

# Assessment of knowledge level of women with urinary incontinence – a single-center online study

Karolina Siewier<sup>1</sup>, Anna Kubsik-Gidlewska<sup>1</sup>

<sup>1</sup> Faculty of Health Sciences, Medical University of Lodz, Lodz, Poland

**Correspondence to:** Karolina Siewier, email: karolinasiewier@gmail.com

**DOI:** <https://doi.org/10.5114/phr.2023.126013>

**Received:** 15.01.2021 **Reviewed:** 16.02.2022 **Accepted:** 17.02.2022

## Abstract

**Introduction:** Urinary incontinence (UI) is a widespread chronic disease that causes embarrassment and shame among patients and can affect between 17 to 60% of the population. It can alter the quality of life and cause physical and mental discomfort. Not all women are aware of urogynecological physiotherapy when a physiotherapy visit is recommended after each pregnancy.

**Aims:** The aim of the study was to investigate the level of knowledge of women with urinary incontinence.

**Material and methods:** A group of 189 women participated in the study. There was a questionnaire used which was placed on different websites.

**Results:** Although women's knowledge level of urinary incontinence can be considered good, almost half of the respondents have not been to a specialist in relation to this issue. Many women feel embarrassed when experiencing urine loss. Frequently, these feelings accompany patients for several years.

**Conclusions:** Urinary incontinence is an embarrassing problem for some women, making them reluctant to seek help from a specialist. Expanding preventive and educational initiatives regarding urinary incontinence is important to increase patients' awareness.

## Key words

urinary incontinence, stress urinary incontinence, incontinence, pelvic floor muscles, urogynecological physiotherapy.

## Introduction

According to the World Health Organization (WHO), urinary incontinence (UI) is a significant health problem and is considered a widespread chronic disease that causes embarrassment and shame among female patients [1]. Furthermore, UI is one of the most common chronic diseases, and it occurs in individuals as young as 30-40 years old and even younger [2,3].

It is estimated that in 10% to 25% of women aged 30, continuous or intermittent urinary incontinence episodes occur [4]. The problem of UI will occur more frequently than ever before due to the aging population. The problem may affect 17% to 60% of the population. However, the actual number of affected individuals is much higher. This is due to the fact that patients hide this problem for several years or do not seek professional help at all [5].

This disease significantly reduces women's quality of life. Furthermore, UI causes continuing mental and physical discomfort [1]. However, many women are not aware of the existence of urogynecological physiotherapy. Therefore, Physiotherapy plays a crucial role in the treatment of UI. It has been found that pelvic floor muscle training is among the most reliable conservative treatment methods for UI [3,6]. When performed systematically twice a week, the exercises eliminate UI symptoms in 40% of women [3,7].

Research carried out over a 15-year period has shown that pelvic floor exercises reduce UI symptoms [8-9]. It is crucial to increase women's awareness during pregnancy and postpartum to minimize UI incidence. The dissemination of information about risk factors will enable early implementation of preventive measures to improve the quality of life in women. Excellent results can be achieved by approaching women's problems holistically, working with other specialists, and involving the individual in the treatment [10-12].

## Aims

The aim of this research was to assess the level of knowledge of women regarding UI.

## Materials and methods

A total of 189 women took part in the study. The women were surveyed using a questionnaire that was posted on more than a dozen online forums. A questionnaire was conducted to obtain information on the level of women's knowledge about UI. The administered questionnaire included closed as well as open-ended questions. Research began in January 2021 and was finalized in June 2021 (Table 1).

**Table 1.** Characteristics of the study population.

| Characteristics    |                                      | X | SD   |
|--------------------|--------------------------------------|---|------|
| Age                | 31-40 years                          | 2 | 1.2  |
| Body mass          | 61-70 kg                             | 3 | 1.13 |
| Body height        | 161-170 cm                           | 3 | 0.68 |
| Place of residence | City of 100-250 thousand inhabitants | 3 | 1.22 |

The obtained results were presented in figures. Statistical analysis was performed, in which the arithmetic mean and standard deviation were measured. Moreover, an analysis of the linear relationship between random variables was performed using Pearson correlation coefficient. Furthermore, another Pearson correlation coefficient between selected questions was carried out. A significance level of  $p < 0.05$  was assumed, indicating the existence of statistically significant relationships. This article presented statistically significant graphs and tables.

