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# Creating a University-Based Performing Arts Clinic: Challenges and Lessons

Carissa Limtiaco
*University of Nevada, Las Vegas*

Alan Savanapridi
*University of Nevada, Las Vegas*

# CREATING A UNIVERSITY- BASED PERFORMING ARTS PHYSICAL THERAPY CLINIC:

# CHALLENGES AND LESSONS

By

Carissa Limtiaco

Michael Alan Savanapridi

A doctoral project submitted in partial fulfillment
of the requirements for the

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Carissa Limtiaco

Alan Savanapridi

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Catherine Turner, Ph.D.
*Examination Committee Chair*

Daniel Young, Ph.D.
*Research Project Advisor*

Merrill Landers, Ph.D.
*Chair, Department of Physical Therapy*

Alyssa Crittenden, Ph.D.
*Vice Provost for Graduate Education & Dean of the Graduate College*

**Table of Contents**

**Abstract**

Fine artists performing at the collegiate level are at a high risk for developing performance related musculoskeletal injuries due to the unique physical demands and repetitive nature of their movements. Previous research has reported incidence rates as high as 81% and 62% for student dancers and musicians respectively. Despite the high injury rates, research has shown that student performers underreport injuries and are reluctant to seek medical management from health professionals due to unhealthy beliefs and attitudes often held by this population as well as the lack of specialized healthcare. The goal of the UNLV College of Fine Arts (CFA) Clinic for Health and Injury Prevention (CHIP) was to establish a functioning clinic and provide free, specialized health services that include dance injury risk screenings, physical therapy evaluations, and physical therapy treatments to students enrolled in the CFA. After attending in person classes and posting flyers, we were contacted by 20 students to perform either a dance screening or physical therapy evaluation. Intake forms and objective outcome measures were provided to assess progress. Out of the 14 students that received physical therapy evaluations, five verbally reported a decrease in pain, three met the minimal clinically important difference, and five either were not readministered an outcome measure or did not attend therapy consistently enough to be readministered an outcome measure. Through outcome measures, verbal feedback, and patient testimonials we were able to show that the CFA CHIP had a positive impact for patients by reducing pain and improving function. In addition to the service provided to the CFA, the student physical therapists involved received additional real-world experience and opportunities to strengthen their clinical skills.

## Introduction

The University of Nevada Las Vegas (UNLV) College of Fine Arts (CFA) consists of the School of Architecture, the Department of Art, the Department of Dance, the Department of Film, the School of Music, and the Department of Theater. The training involved to be a performance or fine artist at the undergraduate or graduate collegiate level blurs the lines between arts and athletics. The performance and fine artists such as musicians, vocalists, dancers, and theater students, enrolled in the UNLV CFA are involved in specialized activities that put them at risk for unique musculoskeletal and neuromuscular injuries (Curry et al., 2020).

Dance is considered a high injury sport due to its physically demanding nature and repetitive movement patterns (Miller et al., 2006). In a recent study, the injury incidence rate in collegiate contemporary dancers was reported as 1.9 injuries per 1000 hours of dance exposure, with 81% of dance students injured during one academic year (van Winden et al., 2019). Common injuries for contemporary dance students were of the ankle, foot/toe, Achilles tendon, heel, lower back, and knee (van Winden et al., 2019). Based on clinic visits, more than one-third of university students in modern dance had injuries, and that number climbed to two-thirds when looking at self-reported injuries (Weigert & Erickson, 2007). The disparity between the injury rates based on clinic visits and self-reported injury rates also reaffirms the issue of underreporting due to commonly held views by dancers concerning pain and injury; dancers perceive pain and injury as an inevitable occurrence due to the nature of their sport, fail to acknowledge and report injuries, and often continue to dance despite pain and injury (Lampe et al., 2018; Mainwaring et al., 2001).

Injuries sustained by dancers also have the potential to affect their psychological well-being. Loss in the ability to dance to the level of prior function poses a threat to a dancer's identity, especially in dancers who define themselves mainly by their role as a dancer (Mainwaring et al., 2001). Adding to these health risks, a systematic review of available literature found that dancers are three times more likely to suffer from an eating disorder when compared to non-dancers, which warrants the addition of eating behavior questions on dance screens (Arcelus et al., 2013).

Dancers specify a preference for dance instructors as their first-choice provider when seeking medical attention for a dance-related injury, with physical therapists second and physicians third (Air et al., 2014). This dancer preference suggests a lack of confidence in the capability of non-specialized treatment providers to offer dance-specific care; however, a majority of injured dancers ultimately sought out physical therapists for treatment of dance-related injuries (Air et al., 2014). Unlike the athletics programs, the dance program at UNLV does not provide specialized medical care for its students. While UNLV dance students have access to the university health center, they may consider it financially taxing to seek outside specialized medical care for dance-related injuries.

Student musicians also experience high injury rates. One study reported injury rates as high as 62% amongst student musicians (Bosi, 2017). Their injury rates can be attributed to multiple factors such as lifestyle, playing posture, and attitudes towards pain and injury. Another study found that student musicians lack health awareness and often adopt poor health behaviors such as playing through pain and a reluctance to seek medical care (Rickert et al., 2015), leading to further injury and longer recovery times. A study reported that 87% of

musicians surveyed had music-related injuries; however, only 25% sought help from a health professional (McReidy et al., 2017). Student musicians are frequently forced to take breaks from playing their instrument due to playing-related injuries (McCready, & Reid, 2007) but taking time away from playing to recover is often viewed as a non-viable option, as they feel they cannot sacrifice the time due to their work and academic demands (Bosi, 2017).

