

RESEARCH PAPER (ORIGINAL)

Quality of life in women with Urinary Incontinence

Qualidade de vida em mulheres com Incontinência Urinária
Calidad de vida en mujeres con Incontinencia Urinaria

Susana Fernandes*; Emília Carvalho Coutinho**; João Carvalho Duarte***;
Paula Alexandra Batista Nelas****; Claudia Margarida Correia Balula Chaves*****;
Odete Amaral*****

Abstract

Background: Urinary Incontinence (UI) impacts the Quality of Life (QoL) of women, causing physiological, psychological, and socio-economic limitations.

Objectives: To assess the perception of QoL of women with UI; to analyse the influence of the type of UI on QoL; to analyse the influence of socio-demographic, obstetric, and gynaecological variables on QoL.

Methodology: A cross-sectional analytic study was conducted. Data were collected using a questionnaire consisting of socio-demographic, obstetric, and gynaecological variables, and the King's Health Questionnaire. The sample was composed of 305 women from the central region of Portugal, with a mean age of 50.01 ± 10.37 years.

Results: Overall, women showed moderate QoL. In most dimensions, QoL is influenced by age; nationality; current employment status; area of residence; body mass index; number of children; pelvic lesions during delivery; child's weight at birth; years of urine loss; stress incontinence; urge incontinence. Women with urinary stress incontinence have a worse QoL.

Conclusion: UI moderately affects the QoL of women.

Keywords: urinary incontinence; women; quality of life.

Resumo

Enquadramento: A Incontinência Urinária (IU) provoca alterações na Qualidade de Vida (QV) da mulher, com limitações fisiológicas, psicológicas e socioeconómicas.

Objetivos: Avaliar a perceção da QV das mulheres com IU; analisar a influência do tipo de IU na QV; analisar a influência das variáveis sociodemográficas, obstétricas e ginecológicas na QV.

Metodologia: Estudo transversal e analítico. Os dados foram recolhidos por questionário constituído por variáveis sociodemográficas, obstétricas e ginecológicas e o *King's Health Questionnaire*. Amostra com 305 mulheres, da região centro de Portugal, com média de $50,01 \pm 10,37$ anos.

Resultados: As mulheres revelaram moderada qualidade de vida global, sendo que na generalidade das dimensões, esta é influenciada pela idade, nacionalidade, situação profissional atual, área de residência, índice de massa corporal, número de filhos, lesões pélvicas no trabalho de parto, peso da criança à nascença, anos de perda de urina, incontinência urinária de esforço, incontinência urinária de urgência. As mulheres com IU de esforço apresentam pior qualidade de vida.

Conclusão: A incontinência urinária influencia moderadamente a QV da mulher.

Palavras-chave: incontinência urinária; mulher; qualidade de vida.

Resumen

Marco contextual: La Incontinencia Urinaria (IU) origina alteraciones en la Calidad De Vida (CDV) de la mujer, con limitaciones fisiológicas, psicológicas y socioeconómicas.

Objetivos: Evaluar la percepción de la CDV de las mujeres con IU; analizar la influencia del tipo de IU en la CDV; analizar la influencia de las variables sociodemográficas, obstétricas y ginecológicas en la CDV.

Metodología: Estudio transversal y analítico. Los datos se recogieron a través de un cuestionario constituido por variables sociodemográficas, obstétricas, ginecológicas y la escala *King's Health Questionnaire*. La muestra estuvo formada por 305 mujeres de la región centro de Portugal con una edad media de $50,01 \pm 10,37$ años.

Resultados: Las mujeres mostraron una CDV moderada y que esta, en la mayoría de las dimensiones, está influida por la edad, la nacionalidad, la situación profesional actual, el área de residencia, el índice de masa corporal, el número de hijos, las lesiones pélvicas durante el parto, el peso del niño al nacer, los años de pérdidas de orina, la IU de esfuerzo (IUE) y la IU de urgencia. Las mujeres con IUE presentan peor CDV.

Conclusión: La incontinencia urinaria afecta moderadamente a la CDV de la mujer.

Palabras clave: incontinencia urinaria; mujer; calidad de vida.

* Master's in Maternal Health, Midwifery and Gynaecology. Clinical Nurse Specialist. Personalised Healthcare Unit (Unidade de Cuidados de Saúde Personalizados-UCSP), 3500-221, Vila Nova de Paiva, Portugal [susanafernandes_84@supsipt]. Contribution to the article: bibliographic search, data collection, data treatment, analysis and discussion, article writing.

