Chapter 4 Integration of Pilates exercise in Nritta part of Bharatanatyam

4.1 Introduction:

Integration is basically the procedure of applying one technique in another to get better result. When doing so much dance practice to prepare their bodies, Bharatanatyam dancers need to undertake a separate exercise routine. Tatta adavu, despite being a simple adavu, is extremely stressful on the body. Supplemental exercises guarantees that the lower back, ankles, and knees are ready for the margam and prepares the limbs for a good araimandi. Bharatanatyam performers should focus on strengthen their bodies. The majority of Bharatanatyam dancers, choreographers, and teachers do not devote any time to body fitness, and as a result, they lose stage confidence due to lack of body aesthetics and body strengthening. Exercise routine is a matter of self-discipline. "Cross-training is a very effective method of warm-up. If you are trained in any other movement form like Ballet, Capoeira, Kalarippayattu, Kung-fu, Kickboxing, Tai-chi etc., doing half/one hour of movement basics from these forms is an excellent way to warm-up before class, rehearsal or performance. Performing your best is must when you are a performer. The Pilates is an exercise which aware the dancer to get used to the movements of several muscles of the body. Therefore, once the dancer performs the Pilates exercise, his/her muscles get used to such movements. Thereby while performing Bharatanatyam the Dancer will be more cautious on delivering his/her best performance than to concentrate on the movements of muscles. Doing a couple of Pilates to strengthen your core muscles is highly recommended. This would ensure that the center is activated and you will be left feeling light and strong in a short span of time. A couple of push-ups or plank positions would be excellent to feel your core muscles." 1 The majority of dance researchers have come to the conclusion that dancers need additional physical training in addition to their dance training to achieve their goals. Supplemental exercises are essential for Bharatanatyam dancers, and the Pilates exercise is one of them, after learning Pilates exercise, in this chapter, we'll explore how Pilates exercises can be integrated into the Bharatanatyam Nritta portion.

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^{1.}Basavarajaiah,Veena.Warm-up for Bharatanatyam dancers, Bangalore https://narthaki.com/info/healthtip/ht16.html

4.2 Integration of Pilates in Bharatanatyam Nritta part:

In order to include Pilates into a Bharatanatyam dancer's regimen, they must first understand the necessity of Pilates exercise, its functions, advantages which are already discussed in earlier chapter. And the "how to" process which is explained in this chapter by the researcher.

To integrate Pilates exercise into Bharatanatyam as a functional training, relative study of their principle is the first step.

4.3 Relative study of Principles of Pilates exercise and Bharatanatyam Dance:

Principles	Pilates	Bharatanatyam	
• Breathing:	Breathing is essential in the	You can prevent muscle	
	Pilates method. Pilates helps	fatigue by providing your	
	improving breathing. Pilates	body with additional oxygen.	
	dedicates a section in his	While performing	
	book "Return to Life through	Bharatanatyam breath	
	Contrology" specifically to	control is must. When the	
	breathing. He understood the	dancer is performing a long	
	importance of increasing	Kriti, fatigue should not be	
	oxygen intake and the flow	seen on the face because that	
	of this oxygenated blood to	can affect quality of dance	
	every part of the body. This	and expressions of a dancer.	
	required proper full	Dancers with strong muscles	
	inhalation and full	can dance for longer period	
	exhalation. He advised	of time while remaining alert	
	people to exhale like they	and focused.	
	would when drying a wet	While reciting a Jati or	
	towel. Pilates exercise	theermanams or Korvai,	
	promotes properly	breath control is must.	
	coordinate movement and		
	breathing practice.		
• Concentration	For Pilates technique	Bharatanatyam dancers must	
	concentration and focus is	be aware of the importance	
	must. The way exercises are	of maintaining	

is most important. done Pilates exercises are total mind body exercises, if you each concentrate on movement and muscle used in an exercise, your ability of understanding the muscle movement will and increase.

concentration. If they will concentrate properly, they will be able to remember what the next step is. Concentration Tala, on performing the hand and leg movement accordingly with the necessary expression is the beauty of Bharatanatyam dance form. Dancers have to concentrate dance on movements and should be fully aware of the space available.

Control

"Contrology" was Joseph Pilates' preferred name for his method, and it was based on the awareness of muscle control. All exercises are done with control. The muscles working to lift against gravity and the resistance of the springs and control thereby the Pilates focuses on core glute muscles, muscles where the muscles are contracted while performing the exercise.

