

Effect of Knowledge and Awareness Regarding Urinary Incontinence and Its Treatment Options in Female Dancers

Prajakta Chavan¹, Rima Musale¹, Vaibhavi Mahendrakar², Neha Bhosale²

¹Intern, ²Associate Professor, ²Assistant Professor, ³Assistant Professor, Department of Physiotherapy, Tilak Maharashtra Vidyapeeth, Pune

Abstract

Background: Urinary incontinence is involuntary loss of urine so as to cause hygiene and/or social inconvenience for day-to-day activities. Urinary incontinence is a common problem in females. As dancers begin training at young age there is potential for great impact on their future health, secondly the interplay of physical and aesthetic demands in dance may lead to various health issues including Urinary Incontinence. Objective of this study is to find out the effect of knowledge and awareness regarding urinary incontinence in female dancers.

Methods: Permission was taken from institutional level ethical committee and from dancers. In this analytical type of study, 50 dancers between 18-35 years of age were selected according to convenient sampling method. Dancers who have chronic asthma, undergone any abdominal surgery, not willing to participate were excluded from the study. Knowledge and awareness were checked pre and post intervention by Urinary incontinence quiz and urinary incontinence knowledge scale.

Results: Data was statistically analysed using Wilcoxon test. Incontinence quiz score pre intervention mean 6.48 ± 2.01 was and post intervention mean was 11.32 ± 1.71 with $p < 0.0001$ which is extremely significant, For incontinence knowledge scale the pre intervention mean was 15.72 ± 3.32 and post intervention mean was 24.2 ± 2.81 with $p < 0.0001$ which is extremely significant.

Key words: Urinary incontinence, female dancers, knowledge, awareness, Urinary incontinence knowledge scale, urinary incontinence quiz.

Introduction

More than 200 million people in the world live with urinary incontinence. There are two main types of incontinence in females, stress urinary incontinence and urge urinary incontinence, can be evaluated by history taking and simple clinical assessment available to most primary care physicians.^[1] It is objectively demonstrable involuntary loss of urine so as to cause hygiene and/or social inconvenience for day-to-day activities.^[2] There are many methods available for treating urinary incontinence. The treatment options of

urinary incontinence in women is an interdisciplinary problem. Physiotherapeutic methods that are highly effective are recommended as first choice of therapy.

Dances which consist of steady postures for long duration while dance practice which can ultimately cause increase in intra-abdominal pressure and causes pressure on pelvic floor which can lead to stress incontinence. Dancers have to perform moderate as well as high impact activities in the form of dance. Strengthening of pelvic floor muscle can minimize

the severity of stress urinary incontinence in high impact activities.^[3] Different Studies have shown a relationship between Stress Urinary incontinence symptoms and the performance of high-impact physical activities. There have been a large number of surveys done where questionnaires are the primary tool for evaluating the presence of incontinence.^[3]

Urinary stress incontinence is a serious medical condition that it can lead to urinary tract infections, pressure ulcers, perineal rash or any social problem creating embarrassment and negative self-perception. Urinary stress incontinence reduces both social interactions and also physical activities and it is also associated with poor self-related problem.^[4]

It is important to have concern about Urinary incontinence in female dancers, as there are various dance forms like western (hip-hop, ballet, contemporary, etc.) as well as classical (Kathak, Bharatanatyam,) which involve moderate to high impact activities as well as steady postures required for long period of the time. To stabilize different postures while dancing it involves both the activation of abdominal pressure and pelvic floor muscles, which give rise to increase in intra-abdominal pressure and due to practicing dance over long time of period there might be increase in the flexibility of lower extremity which may be the another cause for urinary incontinence.^[5] UI is one of the most widespread chronic diseases which poses a serious social problem. Epidemiological data has suggested that UI symptoms occur worldwide in 4–10% of women in their twenties, in as many as 60% of women in their sixties, and in 70–80% of women above 65.

Knowledge of the condition involves a range of beliefs based on the information about various aspects of the disease that the patient has collected over his/her life, both before and after the diagnosis^[6]. Such beliefs usually pertain to the causes of the disease and

exacerbating factors, identification of symptoms, and available methods of treatments and consequences. These beliefs are collected from different sources, such as stereotypes concerning a given disease, previous personal experiences, medical staff, books, or the Internet. The accuracy of these beliefs may vary and some of them may actually not be true. The extent of their correctness can be objectively verified against the current state of medical knowledge about the condition. Knowledge of one's own disease has often been emphasized as an important cognitive factor that can have a considerable impact on the patient's adaptation to the disease and on the course of the disease and its treatment. However, complete mechanisms through which knowledge of the disease can affect adaptation to the disease are not fully understood. It is possible that there are several pathways on which knowledge of one's own disease can influence psychological adaptation and other health outcomes.