### Results

The majority of women were aware of the existence of UI. For example, 88.4% of participants indicated that they had already heard of such a

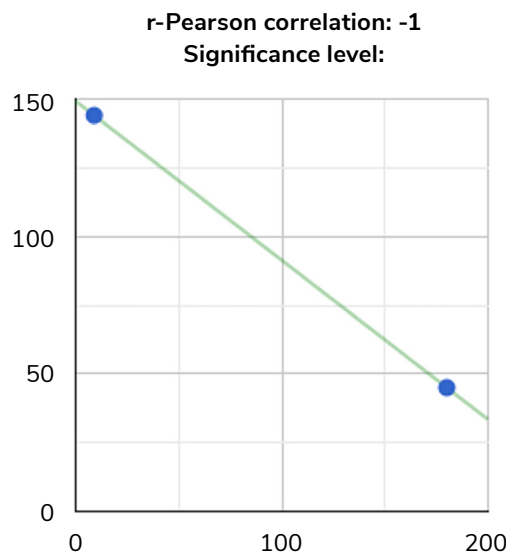
problem, while 11.6% of women were unfamiliar with the condition.

Women's level of knowledge of preferred breathing techniques during pelvic floor muscle exercises was investigated. The questionnaire did not explain the differences between abdominal and diaphragmatic breathing techniques. Nevertheless, most women identified the correct breathing technique. Meanwhile, 23.8% of the women had no knowledge of the subject. During pelvic floor exercises, diaphragmatic breathing is recommended; in addition, the abdominal muscles and gluteal muscles should be relaxed (Table 2).

A very strong negative linear correlation was observed between knowledge of "Kegel" muscle exercises and knowledge of correct breathing patterns during the exercises (Figure 1).

**Table 2.** Correlation between knowledge of "Kegel" muscle exercises and knowledge of proper breathing during exercise.

| Have you heard of "Kegel" muscle exercises? | Answer | What should breathing type be used for effective exercises? | Answer | Pearson correlation |
|---------------------------------------------|--------|-------------------------------------------------------------|--------|---------------------|
| Yes                                         | 180    | Abdominal                                                   | 45     | -1                  |
| No                                          | 9      | Diaphragmatic                                               | 144    |                     |



**Figure 1.** Correlation between knowledge of "Kegel" muscle exercises and knowledge of proper breathing during exercise.

Almost half of the respondents feel embarrassed about experiencing UI (48.6%), 25.9% of women feel shame, 15.0% are afraid for their health, only 8.9% are not ashamed of the problem, and 1.6% of individuals feel indifferent. However, for the ma-

jority of women, the problem of UI causes shame and embarrassment; therefore, when treating the condition, it would be important to work with a psychologist to boost patients' mental health (Figure 2).

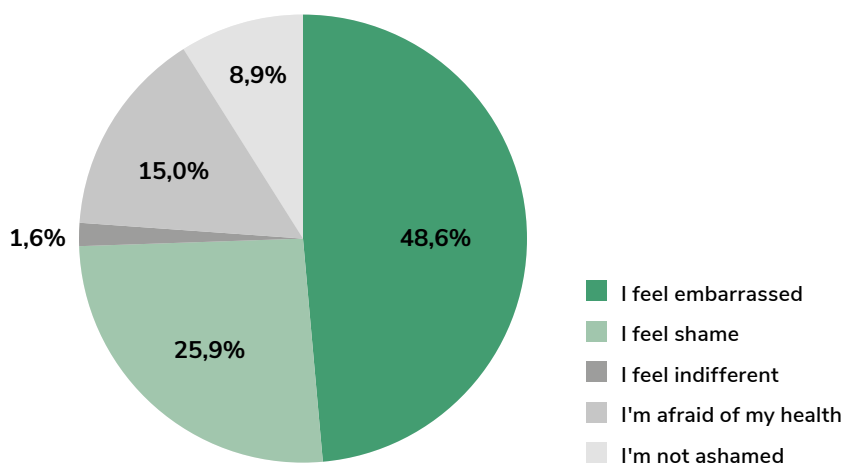


Figure 2. An assessment of the emotions accompanying all women surveyed during urine loss.

