



Impact of Occupational Therapy Management to Reduce the Severity Level and Enhance the Quality of Life for Post- Menopausal Women with Stress Urinary Incontinence-A Case Study

¹Loganathan S – M.O.T (Neuro), ²Raghuram P – M.O.T (Paed), ³T.Sundaresan – M.O.T (Rehab), ⁴Kaviya D – B.O.T.,
Sri Ramachandra Faculty of Occupational Therapy, Sri Ramachandra Institute of Higher Education and Research (DU)

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KEYWORDS

stress urinary incontinence, severity level, post-menopausal women, quality of life.

ABSTRACT:

Introduction: International Continence Society has defined urinary incontinence as the involuntary loss of urine which may lead to social or hygiene problem and also affects the quality of women's lives at various stages of life. Stress urinary incontinence is defined by the international continence society (ICS) as "The complaint of any involuntary loss of urine an effort or physical exertion" or on sneezing or coughing. Though urinary incontinence is not life threatening it will affect the individual's confidence level to indulge in physical and social activities which may lead to social isolation.

Objectives: The objective of the study is to evaluate the Severity Level and the Quality of Life for women with Stress Urinary Incontinence and to determine the Impact of Occupational Therapy Management in Reducing the Severity level and in enhancing the Quality of Life for Stress Urinary Incontinence

Methods: A single case study was conducted in the Department of Occupational Therapy, SRIHER. The participant was briefly explained about the study. Subjects who met the inclusion criteria was been included in the study using Purposive Sampling and gave their written informed consent. Before the commencement of Intervention Pre –test scores for the severity level and Quality of life were assessed. Participant undergone Occupational Therapy Management for 12 sessions. At the end of the 12th session, Post-test scores were assessed. The Pre-test and Post -test scores were compared for the results.

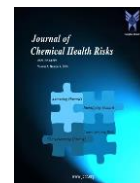
Results: The Results shows that there was a reduction in the score of International Consultation on Incontinence Questionnaire Lower Urinary Tract Symptoms Quality of Life Module (ICIQ-LUT Sqol) which is used to assess the Quality of Life and the post- test Severity levels have markedly reduced when compared with pre-test scores.

Conclusions: Occupational Therapy Management for Post-Menopausal with Stress Urinary Incontinence is effective in improving the Quality of Life and reducing the Severity Level

1. Introduction

International Continence Society (ICS) has defined urinary incontinence as the involuntary loss of urine which may lead to social or hygiene problem [1] and also affects the quality of women's lives at various stages of

life [2] Stress incontinence is the type of involuntary loss of urine that happens during physical movement or activity (for instance coughing, sneezing, laughing, standing up or running, heavy lifting), conditions that elevate the abdominal pressure (stress) on the bladder.



Stress incontinence is certainly not related to psychological stress [3].

Menopause is an event related with drop in ovarian hormones (estrogen and progesterone) that occurs due to the depletion of ovarian follicles. It is diagnosed by the absence of menstruation (bleeding) for 12 successive months, [4] In a survey study done in Tamil Nadu the mean age of attaining the menopause is (45 to 48) years [5] Pathophysiology lies in the epithelial changes in the urethral mucosa due to hormonal changes in the body of the woman after menopause. Hormonal changes cause incontinence by thinning of the urethral mucosa, loss of urethral closure pressure and bladder dysfunction, sphincter dysfunction, or a combination of both [6]

The vaginal delivery had a significant impact on prevalence of stress urinary incontinence Prevalence being higher in women having even a single vaginal delivery [7].

UI influences women in social, physical, psychological and sexual aspects. This negatively impacts the self-esteem and quality of life (QOL) of affected women [8] All subtypes of UI represent significant pain, but SUI usually prevalent and therefore requires special attention as it has a greater and longer lasting impact on quality of life (QOL). [9][10] SUI is more common than many chronic diseases, but it is rarely recognized and undiagnosed. Therefore, the recognition of SUI as a treatable entity is becoming more important. Unfortunately, many women consider this part of normal aging and childbirth and suffer in silence without seeking medical assistance [11]. Women in our country differ from other developed and developing countries because of their cultural, economic and religious scenarios. Although SUI is widespread, it has been observed that Indian women tend to hide SUI and accept it very easily as a result of aging and childbirth. They suffer in silence and they begin to avoid attending social events and rallies. Even during household chores, they have to feel embarrassed because of leakage episodes. Compromised QOL affects women in a variety of ways, including psychological and social. There is a strong need to work on these areas and establish exercise protocols for such women so that they can improve their quality of life. [12]

