Incontinence-Quality of Life (I-QOL) Among Women with Urinary Incontinence

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Abstract. Our goals were to investigate urinary incontinence type and characteristics, and to explore the affecting factors on I-QOL among women living in Jeju. Data were collected via surveys administered by visiting nurses: Incontinence types were as follows: stress urinary incontinence, 25.2%; urge incontinence, 29.3%; mixed urinary type, 45.5%. In the stepwise multiple regression analysis, present UI treatment (t=2.403, p=.018), mixed urinary incontinence (t=-5.670, p<.001), and severity (t=-4.285, p<.001) were predicting factors for I-QOL, and these variables explained 41.1% of the total variance.

Keywords: Urinary incontinence, Quality of life, Women

1   Introduction

According to the International Continence Society (ICS), urinary incontinence (UI) is the condition in which involuntary urine leakage is observed objectively and leads to social or hygiene problems[1].Typically, UI is categorized into three types: stress UI, in which there is an instant urine leakage as a result of a sudden rise in abdominal pressure, such as when coughing, skipping rope, or lifting something heavy; urge UI, in which the need to pass urine is difficult or impossible to hold in, and urine leaks out of the urethra; and mixed urinary incompetence, in which the symptoms of stress and urge UI present together[1]. Although there are some differences in the prevalence of UI among these studies, it is a sufficiently common and important health concern for women, since it affects over one-quarter of women tested in all these studies.

Proactive management is required, as there are many cases in which the individual is ashamed of her UI and worries about it alone, rather than discussing the symptoms with experts or receiving medical help[2]. Quality of life is affected by health-related factors accompanying old age and social environmental factors [3]: in particular, depression among elderly women reportedly exerts a negative effect on quality of life [4].

It is thought that not only will different UI types have different effects on both general quality of life and I-QOL, but also there will be considerable correlation between them. More studies are needed to measure I-QOL according to type. To this

end, the current study was intended to provide baseline data for customized health management interventions suited to homebound women by grasping the present state of UI in homebound women, distinguishing between UI types by using the Questionnaire for Urinary Incontinence Diagnosis (QUID)

2 Research Objectives

The current study was intended to provide baseline data for UI management by confirming the characteristics associated with various UI types, specifically working with homebound women as the subjects, and by looking at which variables most affect I-QOL.

3 Research Methods

3.1 Study Design and Subjects

This study is a descriptive survey study in which the characteristics associated with different types of UI in women were confirmed, and a survey analysis was performed to assess the impact of several variables on I-QOL. The subjects for this investigation were women 30 years old and over, who were among the people targeted by a home visiting healthcare service in the J area. The subjects included 170 women without UI and 123 with UI, after excluding seven people whose survey responses were insincere

3.2 Study Tools

1) QUID (Questionnaire for Urinary Incontinence Diagnosis)
This instrument is made up of three questions for stress UI and three questions for urge UI on a scale of 0–5 points, so that the total score for each was 0–15 points. If the stress UI score was over 4 points, it was categorized as stress UI. If the urge UI score was over 6 points, it was categorized as urge UI. If both stress and urge UI were present, the subject was categorized as having mixed UI.

2) Incontinence-related quality of life (I-QOL)
This instrument is made up of a total of 22 questions and is divided into three subcategories, consisting of eight questions for "avoidance and limiting behavior," five questions for "psychosocial impact," and five questions for "social embarrassment" [5]. Each question was scored on a four-point Likert scale, with answers ranging from "Extremely – 4 points" to "Not at all – 0 points," and with scores ranging of 0–88, higher scores signified a higher quality of life.

3.3 Data Collection Method and Data Analysis Methods

Data collection in the present study recruited survey-takers from among private nurses employed by the community health center's visiting healthcare service. Data were collected via interviews with subjects as people who had agreed to participate in the study through home visits, and the investigation took place between August and October 2011. For differences in I-QOL depending on the type of the women's UI and UI-related characteristics, a t-test or ANOVA were used, and when the results of the ANOVA were statistically significant, a Duncan's grouping procedure was used for the post-hoc analysis. A stepwise multiple regression was used to ascertain the factors influencing women's I-QOL Research was conducted after receiving prior approval from the National Evidence-based Healthcare Collaborating Agency Research Committee.

4 Study Results

4.1 Factors Affecting the Incontinence Quality of Life

The results of analyzing the regression model are that the model was significant (F=29.325, p<.001), and that the adjusted R^2, which represents the model's explanatory power, was .411. For the factors impacting the I-QOL of female UI sufferers living in the regional community, mixed UI (t=-5.670, p<.0001), a large volume of UI (t=-4.285, p<.001), and a positive treatment status (t=2.403, p=.018) were presented as factors having a significant impact. The factors that had the largest impact on I-QOL were mixed UI (beta -0.416), UI amount (beta -0.315), and positive treatment status (beta .172; Table 1).

Table 1. Factors Affecting the Incontinent Quality of Life (N=123)

Variables	B	beta	t	p	(A)R2	F(p)
Present treatment	14.071	.172	2..403	.018		
Mixed UI*	-17.804	-.416	-5.670	<.001	.411	29.325 (p<.001)
Amount	-9.370	-.315	-4.285	<.001		

* UI: Urinary incontinence

5 Discussion

In the present study, the variables mainly used to represent UI-related condition and UI type were investigated to determine which of these factors impact female I-QOL.

In the present study, positive treatment status, having mixed UI, and large UI amount (severity) were revealed to all be factors that impact I-QOL, and these explained 41.1% of the overall variance in quality of life influencing factors. This result is in agreement with previous studies, which showed a tendency for women's quality of life to decrease with more frequent UI, a greater UI amount, and longer duration of UI [2]. This is consistent with the result that I-QOL is lowest when experiencing mixed UI symptoms, and this was followed by urge UI, then stress UI, in affecting quality of life [5]. The results of an analysis by Barentsen[6] on the detailed items in quality of life revealed that mixed UI had a greater impact on the emotional areas of quality of life than either urge or stress UI, so, in future research, comparative studies will be necessary to look at detailed areas within I-QOL according to UI type. In this study, UI amount emerged as a variable affecting I-QOL. Since UI severity is typically expressed in terms of amount and frequency, this result is consistent with previous research reporting that UI severity impacts disease-related quality of life [6].

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The present study intended to ascertain the state of UI in homebound women and to distinguish between UI types, using the UI diagnostic survey QUID, which has been shown to be reliable and valid in diagnosing different UI types. Likewise, we sought to confirm the impact of UI-related characteristics and UI types on I-QOL.

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