** Ph.D. in Nursing Sciences. Adjunct Professor, Polytechnic Institute of Viseu, 3500-843, Viseu, Portugal [ecoutinhobess@gmail.com]. Contribution to the article: bibliographic search, data collection, data treatment, analysis and discussion, article writing, content review.

*** Ph.D. in Mental Health. Coordinating Professor, Polytechnic Institute of Viseu, 3500-843, Viseu, Portugal [Duarte.johnny@gmail.com]. Contribution to the article: data treatment, analysis and discussion, content review.

**** Ph.D. in Education Sciences. Adjunct Professor, Polytechnic Institute of Viseu, 3500-843, Viseu, Portugal [pnelas@gmail.com]. Contribution to the article: bibliographic search, data discussion, article writing, content review.

***** Ph.D. in Education Sciences. Adjunct Professor, Polytechnic Institute of Viseu, 3500-843, Viseu, Portugal [claudiachaves21@gmail.com]. Address for correspondence: Rua da Fonte, nº. 12, Outeiro da Comenda, São Pedro do Sul, 3500-843, Viseu, Portugal. Contribution to the article: bibliographic search, data discussion, article writing, content review.

***** Ph.D. in Public Health. Adjunct Professor, Polytechnic Institute of Viseu, 3500-843, Viseu, Portugal [mojamaral@gmail.com]. Contribution to the article: bibliographic search, data treatment, analysis and discussion, content review.

Received for publication: 04.06.14

Accepted for publication: 15.12.14

Introduction

Urinary incontinence (UI) is known to have a negative impact not only on the physical domain of women's life, but also on the psychological, emotional and social domains, with substantial economic costs (Botlero, Urquhart, Davis, & Bell, 2008). It can affect women of all ages, and influence the urogynaecological health and Quality of Life (QoL) of women and their families (Correia, Dinis, Rolo, & Lunet, 2009).

In Portugal, and according to the Portuguese Association of Urology, it is estimated that there are 600 000 incontinent people in the different age groups, aged between 45 and 65 years, at a rate of three incontinent women for every man. Approximately 50% of institutionalized people suffer from UI and only 10% of the population receives pharmacological treatment. The cure rate for stress incontinence is 90% (Associação Portuguesa de Urologia [APU], 2010). This issue is often neglected in women's urogynaecological health, both by themselves and by the healthcare professionals, either because of unawareness or lack of sensitivity, thus disregarding its true extent and impact.

Women with UI are often affected by their physical condition and tend to limit their social activities. They are not aware that this condition is generally treatable, and they often perceive it as being associated with the natural aging process. As it is strictly related to women's intimate life, there is often a reluctance to address this issue or to seek help to solve it, and these women often end up isolating themselves, both from their families and society, with implications aggravated by postponing or never undergoing treatment. In light of the above, the present study aims at assessing the perception of QoL of women with UI; analyse the influence of the type of UI in QoL; and analyse the influence of socio-demographic, obstetrical and gynaecological variables on QoL.

Background

Urinary incontinence (UI), or unintentional loss of urine, is a condition affecting mainly women. It can be classified as stress UI - when it is a result of effort, coughing or sneezing; urge UI - when there is a sudden and uncontrollable urge to urinate; and mixed UI - when there are signs and symptoms of

both aforementioned types (Botelho, Silva, & Cruz, 2007).

It is known as an objective organic problem, of multifactorial aetiology, with negative consequences on the well-being and at the physical (hygiene, unpleasant odour, and wet clothing); psychological (decreased self-esteem and self-concept, increased levels of stress, depressive mood or depression); sociocultural (social isolation and less relational activities), professional level (absenteeism, lower productivity or even radical change of pace of work); and economic-financial levels (increased expenses in underwear, adult diapers, among others). These effects lead to a worse quality of life in women of different age groups (Lasserre et al., 2009; Basak, Kok, & Guvenc, 2013).

Despite the devastating influence of involuntary loss of urine on the quality of life of women, female urinary incontinence continues to be underdiagnosed and undertreated. It is estimated that only one in every four symptomatic women seeks medical help, as it is incorrectly considered a natural consequence of ageing without an effective treatment - a silent epidemic (Botelho, Silva, & Cruz, 2007). The main causes of urinary incontinence are brain disorders, infection, changes in the central nervous system pathways, changes in the ureterovesical reflex, and tissue lesions. The affected factors are the awareness of the need to void, the neural control to inhibit micturition, the reflex arc, and the brain reaction to bladder filling (Weigel & Potter, 2010).

