

The Effect of Education on Quality of Life in Elderly Females with Urinary Incontinence, Refereeing to Jahandidegan Center in Shiraz-Iran, 2011

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Abstract

Background: Urinary incontinence is a common problem in elderly females. It seems to have negative effects on different aspects of the patients' life.

Objective: To determine the effect of instruction on quality of life of the elderly females with urinary incontinence, who referred to Jahandidegan center in Shiraz-Iran, 2011.

Material and methods: A preliminary study was conducted to validate the Modified QUID (Questionnaire for Urinary Incontinence Diagnosis) questionnaire for Iranian elderly. The QUID questionnaire was primarily administrated. The subjects consisted of 60 women aged 60-74 years with QUID questionnaire's scores for different types of incontinence (stress score ≥ 4 , urge score ≥ 6 and mix score ≥ 10). They completed the I-QOL (incontinence Quality of Life) questionnaire according to incontinence types. 10 subjects from each type were placed in two groups of 30 each (experimental and control groups). 10 training sessions on aging, changes related to aging in different system of the body, function of genitourinary system, urinary incontinence, risk factor and treatment (behavioral intervention, stress management, bladder training, scheduled toileting, pelvic muscle exercises, nutrition and fluid management) were held weekly for the experimental group. After the completion of the sessions I-QOL questionnaire was completed by the experimental group and after 2 and 3 months it was completed by the experimental and control groups. Descriptive statistics, paired t-Test and repeated measurement were used to analyze the data.

Results: The I-QOL score of the participants attending the training sessions was significantly higher than that of the subjects in the control group ($P=0.014$).

Conclusion: Based on our findings, training has a positive effect on QOL of females with urinary incontinence. Thus, it is suggested that the health care providers pay more attention to this issue and use health care centers to train women regarding the prevention of urinary incontinence.

Keywords: Older adults; Urinary incontinence; Quality of life

Introduction

According to the World Health Organization reports, in 2000, the global population aged 60 and over was 600 million, by 2025 it will be 1.2 billion and, by 2050, almost 2 billion [1]. The elderly population is rapidly increasing in Asia. In 2007, 240 million or about 6% of the population were aged 65 years or older, and the proportion tends to increase to 18% by 2050 [2].

Aging is associated with decline in the function of a number of major organ systems [3]. As population ages, the number of patients presenting to their primary care physicians with urologic problems are significantly increasing. Urologic issues are the third most common type of complaints in patients 65 yr or older, accounting for at least a part of 47% of office visits [4]. Urological symptoms are the major public health problems in the USA [5]. One of the most predominant urologic problems among the elderly is urinary incontinence [4]. The International Continence Society (ICS) Standardization Committee defined urinary incontinence as "a condition in which involuntary loss of urine is a social or hygienic problem and is objectively demonstrable [6-8]. Urinary incontinence is a widespread health problem, affecting both sexes, but it is especially common among old women [9]. Studies that have included both genders demonstrate consistently that prevalence is higher in women than in men by an approximately 2:1 ratio [10]. In some epidemiological studies conducted on women aged >60 years, UI (Urinary Incontinence) was reported 4.5 and 44% [11]. The prevalence of this problem in a hospital-based study in Tehran, Iran, was reported about 27% of women with a mean age of 47 years [12]. Despite the high prevalence, 50% of all cases of UI have not been

reported. Individuals with UI do not always seek medical help [9]. There is a misconception that the condition cannot be treated [13,14]. UI is not life threatening [8], does not lead to death [15] but the symptoms often impair the social, physical and psychological well-being of affected individuals [16]. Elderly outpatients describe their experience with incontinence as embarrassing, upsetting, and distressing. The persons may be anxious about not having ready access to a toilet and may worry about the possibility of a urinary incontinence in public [17]. Incontinence makes a significant impact on a woman's Quality of Life (QoL). In a national sample of over 3400 women from the National Survey of Self-Care and Aging, urinary incontinence was positively and independently associated with poor self rated health [18].