In dancing, "control" means that your body is doing what your mind wants it to do.

The in movement Bharatanatyam dance should be controlled; for example, while performing a basic while Natta adavu, maintaining Araimandi and placing your leg in Anchita movement of the body. Pada-bheda by your side. The movement should be controlled. In anga saushthava we focus on core muscles, hip muscles, they contracted. While are jumping also we need a controlled So, jump.

		controlled movement leads
		to graceful performance.
• Centering	For students to control their	While maintaining
	bodies, they must have a	Araimandi, a Bharatanatyam
	starting place: the center. The	dancer should focus on the
	"powerhouse" muscles are a	center of her body. Then only
	group of muscles in the	one will be able to maintain
	center of the body that	the balance in the pose. For
	include the abdomen, lower	example, most of adavus has
	and upper back, hips,	starting position-Araimandi.
	buttocks, and inner thighs. In	So, it is already maintaining
	Pilates, all movement should	the center line but starting is
	start in the center and work	always from the core that is
	its way out to the limbs. All	center of the body.
	movement in Pilates should	
	begin from the center and	
	move outward to the limbs.	
• Flow	Pilates aims for simple	Only if the movements are
	movement patterns, it is	executed in a fluid manner,
	always about transiting from	then the dance piece be
	one pose to another, creating	considered graceful. For
	flow through the use of right	example, In Bharatanatyam
	transitions.	Nritta Kritis adavus and
		poses are done in transitions.
		That means it is done in the
		flow.
Postural alignment	Using correct posture while	Bharatanatyam dancers must
	doing Pilates exercises	maintain proper body
	provides safety. It corrects	alignment and posture to
	muscle imbalances and	appear elegant and confident.
	improves coordination.	It also helps with overall
		balance and control. Dancing
		with proper alignment is

		more comfortable and
		promotes longevity.
• Precision	Precision is essential to do	Bharatanatyam should be
	the Pilates exercises	done precisely because it is
	correctly. The focus is on	our responsibility to take this
	doing one precise and perfect	ancient art form to the next
	movement, rather than	level while maintaining its
	wrong ones.	quality. The physical
		qualities and skills of the
		dancers determine the quality
		of this dance form. A
		dancer's body is more
		capable of a wide range of
		movement if it is stronger
		and more flexible. Audience
		can easily understand the in-
		depth knowledge of a
		Bharatanatyam dancer if the
		movement is Precised.
• Relaxation	Correct muscle firing	If a Bharatanatyam dancer is
	patterns and upgraded mental	conscious and anxious then
	concentration are boosted	he/she will not be able to give
	with relaxation.	best of a performance. But if
		the dancer is conscious and
		relaxed then the performance
		can be better.
		Relaxation allows for
		creativity. Relaxation makes
		room for creative thinking,
		which is often referred to as
		being in the flow or zone.
• Stamina	With increased accuracy,	Stamina is defined as
	motion becomes more	increased endurance. It is

effectual so	there is	less	essential for professional
stress to	perform	the	dancers to maintain their
exercises.			energy level throughout a
			performance or class.
			Increased stamina leads to
			the performance full of
			expressions and graceful
			movements.

The researcher, being a Bharatanatyam dancer and Pilates instructor, can observe the similarities and connections between Bharatanatyam and Pilates exercise. And believes that it can be beneficial if Pilates exercises introduced and integrated into Bharatanatyam dancer's regimen. The above-mentioned Pilates exercise principles are applied in Bharatanatyam. Bharatanatyam dancers who practice Pilates exercise can increase their physical health and career span.

All of the principles can be applied to adavus, Bharatanatyam Nritta kritis are combination of adavus so we can directly apply all the principles to the Bharatanatyam Nritta kritis. Instructions and corrections that dance teachers give in their dance classes are covered by the principles of Pilates exercise. Pilates exercise can assist Bharatanatyam dancers improve their posture, physical health, dance technique, and performance.

The researcher has developed a combinations of Pilates exercises that can be practiced before practicing the specific adavu or Nritta kritis are shown below. The exercise combinations stated below are totally based on the researcher's personal experience and literature research. These exercises should be performed under the supervision of a certified trainer and a physiotherapist should be consulted if you are already suffered from an injury or now suffering from one. As we can be unaware of our postures while performing exercises. Consistency is also a crucial part. One example given during an interview with Nikunj Sir is about the importance and consistency of doing any exercise is, "Person A and Person B, both are dancers, Ms. A wake up at 8 and reaches office at 9 and Person B wakes up at 6 o clock, finishes up her exercise routine and reaches office at 9 o clock. So comparatively on an initial level, Person B's energy will be more than the p0erson B but, gradually the stamina of person B will increase, and on the day of performance, person B will wake up at 6, won't do any exercise still her performance will be better, her stamina will be better as she has trained herself for that every day.