The largest number of women indicated that their problem with stress urinary incontinence had lasted more than 2 years (47.1%), and the smallest

number of women indicated that the problem had lasted less than six months (14.3%) (Figure 3).

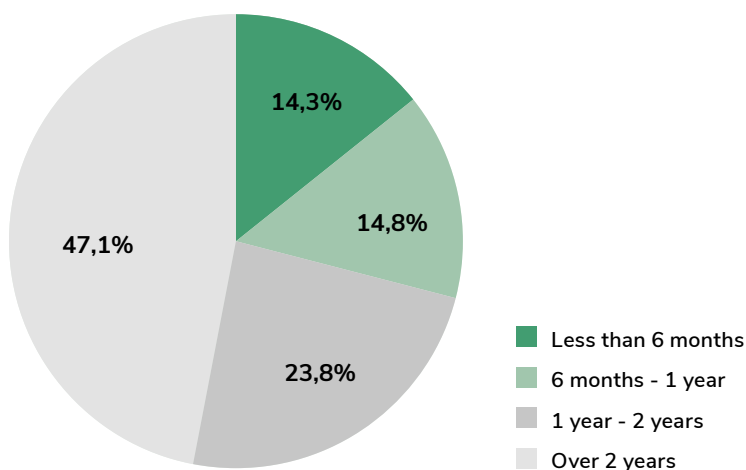


Figure 3. Responses from all women surveyed showing how much the UI problem lasts.

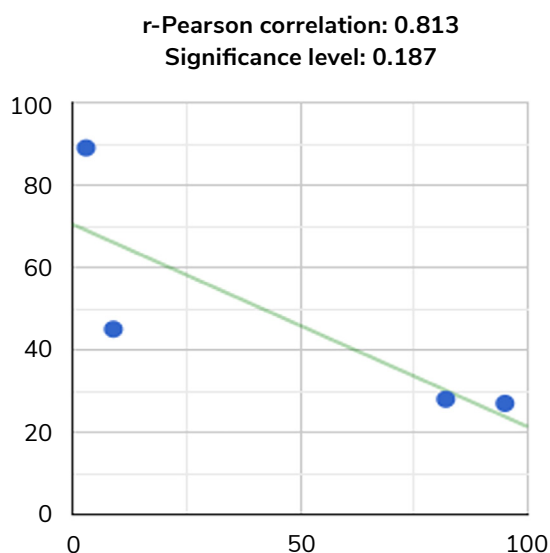
The study group showed a strong negative correlation between feelings toward losing urine and the duration of the UI problem. There is a strong correlation between the data, indicating that few cases do not meet the assumption. The discomfort was defined by the number of complaints/number of subjects (Table 3 and Figure 4).

Most women (39%) have not received any treatment, which is surprising because based on pre-

