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# Exploring Physical Therapy: Gaining Career Perspectives and Knowledge of Injuries

Tegan Hayek

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## DANCE 461: Senior Thesis Project

## EXPLORING PHYSICAL THERAPY:

Gaining Career Perspectives and Knowledge of Injuries

Tegan Hayek

Mentors: Mavis Rode Professor Judith Scalin

In Partial Fulfillment of
The Bachelor of Science Degree with a Double Major in
Health and Human Sciences and Dance
Loyola Marymount University
May 8, 2015

# EXPLORING PHYSICAL THERAPY:

Gaining Career Perspectives and Knowledge of Injuries

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#### **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries By: Tegan Hayek

> Mentors: Professor Judith Scalin Mavis Rode

**Exploring Physical Therapy: Gaining Career Perspectives and Knowledge of Injuries** is a hybrid thesis project. Inspired by powerful treatment I have received in the past for my own dance injuries, I wanted to learn more about what it would be like to work in the physical therapy profession. My thesis consists of two components: gaining internship experience and creating injury pamphlets.

My first internship was during the summer before my senior year at El Dorado Physical Therapy where I was able to gain my first professional experience in a physical therapy clinic. My second internship was with professional physical therapist, Mavis Rode, in the Dance Wellness Lab at Loyola Marymount University where I observed the treatment of my fellow dance majors. I was then hired at Marina Physical Therapy as a rehabilitation aide where I worked hands-on with a variety of patients. I logged observations in my journal and documented experiences that have increased my understanding of the physical therapy career.

To create my pamphlets, I used secondary research methods to find information about common dance related injuries. The pamphlets include injury causes, prevention, and treatment options that could be beneficial to dancers. Ultimately my thesis is a glance into the physical therapy profession and has given me a greater comprehension of dance related injuries.

#### **DESCRIPTION OF INTERNSHIPS**

#### **EL DORADO PHYSICAL THERAPY**

(June - August 2014)

#### History:

El Dorado Physical Therapy was established in 1991. Our goal was to be an integral part of the community. We have established many trusting relationships with referring physicians, created educational programs for the public and have injury treatment and training programs at four of the local high schools. We have offices in El Dorado Hills, Folsom and Shingle Springs to best serve these communities.

#### **Mission Statement:**

El Dorado Physical Therapy's mission is to make a difference in people's lives. Using manual therapy techniques integrated with stretching and functional full body strengthening, we quickly return our patients to their activities. Our goal is to teach our patients how to help themselves and to prevent future injuries. We realize every human body is unique. That is why all of our programs including Physical Therapy, Wellness and Sports Medicine are specifically tailored to your individual needs.

#### **Philosophy Statement:**

We utilize a clinical "Team" approach in order to provide you with the skills and knowledge that may best fit your particular Physical Therapy needs. Our focus is to return you to your potential optimal health so that you can enjoy your life and chosen activities.

#### Specialties:

Orthopedic and Sports Physical Therapy, Joint Replacement Rehabilitation, Pre & Post Surgical Therapy, Aquatic Therapy, Return to Sport – Athletes of all ages, Hand Therapy, ASTYM System, Vestibular Rehabilitation, Sports Medicine, Pilates-Based Therapy, Headache, Carpal Tunnel, Tennis Elbow, Plantar Fasciitis, Tendonitis, Back Pain and Injury, Fall Prevention, TMJ, Orthotics, Acupuncture, Arthritis, Manual Therapy Techniques: Soft Tissue and Joint Mobilization, Muscle Energy Techniques, Myofascial Release, Cranial Sacral, Active Release, Strain / Counterstrain

Location: Folsom, California

#### Staff:

- 4 Physical Therapists
- 3 Physical Therapist Assistants
- 3 Athletic Trainers
- 2 Personal Trainers

#### Owners:

David Thomas and Dianne Ornoski

#### My Supervisor:

Don LaSalle

#### Clients:

El Dorado Physical Therapy treats a wide variety of patients. Clients come to El Dorado PT for both treatment from therapists and physical fitness training in the sports conditioning center. While at my internship I observed the treatment of adults, adults with disabilities, injured athletes, elderly, and children. El Dorado PT has treatment and training programs for athletes at four of the local high school, so young athletes are common patients at the facilities.

