequacy of this care shall be encouraged in the entire multidisciplinary team.

The study also provides important subsidies for reflection related to UI risk management in hospital settings, still little discussed and widespread in clinical practice, highlighting the need for evaluation from structural aspects to aspects related to the systematization of nursing care related to UI, and the means available for the care team to recognize the problem and operationalize the necessary interventions, such as careful evaluation regarding the use and maintenance of urinary control devices, such as geriatric diapers.

It is of utmost importance that this discussion be placed on the agenda, that this object of study has greater visibility, thinking not only of reversing the cause that leads the elderly person to hospitalization, but also of managing the risks to which they are exposed during the process of hospitalization, aiming more and more at maintaining the quality of life and functionality of these people when returning home.

Sustainable person-centered care, when related to continence promotion, requires a committed and positive culture and leadership, including continuous education for the staff and caregivers of elderly people in the hospital setting, as well as a warning to authorities and those responsible for personnel and materials management; therefore, everyone shall be engaged in this objective(3).

It should be noted that, by encompassing Donabedian's theory and analyzing not only the care process, but also aspects of the structure, going beyond just the physical structure, it was possible to identify problems and deficits that are above the governance of the health team, and that demand costs for its resolution. However, when identifying certain weaknesses, it is possible to direct the priority of costs, alert and make managers aware, and adapt the needs demanded with a view to minimizing the problem within the possibilities of each scenario.

The study had as a limitation the difficulty in relation to the availability of professionals to participate in FG meetings, which could take place only during office hours, during scheduled days when there were more professionals in the unit, in partnership with the sector's nursing coordination that allowed such an alternative. The use of the predetermined Donabedian's theoretical research model can also be considered a limitation, as it may have restricted the professionals' speeches to the proposed questions and the guidance of the discussions by the moderator. However, such a design provided an in-depth guidance and analysis of the investigated theme that met the objectives proposed.

CONCLUSION

Factors related to UI onset and/or worsening in the elderly hospitalized patient, in the view of the nursing team, considering the pillars of the Donabedian's triad, are primarily linked to the pillar Structure, with the attribute human resources, focused not only on the quantity, but also on the qualification and awareness, being highlighted. More investment in continuing education and on greater visibility for this problem in undergraduate and graduate programs are required. This attribute is followed by the attribute material resources and physical structure in the hospital setting. The second pillar most addressed by the team was the Process and, finally, the Outcome. The study outcome and the experience of FG meetings with the nursing team alert to the need to create validated evidence-based instruments and protocols to guide this care practice, as well as the need to raise awareness among other members of the multiprofessional team. When recognizing UI in the elderly as a problem, measures and interventions will be planned, executed, and evaluated, reducing its consequences for the person affected and the burden of this geriatric syndrome on caregivers and the public health system.
RESUMO

Objetivo: Aprender os fatores relacionados ao surgimento e/ou piora da incontinência urinária no idoso hospitalizado, considerando a tríade donabedianiana. Método: Estudo qualitativo, descritivo, realizado com enfermeiros e técnicos de enfermagem de um hospital público universitário. Os dados foram coletados por meio da técnica de grupo focal; para tratamento e análise foi utilizada a análise de conteúdo, com posterior codificação das unidades de registro no software WebQDA, relacionando o corpus obtido com os pilares donabedianos. Resultados: Os fatores relacionados ao surgimento e/ou piora da incontinência urinária na pessoa idosa hospitalizada mais relatados estavam interligados ao pilar estrutura, com destaque para o atributo recursos materiais e estrutura física; o segundo pilar donabediano que teve maior associação com os relatos foi o pilar processo e, por último, o pilar resultado. Conclusão: A identificação dos fatores relacionados ao desfecho investigado no cenário hospitalar proporcionou a reflexão e sensibilização dos participantes com relação ao problema, sendo possível, assim, propor medidas e intervenções a fim de minimizá-lo e de garantir um cuidado seguro e de qualidade ao idoso hospitalizado.

DESCRITORES
Idoso; Gestão de Riscos; Incontinência Urinária; Hospitalização; Qualidade da Assistência à Saúde.

REFERENCES


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