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Correlation between urinary incontinence and quality of life among middle aged female

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Abstract

Urinary incontinence is the involuntary leakage of urine. It means that control over the urinary sphincter is either lost or weakened and a person urinates when they do not want to. Urinary incontinence is a common problem that affects many people. The objective of our study is to find out the co-relation between the occurrence of urinary incontinence and quality of life (QOL) of middle aged female among Indian population. Forty-five females diagnosed with urinary incontinence were included in the study. Revised Urinary Incontinence Scale (RUIS) was used for scoring urinary incontinence and The King's Health Questionnaire was used for scoring QOL. Outcome measure is score in QOL scale for those females with urinary incontinence. By using Pearson correlation coefficient, it was found out there is significant relation between urinary incontinence and QOL in middle aged female patients ($r = 0.832$, $P < .000$). Thus the study conclude that Revised Urinary Incontinence Scale (RUIS) and The Kings Health questionnaire has significant correlation on quality of life among middle aged females. Also urinary incontinence affects their life socially but also mentally and physically.

Keywords: Urinary incontinence, quality of life, RUIS, the king's health questionnaire

Introduction

Urinary incontinence (UI), also known as involuntary urination, is any uncontrolled leakage of urine. It is a common and distressing problem, which may have a large impact on quality of life [1]. According to the American Urological Association, one-quarter to one-third of men and women in the United States experience urinary incontinence. Urinary incontinence is more common among women than men. An estimated 30 percent of females aged 30-60 are thought to suffer from it, compared to 1.5-5 percent of men [2].

Potential risk factors for UI include increasing age, parity, vaginal deliveries, obesity, surgery, constipation, and chronic respiratory problems such as cough [3]. The inability to control urine is quite an unpleasant and distressing problem. Although it does not lead to death, it causes substantial morbidity, social seclusion, and psychological stress resulting in impaired QOL. Many women are too embarrassed to talk about it and some believe it to be untreatable [4]. Many patients hesitate to seek medical advice due to embarrassment and they attempt to manage the problem by using incontinence pads, restricting their fluid intake or adjusting their lifestyles, even though many cases of urinary incontinence can be cured or significantly improved with appropriate treatment. Patients with signs and symptoms of UI should undergo a complete medical evaluation to rule out reversible causes of the disorder.

Estimating the true prevalence of bladder problems is difficult and even the most conservative estimate, which suggests that 10 percent of the population are affected by urinary incontinence, probably does not reflect the full extent of the problem. It appears that half as many men as women experience bladder dysfunction, with a proportion as high as 50 percent of women over 18 years experiencing mild stress incontinence [5]. Anatomical differences mean that men tend to suffer more from urge incontinence, whereas women tend to suffer with stress incontinence. Review of published literature indicates that the mean prevalence of incontinence in those aged 30-60 is 25 percent in women and 6 percent in men while in those under the age of 30, it is 16 percent in women and 8 percent in men [6]. In the elderly, the prevalence of bladder control problems is reported to be as high as 30 percent, increasing to 50

percent in patients who are resident in nursing homes. Normal ageing is not a cause of urinary incontinence, but age-related changes in lower urinary tract function predispose older patients to urinary incontinence (due to anatomical or physiological insults to the lower urinary tract, and systemic disturbances) [7]. It is now thought that urinary incontinence occurs more frequently in white women than in black women. This may represent a difference in the rates of genuine stress incontinence and may be related to a shorter urethra, weaker pelvic floor muscles and a lower positioned bladder neck in white women [8].

The condition is usually under reported as many women hesitate to seek help or report symptoms to medical practitioners due to the embarrassing and culturally sensitive nature of this condition. The study hypothesize that there is correlation between urinary incontinence and quality of life among middle aged female. This will provide valuable and useful experiences and suggestions for formulating strategies of prevention and control for UI and reducing disease burden in India.

Methodology

Subjects

Total 45 female patients diagnosed with Urinary incontinence (on the basis of RUIS), aged 35-55 years were recruited for the study through sample of convenience from the Gynecology and Rehabilitation department of HAHC Hospital, Jamia Hamdard, New Delhi. Pregnant women (during pregnancy, 6 months post pregnancy) and patient with any chronic disease like cancer, kidney disease were excluded.

Procedure

Gynecology Department of Jamia Hamdard (Deemed University) is approached for patient of urinary incontinence. Then subject further tested under the inclusion and exclusion criteria. If subject fulfill the criteria they were asked to sign inform consent. After receiving consent form data collection was performed. After the baseline assessment the subjects for the correlation between urinary incontinence among middle aged females – allocated with Data research form, The Revised Urinary Incontinence Scale (RUIS), The King’s Health Questionnaire were used for quality of life respectively. A correlation analysis was done.

Procedure for the Revised Urinary Incontinence Scale (RUIS)

This questionnaire was designed to identify subjects with symptoms of urinary incontinence. This questionnaire contains 5 self- report questions which can help in diagnosed is the patient suffering from urinary incontinence or not. These 5 questions will further give total scoring. The scoring The RUIS total score is then calculated by adding up a person’s score for each question. Adding the score for each of the five questions results in a possible score range of 0 - 16.

King’s Health Questionnaire (KHQ) is widely used as these questionnaires are simple to administer, easily understandable by the participant and cover several domains of life. Several reports on medical and surgical interventions in urinary incontinence have liberally used KHQ system of QOL assessment not only to demonstrate improvement in the condition before and after the procedure, but also the persistence and continuation therapeutic benefits during short term and long term surveillances.