So doing exercise on the day of performance is not recommended but consistency is always important." ¹There are 3 levels of performing a Pilates exercise that are, beginners' level, intermediate level and advanced level. Where advanced level exercises are more intensive. "a six-year-old should not perform high-intensity Pilates; however, three to four general Pilates exercises are fine. Teens as young as 12 or 13 years old can begin Pilates with one or two movements each from the above-mentioned set, as well as stretching as a cool-down activity. Before beginning the adavus or Nritta kritis, one might undertake the exercise combinations listed below to improve body strength and posture. Aside from that, dancers beyond the age of 12 can undertake the above-mentioned set-wise exercises as needed for their bodies, but only after knowing them well and for 60 to 90 minutes twice a week.²

4.4 Exercises suggestion for Adavus:

According to traditional adavus practices, Sthanaka, araimandi, or muzhumandi are applied, they are the basic positions of Bharatanatyam. Throughout the performance, the dancers remain in these stances. To maintain these poses, a strong core, strong thigh muscles and stability are essential. Exercise is required to develop these muscles and improve performance. Given below are suggestion of some Pilates exercises with their benefits to improve performance and prevent injury so that one can expand the career.

More than 200 exercises have been developed by Pilates exercise practitioners and trainers as a result of Pilates' increased popularity. Given that the researcher is only discussing Joseph Pilates' original Pilates exercises and how they can be used to train Bharatanatyam dancers for functional movement, it is important to note that the combinations of Pilates exercises listed below can be performed before practicing any adavu. After becoming experts at Pilates exercise, the students can choose from a variety of combinations of Pilates exercises, based on their knowledge, but professional advice is essential to prevent injuries. Researcher have talked about the exercises and their advantages so that a Bharatanatyam dancer can perform it more clearly. Every exercise focuses on the core muscles and benefits the dancers' body but the researcher suggests only 3 to 4 of the most beneficial exercises for each adavu so that students can finish them quickly and begin practicing Bharatanatyam dance.

Pilates Exercises given below can be done twice a week for 60 to 90 minutes, if you are practicing only Pilates exercises. Pilates exercises can be done on the basis of counts and also be done on the basis of minutes, here the researcher is providing explanation on the basis of

^{1.} Upadhyay, Nikunj. (2022, August 27) Personal Interview.

^{2.} Patil, Smita. (2022, march 1) Personal Interview, Pune

minutes. For, beginners, 1 to 2 minutes per exercise, Intermediate level 2 to 4 minutes per exercise and for advanced level you can do it for 3 to 7 minutes per exercise.

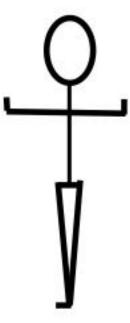
If you are practicing it as a warm up exercise, it can be done before starting with your dance routine, 10 counts each, 3 to 4 exercises are enough. The rules for Pilates exercise are the same as for the other exercises. It is advised to practice only few warm up exercises before the performance.

- 1 day prior to any Bharatanatyam performance do not experiment anything. Just follow your daily routine.
- Just before going to perform margam/ any performance: do not do any exercise just do general stretching or few warm up exercise.
- Do not forget to cool down after the performance.

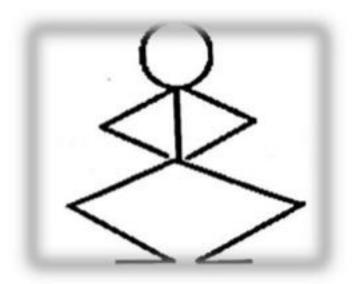
The "how to" process is already given in earlier chapter, given below is the exercises which can be done before practicing a particular adavu or Nritta Kriti. Every time one performs Pilates exercise whether specifically in a Pilates class or as a warm-up before beginning Bharatanatyam dance practice, "the hundred" (Pg. No. 14) is a must do exercise.