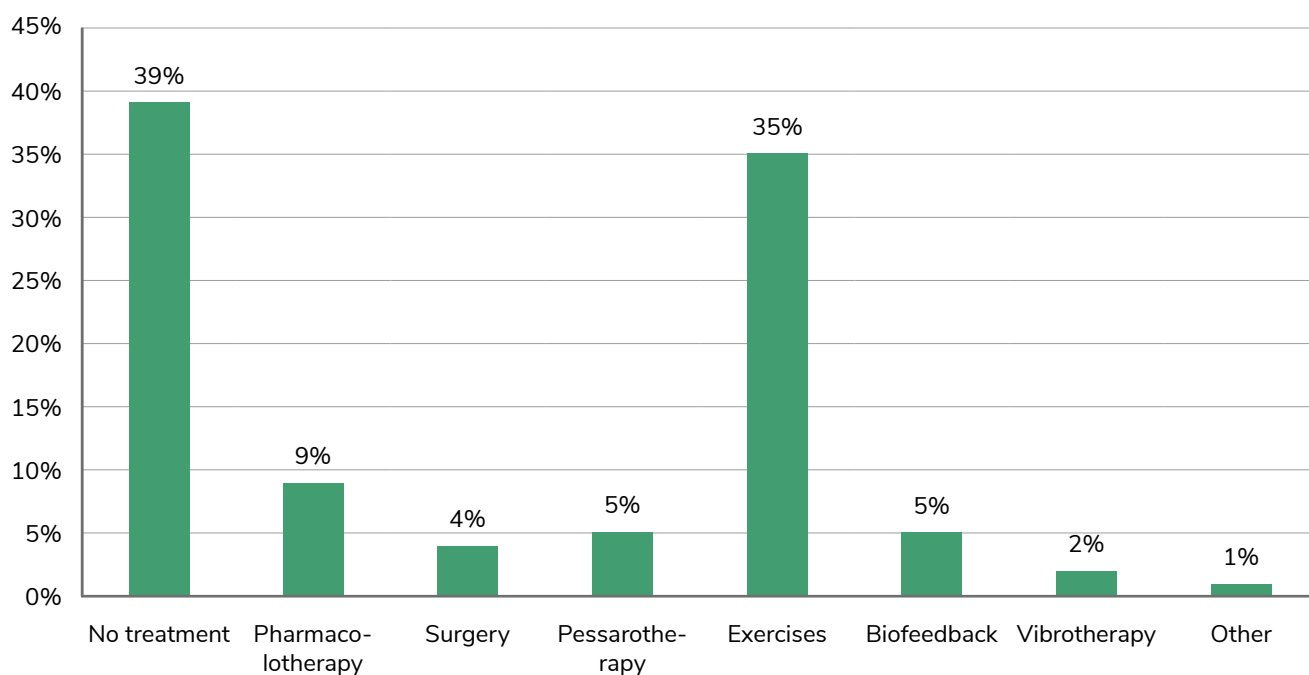
vious responses, it can be concluded that women are aware of the specialists they can go to to treat the problem, and yet, they do not seek treatment. More than half of the participants (52.9%) said they would see a urogynecological physiotherapist for a consultation, which is good news as it is still a fairly unpopular field of physiotherapy. Secondly, women reported that they would see a gynecologist (26.5%), and lastly, a urologist (20.6%) (Figure 5).

**Table 3.** Correlation between the sensation of losing urine and the duration of the UI problem.

| What are your feelings when losing urine? | Answer | How long have you had the UI problem? | Answer | Pearson correlation |
|-------------------------------------------|--------|---------------------------------------|--------|---------------------|
| Slight discomfort                         | 95     | Less than 6 months                    | 27     | -0.813              |
| Moderate discomfort                       | 82     | 6 months - 1 year                     | 28     |                     |
| Medium discomfort                         | 9      | 1 year - 2 years                      | 45     |                     |
| Severe discomfort                         | 3      | Over 2 years                          | 89     |                     |



**Figure 4.** Correlation between knowledge of "Kegel" muscle exercises and knowledge of proper breathing during exercise.



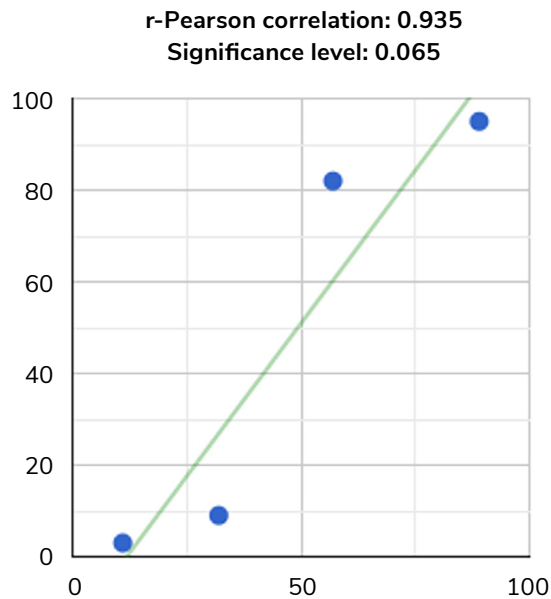
**Figure 5.** The course of current treatment.