Evidence on the importance of QoL has been receiving increased interest. This construct is applied at various levels, from medicine to public health, from sociology to economics and from politics to psychology. However, there is a lack of consensus regarding the definition of the concept (Pais-Ribeiro, 2009). The concept of QoL adopted by the World Health Organization (WHO) includes a cross-cultural perspective. QoL is described as the individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns/interests. This positive health concept emphasizes the individuals' personal and social resources, as well as their physical abilities (Pais-Ribeiro, 2009). Given that health emerges as an important area of QoL, it is important to analyse the severity of UI taking into account its symptoms,

its psychological and social impact and how it affects activities of daily living, social activities, relationships, and emotions in general. Studies have mentioned that different types of UI affect differently women's QoL. Women with urge UI report lower QoL, as a result of urinary symptoms, than those with stress UI (Kelleher, Cardozo, Khullar, & Salvatore, 1997).

Grimby, Milsom, Molander, Wiklund, and Ekelund (1993) found significantly higher levels of emotional distress and social isolation in women with urge and mixed UI than in those suffering from stress UI. Similarly, women with urge UI had more sleep disorders, which contributed to decreased QoL. Another study comparing the impact of the type of UI on the QoL of women who underwent physiotherapeutic treatment revealed that most of them had mixed UI, and that this type of UI had a significantly higher negative impact on QoL, particularly regarding the general perception of health, than stress UI (Dedicação, Haddad, Saldanha, & Driusso, 2009). The symptoms with a higher impact on women's QoL are associated with micturition urgency, stress UI, urinary frequency, and urge UI (Knorst, Resende, & Goldim, 2010).

Studies have indicated that there are several factors associated with the QoL of women with UI, including gynaecological, obstetric, and socio-demographic factors (Botlero, Davis, Urquhart, Shortreed, & Bell, 2009; Correia et al., 2009; Basak et al., 2013; Sensoy, Dogan, Ozek, & Karaaslan, 2013; Kirss, Lang Toompere, & Veerus, 2013).

In view of the above, UI is a condition that negatively affects the QoL of women in their biopsychosocial context as a result of the limitations imposed on patients. Thus, there is an urgent need to gather efforts to increase awareness among healthcare professionals for the adoption of urogynaecological health measures aimed at the early prevention and treatment of UI in the female population.

Research questions

In view of this problem, this study aims at answering the following research questions: What is the perception of QoL of women with UI? What is the influence of the type of urinary incontinence on quality of life? What are the variables influencing the quality of life of women with urinary incontinence?

Methodology

A cross-sectional analytic study was conducted. A non-probability convenience sample was used in this study. Women with urinary incontinence who were users of a Healthcare Centre and a Hospital in the central region of Portugal were selected. Data were collected between 2011 and 2012. The study was authorized by the Cluster of Healthcare Centres and the Hospital, as well as by the National Commission for Data Protection (CNPd reference 20.789.050). The following inclusion criteria were applied: presence of symptoms of urinary incontinence, without other associated disease; ability to speak, read and write; and written and individual consent for participation after being given adequate information about the study.

Data were collected through face-to-face administration of a questionnaire composed of socio-demographic, obstetrical, and gynaecological variables, and the *King's Health Questionnaire* aimed at assessing the QoL of women with UI. The *King's Health Questionnaire* is already validated for the Portuguese population (Tamanini, D'Ancona, Botega, & Rodrigues Netto Jr, 2003) and divided into nine domains: general health perception, incontinence impact, daily activity limitations, physical limitations, social limitations, personal relationships, emotions, sleep/energy, and severity measures. The first part of the questionnaire relates to general health perception and incontinence impact, while the second part addresses six domains: daily activities, physical and social limitations, personal relationships, emotions, and sleep. It is scored for each of its domains. Scores range from 0 to 100 and the higher the score, the worse the QoL. With the aim to illustrate the QoL, the following cut-off points were established: ≤ 50 - low QoL; 51 to 66 - moderate QoL and ≥ 66 - high QoL, based on the method of extreme groups (Pestana & Gageiro, 2005). Parametric and non-parametric statistics were used. Nonparametric statistics were used when the assumptions of parametric testing were not upheld, especially when sample sizes were not homogeneous, that is, the quotient between the greater N and the lowest N was higher than 1.5. As parametric tests, the student's t-test for independent samples and the one-way ANOVA to compare the means of more than two sample groups were used. The nonparametric test used was the Mann Whitney

U-test, instead of the t-test and the chi-square test for nominal variables.