According to more studies, the prevalence of Urinary Incontinence (UI) in women varies between 10% and 40%. [13] A survey study done in Kerala at 2019 in identifying the prevalence of Urinary Incontinence among Post-Menopausal women estimated that Stress Urinary Incontinence is more 26.47% among Post-Menopausal women than any other type of Urinary Incontinence. [14]

2. Objectives

The objective of the study is to evaluate the Severity Level and the Quality of Life for women with Stress Urinary Incontinence and to determine the Impact of Occupational Therapy Management in Reducing the Severity level and in enhancing the Quality of Life for Stress Urinary Incontinence

3. Methods

This single case study involved in assessing the Severity Level and Quality of Life among Stress Urinary Incontinence patient and to find out the Impact of Occupational Therapy Management was approved by Ethics Committee for student proposals, Sri Ramachandra Institute of Higher Education and Research [Category- I deemed to be university]. The subject was recruited from the Obstetrics and Gynecology ward at Sri Ramachandra Hospital Out of 8 Post-Menopausal women screened one patient was selected who met the selection criteria through Purposive Sampling and gave their written informed consent and took part in the study. Before the commencement of intervention, the assessment of the patient is conducted by Incontinence severity index (ISI), International Consultation On Incontinence Questionnaire Lower Urinary Tract Symptoms Quality of Life Module (ICIQ-LUT Sqol) was administered to measure the severity level and quality of life. The study was conducted in out Patient, Department of Occupational Therapy at Sri Ramachandra hospital Implementation of Occupational Therapy management according to the intervention protocol

Intervention period was about 3 Sessions per week for around 4 months and the Duration of Therapy was Approx.1 hour/Session

The pre-test and the post-test scores were assessed using the outcome measure scale by Incontinence Severity Index (ISI) and International Consultation On



Incontinence Questionnaire Lower Urinary Tract Symptoms Quality of Life Module (ICIQ-LUT Sqol) and the scores was compared at the end of the 12th session

Inclusion criteria:

Post-Menopausal women, defined by the absence of Menstruation for 1 to 2 months History of at least one Vaginal Delivery and The Participant Score greater than 6/21 in ICIQ-UI SF scale for diagnosing Urinary Incontinence. Participant with Stress type of Incontinence diagnosed using the QUID scale. Incontinence Severity Index Score 3-9/12 which include moderate and severe severity levels. Women with the Age group of 45 to 50 years. RUDAS Score above 25/30(normal). Participant with BMI<30. Both working and non-working women were Included

Exclusion criteria:

Subject having Diabetic Mellitus Any other associated Cardiovascular, Cardiothoracic or Neurological disorder and comorbidities associated with Stress Urinary Incontinence

4. Results

The study was intended to find out the impact of Occupational Therapy management to improve Quality of Life on Post-Menopausal Women with Stress Urinary Incontinence. The Table 1 Shows Pre and Post intervention scores of the Incontinence Severity Index which significantly reduced from total score 8/12 to 3/12. In Table 2 Shows Pre and Post intervention scores of the ICIQ-LUT Sqol subcomponents which includes Role limitation from 100% to 50%, Physical limitation from 83% to 60%, Social limitation from 40% to 30%, Personal relationship 50% to 30%, Emotions from 60% to 20%, sleep/Energy from 100% to 50% and severity measures from 50% to 25% therefore, all the components of Quality of Life exhibit changes in Post test scores and the Table 3 Shows Pre and Post intervention scores of the overall ICIQ-LUT Sqol from 64/76 to 43/76 thus indicates the overall improvement in the Quality of life. The result of the study reveals that Occupational Therapy Management Significantly reduced the Severity Level and improved the Quality of Life when compared with pre intervention and post intervention Scores.

Table 1: Comparison of Pre-test and Post-test Scores for Incontinence Severity Index

INCONTINENCE SEVERITY INDEX	PRE-TEST SCORE	POST-TEST SCORE
	8/12	3/12

Table 2: Comparison of Pre-test and Post- test score for components of ICIQ-LUT Sqol

ICIQ-LUTSQOL	PRE-TEST	POST-TEST
Role limitation	100%	50%
Physical limitation	83%	60%
Social limitation	40%	30%
Personal relationship	50%	30%
Emotions	60%	20%
Sleep/energy	100%	50%
Severity measures	50%	25%