Another treatment method chosen by participants was exercise (35%), and the fewest number of women used vibration therapy (2%), which is a very effective form of UI treatment. A very strong correlation between the number of treatment attempts

and perceived discomfort during urine loss was found in this group. The relationship between data was strong and observed in most of the participants (Table 4 and Figure 6).

**Table 4.** Correlation between the number of treatment attempts and perceived discomfort during urine loss.

| The course of the current treatment | Answer | What are your feelings during urine lost? | Answer | Pearson correlation |
|-------------------------------------|--------|-------------------------------------------|--------|---------------------|
| No treatment                        | 89     | Slight discomfort                         | 95     | 0.935               |
| 1 method of treatment               | 57     | Moderate discomfort                       | 82     |                     |
| 2 treatment methods                 | 32     | Medium discomfort                         | 9      |                     |
| 3 treatment methods                 | 11     | Severe discomfort                         | 3      |                     |



**Figure 6.** Correlation between the number of treatment attempts and perceived discomfort during urine loss.

## Discussion

When summarizing the conducted research, it can be concluded that women are knowledgeable about UI. They know which specialist to go to with this issue. They are aware of what muscles are responsible for UI. Most respondents have heard of pelvic floor muscle exercises and are aware of recommended breathing patterns during this physical activity. Similar results were obtained by Kocur [13] when assessing women's level of knowledge of pelvic floor muscles. Research has shown that 80% of women are familiar with the location of the pelvic floor muscles, while one in five is unaware of their location. Moreover, Bakalczuk et al. [14], assessed women's level of knowledge of UI. Women who obtained information from specialists showed a higher level of knowledge than patients who derived information about UI from other sources. Women's level of knowledge regarding UI was considered moderate.

Although currently examined women's level of knowledge can be considered good, it could be assumed that these women are able, at least to a small extent, to help themselves. However, unfortunately, they do not utilize their knowledge. While most women had no problem selecting a specialist to go to with UI, almost half of the respondents did not seek treatment. Women are reluctant to seek professional help. Similar findings were demonstrated by Zygmunt et al. [15], who investigated the effects of physiotherapy on UI in women. It has been found that most women have yet to receive information from their gynecologist or midwife about UI treatment options. As a result, patients are ashamed to report UI to a specialist and express great reluctance before admitting to experiencing UI.

Nearly 50% of respondents felt embarrassed when experiencing urine loss, yet this did not

prompt them to seek professional help. These feelings frequently accompany patients for several years. Similar results were obtained by Derewiecki et al. [15], whose research demonstrated that only a small number of respondents got their information from specialists, which may be related to the shame of admitting to the problem. Shame holds individuals back from seeking treatment. According to research conducted by Derewiecki et al. [16], female patients considered UI an embarrassing problem, making them believe that access to information about this issue should be made more available in rural and urban areas. Patients emphasize that UI can negatively affect the quality of life. Similar results were obtained by Polocka-Molinskaya et al. [17], which showed that in younger women, a problem with UI adversely affects sexual life and work activity, leading to limitations in various aspects of family and social life. It has been observed that the earlier the diagnosis and treatment are implemented, the higher the results and the quality of life can be achieved.

A crucial point in sourcing knowledge is that most women look for information about UI online; thus, it is important to obtain knowledge only from reliable and verified websites. In addition, the results of research conducted by Zygmunt et al. [4] demonstrated that educational elements should be introduced in hospitals and clinics, which could help positively impact woman's mental and physical health.