Playing related injuries have also been shown to cause emotion and psychological trauma to musicians. In similarity to dancers, studies have found that when a musician attributes a large component of their self-worth to their performer identities, injuries that require them to take time off from playing can cause a loss of self-worth, depression, and even identity crises (Rickert et al., 2014).

Injury prevention, education, and performance evaluations by trained professionals are supported by research as effective ways to reduce injury rates amongst performance and fine artists. In 2021, a randomized control pilot trial examined the feasibility of a musculoskeletal health program for musician students (Wolff et al., 2021). In this study, data was collected at baseline and after an 8-week intervention period. The authors found that those who attended the injury prevention workshop and implemented the education over the 8 weeks reported a significant decrease in pain by 32%. The results from that study provide support that a program which provides musculoskeletal education and interventions to musicians can effectively reduce pain and injury.

Due to the physical demands, environmental risks, health choices, and socioeconomic factors, actors are an at-risk population, as well. A recent systematic review of university-level actors showed that most actors suffered 1 -2 injuries a year. In addition to physical injury, the

study also found that actors are at a higher risk for mental health disorders with 44% reporting clinical depression and 60% reporting anxiety. The authors of the systematic review suggested that more attention should be focused on health and injury surveillance as well as minimizing injury risk with cardiovascular and muscular conditioning (Martin et al., 2019).

For the past three years, the UNLV Department of Physical Therapy has collaborated with the UNLV CFA to develop the UNLV CFA Clinic for Health and Injury Prevention (CHIP). Previous cohorts of student physical therapists (SPT) involved in this project have worked to develop a screening procedure that includes a detailed questionnaire and appropriate outcome measures to gather relevant information and assess a dancer's potential risk for injury (Appendix A). The tests include assessed joint laxity, hypermobility, flexibility, basic dance positions, conditioning, and knee stability. Along with the injury screening, past cohorts included the EAT-26 (Garner et al., 1982) survey to screen for elevated risk of having an eating disorder. They also utilized the following outcome measures to objectively measure patient outcomes: Neck Disability Index (Vernon & Mior, 1991), Oswestry Disability Index (Fairbank et al., 1980), and Quick DASH (Quick DASH, 2014).

## Purpose

In this third year of the project, our goal was to establish the UNLV CFA CHIP as a functioning clinic for the start of the 2021 UNLV fall semester. For the first time, the clinic would be in a new, dedicated space and allow student physical therapists to further develop their clinical skills and gain real-world experience performing screenings, evaluations, and providing treatment. This experience of working with real patients is typically reserved for clinical rotations, however, this service learning project provided the student physical therapists an additional opportunity to apply their acquired knowledge and reflect on their successes and challenges. The goal of UNLV CFA CHIP was to provide free, specialized health services that include dancer injury risk screenings, traditional physical therapy evaluations, and physical therapy treatments for the underserved and/or at-risk population of students from the UNLV CFA.

## Methods

Students from the UNLV Department of Physical Therapy collaborated with the UNLV CFA to create the CHIP. The participants of this service-learning project were students with current enrollment in the UNLV CFA. While the CHIP has previously focused on dancers specifically, we expanded our reach to serve all students enrolled in the UNLV CFA, including musicians and other performing and fine artists.

### *Recruitment*

To recruit students, we visited several dance classes at the beginning of the 2021 fall and 2022 spring semesters, and a band orientation, and were invited to be a part of the recorded video orientation for new students in the CFA. We used those opportunities to promote the clinic and educate the subjects about the available services. We prepared flyers with a QR code that linked students to the official UNLV CFA CHIP website with contact information (Appendix B). These flyers were posted in dance classrooms and halls of the school of music buildings. Interested students scheduled an appointment with the clinic through email and could choose a traditional physical therapy evaluation or the specialized dancer screening. There was no current screening protocol found in the literature specifically for musicians or other specialized areas of the CFA, therefore, we used a generalized orthopedic physical therapy evaluation for those students.

The clinic was available for appointments 8 hours each week. During the 2021 Fall semester, we allocated two four-hour windows per week that subjects could make

appointments. Appointment times were set at 1 hour for a physical therapy evaluation and 45 minutes for a dance specific injury prevention screening or treatment session.

***Measuring progress***

Once a student scheduled an appointment, they were emailed intake forms and appropriate outcome measures to fill out and return prior to arriving at the first appointment. After initial evaluation, each student was sent home with exercises to perform at home. Additional education focused on, but was not limited to, postural reeducation, sleep hygiene, and stress management. After the initial evaluation, students were scheduled for future appointments. We measured progress by providing outcome measures at initial evaluation, re-evaluations, and discharge. We reevaluated patients every fourth visit as SPT and CFA student schedules permitted. Since we usually saw patients on a weekly basis, the fourth visit was approximately 21 days after their initial evaluation. We chose to reevaluate patients 21 days after initial evaluation to be in accordance with Nevada's Physical Therapy Practice Act (Nevada Administrative Code, 2013). Upon discharge, students were asked for feedback about their experience with the clinic.

Throughout the spring semester, student physical therapists from the following cohort, who would continue the clinic into its 4th year, were brought in to observe. This was done to promote a smooth transition of operations between cohorts and shorten the learning curve so that they could focus on other aspects of growth for the clinic.