Number of Hours: 180

Website: http://eldoradopt.com/

#### LOYOLA MARYMOUNT UNIVERSITY DANCE WELLNESS LAB

(September 2014- February 2015)

#### Purpose:

The Wellness Studio is a state-of-the-art facility where students train one-on-one with faculty and staff as well as a full-time physical therapist. Sessions in the Wellness Lab address issues of core strength and stability, body awareness, injury prevention and rehabilitation. The facility houses physical therapy equipment, four Pilates Reformers, a Pilates Cadillac/Trapeze Table, two Wunda Chairs, and various other equipment that aids dancers in their conditioning practices.

#### Location:

Loyola Marymount University, Foley Building

#### Run by:

LMU Dance Department

#### My supervisor:

Mavis Rode

#### Type of clients:

LMU dance majors

Number of hours: 16

Website: http://cfa.lmu.edu/programs/dance/facilities/wellnessstudio/

#### MARINA PHYSICAL THERAPY

A Physiotherapy Associates Company

(February 2015- May 2015)

#### **Mission Statement:**

At Physiotherapy Associates, we are dedicated to making a difference in the lives of our employees, patients and the communities we serve. Our mission is to:

- Maximize patient satisfaction through interaction with our employees, clinical outcomes and the overall therapy experience.
- Promote an environment where all employees are valued team members and employees can develop and excel beyond their expectations.
- Build relationships in our communities based on the highest levels of clinical care and performance.
- Commit to local market clinical leadership and share accountability to drive our mission.
- Operate within the highest standards of regulatory compliance and integrity not only to meet the requirements of our professions, but because each are foundations of our culture.
- Be leaders and innovators in evidence-based practice in outpatient rehabilitation, orthotics, and prosthetics.

#### **Philosophy Statement:**

Our Marina Del Rey, CA clinical staff believes you need more than a provider to help you reach your goals. We believe you need a partner. That's why our licensed physical therapists work closely with you to provide one-on-one care, understand your unique circumstances, and design a customized treatment plan that enables you to achieve your personal goals. Our successful outcomes are just one reason why people recommend our clinic! At our clinic, you will enjoy a therapy experience focused on providing you with the highest level of clinical expertise and personalized care. Our specialty is providing you with one-on-one care that is designed to help you get back to a healthy lifestyle. We offer convenient appointment times and work with most major insurance plans. We are an outpatient orthopedic clinic with well trained licensed Physical Therapists and a great support staff!

#### Specialties:

Hand Therapy, Physical Therapy, Sports Injury Rehabilitation, Women's Health Services, Pediatrics, Work Conditioning, Orthopedic Rehabilitation, Pre and Post Surgical Rehab, Joint Replacement Therapy, Health and Wellness, Geriatrics, Balance Training

#### Location:

Marina Del Rey, California

#### Staff:

4 Physical Therapists

3 Rehabilitation Aides (including myself)

#### **Clinic Director:**

Karen Garrett

#### Your supervisor:

Karen Garrett

#### Type of clients:

Marina Physical Therapy treats patients of various conditions and age. While working there, I have worked with both adult and elderly patients. I have witnessed the treatment of patients coming to therapy for post-surgical rehabilitation, injury rehabilitation, work conditioning, and general pain. Marina PT treats clients of different health and injury statuses.

Number of hours: 180

Website: http://www.physiocorp.com/

#### **GOALS AND TIMELINE**

#### **GOALS**

#### Cognitive

Gain a comprehensive insight into the physical therapy career and gain an understanding of different rehabilitation methods. Be able to connect information that I learn in my classes with what I am observing and finding in my injury research. Develop knowledge of what causes dance injuries how to prevent them from occurring.

#### Artistic

Find a connection between artistry, creativity, and the physical therapy profession. Find a way that my dance training and arts education can benefit me as a professional and help me provide more unique patient care.

#### Interpersonal

Grow in my communication skills with patients and understand patient-therapist relationships. Gain an understanding of the best way to interact with patients so they feel encouraged to pursue and progress with their rehabilitation.

#### Intrapersonal

Have an awareness of how the aspects I am observing can help me in my future profession. Understand which aspects I will be successful at and which will more challenging.

#### **TIMELINE**

Summer internship (June-August 2014)

Begin internship in Wellness Lab (September 2014)

Summary of dance studies (September 2014)

Begin pamphlet research (October 2014)

Dance perspectives research paper (December 2014)

Complete physical therapy graduate education search (January 2015)

Complete internship with Mavis (February 2015)

Begin working at Marina Physical Therapy (February 2015)

Complete injury pamphlet research (March 2015)

Finish injury pamphlets (April 2015)

Complete Thesis Project (May 2015)