The research presented above showed that women's levels of knowledge varied considerably. Therefore, there is a strong need to educate people about urinary incontinence. Furthermore, it is crucial to address the topic of UI prevention. It is necessary to educate people on the effectiveness of physiotherapy treatment for UI so that women are not ashamed to admit to the problem and confidently seek professional help. It is important to emphasize that the earlier the treatment begins, the more significant results can be achieved.

## Conclusions

The following conclusions can be drawn from the analysis of the research aimed at assessing the level of knowledge of women with UI: (1) UI is an embarrassing issue for women, which is why they are reluctant to seek professional help. (2) It is necessary to ensure the expansion of preventive and educational initiatives regarding UI to raise awareness among female patients.



## References

1. Cichońska M, Maciąg D, Zboina B, Latawiec I, Krawczyk W. The assessment of women's knowledge concerning urinary incontinence. *Zdr Dobrostan* 2013; 4: 45-64.
2. Borowicz A, Wieczorowska-Tobis K. Physiotherapy treatment in urinary incontinence. *Gerontol Pol.* 2010; 18 (3): 114-119.
3. Opara JA, Socha T, Poświata A. Ćwiczenia mięśni dna miednicy najlepszym sposobem prewencji w wysiłkowym nietrzymaniu moczu u kobiet uprawiających wyczynowo sport. *Fizjoterapia* 2013; 21 (2): 57-63.
4. Zygmunt R, Kozioł S, Hałdki W. Wpływ fizjoterapii na nietrzymanie moczu u kobiet. *Ostry Dyżur*, 2017; 10 (3): 77-83.
5. Ciszek B. Anatomia dna miednicy u kobiety. In: Baranowski W, Rogowski A. [Eds.], *Uroginekologia*. Warsaw 2018: pp. 21-33
6. Dumoulin C, Glazener C, Jenkinson D. Determining the optimal pelvic floor muscle training regimen for women with stress urinary incontinence. *Neurolog Urologyn.* 2011; 30 (5): 746-753.
7. Krüger AP, Luz SC, Virtuoso JF. Home exercises for pelvic floor in continent women one year after physical therapy treatment for urinary incontinence: an observational study, *Rev Bras Fisioter.* 2011; 15 (5): 351-356.
8. Fiodorenko-Dumas Ż, Paprocka-Borowicz M. Physiotherapeutic procedure in urinary incontinence. *Med Og Nauk Zdr.* 2014; 20, (1): 12-16.
9. Purc D, Rasała A. Method of treating urinary incontinence. *Eur J Med Technol* 2015; 3(8): 29-38.
10. Gugąła B, Głaz J, Drelich A. The need for patient education in the prevention of incontinence in women. *Prz Med Uniw Rzesz Inst Leków* 2011; 3: 340-347.
11. Abrams P, Cardozo L, Khoury S, Wein A. (Eds.) *Incontinence 2nd International Consultation on Incontinence*; Plymouth: Health Publication Ltd 2002.
12. Taranowicz I. Nietrzymanie moczu w ujęciu socjologicznym. In: Steciwko A. (Ed.). *Wybrane zagadnienia z praktyki lekarza rodzinnego*. Continuo Publisher. Wrocław 2002: pp. 133-135.
13. Kocur D. Women's knowledge concerning pelvic floor muscle. *Seksuol Pol.* 2016; 14 (1): 31-38.
14. Bakalczuk G, Madej A, Lewczuk J., et al. Status of women's knowledge on urinary incontinence. *Med Og Nauk Zdr.* 2016; 22 (4): 277-281.
15. Derewiecki T, Mroczek M, Majcher P, Chruściel P. Importance of urinary incontinence problem among women over 40 years of age. *Hygeia Public Health* 2015; 50 (1): 219-225.
16. Derewiecki T, Duda M, Majcher P, Mroczek K. Women's knowledge of urinary incontinence and coping strategies with the disease. *Pol J Publ Health* 2012; 12 2(3): 269-273.
17. Połocka-Molińska M, Jakóbczak B., Plagnes-Rotman K. The influence of urinary incontinence on the quality of women's live. *Pol Przegl N Zdr.* 2017; 2 (51): 161-167.