## Challenges

As the clinic progressed, the student physical therapists identified that communication and accessibility were areas that could be improved to enhance the overall experience of the dancers and musicians. Our biggest obstacle was time management and coordinating the schedules of the student physical therapists and faculty. In addition to the two four-hour windows spent with patients, the student physical therapists spent several more hours studying and writing documentation and found it difficult to manage all at once. The limited clinic hours were also an obstacle to some of the CFA students with conflicting class schedules. Most subjects scheduled follow-up appointments for the next week, and we were quickly operating at full capacity. This meant that students contacting the clinic beyond the beginning of the semester often had wait times of 2 weeks.

Another issue we faced was patient compliance with the home exercise programs. Many subjects verbally expressed various difficulties completing the prescribed exercise program. In response to this feedback, one method we tried to improve compliance was to reduce the individual home exercise programs to 3-4 exercises. Possible barriers to compliance for many in this population may be prioritizing the demands of university-level coursework. As a younger demographic they may not prioritize their health or may have limited free time to perform the exercise programs. Research into contributing factors by future cohorts could help the clinic better serve the population into the future.

As we were creating and streamlining new protocols for management of the clinic, consistency was also a challenge. We did not have a system in place to create consistency with

patient communication, scheduling, and implementation of appropriate outcome measures with every evaluation and reevaluation.

## Outcomes

For the first time, the clinic had a dedicated, permanent, physical location on the UNLV campus. We successfully opened the doors to our clinic space and welcomed patients in-person beginning in the fall semester of 2021. We also expanded upon the previous physical therapy cohorts' target population from the Department of Dance to include undergraduate and graduate students from the School of Music and the Department of Theater.

Participation in the operation of this clinic allowed the student physical therapists to practice their clinical skills while providing readily accessible physical therapy care to this underserved population of dancers and performance artists as well as other students from the CFA. Many participants shared that they were uninsured or underinsured and would not have sought healthcare without this access to the free clinic.

### *Scheduling outcomes*

While initially we expected to focus on the dance screening tool developed by the previous cohorts, we found that the majority of those who contacted us sought traditional physical therapy evaluations and treatments for musculoskeletal concerns. During the 2021-2022 school year we were contacted by 20 students: ten music majors and ten dance majors/minors. Of the 20 contacts, we evaluated 14 for musculoskeletal insults, performed the dancer screening on one, had one no-show, three contacted us too late in the fall semester to schedule an appointment, and two never followed-up after the initial email to schedule an appointment. Twelve of the subjects we evaluated returned for at least one follow-up session

and eight returned on a weekly basis. In total, we performed 21 evaluations, reevaluations, or discharge evaluations and 34 treatment sessions.

***Body region***

Out of all the subjects we evaluated, the upper extremity was the most common area of complaint with a total of five patients seeking treatment for upper extremity injuries. The next most common area of complaint was the neck, followed by the lower extremities and low back pain. The body region being treated did not appear to be related to the student's major (theater, music, or dance).

***Patient Outcomes***

In Fall 2021, we worked with nine subjects and the results were as follows:

- Two subjects reported the same scores on their outcome measures at initial evaluation and discharge but verbally stated they had less pain after participating in physical therapy.
- Three subjects were not re-administered outcome measures but did verbally report a decrease in their pain levels.
- Two subjects only attended therapy for one or two visits due to the semester coming to an end and were not able to be readministered outcome measures.
- One subject was not readministered outcome measures due to miscommunication between student physical therapists and did not report any change in her pain levels or symptoms.

After the Fall semester we reflected on ways to create a better experience for all involved in the clinic. We began to develop and implement protocols for consistently using objective measures during reevaluations and creating a schedule for reevaluations. We continued to refine these practices during the Spring semester and the results from the Spring semester are as follows:

- Three subjects met the minimal clinically important difference for their appropriate outcome measures.
    - One subject was not re-administered outcome measures and did not report a change in her symptoms.
    - One subject only attended therapy for 1 visit and therefore we were unable to re-administer outcome measures.
    - One patient was referred to a physician and physical therapist in the community due to a suspected rotator cuff tear. We recommended that they might benefit from further evaluation with diagnostic imaging.
    - One patient was provided with resources for student support services due to their potentially unsafe living situation that was divulged after cultivating a therapeutic relationship. This patient verbally reported a positive change in her situation after the intervention.

All students that received services were asked to provide feedback about their experience. This was done so through email after completion of the clinical portion of the project and two students responded with feedback. These responses are provided in Box 1.

## Reflections

To maximize the learning experience, each student physical therapist wrote a personal reflection prior to working with subjects and after completion of the clinical portion of the project. Summaries of these reflections are provided in Box 2. Opening the physical clinic came with successes, challenges, and lessons. As we progressed through the year, we were able to identify areas of improvement and discuss strategies that would best facilitate improvement. One suggestion is that the next cohort should allocate a check system to make sure each student is given an outcome measure at initial evaluation, re-evaluation, and discharge. By being more consistent with providing outcome measures, this will provide more evidence in addition to anecdotal patient reports that the clinic is providing a benefit to the students of the UNLV CFA.

## Conclusion

Through review of available literature and ongoing communication with the CFA we confirmed the need for targeted and specialized health care for the at-risk and underserved populations of students in the CFA at UNLV. The UNLV Department of Physical Therapy, in collaboration with the UNLV CFA, was able to open the UNLV CFA Clinic for Health and Injury Prevention (CHIP) in a permanent and dedicated facility and begin treating students. Through objective outcome measures and patient feedback, we were able to show positive results in decreasing pain and improving function for our underserved population. Our small sample size has shown that the UNLV CFA CHIP can make a positive impact on fine artists, musicians, and actors and this can be progressed and amplified for greater impact in the future. Lastly, this experience has also had a positive impact on the learning and personal development of the Student Physical Therapists involved.

