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Effectiveness of knack maneuver exercise in urinary incontinence among women

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Abstract

Urinary incontinence refers to a loss or leaking of urine due to the faulty bladder control. There is a sudden involuntary contraction of the muscular wall of the bladder resulting in urinary urgency. According to World Health Organization are defined as Urinary Incontinence is a involuntary loss of urine. 60(30 experimental group and 30 control group) women's who met the inclusion criteria were selected by using convenience sampling technique. After selecting the sample, the investigator explained the purpose of the study and informed consent was obtained. Demographic variables were collected pre test done by using oxford questionnaire for both experimental and control group. For experimental group, Knack maneuver exercise was taught the program session were done twice per day, each session ranged from 10-15 minutes. The data were tabulated and analyzed by descriptive and inferential statistics. The calculated 't' value is significant at $P < 0.005$. The study indicates that administration of knack man oeuvre exercise was effective in reducing urinary incontinence. The present study showed that knack maneuver exercise was not only beneficial but also safe and effective in the treatment of urinary incontinence.

Keywords: Effectiveness, knack maneuver, urinary, incontinence

Introduction

Urinary incontinence (UI) is a common problem among adults living in the community. Its incidence increases with age and it is more frequent in women, being particularly common amongst elderly women in residential care. Estimates of the prevalence of urinary incontinence in women vary from 10% up to 40% ^[1, 2]. However, these figures probably do not reflect the true scope of the problem, because of under-reporting arising from social embarrassment associated with the condition.

Urinary incontinence (UI) is a condition that negatively affects the quality of life more frequently with age and is observed more often in women than men (Or) Urinary incontinence means involuntary leakage of urine and inability of the bladder to hold it because the voluntary control in the urinary sphincter is either weakened or lost. It is not a disease but a symptom; these symptoms vary according to types of urinary incontinence. Some women may lose a few drops of urine while running, coughing or even laughing. Others may feel a strong sudden urge to urinate just before losing a large amount of urine.

The most commonly recommended first-choice treatment methods, especially for stage 1 stress urinary incontinence, involve exercise for the pelvic floor muscle. Many publications emphasize good effects of this type of conservative treatment, thus indicating that it is Appropriate non invasive management of the mildest- stage 1-SUI. Doing these exercise leads to stabilization of the urethra through an increase in muscle mass. Positive results, patients achieve only after about 6-8 weeks of regular exercise and are manifest themselves in a higher assessment of the QoL. Some researchers indicate the possibility of combining exercise for the pelvic floor muscle and the TrA muscle. According to stapsford, the TrA muscle is a synergist muscle, showing natural activity during pelvic floor muscle contractions. Urinary incontinence is one of major problems that have a negative impact on the women's daily life physically, socially, psychologically, sexually, and economically; it's also one of the threatening factors that can cause withdrawal from social situations and reduced quality of life Urgency just before urination becomes so unpleasant that the person tries to suppress it by contraction of the stratified pelvic floor muscles. This is a normal voluntary or involuntary mechanism which produces marked variations in intra-urethral pressure without any change in the bladder pressure.

It has been called the "unstable urethra", but when it becomes so greater than urination cannot be prevented, urination is started by decrease in intra urethral pressure and association with relaxation of stratified muscle followed a few seconds later by moderate or slow increase in bladder pressure. This produce a maximum intra-urethral pressure less than the bladder pressure and urine escapes. This indicates that the pelvic floor muscle cease to support the urethra and this process facilitates falling of the bladder outlet Damaged, G and Davenport T, (2012) [5].

Incontinence may be a result of bladder dysfunction, sphincter dysfunction, or a combination of both, but large scale studies are not designed to determine the etiology. In young women, The prevalence of peaks around menopause, with a steady around rise thereafter into later life. Although the prevalence of stress and mixed (stress and urge) incontinence, the later is more likely to require treatment. In women, moderate and severe bother have a prevalence ranging from about 3% to 17%. Severe incontinence has a low prevalence in young women, but rapidly increases at ages 70 through 80. In men, the prevalence of incontinence is much lower than in women, about 3% to 11% overall, with urge incontinence accounting for 40% to 80% of all male patients. Stress incontinence accounts for less than 10% of cases and is attributable to prostate surgery, trauma, or neurological injury. Incontinence in men also increases with age, but severe incontinence in 70 to 80 year old men is about half of that in women. The most effective therapy for incontinence will rely on targeting the correct populations to be treated, which depends on how data is collected on prevalence and severity.

Pelvic floor muscle training consists of fast (2-sec) and slow contraction, 10-s hold, 5-s relaxation, totally (20 sec). One set of exercise includes ten fast and ten slow voluntary pelvic floor muscle contraction (VPFMCs). During week 1 and 2, participants will be instructed to perform two sets of exercise per day (20 fast and 20 slow contractions per day), Pelvic floor exercises are also known as Kegel, or childbirth, exercises. Kegel exercises are commonly used and have a 30% to 90% success rate in women with stress

incontinence. Kegel exercises were originally designed by Dr. Arnold Kegel in 1948 who found that most women with stress urinary incontinence had pelvic floor muscle insufficiency. Kegel argued that restoring the function of the pelvic floor would in turn increase the urethral closure pressure, thus preventing involuntary loss of urine (de Kruif & van wegen, 1996).