Beneficial effects of health promotion are documented in several studies; research indicates that health promotion plays an important role in increasing healthy life span, reducing illness burden, slowing down functional decline, improving independence, and enhancing

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quality of life [19]. Investigators indicated that urinary incontinence is significantly improved by behavioral interventions. The majority of patients were satisfied with the clinical progress achieved after behavioral intervention. Burgio et al [10] have shown that pelvic floor exercise is an effective treatment for both stress and urge incontinence [20]. The role of the nurse has the potential to contribute significantly to resolve incontinence and decrease the cost of incontinence management [21]. In our study, training classes about aging, changes related to aging in different systems of the body, function of the genitourinary system, urinary incontinence, risk factor and treatment (behavioral intervention, stress management, bladder training, scheduled toileting, pelvic muscle exercises, fluid and nutrition management) were used to improve the quality of life of females with urinary incontinence.

Methods and Materials

Setting: Jahandidegan center is a day-time center for older adults located in Kholdebarin Park in Shiraz, Iran. In this interventional study, a preliminary pilot study was carried out to determine the validity and reliability of Quid questionnaire for Iranian elderly. The original questionnaire was translated into Persian by three professors of Nursing and Midwifery College in Shiraz University of Medical Sciences, and then it was back translated from Persian into English. In the next step, as approved by Shiraz Welfare Organization, 25 females aged 60–74 years willing to participate in the study were chosen from Shiraz Jahandidegan Center to fill out the questionnaire twice with three weeks interval.

In this interventional study, 60 old females aged 60–74 years were chosen among the members of Jahandidegan center, and they were asked to sign the informed consent form and complete the demographic questionnaire. Then, Quid questionnaire was used for choosing the

type of incontinence in the elderly females. Next, the participants completed the I-QOL questionnaire. The inclusion criteria were age 60–74 years, having Quid score for incontinence type (stress score ≥ 4 , urge score of ≥ 6 and mix score ≥ 10), clinical symptoms of urinary incontinence within the last 6 months, and willing to participate in the study. The exclusion criteria were absence in more than two training sessions, suffering from central nervous system disease (e.g. multiple sclerosis, cerebrovascular accident or acute mental illness and dementia, recent urology surgery (for less than three months), history of genitourinary malignancy, current urinary infection, hysterectomy and diabetic mellitus. Then, according to the type of incontinence they were randomly assigned to case and control groups. Each participant took part in ten training classes. Finally, the subjects filled the I-QOL questionnaire immediately, 2 and 3 months after the intervention. The data were examined using Paired t-test and repeated measurement.

Results

Statistical analysis showed that the Cronbach α coefficient of the Quid questionnaire was 0.86 and the performed test-retest had an appropriate reliability. Baseline Characteristics of Women with incontinence between the case and control groups are shown in Tables 1 and 2. It is shown that before the intervention there was no significant difference between the two groups in incontinence subtypes (stress, urgency and mix, p value: 0.9). Overall, 53.7% of the participants were married, 70.4% educated under diploma, 92.6% had normal vaginal delivery and 72.2% had given birth to four children or more. The mean age and body mass index of the subjects are presented in Table 2.

As shown in Table 3, the mean score for I-QOL before the intervention in the two groups is almost the same ($P=0.5$). The results after the intervention are shown in Table 4. It is shown that