Data were processed and analysed using the Statistical Package for the Social Sciences (SPSS 20.0.). The final sample was composed of 305 women with urinary incontinence, aged between 29 and 75 years ($X = 50.01 \pm 10.37$ years). Most women were Caucasian (98.0%), Portuguese (95.4%), married/co-habiting (90.1%), housewives (30.9%), unemployed (54.9%), with secondary education (70.2%), living in a town (44.7%), and with a monthly income between 500 and 1000 euros (47.7%).

Results

With regard to QoL according to age, it was found that 39.5% of the sampled women had a high QoL, 38.4% had a low QoL, and 22.1% had a moderate QoL. As for age groups, the largest percentage of women who reported a low and moderate QoL is

45 years old or less (40.7% vs. 37.0% and 27.4% vs. 18.8%, respectively) and the highest percentage of women who reported having a high QoL was 46 years old or more (44.2% vs. 31.9%). No statistically significant differences were found between age and total QoL ($p = 0.071$). However, age was associated with some dimensions of the *King's Health Questionnaire*, in particular with general health perception ($p < 0.001$), daily activity limitations ($p = 0.001$), physical limitations ($p = 0.001$), and emotions ($p = 0.05$).

In relation to the type of incontinence, the prevalence of stress UI was of 71.9% and urge UI of 23.4%. In the total sample, 39.5% of women with UI reported high QoL, 22.1% moderate QoL, and 38.4% low QoL.

Of the women with stress UI, 17.9% reported low QoL, 30.0% moderate QoL, and 52.2% high QoL, with statistically significant differences ($p < 0.001$). Of the women with urge UI, 50.0% reported poor QoL, 14.3% moderate QoL, and 35.7% high QoL, with statistically tangential differences ($p = 0.05$; Table 1).

Table 1
Quality of life of women with stress and urge UI

	Quality of Life							
	Low		Moderate		High		<i>P</i>	
	n	%	n	%	n	%		
Stress UI	yes	37	17.9	62	30.0	108	52.2	0.001
	no							
Urge UI	yes	35	50.0	10	14.3	25	35.7	0.05
	no							

The descriptive analysis of obstetric variables showed that women had been pregnant one to four times, more than half of the women had two children (54.1%), had a normal delivery (54.1%), and was in labour for 7 or more hours to deliver their first child (39.7%), for 7 or less hours in their second child (37.2%), and for 4 or less hours in their third child (41.9%). It was found that 80.0% of women reported having no pelvic lesions, such as childbirth lacerations. Most women had children weighing more than 4 kg (72.5%). In relation to gynaecological variables and analysing the number of years of urine loss, there was a minimum of 1 year and a maximum of 30 years of urine loss, with most women losing urine for 5 years or less (35.1%) and for 10 years or more (35.1%).

The number of vaginal infections/dermatitis during the last year ranged between 1 and 6 episodes. Most women were unfamiliar with Kegel exercises (84.3%), had never undergone surgery to correct UI (98.0%); use absorbing pads (84.6%); and do not associate the beginning of urine loss with any particular moment in their lives (98.9%).

The total quality of life was associated with socio-demographic variables - marital status ($p < 0.01$), current employment status ($p < 0.001$), and monthly income ($p < 0.001$); with obstetric variables - body mass index ($p < 0.01$), number of children ($p < 0.001$), and child's weight at birth ($p < 0.001$); and with the type of incontinence - stress UI ($p < 0.001$; Table 2).

Table 2

Factors associated with the quality of life of women with UI

	Total Quality of Life	
	<i>Test</i>	<i>p</i>
Socio-demographic variables		
Marital status	U= 2752.50	0.003
Current employment status	T= - 3.928	0.000
Monthly income	U= 10.711	0.000
Obstetric variables		
Body Mass Index	U= 8154.00	0.005
Number of children (> 2)	F= 10.291	0.000
Child's weight at birth (more than 4kg)	U= 177.89	0.002
Type of UI		
Stress UI	U= 1973.50	0.000

Note. U - Mann-Whitney U test; T - student's t test; F - One-way ANOVA

Discussion

It is extremely important to assess the impact and the perception of QoL in women with UI. Several studies have concluded that women with UI often report a decrease in their QoL (Correia et al., 2009; Lasserre et al., 2009; Basak et al., 2013).