Knack Maneuver exercises help to strengthen the Pubococcygeus (PC) muscle, which supports the pelvic floor. The potential benefits of doing Knack maneuver exercises on a regular basis include: greater ease in achieving orgasm, increased intensity of orgasm, increased lubrication, heightened control over sensation during penetration, and protection against urinary incontinence and bladder prolapsed. Pubococcygeus (PC) muscles are activated when one stops the flow of urine. Clinicians are encouraged to use this example when teaching patients about Knack maneuver exercises. Often, a total of 200 repetitions are recommended per day, not necessarily all at one time.

Methodology

The study was conducted during the period of 10/4/2019 to 25/4/2019 at Saveetha Medical College and Hospital, Thandalam. The formal permission was obtained from higher authority. The purpose of the study was explained. IRB permission was obtained from SIMATS. Samples were selected by purposive sampling technique. Thirty Samples were selected. Demographic variables was collected by interview method followed by assessed the level of urinary incontinence by using oxford questionnaire. Knack maneuver exercise was taught the program sessions are twice per day, each session ranged from 10-15 minutes. After 2 weeks, assessed (post-test) the level of urinary incontinence with the same Incontinence by using oxford questionnaire. The data was analyzed by using descriptive and inferential statistics.

Results

Table 1: Frequency and percentage distribution of pre-test on severity of urinary incontinence among women.

Severity of Urinary Incontinence	Experimental Group		Control Group	
	Frequency (N)	Percentage (%)	Frequency (N)	Percentage (%)
No contraction	0	0%	0	0%
A flicker	0	0%	0	0%
Weak	7	23.33%	3	9.33%
Moderate with some lift	13	43.33%	16	52.66%
Good contraction with some lift, against some resistance	10	33.33%	11	36.66%
Normal muscle contraction strong, squeeze and lift	0	0%	0	0%
Total	30	100%	30	100%

Table-1 shows the frequency and percentage distribution of pre-test on severity of urinary incontinence among women's. This data revealed that 0(0%) had No contraction urinary incontinence, 0(0%) a flicker, 7(23.33%) weak

urinary incontinence, 13 (43.33%) had moderate with some lift urinary incontinence, 10(33.33%) had good contraction wit lift, against some resistance and 0(0%) is normal muscle contraction strong, squeeze and lift urinary incontinence.

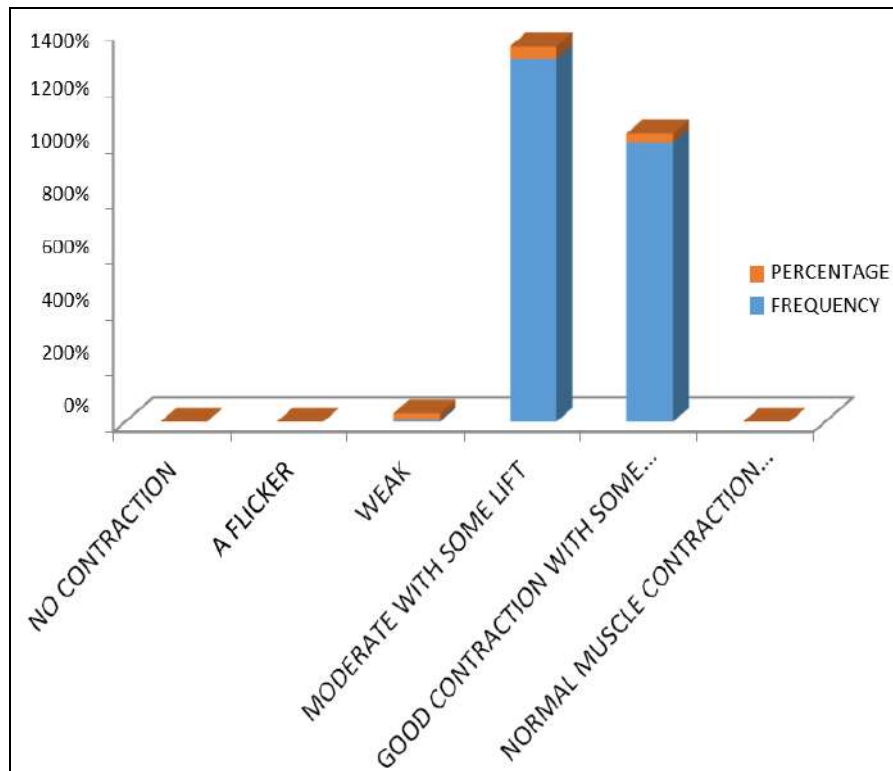


Fig 1: Severity of Level of Urinary Incontinence in Pre-Test

Table 2: Frequency and percentage distribution of post test on severity of urinary incontinence among Women's.