Table 3: Comparison of Total Pre-test and Post-test Score for ICIQ-LUT Sqol

ICIQ-LUT Sqol	PRE-TEST	POST-TEST
	64/76	43/76



5. Discussion

This study provides general information about Urinary Incontinence and mainly focus about the Stress Urinary Incontinence, its causes, risk factors, the relationship between Vaginal Delivery and Post-Menopausal women and how it impacts on their Quality of Life. This study demonstrated significant reduction in the Severity Level and improved the Quality of Life among Post-Menopausal women with Stress Urinary Incontinence. All subtypes of UI represent significant pain, but SUI more prevalent and therefore requires special attention as it has a greater and longer lasting impact on Quality of Life. **(14) (15)** UI influences women in social, physical, psychological and sexual aspects. This negatively impacts the self-esteem and Quality of life (QOL) of affected women **(13)**

The study participant Mrs. A had a severe incontinence according to the incontinence severity index that impacts the quality of life showing low scores in the all the sub components: role limitation, physical limitation, social limitation, personal relationship, emotions, sleep/energy , severity measures and overall scores according to ICIQ-LUT Sqol .After 12 weeks of occupational therapy management the participant had a significant reduction in the severity level and overall improvement in the quality of life. The participant received diaphragmatic breathing exercise, pelvic floor and core strengthening exercise, behavioural training, client education and life style modification as Occupational Therapy Management for 4 weeks and has shown statistical reduction in the severity level and improvement in the Quality of Life

Diaphragmatic breathing exercise helps in improving the coordination of diaphragm and deep abdominal muscles that helped in improving their role limitation, physical limitation and severity measures in the Quality of Life components for Mrs. A. This results in accordance with the study done by Hsiu-chuan hung et.al (2010) they have performed a study to evaluate the effect of diaphragmatic breathing exercise in women with SUI. The results shows that the diaphragmatic breathing exercise shows significant improvement in Quality of life for women with SUI.

Core and Pelvic floor muscle strengthening along with functional activities that focuses in improving the strength of the abdominal, deep and core muscles of pelvic region and thereby retraining of the pelvic floor musculature that helped in improving their Role limitation, Physical limitation and Severity Measures in the Quality of Life components for Mrs. A. this results in accordance with the studied done by Jose Mary Sangeetha X study determined that comprehensive pelvic floor muscle rehabilitation program is more effective than conventional pelvic floor muscle exercise in improving Quality of Life alone, but there is no statistical significant difference between the interventions in reducing the severity of incontinence and in increasing the pelvic floor muscle strength. Magdalena Ptak et.al, (2019) conducted an experimental study at Pomeranian medicals University in szeszecin, among women with stress urinary incontinence and its relationship with vaginal deliveries: A Randomized trial at first the interview was carried out using the ICIQ-LUT Sqol. The training programs where designed for both group A (PFM+TrA) & group B (PFM) for 12. Weeks both training programs of group A and group B improves the quality of life in all the subcomponents according to the ICIQ-LUT Sqol. But group A is more effective than group B.

Lifestyle modification that helped in improving their Social Limitation, Sleep/Energy in the Quality of Life components for Mrs. A This result in accordance with the study done by Zarna Ronak Shah et.al conducted a quasi-experimental study to evaluate the effect of home-based pelvic floor muscle training based on the severity of incontinence on quality of life in women with stress urinary incontinence, in which Lifestyle Modification is one of their treatment protocol and concluded that the Home based pelvic floor muscle training was effective in improving quality of life in female with Stress Urinary Incontinence. Client education and behavioral training that helped in improving their personal relationship and emotions in the Quality of Life components for Mrs.A and the overall intervention that reduce the severity level and shown significant impact on the Quality of Life

This single case study provides tailor-made occupational therapy management that focused on the patient's context. The result of this study Proves alternate hypothesis that occupational therapy management



reduces the severity level and improve the quality of life in all the subcomponents: role limitation, physical limitation, social limitation, personal relationship, emotions, sleep/energy, severity measures and overall scores, when compared between pre -test and post-test scores.

This study conclude that Occupational Therapy management was found to improve Quality of Life by reducing Severity Level in Post-Menopausal women with Stress Urinary Incontinence which can be included in the Occupational Therapy services. However, there is limited number of research that focuses on the Occupational Therapy role in improving the Quality of Life in Post-Menopausal women with Stress Urinary Incontinence.

The limitation of the study includes Since it is a single case study the results could not be generalized to population Difficult in recruiting participants due to the unwillingness to take part in the study due to social stigma There is no specific tool to assessing the Quality of Life for Stress Urinary Incontinence Urological Disease have not specified in my study that might influence the outcome of the study.

Further recommendation for future research includes to conduct the study in a longer duration for implication in clinical set ups. Study with larger sample size. And also can be done in experimental study design.

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