## **SUMMARY JOURNAL ENTRIES**

#### EL DORADO PHYSICAL THERAPY

#### Summary of Internship

My internship at El Dorado Physical Therapy was my first experience working in a physical therapy clinic. As an intern, I wasn't able to do much hands-on work with patients due to liability issues. I did gain my first prospective of what it is like to work as a physical therapist. I interned there during my summer break and went in at least 4 days every week. This facility was a great place for me to start my physical therapy experience because it was a very large facility with many staff specializing in all different aspects of treatment. I have always gone back and forth between a career in athletic training and a career in physical therapy. I enjoyed working in a setting with so many athletic trainers because I was able to gain a look into that career as well. I also gained an interest in personal training by observing the on site trainers working with their clients. All of the staff at the facility were very open and welcoming to me and were willing to answer any questions I had. Don, the physical therapist I mainly worked with, took me under his wing and let me observe all of his patients (as long as they gave consent). He explained to me everything I was doing and constantly tested me to see if I remembered my anatomy or other things I have already learned in school. I think one of the greatest aspects of this facility was their "team approach" in which it seemed all the staff were dedicated to each patient. The clients all knew several of the staff working there because everyone was interested in the recovery and well-being of patients, even if they weren't their own. The therapists were constantly asking each other for new treatment ideas or different ways to approach a patient's injury. I really enjoyed the community outreach aspect of this facility because I think it really correlated with LMU's mission. With implementing public health education programs and treatment programs at the local high school, it was clear that the owners truly cared about the community they were serving. I also felt a strong sense of community in the facility, as all the staff knew each other on a personal level and all three of the locations often get together. I hope to work in a facility one day with similar ideals and missions as El Dorado PT.

#### What did I do? Describe the work in detail.

At El Dorado PT my job was mainly to assist and observe Don LaSalle with anything he needed while treating his patients. I learned the basic exercises that were commonly used in treatment and even learned how to perform some modalities. Unfortunately, I was not able to work personally with any patients, but I was able to build patient relationships. From coming into the facility almost everyday, I got to know the majority of Don's patients on a personal level. I also did a lot of cleaning, sanitizing, and laundry for the therapists.

#### What did I learn?

- *Communication* the most rewarding and valuable skill I think that I learned from this internship was patient communication. I learned how to address patients in a professional manner while remaining personable and being someone patients enjoy talking to. It is essential to have good communication skills and to like working with people in the physical therapy profession.
- *Professionalism* I was always on time to work and felt pressure to act professional in all aspects of what I was doing. Being young, it was important that I showed patients I was mature and knowledgeable enough to be working that position and that they were receiving proper care.
- Compassion- Don had an incredible amount of empathy and expressed kindness to all of his patients, making them love working with him. I already consider myself to be generally kind to people, but I learned how to express compassion towards patients that are frustrated with recovery, without being overly grieving.
- *Understanding of treatment* by observing the constant treatment of patients, I was able to gain a better understanding of why certain rehabilitation techniques are used over others. In the beginning stages of an injury more manual therapy might be needed, and in the end stages of an injury patients might only need to perform strengthening exercises.
- Everyone is different- patients respond differently to both injuries and treatment. I learned that all patients have different tolerances and attitudes during their rehabilitation process. Some patients may be able to tolerate immense pain, and others will not be able to tolerate any pain at all during manual therapy. I also learned that some patients are more proactive and motivated than others. Some patients always do their exercises and are excited to progress, whereas other patients seem to not care if they get better. I began to learn how to approach these different types of patients and at times a physical therapist might also have to act as a motivator and psychologist.
- Connection to my education- upon returning to LMU for my senior year, I was able to draw connections from things I learned during my internship to what I was learning in my classes. My professors were stressing importance in ideas and treatments that I experienced during the summer. I began to learn more about some of the injuries that I observed at my internship and gained an understanding of the causes and who is more prone to certain injuries.
- The flexibility of the career- there are many options for people wanting to work in physical therapy. It is possible to work as often or as little as you like. It is a great career choice for people who want to have families or pursue other interests because you can work part-time if that is preferred.

• Patient confidentiality- I gained an understanding of HIPAA and the rules of privacy during patient care. I learned that it is illegal to discuss treatment to patients with anyone that is not approved of by the patient.

#### What came naturally?

- Getting along with the staff at this clinic was easy for me. I loved being surrounded by people who had the same interests as me and have gained the educational training that I want to pursue. I was able to gain advice about my future and what was important to the profession, as well as being able to express my interests with the people I was working for.
- Talking to patients was easy from me and I enjoyed getting to learn about their life experiences and what brought them into therapy. I found it easy to build relationships with the patients.
- I was able to easily understand the execution of exercises given to patients. From having a basic understanding of alignment from my dance background, I was able to notice if patients were performing exercises properly or if they needed to be adjusted. I also had an understanding of which muscles were being targeted with the exercises from my anatomy classes.

