

# Awareness of Doctors Regarding the Role of Physiotherapy in the Management of Stress Incontinence

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**Abstract:** ***Background:** Urinary Incontinence is a worldwide problem that remains a highly prevalent cross-cultural and costly condition affecting millions regardless of age and gender. Physiotherapy is among the recommended treatment options for the management of stress incontinence. **Objectives:** To assess the awareness among doctors regarding the role of physiotherapy in stress incontinence management. **Methods:** A cross-sectional study was done among gynecologists, nephrologists and urologists selected from Public and Private Hospital of Riyadh, Qassim and Hail; total sample size of the study was 50. Data was entered and analyzed using SPSS version 18. Chi square test was used to find association for qualitative variables and p value <0.05 was considered as significant. **Results:** Awareness regarding role of physiotherapy management in stress incontinence was found among 80% doctors. Urinary tract infection (55%), Post partum (45%) and post surgical (45%) were considered by doctors as the most common causes of stress incontinence. Preferable choice of management for stress incontinence was physiotherapy by 75% doctors. Regarding Average recovery after physiotherapy, 10% of the Consultants was agree for 100% recovery of stress incontinence patient after physiotherapy where as maximum number of Consultants 40% are agree 70% recovery, 30% Consultants for 50% recovery, 12% Consultants for 20% recovery and the 8% Consultants said 0% recovery of stress incontinence patient after physiotherapy. **Conclusion:** The study showed that there was awareness among doctors about the role of physiotherapy in management of stress incontinence and most of them referred their patients for physiotherapy.*

**Keywords:** Awareness, Stress Incontinence, Physiotherapy, Gynecologist, Urologist, Nephrologists, Recovery

## 1. Introduction

### Epidemiology

Urinary incontinence (UI) affects 23% to 55% of women.<sup>1–3</sup> There are 3 most common types are stress urinary incontinence (SUI), urge urinary incontinence (UII), and mixed urinary incontinence (MUI).<sup>4</sup> SUI is the involuntary leakage of urine on effort or sneezing or coughing. the involuntary leakage of urine due to increased in abdominal pressure in the absence of a detrusor contraction. UII is the involuntary leakage of urine accompanied by or immediately preceded by urgency. MUI is the involuntary leakage of urine associated with urgency as well as with exertion, effort, or sneezing.

Stress incontinence, mainly in women, is caused by physical changes to the body. Things that can cause these changes include pregnancy and childbirth, menstruation, menopause, surgery, bladder wall problems and weakened pelvic muscles.<sup>6</sup>

The prevalence of urinary incontinence in women is twice than that for men with majority of them having symptoms of stress incontinence. Large studies have indicated that there is a 3% to 11% overall prevalence rate of incontinence in the male population.<sup>7</sup> Stress incontinence in men is rare unless the patient has undergone some type of prostate surgery or has suffered neurological injury or trauma. Isolated stress incontinence accounts for less than 10% of incontinence in male patients.<sup>7</sup>

The peak incidence of stress incontinence occurs between 45 and 49 years of age. Approximately 25% of pre menopausal women and 40% of postmenopausal women report dribbling of urine. Symptoms of stress incontinence may develop in

approximately one third of women during their pregnancy, although incontinence frequently resolves after delivery. One of the research report suggested that females having persistent stress incontinence three months postpartum, 92% continued to have stress incontinence at 5 years postpartum. Recognized risk factors for stress incontinence include white race, obesity, pre and post partum, particularly after normal vaginal delivery. In an international study Graham and colleagues noted that among women presenting for incontinence treatment, stress incontinence was diagnosed more frequently in Caucasian women.<sup>7</sup> Obese women (BMI>30) have twice the risk of incontinence than lean women.<sup>9</sup>

The treatment modalities for female stress incontinence include physiotherapy, drug therapy, surgical treatment, and the use of adsorbents and devices. In general physiotherapy is selected first for mild to moderate cases,<sup>10</sup> .The efficacy of drug therapy for stress incontinence has not been evaluated in a randomized controlled trial, such that drug therapy is currently positioned as a supplemental treatment. Surgical treatment is used in moderate to severe cases. The use of adsorbents and devices are reasonable treatments for female stress incontinence in the short term but are not ideal in the long term.<sup>9–23</sup>