## Appendices

*Appendix 1: Patient Testimonials*

"Alan, Carissa and Dr. Turner have all been so amazing and beneficial to helping with the back pain that I have been having for a while. They were all committed to finding different exercises and stretching methods to help with decreasing the amount of back pain I had. I can happily say that I have seen a huge difference from before starting physical therapy with them to now. This program is really amazing to have and one that I hope continues to stay for dancers as we are one of the sports groups at UNLV that gets overlooked sometimes when it comes to treatment and things. There is nothing I would change about this program as I feel that it was being ran amazingly. I personally would like to thank Alan, Carissa and Dr. Turner for helping me with decreasing the amount of back pain I have and for giving me exercises I can do to continue keeping my back in good shape."

- UNLV Dance Major

"I want to thank you for your amazing work on alleviating my neck pain. During the middle of the semester this pain has come to the point where it keeps distracting me from focusing on my academic study. I am so glad that I reached out to you. The information and training exercises I learned from our session are very beneficial. Now I'm not restrained by the pain for most of the days, and I'm having more flexibility that allows me to focus on my work again."

- UNLV Music Major - Vocal Concentration

*Appendix 2: Student Physical Therapist's Personal Statements*

**Carissa Limtiaco**

My interest in being a part of the CFA Clinic for Health and Injury Prevention stemmed from my personal background and respect for dancers. I took my first dance class at the age of 4 and continued with it until I was 16 years old. Through my years of dancing, I learned that it takes a great deal of hard work, dedication, and commitment to perform at a high level. While the audience sees the beautiful performance, there has been an incredible amount of work done behind the scenes that many people don't realize. Dance, just like any other sport, requires technique, strength, and athleticism. Although the demands are just as high as other sports, they don't receive the same medical attention.

Now having participated in this service-learning project since Fall 2021, I have seen how it has helped to fill the gap in healthcare at UNLV by providing specialized care to the dance and music communities. As a student physical therapist, I have been able to apply the knowledge I have learned in the classroom to perform proper screenings, evaluations, and treatments for this population. Receiving positive testimonials from patients has also allowed me to appreciate how much this clinic can impact students and I hope to continue to see the clinic grow and expand to help many others.

After reflecting on the Fall 2021 semester, there were a few challenges that presented during the semester. One of the biggest challenges I recognized was managing time for the patients as well as for myself. As a student, there were times where my DPT

curriculum was very time demanding, and I found it hard to balance being a student physical therapist in the classroom and in the clinic at the same time. However, this has taught me the true value of altruism. I was able to learn to prioritize my time better so that when I was with them, I was able to keep their needs and goals at the top of my mind so I could provide the best care for them, no matter what academic responsibilities I had outside the clinic. I also recognized my areas that I could improve upon in terms of communication. Communicating through email to send out HEPs in a timely manner, as well as being more confident in front of patients were two more areas that I found challenging. I think it will be helpful in the future to expand on the number of students involved in the clinic so communication can be divided and in return, more effective.

Lastly, I feel as though the 2022 semester went a lot smoother. Dr. Turner, Alan, and I worked well to try and improve on the challenges we encountered during the fall such as time management. We got much better at re-evaluating on a consistent basis and administering outcome measures. Overall, participating in this service-learning project has allowed me to grow in ways that I wouldn't have been able to had I not participated in it. I have learned how to truly collaborate with my patients to achieve a shared goal, as well as how to collaborate with other professionals such as professors and dance instructors. The one-on-one mentorship and interactions with patients have impacted my professional growth and confidence immensely and I am very thankful for the experience I have gained.

**Michael Alan Savanapridi**

Much of my adult life was spent as an artist and graphic designer. I left that career to be the primary caregiver for my two children. When they transitioned to school I decided to return to school to pursue a new career path. After much introspection I found that what I loved about art and life could be distilled to one's expression of self and, specifically, movement as one of the purest forms of that expression. It's obvious with performers how movement is used to express one's self, but so much of our own expression comes through the body: the autonomic visceral physicalized eruption of immense joy, the smile that blossoms from seeing a loved one, the proud posture of accomplishment. I realized I could find fulfillment working to facilitate an increased ability to express oneself or even be a part of someone's story of gaining that previously inaccessible human right.

I was excited and honored to be part of the CFA CHIP. It was my hope to build upon the foundation of previous cohorts to create a special place to serve performance and fine artists with their own specific physical therapy needs while creating a possible framework for other institutions to implement.

Managing my obligations to the clinic, the rigorous demands of a doctoral program, and the responsibilities of a family with two small children was trying at times. Graded assignments and exam preparation had to be prioritized over timely documentation in many instances. Another challenge and opportunity for growth was learning proper documentation after adjusting to the specific style of my first, short-term

clinical experience. During the earlier initial evaluations and interactions with patients I had trouble organizing my subjective history and objective measures in the most efficient manner. I lacked confidence in my technical and social skills as a clinician. This self-doubt often led to moments of pause with uncertainty on how to proceed. With the experience afforded by the clinic, I became much more confident in my skills and knowledge base. My progress was recognized with the positive feedback I received from the faculty during practical assessments of clinical skills. The experience and confidence I gained during my time in this project allowed me to perform in and benefit from class and clinical experiences to a much higher degree.

