

Elements Affecting Adherence To Pelvic Floor Rehabilitation Exercises In Females With Urinary Incontinence

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Highlights:

- To determine the elements affecting adherence to pelvic floor rehabilitation exercises in females with urinary incontinence.
- Present study had females with mean age of 27.60 ± 2.32 years and mean number of children 4.03 ± 2.3 . Majority (42%-47%) of females had moderate to high level of adherence for pelvic floor rehabilitation based exercise program.
- Patient related factors were dominating as hindrance to adherence for pelvic floor muscle exercises.

Abstract:

Urinary incontinence is explained by International Continence Society, it is lack of control on urination which leads to leakage of urine. Women are more sufferer than males and it can happen at any stage of life span but adulthood and old age is more common.

Objectives: To determine the elements affecting adherence to pelvic floor rehabilitation exercises in females with urinary incontinence.

Methodology: Present study was descriptive cross sectional survey conducted on 100 females and convenient sampling technique was used. Data were collected through a reliable, validated, modified, self-administered questionnaire from Nawaz Sharif Punjab Social Security Hospital, Lahore within four months after approval from Institutional Review Board, University of Lahore. Data were analysed in SPSS version 22.0.

Results: Present study had females with mean age of 27.60 ± 2.32 years and mean number of children 4.03 ± 2.3 . Majority (42%-47%) of females had moderate to high level of adherence for pelvic floor rehabilitation based exercise program. More than half (56%) population had

doubts about their effectiveness for decreasing urinary incontinence. Females found out boring to perform exercises mainly influenced high level of adherence.

Conclusion: Pregnant ladies with urinary incontinence have moderate to high level of adherence to pelvic floor rehabilitation-based exercises. Patient related factors were dominating as hindrance to adherence for pelvic floor muscle exercises mainly the perception of females to find out exercises boring and unable to make reminder strategies in case they forget easily about doing exercises.

Key words: Pelvic floor muscles, Physical therapy, Urinary incontinence, Level of adherence

Introduction:

Urinary incontinence is lack of control on urination which leads to leakage of urine. Women are more sufferer than males and it can happen at any stage of life span but adulthood and old age is more common. 25-45% of women suffer from uncontrolled urination and 9-39% over the age of 60 complains routine urine leakage. Due to this problem there are many consequences which affect quality of life of women including social anxiety and disturb mental health. Structures that prevents incontinence due to increased abdominal pressure during daily activities are sphincters and supportive system. There are two main types of incontinence which are stress and urge incontinence, also known as mixed incontinence. Leakage of urine due to any exertional activity or coughing or sneezing is called stress incontinence, while involuntary urination due to urgency is urge incontinence. Social, mental and

physical health is reduced due to urinary incontinence because of fear, smell and reduced self-esteem. Practice of pelvic floor muscles increases the strength in urinary incontinence symptoms. Success in any therapy required patient motivation, full clear instructions and follow up. Vaginal delivery is the major cause of urinary incontinence because it can lead to decreased innervation of pelvic floor muscles as well as direct damage to Levator Ani muscle and endo-pelvic fascia. Females are more prone to stress incontinence. Many systemic reviews are done on Pelvic floor muscle training (PFMT) and other physical therapies for the treatment of female SUI and UI. Physiotherapy, psychological therapy and hormone replacement and pharmaceutical interventions are options for managing conservatively. So in physical therapies, specially pelvic floor muscle (PFM) exercises, with or without other treatment for example vaginal cones, bio-feedback, and electrical stimulation, are the main parts of this treatment and can prevent urine incontinence. First line treatment for this problem included behavioural changes and pelvic floor, muscles exercises and functional training for prevention of urine leakage. Well reduction in occurrence of urine leakage is linked with behavioural interventions which are high. Many follow up studies showed that over period of time, women showed decrease adherence to pelvic floor muscle exercises. There are many factors which cause decrease in adherence including poor instructions, doubt on effectiveness, lack of knowledge about exercise performance, lack of time and interest and motivation. A study demonstrated that when other interventions are prescribed with exercise then women adherence is better but it's not fully understood. For example, few women getting conservative management such as continence pessary. These are believed to act as stabilizer for urethral proximal portion and urethrovesical junction, thus controlling urethral closure and improving urethral pressure to prevent SUI

during occurrences of increased intra-abdominal pressure. A study showed significant difference in outcomes with pelvic floor exercises in stress incontinence. Another study found that short-term physical therapy interventions on the pelvic floor muscles and urinary incontinence (UI) among patients brings satisfactory results. Poor adherence can lead to decrease efficacy of treatment in which low esteem and depression are the major factors which affect treatment. Motivation is the main component which can increase compliance to pelvic floor muscles exercises. So in present circumstances, this type of literature is required to educate the patients of incontinence and it will fill the geographical gap and spread awareness about physiotherapy treatment and its importance.