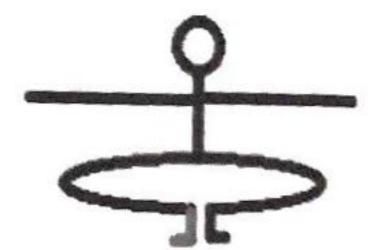
Basic Positions-

Sthanaka-



Araimandi-





Muzhumandi-

For Sthanaka, Araimandi and Muzhumandi strengthening of the core muscles and inner thigh muscle and gluteal muscle is must. The Pilates exercises are listed below to help strengthen these muscles.

Pilates exercises for basic positions:

1. The Hundred:

- It stabilizes core muscles which can be beneficial for basic positions.
- Increases blood circulation and supports optimal breathing pattern.

2. The Roll Up:

- It challenges core muscles.
- Tightens abdominal muscles
- Strengthens back
- Mobilizes spine.

3. The One Leg Circle:

• It articulates, stretches and strengthens leg in hip socket.

4. The Side leg kick:

- Improves hip mobility and strength
- Works inner and outer thighs

Promotes proper alignment and good posture.

1. Tatta Adavu (Thai Ya Thai) (The flat foot strike):

Pilates Exercise for Tatta Adavu:

- 1. The One Leg Circle
- It articulates, stretches and strengthens leg in hip socket.
- 2. Rolling back
- Reduces tension in spine
- Improves abdominal control of momentum in movement
- 3. One Leg Stretch
- Strengthens and stabilizes the core
- 4. Double Leg Stretch
- Tones abdominal muscles
- Strengthens back
- Develops coordination
- 5. The Spine stretch
- Improves spinal articulation
- improves torso and leg flexibility
- Supports good posture

are good exercises which focus on thigh muscle, calf muscle and develop control over the ankles and to strengthen the core and keep your spine proper and fit.

2. Natta Adavu (tai yum tat tat) (Movement in Stretch):

Pilates exercises for Nattu Adavu:

- 1. Spine stretch
- Improves spinal articulation
- improves torso and leg flexibility
- Supports good posture
- 2. Shoulder bridge
- Increases shoulder stability
- Strengthens powerhouse muscles
- Opens chest and pelvic area

- Works backs of legs
- 3. The hip twist with stretched arms
- Strengthen the oblique muscles
- Helps to shape the waist
- Strengthens the shoulder
- Improves control over the leg movement.

4. The leg-pull-front

- Stretches Achilles tendon
- Strengthens upper limbs and shoulder girdle
- Stabilizes powerhouse muscles

5. The scissors

- Increases abdominal control
- Improves stabilization through shoulder area
- Lengthens hamstrings
- Works hip flexors
- Improves coordination

3. Korvai Adavu (Tat Tai Tam) A Brisk Movement:

Pilates exercises for Korvai Adavu:

1. Rolling back

- Reduces tension in spine
- Improves abdominal control of momentum in movement

2. The spine stretch

- Improves spinal articulation
- improves torso and leg flexibility
- Supports good posture

3. The corkscrew

- Strengthens deep abdominals
- Increase upper body stability
- Improves hip mobility

4. The neck pull

Develops abdominal strength

- Promotes spinal articulation
- Flexibility and strength
- Improves posture

4. Kutthu Adavu (Tat Tai Ta Ha) Energetic Movements:

Pilates exercises for Kutthu Adavu:

- 1. The saw
- Streamlines waistlines
- Stretches hamstrings
- Enhances spinal rotation and flexibility
- 2. The seal
- Improves balance and coordination The shoulder bridge
- Increases shoulder stability
- Strengthens powerhouse muscles
- Opens chest and pelvic area
- Works backs of legs

3. The spine twist

- Strengthens oblique muscles
- Spine extensors
- Helps to train body to move from center when performing rotation actions.

4. The double leg kick

- Stretches the chest
- Works on abdominals
- Works on hip flexors
- Back extension improves the flexibility of back
- Help you to maintain good posture

5. Theermanam adavu: Tadhi Gina Tom: Vibrant Movement:

Pilates Exercises for Theermanam Adavu:

1. The bicycle

• It works on legs, gluts, abs, shoulders and arms at same time.