The results obtained in the present study are in line with those obtained by Dedicação et al. (2009) with regard to UI having an important and significant negative impact on women's QoL, even though they have perceived their overall QoL as moderate. The abovementioned study also showed that women with stress UI have worse quality of life, which is in line with data obtained by Oliveira et al. (2010). The subjective nature of QoL assessment is ensured, which may result from the variety of social, cultural, religious, and hygiene factors of each participant.

UI is a relatively common and unpleasant problem. In relation to obstetric aspects and in an analysis of the study of Albuquerque et al. (2011), 65.5% of the women became pregnant at least once; the most frequent situation was two pregnancies and one pregnancy, in which most of the women were subjected to caesarean section. These results do not corroborate the data obtained in this study, since there was a prevalence of women with a normal delivery.

It was also found that most women were unfamiliar with Kegel exercises. This type of exercises should always be recommended given its simplicity and cost-

effectiveness, not only as initial treatment for mild incontinence, but especially as a preventive measure after vaginal delivery or surgery of the pelvic region (Botelho, Silva, & Cruz, 2007). As confirmed by these results, there are several risk factors associated with UI which are described in the literature, such as age, nationality, body mass index, number of children, pelvic lesions during delivery, child's weight at birth, physical exercise, among others, thus suggesting that it is part of a complex multifactorial problem, resulting from the vascular and central nervous system transformations that affect bladder control mechanisms, particularly with ageing (Albuquerque et al., 2011; Basak et al., 2013; Sensoy et al., 2013).

The results related to the gynaecological variables suggest the need for a screening of urinary symptoms and associated factors, so that they can be detected by healthcare professionals as early as possible. These professionals must pay attention to this highly frequent condition among women, thus enabling an adequate preventive approach (Dellú, Zácara, & Schmitt, 2008). In this regard, Dellú et al. (2008) mention that the social, family, and professional activities may be limited in women with urinary incontinence and that their quality of life may decrease due to social isolation and emotional distress, associated or not with the feeling of inferiority and depression. In addition to the physical and social consequences, the significant and increasing financial burden should also be mentioned.

Conclusion

UI has an impact on the life of most women, namely stress UI. In general, it was found that QoL (as assessed in the subscales) is influenced by age, nationality, current employment status, area of residence, body mass index, number of children, pelvic lesions during delivery; child's weight at birth; years of urine loss; stress UI; and urge UI. The type of delivery had no influence in any subscale of QoL.

UI impacts several dimensions of women's life due to either the physiological limitations imposed by the disease or the psychological confrontation resulting from social and family isolation, with consequences on QoL. The combination of qualitative and quantitative methods may contribute to clarify this issue by trying to analyse how this phenomenon is experienced, privileging women's interpretation of the experience, not only with a view to knowing them better, but also to learning how to intervene to meet their needs. It would also be important to understand if healthcare professionals, especially physicians and nurses, are acting in such a way as to prevent UI, and if they are adequately prepared and hold the necessary knowledge to help these women overcome this situation of morbidity.

Nurses must pay close attention to this issue and be able to intervene in order to help women prevent UI though the performance of Kegel exercises and by raising awareness to the importance of prevention and early intervention.

References

Albuquerque, M. T., Micussi, B. C., Soares, E. M. M., Lemos, T. M. A. M., Brito, T. N. S., Silva, J. B., & Maranhão, T. M. O. (2011). Correlação entre as queixas de incontinência urinária de esforço e o pad test de uma hora em mulheres na pós-menopausa. *Revista Brasileira de Ginecologia e Obstetria*, 33(2), 70-74. Retrieved from <http://www.scielo.br/pdf/rbgo/v33n2/v33n2a03>

Associação Portuguesa de Urologia. (2010). Semana da incontinência urinária. Retrieved from <http://www.apurologia.pt/>

Basak, T., Kok, G., & Guvenc, G. (2013). Prevalence, risk factors and quality of life in Turkish women with urinary incontinence: A synthesis of the literature. *International Nursing Review*, 60(4), 448-460. doi: 10.1111/inr.12048.

Botelho, F., Silva, C., & Cruz, F. (2007). Incontinência urinária feminina. *Acta Urológica*, 2, 79-82.

Botlero R., Urquhart D. M., Davis S. R., & Bell R. J. (2008). Prevalence and incidence of urinary incontinence in women: Review of the literature and investigation of methodological issues. *International Journal of Urology*, 15(3), 230-4. doi: 10.1111/j.1442-2042.2007.01976.x.