Severity of urinary Incontinence	Experimental group		Control	Group
	Frequency	Percentage	Frequency	Percentage
No contraction	0	0%	0	0%
A flicker	0	0%	0	0%
Weak	1	3.33%	8	26.66%
Moderate with some lift	6	20.0%	14	46.66%
Good contraction with some lift, against some resistance	11	36.66%	8	26.66%
Normal muscle contraction strong, squeeze and lift	12	40.00%	0	0%
Total	30	100%	30	100%

Table 2 shows the frequency and percentage distribution of post-test on severity of urinary incontinence among Women's data revealed that 1(3.33%) women's were comes under weak level of urinary incontinence, 6(20.00%) women's were comes under moderate with some

lift level of urinary incontinence, 11(36.6%) women's were comes under good contraction with some lift, against some resistance level of urinary incontinence and 12(40.00%) women's were comes under normal muscle contraction strong, squeeze and lift

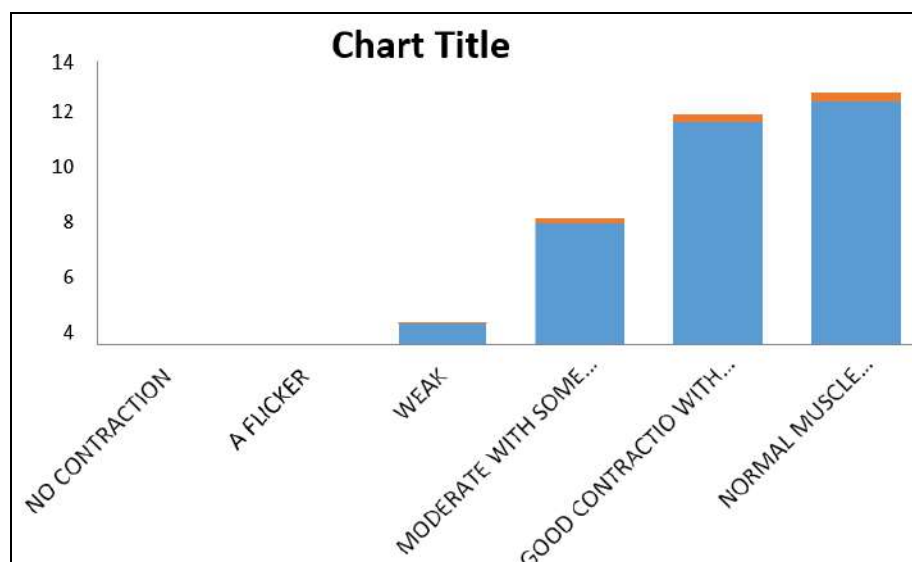


Fig 2: Severity Levels of Urinary Incontinence Post-Test

Table 3 shows the frequency and percentage distribution of post-test on severity of urinary incontinence among Women's data revealed that 1(3.33%) women's were comes under weak level of urinary incontinence, 6 (20.00%) women's were comes under moderate with some lift level of urinary incontinence, 11(36.6%) women's were comes under good contraction with some lift, against some resistance level of urinary incontinence and 12 (40.00%) women's were comes under normal muscle contraction strong, squeeze and lift.

Table 3: Mean and standard deviation of the effectiveness of knack manoeuvre exercise.

Knack Manoeuvre Exercise	Pre-test	Post-test	Paired 't' test
Mean	3.16	4.13	11.521
Standard Deviation	0.834	0.860	

Table 3 Reveals that, the post –test mean value is lower than pre-test. The paired 't' value found statistically significant, and it shows that knack manoeuvre exercise is effective in urinary incontinence among women's at saveetha medical college and hospital, Chennai

Discussion

The above table reveals that shows the frequency and percentage distribution of pre-test on severity of urinary incontinence among women's. This data revealed that 0(0%) had No contraction urinary incontinence, 0(0%) a flicker, 7(23.33%) weak urinary incontinence, 13(43.33%) had moderate with some lift urinary incontinence, 10(33.33%) had good contraction with lift, against some resistance and 0(0%) is normal muscle contraction strong, squeeze and lift urinary incontinence. (Tab.3)

The above table reveals that shows the frequency and percentage distribution of post-test on severity of urinary incontinence among Women's data revealed that 1(3.33%) women's were comes under weak level of urinary incontinence, 6(20.00%)women's were comes under moderate with some lift level of urinary incontinence, 11(36.6%) women's were comes under good contraction with some lift, against some resistance level of urinary incontinence and 12(40.00%) women's were comes under normal muscle contraction strong, squeeze and lift.(Tab.4)

Reveals that the post–test mean value is lower than pre-test. The paired't' value found statistically significant, and it shows that knack manoeuvre exercise is effective in prevention of urinary incontinence among women's

Conclusion

The knack manoeuvre exercise reduce the incontinence levels gradually. It gives changes in the incontinence level but there is no change in the urinary pattern. The feedback from the experimental group is the contraction will improve the incontinence level.

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