#### What was challenging?

- When I first started my internship, I found it challenging to figure out how I fit in to the facility and what tasks I needed to be doing. I wasn't given much introduction into the facility, so I had to figure out a lot of things on my own, which I think was a valuable experience for me. There was so many staff working there that I was a little overwhelmed in the beginning and felt like there was nothing for me to really do there. I later embraced the fact that there was so many staff and saw it as a better learning experience and opportunity. I began to realize that the internship was really more of an educational experience for growth than a true job and I focused more on what I could gain from the experience.
- I found it challenging to find things to do when there were no patients in the facility. When there were no tasks for me to complete I began to lose interest because I am someone who feels the need to stay busy at all times. Towards the end of the summer, I began to use this time to learn from the professionals I was working with. Everyone has had more experience in the career than me, so there was advice I could gain from everyone.
- Staying motivated as an unpaid intern. During the summer I was extremely busy, which isn't out of the ordinary, but I was working at a summer camp every morning for six hours before coming to intern at the facility. Sometimes I was so exhausted that it was difficult to motivate myself to go to the internship. I learned the importance in commitments and responsibility in times when I didn't necessarily want to be doing what I was supposed to be doing. I had to take some days off when

it became too much, but I learned how to balance responsibilities with activities I wanted to do for fun.

#### What surprised me?

- The amount of knowledge I already had. Don was never one to let me stand there without knowing what was going on in the treatment. He would constantly ask me if I knew where a certain muscle was or what action it performed. From my anatomy and physiology classes, I knew most of the answers and was able to demonstrate that I had some knowledge related to the field. When I didn't know the answer, Don made me research up the anatomy and report to him what I learned.
- The physical demands of the career. Before my internship, I was unaware at how physically demanding the job of a physical therapist can be. The manual therapy that has to be performed on patients requires a lot of muscular strength and endurance. Don taught me how to perform some small mobilizations on his own vertebrae and the proper amount of pressure for the therapy to work. I found it near impossible to apply the amount of pressure he was asking of me. An immense amount of strength is needed to be able to perform manual therapy on patients. Don told me that he constantly had to lift weights and keep himself in shape to be able to treat patients in the way that he did. He also expressed how often he needed to get massages to relieve the tension that was built up in his back from constantly working on the musculature of his patients.

#### What did I really enjoy doing and learning?

- Talking to patients and learning about their experiences. I am a people person so I really liked the aspect of the profession that lets you learn from other people. There were some elderly patients that I was able to learn about history from and some younger patients that gave me insight about what it was like to be a kid again.
- I enjoyed observing the athletic injuries and patients the most. I felt like I could relate to athletes that were recovering from an injury and these patients were more motivated to improve with their therapy. I really liked working with the patients that came from the sports team from local high schools and found an interest in watching the athletic trainers treat them.
- I was always fascinated with the manual therapy aspect and the hands-on treatment of muscles. Don was always able to pin point the exact spot a patient needed treatment and could find a knot or tightness in the muscles right away. I found this interesting and found a curiosity for how to be able to feel the difference in muscles and how to know what to treat.

#### What parts of the work didn't really appeal to me, but I see the necessity?

- The amount of paperwork involved with physical therapy. I have learned from my classes at LMU that "you document it or it didn't happen." The amount of time the therapists had to spend recording what was done during treatment and documenting each exercise seemed tedious, but I know that it is important to keep record of everything that was done in treatment.
- The issues that come with insurance. With any health profession, you are going to have to deal with the insurance companies of patients. From witnessing clients with worker's compensation to Medicaid cases, I saw a lot of the struggles that can come up from insurance policies. Patients are only given a certain number of visits, so it can be difficult if you think the patient is going to need more treatment, but they cannot pay for it. It is also necessary to show the insurance that the patient is progressing because if they aren't the insurance can stop covering the treatment.
- The amount of liability and lawsuit issues that comes with the territory of working in the health profession. There are always going to be patients that are looking to make money or formulate a lawsuit. This is why it is so important to document everything that happens in treatment and follow guidelines and protocols to prevent harming any patients.