Botlero, R., Davis, S. R., Urquhart, D. M., Shortreed, S., & Bell, R. J. (2009). Age-specific prevalence of, and factors associated with, different types of urinary incontinence in community-dwelling Australian women assessed with a validated questionnaire. *Maturitas*, 62, 134-139.

Correia, S., Dinis, P., Rolo, F., & Lunet, N. (2009). Prevalence, treatment and known risk factors of urinary incontinence and overactive bladder in the noninstitutionalized Portuguese population. *International Urogynecology Journal Pelvic Floor Dysfunction*, 20, 1481-1489.

Dedicação, A. C., Haddad, M., Saldanha, M. E. S., & Driusso, P. (2009). Comparação da qualidade de vida nos diferentes tipos de incontinência urinária feminina. *Revista Brasileira de Fisioterapia*, 13(2), 1-7. Retrieved from : http://www.scielo.br/pdf/rbfis/v13n2/aop012_09.pdf

Dellú, M. C., Zúcaro, P. M. D., & Schmitt, A. C. B. (2008). Prevalência de sintomas urinários e fatores obstétricos associados em mulheres adultas. *Revista Brasileira de Fisioterapia*, 12(6), 1-8. Retrieved from <http://www.scielo.br/pdf/rbfis/v12n6/aop005.pdf>

Grimby A., Milsom I., Molander U., Wiklund I., & Ekelund P. (1993). The influence of urinary incontinence on the quality of life of elderly women. *Age Ageing*, 22(2), 82-9.

Kelleher, C. J., Cardozo, L. D., Khullar, V., & Salvatore, S. (1997). A new questionnaire to assess the quality of life of urinary incontinent women. *British Journal of Obstetrics and Gynaecology*, 104, 1374-1379.

Kirss, F., Lang, K., Toompere, K., & Veerus, P. (2013). Prevalence and risk factors of urinary incontinence among Estonian postmenopausal women. *Springerplus*, 17(2), 524. doi: 10.1186/2193-1801-2-524.

Knorst, M. R., Resende, T. L. & Goldim, J. R. (2010). Clinical profile, quality of life and depressive symptoms of women with urinary incontinence attending a university hospital. *Revista Brasileira de Fisioterapia*, 15, 2, 12-23.

Lasserre, A., Pelat, C., Guérault, V., Hanslik, T., Chartier-Kastler, E., Blanchon, T., & Bloch, J. (2009). Urinary incontinence in French women: Prevalence, risk factors and impact on quality of life. *European Urology*, 56(1), 177-83. doi: 10.1016/j.eururo.2009.04.006.

Oliveira, E., Losinsky, A. C., Palos, C. C., Ribeiro, D. A. M., Souza, A. M. B., & Barbosa, C. P. (2010). Influência do índice de massa corporal na incontinência urinária feminina. *Revista Brasileira de Ginecologia e Obstetria*, 32(9), 454-458.

- Pais-Ribeiro, J. (2009). A importância da qualidade de vida para a psicologia da saúde. In J. P. Cruz, S. N. Jesus, & C. Nunes (Coords.), *Bem-estar e qualidade de vida* (pp.31-49). Alcochete, Portugal: Textiverso.
- Pestana, M. H., & Gageiro, J. N. (2005). *Análise de dados para ciências sociais: A complementaridade do SPSS* (4ª ed.). Lisboa, Portugal: Edições Silabo.
- Sensoy, N., Dogan, N., Ozek, B., & Karaaslan, L. (2013). Urinary incontinence in women: Prevalence rates, risk factors and impact on quality of life. *Pakistan Journal of Medical Sciences*, 29(3), 818-22.
- Tamanini, J. T. N., D'Ancona, C. A. L., Botega, N. J., & Rodrigues Netto Jr, N. (2003). Validação do "King's Health Questionnaire" para o português em mulheres com incontinência urinária. *Revista de Saúde Pública*, 37(2), 203-211. Retrieved from http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-89102003000200007&lng=en&tlng=pt. 10.1590/S0034-89102003000200007.
- Weigel, K. A., & Potter, C. K. (2010). Avaliação do sistema renal. In F. D. Monahan, J. K. Sands, M. Neighbors, J. F. Marek, & C. J. Green (Eds.), *Enfermagem médico-cirúrgica: Perspectivas de saúde e doença* (8ª ed., Vol. 2, pp. 971-1068.). Loures, Portugal: Lusodidacta.