2. The swan dive

Strengthens back

- Works on gluts and hamstrings muscles
- Works on inner thighs

3. The one leg kick

- Strengthens core muscles
- Helps you keeping shoulder open and shoulders stable

4. The double leg kick

- Stretches the chest
- Works on abdominals
- · Works on hip flexors
- Back extension improves the flexibility of back
- Help you to maintain good posture

5. Rocker with open legs

- Strengthens the abdominal muscles
- Improves posture
- Improves balance, coordination and flexibility

6. Kudittu Mettu Adavu (Tai Ya Tai hi): Sound of Heel:

Pilates exercises for Kudittu Mettu Adavu:

1. The control balance

- Strengthens hip extensors
- Improves hip flexibility
- Strengthens core

2. The jack knife

- It provides a stretch for the back and shoulders
- Spinal articulation(carefully rolling the spine up and down)
- Improves flexibility and posture

3. The bicycle

It works on legs, gluts, abs, shoulders and arms at same time.

4. The one leg kick

- Strengthens core muscles
- Helps you keeping shoulder open and shoulders stable

5. Rocker with open legs

Strengthens the abdominal muscles

- Improves posture
- Improves balance, coordination and flexibility

7. Veeshu adavu (Tha thai tat) Arc Movement:

1. The spine stretch

- Improves spinal articulation
- Improves torso and leg flexibility
- Supports good posture

2. The side bend

- Stabilizes spine in a neutral position
- Develops balance and proper alignment
- Strengthens torso, upper limbs, and oblique abdominal muscles
- Increases upper body flexibility

3. Rocker with open legs

- Strengthens the abdominal muscles
- Improves posture
- Improves balance, coordination and flexibility

8. Pakka Adavu (Thai Thai di di Thai): Sideways Movement:

Pilates Exercises for Pakka Adavu:

1. The side bend

- Stabilizes spine in a neutral position
- Develops balance and proper alignment
- Strengthens torso, upper limbs, and oblique abdominal muscles
- Increases upper body flexibility

2. The bicycle

• It works on legs, gluts, abs, shoulders and arms at same time.

3. The spine stretch

- Improves spinal articulation
- Improves torso and leg flexibility
- Supports good posture

9. Tatti Metti Adavu:

Pilates exercises for Tatti Metti Adavu:

1. Swimming

- Challenges core stability against dynamic movement of arms and legs
- Strengthens and stretches spine

2. The boomerang

- Stabilizes the hips
- Helps develop flexibility
- Strengthen the core

3. The control balance

- Strengthens hip extensors
- Improves hip flexibility
- Strengthens core

4. The rocking

- Stabilize the torso
- Provide good posture
- Flexible back

10. Sarukkal Adavu (Tai Ya Tai Yi) A Sliding Movement:

Pilates exercises for Sarukkal Adavu

1. The push up

- Strengthens biceps, shoulders, chest, back and core
- Tones abs

2. The hip twist with stretched arms

- Strengthen the oblique muscles
- Helps to shape the waist
- Strengthens the shoulder

11. Paichal Adavu (Thai Thai dat Tha): Movement of High and Far Leap

Pilates exercises for Paichal Adavu:

1. The one leg kick

- Strengthens core muscles
- Helps you keeping shoulder open and shoulders stable

2. The boomerang

- Stabilizes the hips
- Helps develop flexibility

Strengthen the core

3. The seal

Improves balance and coordination

4. The crab

- Provide stretch to the lower back
- Strengthens the abdominal muscles
- Strengthens the oblique

12. Mandi Adavu (tangad tat tat dhin na): Sitting on Toes

Pilates Exercises for Mandi Adavu:

1. The swan dive

- Strengthens back
- Works on gluts and hamstrings muscles
- · Works on inner thighs

2. The jack knife

- It provides a stretch for the back and shoulders
- Spinal articulation(carefully rolling the spine up and down)
- Improves flexibility and posture

3. The double leg stretch

- Tones abdominal muscles
- Strengthens back
- Develops coordination

4. The double leg kick

- Stretches the chest
- Works on abdominals
- Works on hip flexors
- Back extension improves the flexibility of back
- Help you to maintain good posture

13. Periya Adavu (tat thai tham) Blooming Variations:

Pilates exercises for Periya Adavu:

1. The leg pull front

- Stretches Achilles tendon
- Strengthens upper limbs and shoulder girdle

Stabilizes powerhouse muscles

2. The shoulder bridge

- Increases shoulder stability
- Strengthens powerhouse muscles
- Opens chest and pelvic area
- Works backs of legs

3. The leg pull front

- · Stretches Achilles tendon
- Strengthens upper limbs and shoulder girdle
- Stabilizes powerhouse muscles

4. The push up

- Strengthens biceps, shoulders, chest, back and core
- Tones abs

4.5 For Nritta kritis:

Nritta Kritis are a combination of several adavus, so the researcher will not suggest particular exercises combination for particular Nritta kritis, if you practice Pilates exercises given above constantly with discipline, you automatically improve your body and see the results while performing the Nritta kritis.