Research have shown a success rate of 80% after physical therapy treatment for stress incontinence.<sup>25</sup> A study conducted by Patricia Neumann, concluded that an effective program of pelvic floor strengthening exercises increase the strength of the muscles of pelvic floor. According to Neumann, in some cases as little as two minutes of exercises two or three times a day for four to six months, is sufficient.<sup>24,25</sup>

Physiotherapy can play an important role in management of stress incontinence. The aim of this study is to find out the awareness among doctors regarding the role of physiotherapy in management of stress incontinence. The results of this study will help health professionals in utilizing combination treatment of medication and exercises so that they can treat the problem up to an optimum level.

### **Pathophysiology**

SUI is thought to be caused by a sphincteric abnormality, which in the past was considered to be either urethral hypermobility or intrinsic sphincteric deficiency (ISD). SUI is now thought to be due to an abnormality in the urethra itself rather than abnormalities in vaginal position or mobility.<sup>7</sup> On magnetic resonance imaging (MRI) of the pelvic floor, SUI was associated with unequal movement of the anterior and posterior walls of the bladder neck and urethra in the presence of increased abdominal pressure. MRI demonstrated the urethral lumen being pulled open as the posterior wall moved away from the anterior wall.<sup>8,9</sup> Anatomic specimens have demonstrated that the urethra is compressed against a hammock-like musculofascial layer upon which the bladder and bladder neck rest. If this supporting layer becomes unstable, significant changes in abdominal pressure can cause SUI.<sup>10,11</sup>(ISD).

### **Risk Factors**

Risk factors for UI in women were reviewed at the second International Consultation on Incontinence in 2001.<sup>7</sup>

#### *Risk Factors for Urinary Incontinence in Women*

- Age
- Pregnancy
- Childbirth
- Menopause
- Hysterectomy
- Obesity
- Lower urinary tract symptoms
- Functional impairment
- Cognitive impairment
- Occupational risks
- Family history and genetics

### **Method:**

This cross-sectional study was carried out at Public and Private hospital of Riyadh, Qassim and Hail. The target population of this study consists of 50 doctors who have specialty in gynecology, urology, Nephrology other general physicians. The sample was randomly selected. A Pretested and modified questionnaire was used to assess the Awareness of Doctors regarding the Role of physiotherapy in the management of stress incontinence. The questionnaire included questions related to specialty of the doctors, sectors and location of the hospital, Major cause of stress incontinence, Treating average number of stress incontinence patients every day, Average age of the stress incontinence patient coming for treatment, Line of treatment

for stress incontinence, doctors refer patients to physiotherapy and Average recovery of the patients problem after physiotherapy etc.

### **Statistical analysis:**

The Social Package for Social Sciences (SPSS) version 18.0 (SPSS Inc, Chicago, IL, USA) was used to analyze the entered data. Descriptive statistics such as Chi square test, correlation, graphs as well as percentages were used to describe the participants.

## **2. Result**

The total sample size was n=50, among which 78% were female and 22% were male. Majority of the Consultants were from public sector hospitals 54% while rests of them 46% were from private sector hospitals. Among the major causes of Stress Incontinence, Urinary tract infection (26%), Post Partum (10%), Post Surgical (10%) and Post Stroke (4%) were most significant (Figure 1). It was found that 80% of the consultants were aware about the role of Physiotherapy in management of stress incontinence whereas 20% were unaware. When inquired about the options available for managing stress incontinence, 75% of the Consultants were in favor of physiotherapy, with 64% favoring medicine and remaining 45% were opting for surgical management (Figure 2). It was found that 10% of the Consultants was agree for 100% recovery of stress incontinence patient after physiotherapy where as maximum number of Consultants 40% are agree 70% recovery, 30% Consultants for 50% recovery, 12% Consultants for 20% recovery and the 8% Consultants said 0% recovery of stress incontinence patient after physiotherapy (Figure 3).