| Group Variable | Case | | Control | | Total | |
|--------------------|------|------------|---------|------------|-------|------------|
| | N | proportion | N | proportion | N | proportion |
| Incontinence type | | | | | | |
| Stress | 9 | 7.16 | 10 | 18.5 | 19 | 35.2 |
| Urgency | 9 | .716 | 9 | 16.7 | 18 | 33.3 |
| Mix | 8 | 8.14 | 9 | 16.7 | 17 | 31.5 |
| Total | 26 | 48.1 | 28 | 51.9 | 54 | 100 |
| Marital status | | | | | | |
| Single | 0 | 0.0 | 2 | 7.3 | 2 | 7.3 |
| Married | 15 | 8.27 | 14 | 9.25 | 29 | 7.53 |
| Divorce | 3 | 6.5 | 3 | 6.5 | 6 | 1.11 |
| Widow | 8 | 8.14 | 9 | 7.16 | 17 | 5.31 |
| Total | 26 | 1.48 | 28 | 9.51 | 54 | 100 |
| Literacy | | | | | | |
| Under Diploma | 19 | 2.35 | 19 | 35.2 | 38 | 70.4 |
| Diploma | 4 | 7.4 | 7 | 13.0 | 11 | 20.4 |
| Associated Degree | 2 | 3.7 | 2 | 3.7 | 4 | 7.4 |
| Higher education | 1 | 1.9 | 0 | 0 | 1 | 1.9 |
| Total | 26 | 48.1 | 28 | 51.9 | 54 | 100 |
| Type of delivery | | | | | | |
| No Pregnancy | 0 | 0 | 2 | 3.7 | 2 | 3.7 |
| Vaginal | 26 | 48.1 | 24 | 44.4 | 50 | 92.6 |
| Section | 0 | 0 | 2 | 3.7 | 2 | 3.7 |
| Total | 26 | 48.1 | 28 | 51.9 | 54 | 100 |
| Number of children | | | | | | |
| Less than 4 | 5 | 9.3 | 10 | 18.5 | 15 | 27.8 |
| 4 and more | 21 | 38.9 | 18 | 33.3 | 39 | 72.2 |
| Total | 26 | 48.1 | 28 | 51.9 | 54 | 100 |

Table 1: Descriptive statistics for subjects by group.

| Group | Case | | Control | | P-value |
|-------|-------|------|---------|------|---------|
| | M | SD | M | SD | |
| Age | 66.76 | 5.35 | 67.71 | 4.12 | P=0.5 |
| BMI | 25.07 | 2.85 | 23.85 | 3.71 | P=0.2 |

Table 2: Mean and standard deviation of age and body mass index in the two groups.

| Variable Group | Before the intervention | | | | P-value |
|----------------|-------------------------|-------|-------|-------|--------------|
| | M | SD | M | SD | |
| Case | 42.65 | 39.32 | 42.65 | 39.32 | P=0.5 |
| Control | 19.41 | 18.40 | 19.41 | 18.40 | |

Table 3: Comparison of mean of I-QOL score before the intervention in the two groups.

| variable Group | immediately | | 2m later | | 3m later | | P-value |
|----------------|-------------|-------|----------|-------|----------|-------|----------------|
| | M | SD | M | SD | M | SD | |
| Case | 45.62 | 19.43 | 54.50 | 20.35 | 61.75 | 19.34 | P=0.014 |
| Control | 38.10 | 17.56 | 38.43 | 18.40 | 37.90 | 18.03 | |

Table 4: Comparison of mean of I-QOL score after the intervention in the two groups.

| Incontinency type | Stress | | Urgency | | Mix | | P-value |
|-------------------|--------|------|---------|------|-------|------|---------|
| | M | SD | M | SD | M | SD | |
| Case | 6.56 | 6.06 | 1.14 | 6.27 | 0.99 | 3.81 | P= 0.08 |
| Control | 0 | 2.78 | 1.13- | 3.85 | 2.65- | 8.87 | P= 0.61 |

Table 5: Comparison of mean differences for I-QOL score, before and after the intervention in the two groups.

immediately, 2 and 3 months after the intervention, I-QOL score has a significant difference between the two groups (P=0.014). In other words, the training sessions improved the score of I-QOL in the case group (P<0.0001) versus control group (P=0.6).