KHQ is a patient self-administered self-report and has 3 parts consisting of 21 items. Part 1 contains general health

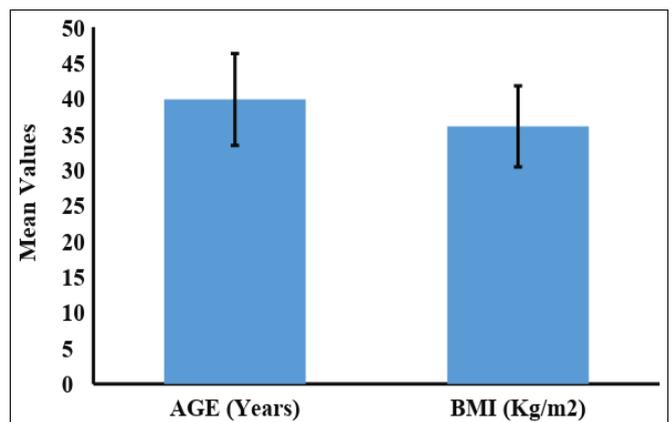
perception and incontinence impact (one item each). Part 2 contains role limitations, physical limitations, social limitations (two items each), personal relationships, emotions (three items each) and sleep/energy (two items), severity measures (four items). Part 3 is considered as a single item and contains ten responses in relation to frequency, nocturia, urgency, urge, stress, intercourse incontinence, nocturnal enuresis, infections, pain, and difficulty in voiding. The responses in KHQ have four point rating system. These subscales (“domains”) scored between 0 (best) and 100 (worst) [9].

Statistical analysis

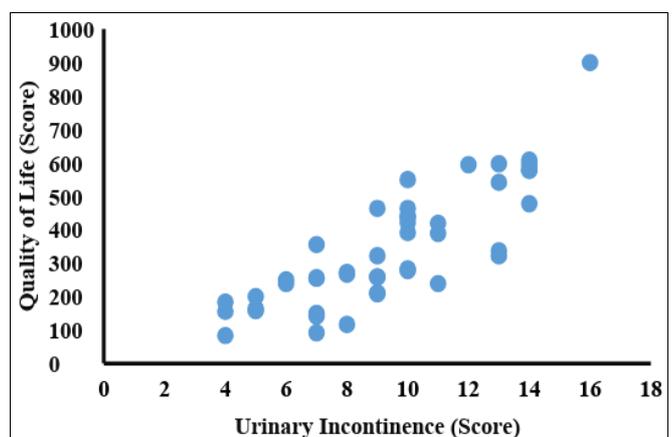
The data was managed on an excel spreadsheet and was analyzed using SPSS (Statistical Package for Social Sciences for windows) software, version 16.

Results

Forty-five female subjects were recruited for the study and assigned by convenience method of sampling. The mean age and BMI was 39.57 ± 6.45 and 36.07 ± 5.67 respectively. According to table 2, the p value was found to be less than 0.05, p value = 0.000, hence it was statistically significant. Urinary Incontinence and quality of life have a statistically linear relationship (See Graph 2), the magnitude, strength of relation is moderate correlation, $r=0.832$.



Graph 1: Graphical representation of mean values of age and BMI.



Graph 2: Graphical representation of correlation between urinary incontinence and quality of life at middle among middle aged females.

Table 1: Scores of Quality of Life and Urinary Incontinence

	Mean ± SD
Ruis Score	9.38±3.12
Quality of life	344.48±176.37

Table 2: Correlation between Urinary Incontinence and Quality of Life is significant.

		Quality of life
Urinary Incontinence	Pearson Correlation	.832**
	P value	0.000
	N	45

Discussion

The hypothesis of this study is found to be true as it shows significant correlation between urinary incontinence and its effect on quality of life. Scales used for urinary incontinence is RUIS and for QOL the King's health questionnaire among middle aged females.

The patient may have a congenital problem (born with a defect), there may be an injury to the spinal cord or urinary system, or there may be a hole (fistula) between the bladder or vagina which can also leads to UI and affect the person's life socially, physically as well as psychologically [10]. The inability to retain urine can sometimes lead to discomfort, embarrassment, and sometimes other physical problems. These include: *skin problems* - a person with urinary incontinence is more likely to have skin sores, rashes, and infections because the skin is wet or damp most of the time. This is bad for wound healing and also promotes fungal infections. *Urinary tract infections* - long-term use of a urinary catheter significantly increases the risk of infection. *Prolapse* - part of the vagina, bladder, and sometimes the urethra can fall into the entrance of the vagina, this is usually caused by weakened pelvic floor muscles [11].

A study suggested that women with any form of urinary incontinence experience more social isolation than age-matched continent women. Those women with either urge or mixed incontinence also experience more emotional disturbances than the continent control group [12]. Hunskaar and Visnes reported an adverse effect on quality of life in Norwegian community-dwelling women [13]. This appeared to be more pronounced in women with urge incontinence. Perceived severity of UI was reported as a risk factor of a poorer QOL [14], and the factor that most influenced the QOL score in women with UI was the degree of symptom severity [15]. Embarrassment can cause people to withdraw socially, and this can lead to depression. Anyone who is concerned about urinary incontinence should see a doctor, as help may be available. Treatment options range from conservative treatment, behavior management, bladder retraining, [16] pelvic floor therapy, collecting devices (for men), fixer-occluder devices for incontinence (in men), medications and surgery [17]. The success of treatment depends on the correct diagnoses.

Large sample size can be taken to give more generalized results and samples can be taken from different geographical areas for comparative study for future research.

Conclusion

This study concludes that The Revised Urinary Incontinence Scale (RUIS) and King's health questionnaire having significant correlation on quality of life among middle aged females. This urinary incontinence effect on their life socially but also mentally, physically. 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. Thus, the individuals with incontinence can be significantly improved following instruction by health care providers.

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