Association of different specialty with various factors like awareness, management and referral was analyzed. It was found that out of 80% Consultants who were aware about physiotherapy 56% were gynecologists, 15% were urologist and 8% were nephrologists. Regarding the management options for stress incontinence, gynecologists (56%) and nephrologists (8%) mostly used physiotherapy while urologists (11%) preferred all options like physiotherapy, medicine and surgery. About referral of patients for physiotherapy, gynecologists and nephrologists referred their patients for physiotherapy depending on patient's condition 35% and 6% respectively. Urologist referred 6% patients randomly and other 6% referrals were depending on patients' condition (Table 1).

After cross tabulation between Type of Hospital and Patient Refer to Physiotherapy I found that 36% patient were refer to physiotherapy by Public Hospital Consultant wear as 34% from Private Hospital. 30% patient was not refer to physiotherapy from both the Sectors (Table 2).

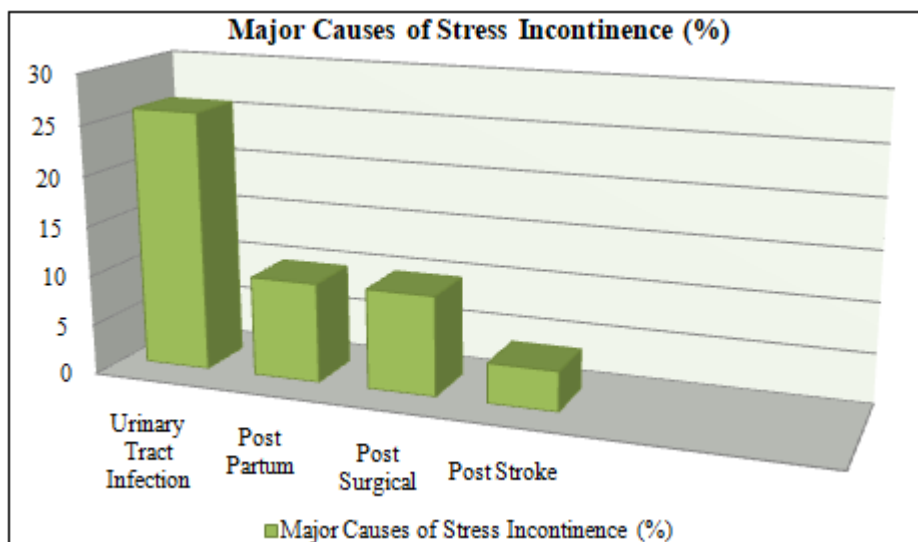


Figure 1: Major Causes of Stress Incontinence (%)

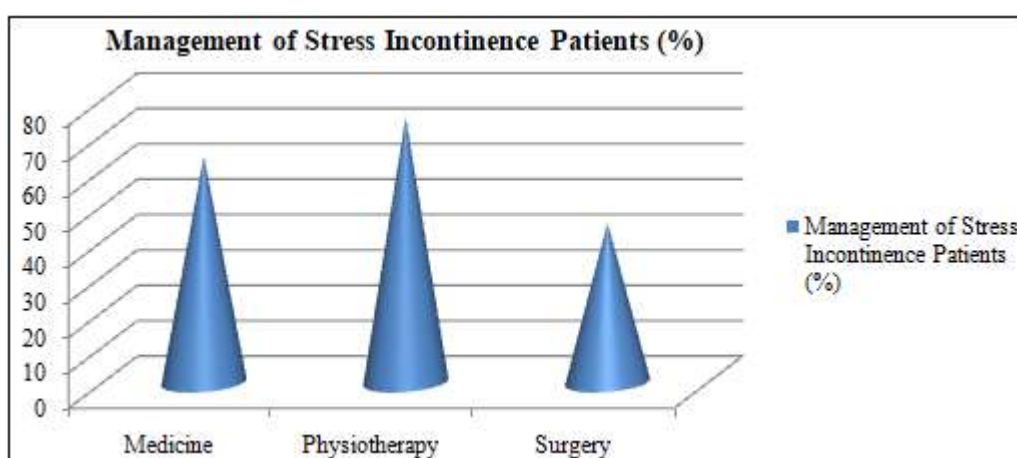


Figure 2: Management of Stress Incontinence Patients (%)