The results for the I-QOL subtype scores before and after the intervention are presented in Table 5. There were no significant differences between the control scores (P=0.6). In the training group, it was significant on alpha=0.1 (P= 0.08).

Discussion

In 2000, approximately 10% of the world's people were 60 years old or older. According to the United Nations' report, 400 million older people will be living in the developed countries and over 1.5 billion in the less-developed world by 2050 [22].

The growing proportion of elderly people among the population simply highlights the importance of addressing their health problem [23]. This trend is important because it leads to a predictable increasing burden of diseases, and political, social and economic challenges [9]. Accordingly, the health care needs of older people cannot always be adequately met by other family members. Many of the disabilities and diseases suffered by older people are not the natural part of growing old [23]. For example, urinary incontinence should not be considered a "normal part of aging" but a condition that can be treated [24]. Urinary incontinence can occur at any age but is much more common among older people – especially older women, for whom frequent childbirth and inadequate treatment of urinary tract infections can cause long term damage [23]. Aslan' study showed that, according to the results of the King Health Questionnaire, UI had a more unfavorable effect on women than on men [25].

At least 1 in 10 people aged 65 or older suffers from incontinence [23]. It is a common health problem that seriously affects patients' quality of life [26]. Incontinence can be slightly bothersome or totally

debilitating. It keeps some women from enjoying many activities with their families and friends. Urine loss can also occur during sexual activity, causing tremendous emotional distress [23]. A significant effect of incontinence is that it can cause older people to become socially isolated [27].

Ragins' et al. in their research reported that urinary incontinence is significantly associated with a decreased quality of life and those with more frequent incontinence have significantly lower quality of life scores [28]. Their findings are consistent with several other studies such as [6,9,14,15,25,29,30]. They found that urinary incontinence has more widespread negative effects on quality of life. The goal of healthy aging should not be only extending the life expectancy, but improving QOL [31].

Notably, incontinent individuals do not seek medical help because they either are not aware that effective treatments are possible, consider it as a natural aging process, or are too ashamed to mention it to their healthcare providers. Health care providers need to be sensitive to these deterrents and identify better ways to evaluate and discuss urinary incontinence (UI) with their patients. In addition, they can play an important role in teaching patients about their health condition, treatment options, and disease management. Several treatment choices are now available with greater effectiveness and feasibility, to significantly improve the QOL of the elderly population along this problem [9].

Strategies to meet the health needs of older people must consider the limited resources of governments to provide a health and welfare safety program for their elderly [23]. Further studies are needed to focus on whether education and more other interventions for UI could reduce long-term healthcare costs, decrease disease burden, and increase QOL and patient satisfaction of health-plan enrollees. Current treatments for UI include behavioral treatment. Behavioral interventions are usually relatively inexpensive and easy to implement, but the effectiveness chiefly depends on the patient's adherence [9]. Obtaining women's trust and encouragement is essential if we are to provide early diagnosis and proper treatment [32].

In our study, the effects of 10 training classes, about aging, changes related to aging in different system of the body, function of genitourinary system, urinary incontinence, risk factor and treatment (behavioral intervention, stress management, bladder training, scheduled toileting, pelvic muscle exercises, fluid and nutrition management) were examined in 60 people aged 60-74 years old with urinary incontinence referring to Shiraz Jahandidegan Center. The results showed a considerable increase in I-QOL score, immediately, 2 and 3 months after intervention, for the subjects attending in the training classes.

Our results support the [20,33] studies that showed a significant improvement on the quality of life outcomes in elderly people with urinary incontinence.

In our study, there were no significant differences for the I-QOL subtype scores before and after the intervention in the training group. It showed that the effect of teaching was equal in UI subtypes. Another reason was the small sampling. So, it is recommended to assess the effect of education in large sample for better evaluation.

Conclusions

The 10 week training classes significantly improved the quality of life outcomes of the elderly females with urinary incontinence. Thus, it is concluded that the individuals with incontinence can be significantly improved following teaching from health care provider.

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