Methods:

Present study was descriptive cross sectional survey conducted on 100 females and sample size was calculated online through epitool software by keeping confidence interval (CI=95%), and desired precision (0.05). Convenient sampling technique was used to take data from Nawaz Sharif Punjab Social Security Hospital, Lahore within four months after approval from Institutional Review Board, University of Lahore. Study was completed from September 2020 to December 2020. Ladies between the age ranges of 18-40 years, being treated for urinary incontinence in department of urology and physiotherapy of same hospital were included for the study. Those females were excluded who were pregnant, had any other genitourinary disorder, undergone treatment of neuro-modulation via posterior tibial nerve stimulation etc. The aim of the study was explained to every patient fulfilling the inclusion criteria and all of them were asked to sign written consent forms. Those who voluntarily signed them were welcomed to fill the questionnaires. Data were collected through a reliable, validated (Cronbach's alpha = 0.77), modified, self-administered questionnaire which was already used in related research work

in 2019 in which the research team developed it according to WHO dimensions. It consisted of twenty-eight questions and it took 10 minutes by everyone to fill that completely according to their perception. A separate investigator added all the data into SPSS version 22.0 and calculated categorical variables in terms of frequencies, percentages while quantitative variables through mean and standard deviation. Chi-square test was used to evaluate association between extent of exercise devotion and elements described by the WHO that may influence exercise adherence in treating urinary incontinence. P-value less than 0.05 deliberated the results as significant.

Results:

Present study had females with mean age of 27.60 ± 2.32 years and mean number of children 4.03 ± 2.3 .

Variable	Mean	Standard Deviation	Minimum	Maximum
Age (years)	27.60	± 2.32	18	40
Number of children	4.03	± 2.3	0	5

Table 1: Descriptive statistics of age and number of children (n=100)

Majority of females were between 26-32 years, unemployed (69%), educated till middle school and had moderate to high level of adherence for pelvic floor rehabilitation based exercise program.

Variable	Construct	Frequency	Percent
Age groups (years)	18-25	35	35.0%
	26-32	44	44.0%
	33-40	21	21.0%
Employment	Yes	31	31.0%
	No	69	69.0%
Education	Middle	56	56.0%
	Matriculation	15	15.0%
	Intermediate	13	13.0%
	Graduation	16	16.0%
Level of Adherence	Low	11	11.0%
	Moderate	42	42.0%
	High	47	47.0%

Table 2: Demographics of the study and level of adherence (n=100)

Investigators studied various factors affecting adherence to pelvic floor exercises including patient related, therapy related, healthcare professionals related and condition related factors. Although majority of patients considered pelvic floor rehabilitation based exercises easy and less time taking to perform but more than half (56%) population had doubts about their effectiveness for decreasing urinary incontinence. Subjects had relatively positive impact of elements regarding healthcare professionals and system. Urinary continence affected quality of life of almost every pregnant female (99%) and that was considered on of important condition related element that influenced the adherence of pelvic floor rehabilitation.

Variable	Construct	Frequency	Percent
Therapy related factors			
Did your urinary incontinence symptoms decrease?	Yes	100	100.0%
	No	0	0%
Was the home exercise program difficult to follow?	Yes	2	2.0%
	No	98	98.0%
Was the home exercise program easy to follow?	Yes	98	98.0%
	No	2	2.0%
Did it take a long time to perform the home exercises?	Yes	1	1.0%
	No	99	99.0%
Was this treatment effective?	Yes	44	44.0%
	No	56	56.0%
Healthcare team and system related factors			
Was relationship with your physical therapist during treatment good?	Yes	100	100%
	No	0	0%
Information about the consequences of performing and not performing the home exercises guided by Doctor?	Yes	91	91%
	No	9	9%
Were the instructions that your physical therapist gave helpful?	Yes	100	100%
	No	0	0%
Condition related factors			
Have your symptoms improved?	Yes	100	100.0%
	No	0	0%
Have your symptoms worsened?	Yes	0	0%
	No	100	100.0%
Does urinary incontinence affect your quality of life?	Yes	99	99%
	No	1	1%