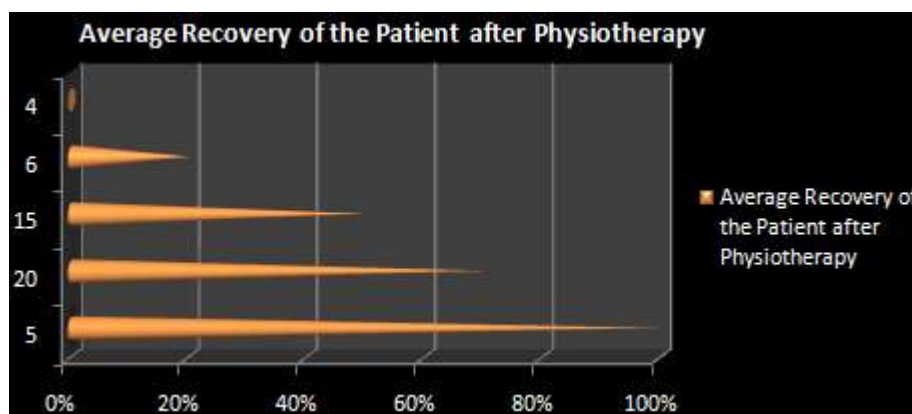


Figure 3: Average Recovery of the Patient after Physiotherapy (Frequency)

Table 1: Association of Aware, Management and Referral for Physiotherapy among different Clinical Specialties

Specialty	Gynecologist (%)	Urologist (%)	Nephrologist (%)	Total	P-value
<b>Awareness</b>	56	15	8	40	0.872 (NS)
<b>Management</b>					
Medicine	48	11	5	17	0.566 (NS)
Physiotherapy	56	11	8	25	0.32 (NS)
Surgery	31	11	4	8	0.359 (NS)
<b>Refer for Physiotherapist</b>					
Usually	8	3	1	5	0.661
Randomly	22	6	1	19	
Depending on patient condition	35	6	6	21	
Never	7	3	2	5	

**Table 2:** Cross tabulation between Type of Hospital and Patient Refer to Physiotherapy

Type of Hospital	Public (%)	Private (%)	Total
<b>Patients Refers for Physiotherapy</b>			
YES	36%	34%	35
NO	18%	12%	15
<b>TOTAL</b>	27	23	50

### 3. Discussion

Awareness of doctors regarding the role of physiotherapy in management of stress incontinence was assessed in this study. Our research revealed that 80% of all the doctors were aware about role of physiotherapy in management of stress incontinence and among them gynecologists were more aware than urologists and nephrologists.

Study done by Najomi M et al, mentioned old age, high parity, pelvic trauma, chronic illness (diabetics and stroke) and gynecologic and other pelvic surgeries were the major causes of incontinence.[10]

Another similar study by Kepenekci I, also found that aging was a major factor in developing incontinence along with high parity and vaginal deliveries. In relation to these studies in our research revealed that an important cause, stated by majority of the doctors, was urinary tract infections while aging was not reported as major cause. Post surgical and post partum identified in our research as important causes were similar as in rest of the studies. Nakayama H in his study highlighted stroke as one of the important cause of stress incontinence which was reported by only 10% doctors in our study.[11]

When it came to the choice of management for stress incontinence, physiotherapy was selected as the choice by majority of the doctors. Medical and surgical treatments were also selected but physiotherapy was the mostly opted option. Various researches also supported this option as the treatment of choice.[12-15]

Findings of this research may help doctors in planning and referral of patients with stress incontinence for physiotherapy. On the other hand results will also be helpful for patients as it will improve their quality of life. Improvement in quality of life was also reported in other researches.

### 4. Conclusion

This research showed considerable awareness among doctors from different specialties and hospital settings regarding the role of physiotherapy in management of stress incontinence. Urinary tract infections, post partum and post surgical causes were identified as major causes of stress incontinence. Physiotherapy was considered the most used management strategy for resolving incontinence.

### 5. Limitations

The limitations of the study are that during the process of research as sample size was small and sample was taken from convenient hospitals.

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