4.6 To concentrate on a particular part of the body:

Every body is unique; thus, Bharatanatyam dancers should be aware of their body type and choose workouts accordingly. A dancer should recognize which part or muscle of the body requires more attention because it varies from person to person. For example, a dancer may have a very flexible physique but a weak core, or a powerful abdomen but a weak thigh muscle, which may result in injury. To do Bharatanatyam, all of the body's muscles must be strong and flexible at the same time. So, depending on one's needs, he or she may engage in the following exercises to improve performance and avoid injury.

4.6.1 Set 1- for abdominal muscle and spine:

- 1. The hundred
- 2. Roll up
- 3. Push up
- 4. Side bend
- 5. One leg circle

- 6. The scissors
- 7. Roll over
- 8. Double leg stretch
- 9. Side kick kneeling
- 10. Leg pulls front
- 11. The saw
- 12. Corkscrew
- 13. Spine stretch forward
- 14. The one leg stretch

4.6.2 Set 2- for a stronger mid-section/core:

- 1. Double leg stretch
- 2. The scissors
- 3. Roll up
- 4. Side leg kick kneeling
- 5. Side bend
- Criss cross
- 7. Corkscrew
- 8. Rolling like a ball
- 9. Bicycle
- 10. The saw
- 11. Teaser
- 12. Roll over

4.6.3 Set-3 Side lying workout:

- 1. Side leg kick
- 2. Shoulder bridge

4.6.4 Set-4 Leg-core engaging workout:

- 1. Corkscrew
- 2. The leg pull front
- 3. Rocker with open legs
- 4. Bicycle
- 5. swimming

4.6.5 Set-5 Leg workout:

1. One leg circle

- 2. Side leg kick
- 3. The one leg stretch
- 4. The double leg stretch

4.6.6 Set-6 The arm toner:

- 1. The hip twist with stretched arms
- 2. The bicycle

4.6.7 Set-7 Spinal call:

- 1. The roll up
- 2. The roll over with leg spread
- 3. The spine stretch
- 4. The teaser
- 5. The side bend
- 6. The spine twist

4.6.8 Set-8 Back basics:

- 1. Swimming
- 2. he roll up
- 3. The rolling back
- 4. The double leg stretch
- 5. The push up
- 6. The leg pull
- 7. The crab
- 8. The jack knife
- 9. The swan dive
- 10. The rocking
- 11. The double leg kick

4.6.9 Set-9 Gluts:

- 1. Shoulder bridge
- 2. The bicycle
- 3. The swan dive

4.7 Stretching:

Maintaining flexibility by stretching can help you avert many of the minor strains from activities of daily life that take a toll on you over time. There's also a meditative element to it that helps you focus and relax. For Bharatanatyam dancers stretching is an important element

for career longevity. Stretched muscles are more flexible and one can move without having much risk of injury.

- 1. Spine stretch
- 2. Roll over
- 3. Shoulder bridge

4.8 Conclusion:

In this chapter we have seen the similarities in Bharatanatyam principles and Pilates exercise principle because of which integrating Pilates exercise in Bharatanatyam is beneficial for Bharatanatyam dancers. Researcher applied Pilates workouts for multiple basic stances, Bharatanatyam adavus, and diverse body areas to prevent injury. Pilates training can help Bharatanatyam dancers, professionals, and teachers improve their learners' physical strength and flexibility by emphasizing balance, breathing, flexibility, and postural alignment. Pilates exercises are applicable to Adavus, Nritta kritis of Margam are combinations of adavus so we can apply Pilates exercise to Nritta kritis also. These exercise suggestions are researchers' personal advice being a trainer, undoubtedly there is a more scope of improving or changing the exercise sequence or type after detailed study of the muscles and body anatomy or Pilates anatomy as every body is different. Pilates is recommended because it develops the necessary capacities for dance performance while keeping the artistic component in mind. Teachers should be aware of the importance of conditioning outside of dance sessions, not only to improve performance but also to protect dancers from injury. By stressing on breathing, alignment, position, and abdominal exercises, Pilates exercise can help the dance class enhance ideal dance technique, explore and increase one's physical potential, and avoid and rehabilitate injuries.