From my capstone project I wanted to gain real-world experience working with patients. The project gave me an opportunity to understand the core values of the American Physical Therapy Association as they applied to our work and future work. Our success came from collaboration, accountability, duty, integrity, and excellence. We were able to nurture and further understand our social responsibility and treat our patients with altruism, compassion, and caring. Being a part of the CFA CHIP with Carissa Limtiaco and being mentored by Dr. Catherine Turner has given me opportunities to grow in ways unforeseen and directly benefited my personal and professional growth.

*Appendix 3: UNLV PT Dancer Screening Protocol and Student Intake Forms*

# UNLVPT Dance Clinic Screening Protocol

**Section One**

Beighton Hypermobility Scale—General Joint Laxity (check appropriate box)

| Clinical Maneuver | | Unable to perform (0 points) | Able to perform (1 point) |
|---|---|---|---|
| Apposition of thumb to forearm | Right | | |
| | Left | | |
| Extension of 5th finger beyond 90 degrees | Right | | |
| | Left | | |
| Extension of elbow beyond 10 degrees | Right | | |
| | Left | | |
| Extension of knee beyond 10 degrees | Right | | |
| | Left | | |
| Forward flexion of trunk, legs straight, palms touching floor | | | |
| Total Beighton Score (sum of points for each maneuver) | | | |

Scoring:

Low: 0-2
Medium: 3-4
High: 5-9

Low and High may be at increased risk of injury

**Section Two**

Posture and Turnout

- Examine standing posture in sagittal and frontal planes (feet in parallel)

| Look for: | Check box if observed | Notes (L or R, clarification) |
|---|---|---|
| Forward head | | |
| Kyphosis | | |
| Pelvic malalignment | | |
| Locking knees in genu recurvatum | | |
| Foot pronation | | |
| Hallux valgus | | |

- Examine turnout in first position on flat ground
  - Measure
- Examine turnout in first position on rotating discs
  - Measure

| Turnout on flat ground (degrees) | Turnout on rotating discs (degrees) |
|---|---|
| | |

Scoring:

If floor turnout is **at least 10 degrees more** than disc turnout, the dancer may be forcing turnout or has insufficient external rotation strength on discs. If an issue is suspected, compare PROM of prone hip ER.

**Section Three**

Lower Extremity Muscle Flexibility Test

| Muscle | Test | Result | Circle One | | L/R/Both |
|---|---|---|---|---|---|
| Hamstrings | Passive SLR | Reaches 90 degrees | No | Yes | |
| Iliopsoas | Modified Thomas Test | Hip flexion= 0 degrees | No | Yes | |
| Rectus Femoris | Modified Thomas Test | Knee flexion < 90 degrees | No | Yes | |
| IT band | Ober's test | Knee touches mat | No | Yes | |

**Section Four**

Strength—Abdominal Leg Lowering Test

- Dancer lays supine
- Examiner passively lifts both legs to 90 degrees with knees extended
- Dancer slowly lowers legs
- Examiner monitors ASIS movement and stops test if ASIS moves or if dancer reports pain

| Degrees between legs at end of test and the table (90-hip flexion) |
|---|
| |

Scoring:

Normal 5/5: Dancer lowers legs to the table
Good 4/5: Dancer reaches 30 degrees from the table
Fair 3/5: Dancer reaches 60 degrees from the table
Poor 2/5: Dancer reaches 65 degrees or higher from the table

Remedial core and psoas strengthening is critical for those who are fair to poor

**Section Five**

Dance Position Form and Technique

| Sequence/Position | Problem | Assessment (circle one) | |
|---|---|---|---|
| 2nd Position Grand Plié at barre | Lumbopelvic: lordosis (ant tilt) or tucking (post tilt) | Problem | WNL |
| | Hip: maintenance of turnout | Problem | WNL |
| | Knee: rolling in | Problem | WNL |
| | Ankle/foot: pronation | Problem | WNL |
| Dèveloppé a la seconde from 1st position to 90 degrees at barre Port de bras: 2nd position | Lumbopelvic: lordosis (ant tilt) or tucking (post tilt) | Problem | WNL |
| | Hip: maintenance of turnout | Problem | WNL |
| | Hip: sitting in hip / pulling off hip / no movement (no shift to one leg) | Problem | WNL |
| | Knee: rolling in | Problem | WNL |
| | Ankle/foot: pronation / supination | Problem | WNL |
| Jumps in 1st (no barre) Port de bras: 1st position | Lumbopelvic: lordosis (ant tilt) or tucking (post tilt) | Problem | WNL |
| | Hip: maintenance of turnout | Problem | WNL |
| | Knee: rolling in on landing | Problem | WNL |
| | Ankle/foot: heavy / no heel strike | Problem | WNL |

Scoring:

| | |
|---|---|
| Problem= 1 point<br>WNL= 0 points | Low: 0-11 points<br>Medium: 12-24 points<br>High: 25-37 points |
| Low and medium scores are less likely to sustain injury | |

**Section Six**

Balance—Single Leg Stance

Parallel Passé position: cross arms across the chest with eyes closed (check box if observed)

Non-test leg should be in hip and knee flexion and not making contact with standing leg

Attempt to hold position for 60 seconds

May have a second attempt

| | Seconds | Touch | Break | Hop | N/A |
|---|---|---|---|---|---|
| Left | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Right | | | | | |

Scoring:

Touch= touching foot down on ground
Break= sudden shift at any joint (usually waist)
Hop= jumping to try and maintain balance

If a dancer is unable to hold the steady position for at least 30 seconds, further evaluation of proprioception, muscle strength, or motor control is warranted.