Table 3: Elements affecting adherence to pelvic

floor rehabilitation (n=100)

Patient related factors such as exercised didn't meet expectations of subjects, understanding of them regarding instructions to perform exercises, their perception related to the importance of these exercises, time management to perform home exercise plan, forgetfulness about exercises etc. (Tabulated below) were analysed as well. It was resulted that females found out boring to perform exercises mainly influenced high level of adherence. Forgetfulness to perform exercises was also an important element that hindered with but failing to make reminder strategies was second most important element that affected high, medium and low levels of adherence to perform pelvic floor exercises.

Patient related factors	Adherence Level				p Value
	Construct	Low	Moderate	High	
Pelvic floor rehabilitation meet your expectations?	Yes	10 90.9%	42 100.0%	47 100.0%	0.017
	No	1 9.1%	0 0.0%	0 0.0%	
Understanding of the instructions to perform exercises	Yes	11 100.0%	43 100.0%	47 100.0%	0.006
	No	0 0.0%	0 0.0%	0 0.0%	
Perception of patients about importance of pelvic floor exercises	Yes	4 36.4%	33 78.6%	44 93.6%	0.00
	No	7 63.6%	9 21.4%	3 6.4%	
Enough time to perform your home exercises?	Yes	4 36.4%	16 38.1%	38 80.9%	0.00
	No	7 63.6%	26 61.9%	9 19.1%	
Forgetful about home exercises	Yes	11 100.0%	40 95.2%	43 91.5%	0.51
	No	0 0.0%	2 4.8%	4 8.5%	
Any strategies to remind yourself about your home exercises?	Yes	0 0.0%	2 4.8%	9 19.1%	0.04
	No	11 100.0%	40 95.2%	38 80.9%	
Did you feel committed to doing your home exercises?	Yes	0 0.0%	11 26.2%	40 85.1%	0.00
	No	11 100.0%	31 73.8%	7 14.9%	
Was performing your home exercises bothersome in any way?	Yes	9 81.8%	34 81.0%	39 83.0%	0.96
	No	2 18.2%	8 19.0%	8 17.0%	
Did you find your home exercises boring?	Yes	2 18.2%	6 14.3%	0 0.0%	0.02
	No	9 81.8%	36 85.7%	47 100.0%	

Discussion:

In the study 100 female have participated with minimum age 18 and maximum age of 40 years ± 2.32 . The study found that 47.0% of the participants had high level of adherence to pelvic floor exercises. Majority of the female have high perception about the importance of pelvic floor

exercises observed in the study. Most of the female found the exercises to be bothersome and boring. Similar to the study another study performed in 2018, found that the patients felt that pelvic floor exercises boring and bothersome and also forget to do the exercises. Just like the current study majority of the participants in the study were also aware about the importance of pelvic floor exercises. In contrast to the current study another study was performed on pregnant ladies to know about the perceptions of pelvic floor exercises in pregnant ladies. Similar to the current study majority of the participants were aware about the importance of pelvic floor exercises. In contrast to the current study another study found low level of perception about the benefits of exercises in patients. The study also found low level of adherence to pelvic floor exercises. The study highlighted the need for further research on PFMT adherence barriers and facilitators." –

Similar to the current study another study found high adherence to pelvic floor exercises. But in contrast to the current study low level of perception about pelvic floor exercises was found in participating female in the study. Similar to the above studies another study found that women face difficulty in remembering exercises and found these exercises to be boring. The study recommended that there is a need to develop new behavioural interventions that will help women remember and help them to find time to perform PFM exercises to gain long term benefits.

Conclusion:

This study summarized that pregnant ladies with urinary incontinence have moderate to high level of adherence to pelvic floor rehabilitation based exercises. Therapy related, condition related, patient related, healthcare professionals and system related factors were traced out. Patient related factors were dominating as hindrance to adherence for pelvic floor muscle exercises mainly the perception of females to find out exercises boring and unable to make

reminder strategies in case they forget easily about doing exercises.

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