People with urinary incontinence are more likely to contact a healthcare provider if they use pads and if daily activities are impaired. As stress urinary incontinence usually results in only small amounts of urinary leakage, none of these triggers for seeking care may exist. In addition, men are more likely to seek medical care than women. Instead of seeking treatment, many individuals with urinary incontinence practice behavioural modifications such as limiting trips, fluids, and routine activities.^[7]

Materials and Methodology

- Study design- Analytical
- Sampling method- convenient sampling
- Sample size-50
- Study setup- Dance institute in and around Pune city

- Sampling population – Female dancers practicing since 1 year

- Materials used- Consent Form, pen, audio-visual tools,

Handouts, Data collection sheet.

- Inclusion criteria:

1. Female dancers between age group 18-35 years
2. Practicing dance from 1 years
3. Only female dancers.

4. Nulliparous and parous dancers

- **Exclusion Criteria:**

1. Dancers having Urge incontinence
2. Dancers with behavioural abnormality
3. Dancers who aren't willing to participate

- **Outcome measures:**

1. Urinary Incontinence Knowledge Scale. (UIKS)
2. Urinary Incontinence Quiz. (IQ)

Results

TABLE 1: DISTRIBUTION OF SUBJECTS ACCORDING TO URINARY INCONTINECE QUIZ SCORE.

Incontinence Quiz	PRE	POST	Wilcox on test p VALUE
SCORE	6.48±2.01	11.32±1.71	<0.0001

INTERPRETATION Table 1. Distribution of participants according to knowledge and awareness pre and post intervention which showed that knowledge and awareness before was 6.48 and post intervention was 11.32 with a p-value <0.0001 which is statistically signific

TABLE 2. RESPONSES OF PARTICIPANTS TO THE INCONTINENCE QUIZ ACCORDING TO THEIR COMPONENTS

SR.NO	COMPONENTS OF INCONTINENCE QUIZ	PERCENTAGE
1	Causes	53.2%
2	Treatment	51.2%
3	Effect of aging on UI	32%
4	Patient-physician response to UI	43%

INTERPRETATION TABLE 2. Responses of participants to Urinary Incontinence Quiz component with 53.2% correct response to the causes, 51.2% correct response to treatment and 32% correct response in the effect of aging, the correct response for Physician-patient response to Urinary Incontinence was 43%.

TABLE 3: DISTRIBUTION OF SUBJECTS ACCORDING TO URINARY INCONTINENCE KNOWLEDGE SCALE SCORE.

URINARY INCONTINENCE KNOWLEDGE SCALE	PRE	POST	p-VALUE
SCORE	15.72±3.32	24.2±2.81	<0.0001

INTERPRETATION TABLE 3: According to urinary incontinence knowledge and its different treatment options pre and post intervention along with their mean and standard deviation which showed that urinary incontinence knowledge and its different treatment options before was 15.72±3.32 and post intervention was 24.2±2.81 and p-value being extremely significant that is <0.0001

TABLE 4: RESPONSE TO URINARY INCONTINENCE KNOWLEDGE SCALE.

No	Components	Percentage Response
1	Risks	52.80%
2	Symptoms	63%
3	Impact	57.20%
4	Prevention	44.80%
5	Treatment	64%
6	Management	41.60%

INTERPRETATION TABLE 4: Urinary incontinence knowledge scale components with 52.80% correct response to the Risk, 63% correct response to symptoms and 57.20% correct response in the Impact, the correct response for prevention was 44.80% and 64% correct response was seen in treatment and 41.60% correct response in management.

Discussion

The study investigated the effect of knowledge and awareness regarding Urinary Incontinence in female dancers with the help of counselling, audio-visual tools methods and providing handouts over a period of one week.

Dance is an art where human movements are strictly selected in particular sequence, which is based on aesthetic and symbolic value. Koutedakis et al. underwent study on the dancer as a performing athlete, suggested that dancers also have specific conditions like disordered eating, osteoporosis, amenorrhea and urinary incontinence.^[10]

In this study, the outcome measures used are Urinary Incontinence Quiz (UIQ) and Urinary Incontinence Knowledge Scale (UIKS). The Urinary Incontinence Quiz is a 14-item UI quiz that was developed by Branch et al. (1994) on their own experience with UI, data that is been published and their own research. Participants answered 14 UI related quiz statements with either “agree”, “disagree”, or “don’t know”. Among the 14 statements, 6 of the statement in the quiz were true, so the correct answer would be “agree”, 8 statements were false, so the correct answer would be “disagree”.

The Urinary Incontinence Knowledge scale is a 30-item scale which consists of knowledge of risk factors (items 1 to 5), symptoms (items 6 to 10), impacts) items 11-15), prevention (items 16-20),

treatment (items 21-25), management (items 26-30). In UKIS the score ranges from 0 to 30, where a rate of less than 60 %correct (sum score less than 18) indicates poor knowledge, rate of 60-80% correct (18-24) indicates moderate knowledge and a rate more than 80% correct (sum score more than 24%) indicates good knowledge. The choice of responses were true equal to 1 point and false and don’t know is equal to 0.