**Section Seven**

Single Leg Step Down Test

- Set up a step that is 12" (30 cm) tall
- Dancer stands on both feet in a natural position on top of box
- "Stand on your right leg and slowly lower the left foot toward the floor with your heel, trying to achieve your deepest demi plie, then return to standing with both feet on the step. Keep your trunk straight, hands on waist, and do not put any wait on your left leg"
- Complete as many practice trials as necessary, then perform 5 trials for the exam
- Test both sides

| | LEFT | | RIGHT | |
|---|---|---|---|---|
| **Pelvis** Pelvis must not rotate in transverse plane or elevate/drop in frontal plane | Pass | Fail | Pass | Fail |
| **Knee position** Knee must not move medially in frontal plane (medially to 2nd toe) | Pass | Fail | Pass | Fail |
| **Trunk position** Trunk must not lean to either side | Pass | Fail | Pass | Fail |
| **Steady Stace** Dancer must not support body weight on non-test limb, or move the foot of test limb | Pass | Fail | Pass | Fail |
| **Arm strategy** Dancer must not move hands from waist | Pass | Fail | Pass | Fail |
| **Overall:** (write pass or fail) | | | | |

Scoring:

If dancer fails 2 or more for one side = fail
If dancer fails 0 or 1 for one side = pass

**Section Eight**

Aerobic Fitness—Accelerated 3 min step test

- Set up a step that is 12" (30 cm) tall
- Record resting HR
- Perform step test for 3 minutes with a metronome at 112 beats per minute
- Sit down and rest for 1 minute
- Record HR

| Resting HR (bpm) | HR after 1 min of recovery (bpm) |
|---|---|
| | |

Scoring:

| Fitness Category | 18-25 | 26-35 | 36-45 | 46-55 | 56-65 |
|---|---|---|---|---|---|
| **MEN** | | | | | |
| Excellent | <79 | <81 | <83 | <87 | <86 |
| Good | 79-89 | 81-89 | 83-96 | 87-97 | 86-97 |
| Above Average | 90-99 | 90-99 | 97-103 | 98-105 | 98-103 |
| Average | 100-105 | 100-107 | 104-112 | 106-116 | 104-112 |
| Below Average | 106-116 | 108-117 | 113-119 | 117-122 | 113-120 |
| Poor | 117-128 | 118-128 | 120-130 | 123-132 | 121-129 |
| Very Poor | >128 | >128 | >130 | >132 | >129 |
| **WOMEN** | | | | | |
| Excellent | <85 | <88 | <90 | <94 | <95 |
| Good | 85-98 | 88-99 | 90-102 | 94-104 | 95-104 |
| Above Average | 99-108 | 100-111 | 103-110 | 105-115 | 105-112 |
| Average | 109-117 | 112-119 | 111-118 | 116-120 | 113-118 |
| Below Average | 118-126 | 120-126 | 119-128 | 121-126 | 119-128 |
| Poor | 127-140 | 127-138 | 129-140 | 127-135 | 129-139 |
| Very Poor | >140 | >138 | >140 | >135 | >139 |

For dancers who score in the average to very poor categories, supplemental aerobic training is recommended.

**Recommendations**

| Section | Notes |
|---|---|
| Hypermobility | |
| Posture | |
| Turnout | |
| Muscle Flexibility | |
| Strength | |
| Dance form and technique | |
| Balance | |
| Single Leg step down test | |
| Aerobic Fitness | |

UNLV COLLEGE OF FINE ARTS
CLINIC FOR HEALTH AND INJURY PREVENTION

**Personal History**

Name _____ Today's date: _____
Date of Birth _____ Gender M / F
Email: _____ Phone:_____
What is the best way to contact you? Email / Text / Call
Height _____ Weight _____
Ethnicity African American / Asian / Hispanic / Caucasian / Other _____
Education High school / College / Graduate school
Year in school? Freshman / Upperclassman Expected graduation date_____
Hand dominance R / L Smoking Y / N
Rate present state of health: Good / Fair / Poor
Please check all conditions that apply to you:
_____ high blood pressure _____ diabetes _____ stroke
_____ epilepsy/seizures _____ heart disease _____ asthma
_____ dizziness/fainting _____ cancer _____ arthritis
_____ scoliosis _____ stress fractures _____fatigue associated with exercise
_____ shortness of breath _____ chest pain _____ allergies: specify _____
Do you take any medication? Y / N
If female: Currently, are your periods regular / irregular / absent # per year _____
Do you have difficulty maintaining your current body weight? Y / N
Do you have any dietary restrictions? Y/N
If Yes, please detail:

**Dance/Performance History**

Position as a dancer: Student / Corps dancer / Solo performer / Principal dancer / Guest Artist / Teacher / Choreographer / Other _____
Type of dance work: Professional / Free lance / Recreational / Student

Current company: _____ Position in company: _____
Previous Company / School: _____
If student, dance program: _____
Have you declared a dance major? Y/ N
If yes: BA / BFA
If no: Do you intend to declare a BFA major? Y/ N
If enrolled in UNLV Dance Department what is your Class Level_____
Main type of dance training Ballet / Modern / Lyrical / Contemporary / Theatrical-Broadway / Tap / Jazz / Folk / Ethnic / Flamenco / Hip Hop / Ballroom
Age began dance training _____ Has your training been continuous Y / N
Do you do pointework? Y / N If yes, age began to dance en pointe _____
Total number of years dancing? _____ Number of years professional dancer _____
Performing currently? Y / N # hours of rehearsal per day _____
# dance classes per day _____ # performances per month _____
If you are in a company, # weeks you are employed per contract year _____ , # weeks per year on tour _____

**Exercise History**

Currently, do you regularly participate in a cross training/exercise program (in addition to dance)? Y / N
Do you participate in a preseason or offseason conditioning, weight, and or jump program? Y / N
If yes, what?
____ Pilates____ Yoga ____ Feldenkrais or Alexander
____ Fitness or health club ____ Swimming ____ Walking
____ Running/jogging ____ Weight lifting ____ Jump training
____ Theraband resistance training ____ Cycling ____ Other (please list) _____
Current number hrs/wk of cardiovascular training _____

**Injury History**

Have you sustained any musculoskeletal injuries in the last 12 months that caused you to miss (Circle):

Performance / Rehearsal / Dance class / Work / Sports / Other / No
Were you initially seen by: General MD / Orthopaedist / Osteopath / Physical Therapist / Chiropractor / Massage therapy / Athletic Trainer / no one
Did you consult a dance teacher for injury advice?
What was the diagnosis or body region of your musculoskeletal injury sustained in the last 12 months?

_____

Surgery? Y / N
Where did the injury occur? Performance / Rehearsal / Dance class / Work / Sports / Other / No injury
Did you receive any rehabilitation for injuries sustained over the last 12 months? Y / N
Problems or setbacks in rehab progression? _____
Date of resumption of dance classes _____
Date of return to performance / rehearsal _____
Are there any continuing problems due to your injury? Y / N

Please circle which of the following is most accurate to describe your injury:

**Table 4** Categories of Injury and Their Definitions[14]

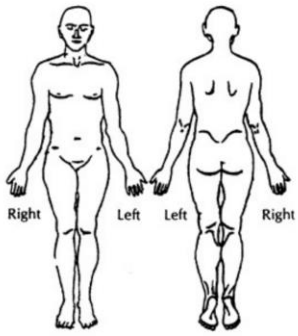
| Category of Injury | Definition Given to Participants |
|---|---|
| Physical Complaint Injury | 1. Ability to perform full dance activities, but feeling restricted by injury<br>2. Attended a triage session, but not a physiotherapy session |
| Medical Injury | An injury resulting in medical attention (physio., etc.) beyond triage |
| Time-Loss Injury | An injury resulting in inability to participate in activities (class, etc.) |

UNLV COLLEGE OF FINE ARTS
CLINIC FOR HEALTH AND INJURY PREVENTION

**Name:** _____ **Date:** _____

Using the symbols below, mark on the body the areas where you feel that particular sensation.

| Numbness | Pins & Needles | Burning | Aching | Sharp/Stabbing |
|---|---|---|---|---|
| ////// | +++++ | **00000** | **XXXX** | ******* |




| **PLEASE CIRCLE YOUR LEVEL OF PAIN:** (1 = Minimal Pain; 10= Worst Pain Imaginable) |
|---|
| **PAIN CURRENTLY** 1 2 3 4 5 6 7 8 9 10 |
| **PAIN AT ITS WORST** 1 2 3 4 5 6 7 8 9 10 |
| **PAIN TYPICALLY** 1 2 3 4 5 6 7 8 9 10 |

*Appendix 4: UNLV CFA CHIP Flyer*

UNLV | COLLEGE OF FINE ARTS

CLINIC FOR HEALTH and INJURY PREVENTION

*Injury prevention screenings for dancers*

*Physical therapy services for all students in the UNLV College of Fine Arts*

cfachip.unlv@gmail.com

Wed. 12-4 pm, Fri. 8 am - 12 pm, By appointment only.
Clinic for Health and Injury Prevention is located at the Harmon Annex Building (HAB-1) in room HAB-126

## References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**Curriculum Vitae**

# CARISSA LIMTIACO

Climtiaco.dpt@gmail.com

5310 Reed Station St
North Las Vegas, NV

## EDUCATION

| | | |
|---|---|---|
| **DPT** | University of Nevada, Las Vegas | May 2023 |
| **BS** | University of Nevada, Las Vegas, Kinesiology<br>Cum Laude | May 2020 |

## LICENSURE

| | |
|---|---|
| Nevada State Board of Physical Therapy Examiners | May 2023 |

## CERTIFICATIONS

| | |
|---|---|
| OTAGO certified | November 2021 |
| STEADI certified | September 2021 |
| American Heart Association, BLS for Healthcare Providers | May 2023 |
| HIPAA Training certification | June 2020 |
| Bloodborne Pathogens Training Certified | June 2020 |

## EMPLOYMENT/ CLINICAL EXPERIENCE

- **Student Physical Therapist** January 2023 - March 2023
  - **Sunrise Hospital and Medical Center**
  - Pediatric Inpatient/Outpatient
  - Evaluated, developed a plan of care, and treated pediatric patients with a variety of orthopedic, cardiovascular, and neurologic diagnoses. Collaborated and educated parents of pediatric patients to implement home programs to achieve physical therapy goals.