Comparison between pre intervention scores and post intervention score for both the scales were taken. Comparison between pre intervention score and post intervention score for Urinary Incontinence Quiz showed the p value is extremely significant i.e. <0.0001 with mean value of 6.48±2.04 and 11.32±1.71 respectively.

Comparison between pre intervention scores and post intervention score for Urinary incontinence knowledge scale showed p value is extremely significant i.e.,

<0.0001 with mean value of 15.72±3.32 and 24.2±2.81 respectively.

This study is important because it is one of the very few studies that have studied the level of knowledge about UI in female dancers. In this study, the participants received a moderate mean score (6.48 ± 2.01) in the Urinary Incontinence Quiz. Mary Rose Day et al. also studied on community-dwelling women’s knowledge of urinary incontinence which revealed that women have poor knowledge about urinary incontinence.^[11] Yuan and Willams (2010) found that women lacked knowledge on UI.^[14] It was observed that education and experience contributed positively to the level of knowledge. It is expected that the level of UI knowledge will increase as education and experience increase.

The highest rate of correct answers was observed

in the causes and treatment component which was 53.2% and 51.2% respectively. Considering the statements in the relevant items, we concluded that the participants knew that people who have involuntary loss of urine can live normal lives, the prevalence of

UI is higher among women, there are exercises that can help improve bladder control. Dancers who were already diagnosed with UI knew about the causes and that UI could be prevented with exercises. The highest rate of false answers was observed in the components stating the effect of aging (32%) on urinary incontinence and patient physician response (43%) towards UI. We concluded that the participants had incorrect knowledge on these items because they believed that involuntary urine loss was normal in the elderly, that those who had UI shared their problem with their physician.

Findings in our study revealed that participants had poor knowledge of UI, principally in relation to risk factors (52.8%), symptoms (63%), impact (57.2%), prevention (44.8%), treatment (64%) and management of UI (41.60%). No participant responded correctly to all 30 items. More than one-third (48%) reported that UI was a normal part of ageing, many considered UI to be a normal occurrence after childbirth (36%) and some (20%) did not know. More than one-third did not know (38.8%) whether drinking alcohol or coffee could increase the risk of UI. Interestingly, participants had good overall knowledge of the symptoms (63%) and impact (57.2%) of UI. The majority of participants knew about the impact of UI on lifestyle and quality of life (64%), social activities (72%), psychological distress (76.2%) and finances (18%). When presented with the statement, 'UI can restrict activities of daily living and sexual activities', many indicated that they thought the statement was false (27.8%) or said they did not know (27.8%). In relation to the prevention of UI, many respondents did not know that avoiding

smoking (65%), constipation (68%) obesity (55.4%) and managing long-term illness (68.3%) could help or reduce the risk of UI. In relation to the treatment of UI, many did not know that doing pelvic floor exercises (20%) and increasing time intervals between voids (35.8%) could help. Nearly half (50.2%) of participants reported that 'going to the toilet more often can reduce frequency of urinary incontinence' and the majority (74.5%) of participants reported that pads or diapers were an appropriate intervention for managing incontinence. The study revealed that many participants considered UI as a normal part of aging. These assumptions may impact the on their help seeking behaviour. And therefore, proper education needs to be given to increase awareness of UI which may improve quality of life of the females. Dayana Maia Saboia et al. underwent a study on impact of urinary incontinence types on women's quality of life which concluded that all types of urinary incontinence interfere both in general and specific quality of life.^[12]

On the other hand, Orly Goldstick et al. underwent a study on urinary incontinence in physically active women and female athletes, the results showed that urinary incontinence affects women of all ages, including top female athletes, but is under reported.^[16]

The results show that participants have poor knowledge and awareness about UI. Urinary incontinence is a common condition that has substantial negative impact on wellbeing and quality of life. Increase workshops and counselling sessions can improve awareness and knowledge of UI and help breaking the taboos. This will possibly improve help-seeking behaviour and promote management approaches among women.

Proper knowledge and awareness given to the dancers in understanding their condition, symptoms, impact, prevention, management and treatment with specific counselling, tools and motivation to

consult the handouts will increase the knowledge and awareness and also indirectly improve quality of life and help-seeking behaviour in female dancers. Knowledge about the causes of the problem is necessary for dancers to be able to identify the risk groups beforehand. The prevalence of UI can be reduced when people know that bladder control can be achieved by proper guidance, Exercise and Physiotherapy rehabilitation.

Conclusion

The study of effect of one week program on female dancers' knowledge and awareness regarding Urinary Incontinence concluded that the one-on-one counselling and handouts combined with audio-visual tools have an effect on increasing awareness and knowledge regarding UI in female dancers.

Conflict of Interest – There was no conflict of interest to conduct this study.

Source of Funding - Self

Ethical Approval- As per the Declaration of Helsinki, Ethical approval is not required in this study because the study does not involve any drug or invasive procedure on Humans and animals.

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