- **Student Physical Therapist** September 2022 - December 2022
  - **St. Rose Dominican Hospital – Siena**

- Acute
- Evaluated and treated patients with cardiovascular, orthopedic, neurological, and post-op diagnoses in the intensive care unit, cardio observation unit, and medical/surgical units. Attended weekly interdisciplinary rounding meetings.

- **Student Physical Therapist** July 2022 – September 2022
  - **Encompass Health Rehabilitation Hospital of Las Vegas**
  - Inpatient rehab
  - Evaluated and developed plans of care for patients with neurologic and orthopedic diagnoses. Performed interventions for gait training, strength and endurance training, balance training, and general rehabilitation.

- **Student Physical Therapist** June 2021 - July 2021
  - **Carson Valley Medical Center**
  - Outpatient- Rural
  - Evaluated, developed individualized plans of care, and treated patients with orthopedic and post-op diagnoses.

## PROFESSIONAL AFFILIATIONS

- Member American Physical Therapy Association (2020- present)

- Member Nevada Physical Therapy Association (2020 – present)

## SERVICE/VOLUNTEER ACTIVITY

**Fall Risk Screening** September 2021

- Administered self-questionnaires, performed standardized outcome measures and screening tools, interpreted results, educated patients, and provided resources that were appropriate.

## HONORS AND AWARDS

- **2020 Rural Health Scholarship Award**
- **2017-2020 Phillip J Cohen Scholar**

# Alan Savanapridi

PT, DPT, NREMT
E: a.savanapridi@gmail.com

## 01 LICENSURE

**Nevada State Board of Physical Therapy Examiners** - License Pending NPTE 07.2023
**National Registry of Emergency Medical Technicians** - Recertified 04.2023

## 02 EDUCATION

| | |
|---|---|
| 2020-23 | University of Nevada Las Vegas - Las Vegas, NV \| **DPT** |
| 2018-20 | College of Southern Nevada - Las Vegas, NV \| **PreMed** |
| 1998-02 | Auburn University - Auburn, AL \| **BFA Graphic Design** |

## 03 CLINICAL ROTATIONS & SERVICE LEARNING

01.23-03.23 **SPT - Encompass Health Rehabilitation Hospital of Desert Canyon**
Evaluated, created POC, and treated patients of various ages, backgrounds, and with a wide array of diagnoses (including TBI, stroke, and SCI) in an inpatient rehabilitation setting. Worked closely with a team of inter-professional providers to collaborate for the success of our patients and facilitate a pathway to higher quality of life.

09.22-12.22 **SPT – Comprehensive Therapy Centers – Siena Clinic**
Evaluated, created POC, and treated patients of various ages, and backgrounds with complex orthopedic conditions (specializing in back and neck pain) in an outpatient setting often utilizing McKenzie principles.

07.22-09.22 **SPT – Sunrise Hospital and Medical Center**
Evaluated and treated patients of various ages, backgrounds, and with a wide array of diagnoses in an acute care setting in an underserved community, with emphasis on safe discharge planning and coordination with other disciplines.

08.21-05.22 **SPT – UNLV College of Fine Arts Clinic for Health and Injury Prevention**
Evaluated and treated patients from the UNLV College of Fine Arts, specializing in specific musculoskeletal insults from performing artists such as dancers, actors, and musicians.

06.21-07.21 **SPT - Synergy Physical Therapy – Inspirada**
Evaluated and treated patients of various ages, backgrounds, and with a wide array of diagnoses in an orthopedic outpatient setting. Responsibilities included following post-surgical protocols while utilizing creativity to create plans of care that would be salient to the patient.

## 04 OTHER EXPERIENCE

11.12-PRESENT **Stay-At-home Dad**
Primary charge of family and domestic responsibilities. Developed plan of care and oversaw longitudinal treatment for 2 non-verbal, non-ambulatory individuals from DEP overall to IND for mobility and ADLs (w/ max VC at times).

11.05-08.12 **Co-Founder/Partner - Airblasts**
Worked with an interdisciplinary team of partners to create digital marketing for the leading recording labels such as Sony Music Entertainment, EMI, Universal Music Group, and Warner Music Group.

10.95-11.05 **Additional Experience Includes**
Graphic design for music, film, television, and theater.
Various positions, including management, in service and retail.

## 05 SERVICE

03.22-PRESENT **Rock Steady Boxing @ Tony Cress Training Center**
Volunteer using skilled interventions as an SPT to ensure participants' safety and facilitate increased participation in activities.

09.21 **Balance and Memory Screening Presented by UNLV School of Integrated Health Sciences and Cleveland Clinic**
Worked with an interdisciplinary team to perform a free community screening and referrals.

## 06 CERTIFICATIONS / CONTINUING EDUCATION

| | |
|---|---|
| 04.2023 | Nationally Registered Emergency Medical Technician Recertification |
| 04.2023 | AHA Basic Life Support |
| 01.2023 | The McKenzie Institute MDT Part B - Cervical and Thoracic Spine |
| 02.2022 | The McKenzie Institute MDT Part A - Lumbar Spine |
| 11.2021 | The Otago Exercise Program: Falls Prevention Program |
| 09.2021 | STEADI: Empowering Healthcare Providers to Reduce Fall Risk |
| 12.2020 | Group 1 Biomedical IRB course – CITI Program |
| 03.2020 | Nationally Registered Emergency Medical Technician |
| 07.2019 | WMD/Terrorism Awareness for Emergency Responders |

## 07 PROFESSIONAL ORGANIZATION

American Physical Therapy Association - Member / **2020 – Present**