#### What did I learn about people?

- People want someone they can trust. It is extremely important to gain the trust of your patients, so that they are open and willing to the treatment you are giving them.
- Some people are stubborn. Some people will always think they know more and there will be the patients that think they know what their body needs more than the therapist does. Some might request different treatment than what will really help them and it can be difficult for the therapist to explain the importance of certain treatments over others to them.
- People are generally thankful for the treatment they have received. If you can make someone feel better or get back to the normal lifestyle they had before their injury, they will be thankful and glad that you helped them.
- They need motivation. Not everyone is highly self-motivated to do exercises or come to therapy. Sometimes it is up to the therapist to encourage them to keep coming in for treatment and to continue with their exercises until they are completely better.

## What did I learn about myself?

- I have a strong interest in working with athletes and pursuing sports physical therapy.
- My experience with physical therapy from dance injuries has made it able for me to empathize with patients and understand the recovery process they are going through.

- I have a constant curiosity about injury rehabilitation and I want to continue to learn more about the human body.
- I am strongly interested with fitness and how to create exercises for individuals to benefit from.
- I am good at working with people and I care for each patient's recovery process.
- I find it exciting when I can see the growth and improvement in a patient's pain or injury level.

## DANCE WELLNESS LAB Entries every day of internship

## September 19, 2014

#### What am I doing? Describe the work in detail.

Today was my first day interning with Mavis. We started with her explaining the importance of patient confidentiality while I was working in the lab, which is a concept I became familiar with during my summer internship. One patient came in to see Mavis complaining of back pain. She said she used to experience this pain before and has received past treatment. Mavis showed the student some current research on the condition that she thought might be present. Mavis then had the patient walk back and forth to observe her gait. It was noted the patient naturally walks very turned out, which can be placing extra stress on her knees, hips, and could be causing some of the pain in her back.

## What am I learning?

- It is important to do a gait analysis of patients with lower extremity injuries.
- Many patients with deviations from the norm during gait can be predisposed to injuries or could have injuries that are being worsened by these deviations.
- Deviations in gaits can have detrimental effects to patients because they will constantly be walking with these dysfunctions and this can place unwanted stress on joints.

## What comes naturally?

- Noticing patient deviations during a gait analysis.
- Understanding which injuries can be caused by the gait deviations.
- How to take a patient history and which questions are essential to ask when learning of an injury.

#### What is challenging for me?

- How to explain to a patient to alter their gait since it is the natural way he/she walks.
- Knowing how to distinguish different injuries, such as those causing low back pain, because many of the diagnoses have similar symptoms.

#### What questions do I have?

- Are gait deviations common causes of back injuries or pain?
- What is the most common cause of back pain in dancers?

## September 26, 2014

#### What am I doing? Describe the work in detail.

Two patients were treated by Mavis today during my observations. The first was being treated for hip pain and I came in during the middle of her appointment. Mavis asked for me to assist her with some of her hip strengthening and balancing exercises. I made sure she was performing them correctly and gave her any corrections that were necessary. The second patient was seeing Mavis for pain in her shins, which Mavis believed to be shin splints. She has seen Mavis before for this issue and Mavis decided to use Kinesio tape because the patient said that helped her last time.

#### What am I learning?

- The importance of pelvic stability in dance, but most importantly in patients with hip injuries and exercises that can help them improve this.
- Rest and ice is the main treatment for shin splints and there is not much else that can be done in therapy to help further the recovery process.
- Continuing to dance on shin splints, or other injuries, can lead to a worse condition especially stress fractures.
- Kinesio tape can teach alleviate some pain by relaxing muscles that might be overworking during an injury, but it is only a temporary solution.

## What comes naturally?

- Communicating with patients and being able to empathize with their injuries.
- Knowing which muscles are being strengthened in the exercises Mavis is giving patients.
- Tying together concepts learned in my classes with ideas that Mavis has regarding treatment of injuries.

#### What is challenging for me?

Understanding why certain modalities are used over others.

#### What do I really enjoy doing and learning?

- I find Kinesio tape very interesting and want to learn more about how it works and how to apply it.
- I enjoy helping patients with their exercises and seeing them finally understand a concept that has been described to them regarding their recovery process.

#### What have I learned about people?

• If one type of treatment has worked for someone in the past, he/she will be more likely to want that treatment over other options.

#### What questions do I have?

- What are the benefits of e-stim and when should it be used?
- What are the benefits of ultrasound and when should it be used?

#### October 3, 2014

## What am I doing? Describe the work in detail.

Today Mavis was focused on conducting health screenings that are required for the freshmen dance majors. She performed two of the evaluation while I was there. The evaluations are to notice any predispositions the dancers might have to injuries, structural deformities, or health concerns. She had the patients perform a few simple exercises such as holding a plank, a plié, and a relevé. She also asked about nutritional habits, alcohol intake, amount of sleep, general health, and past injuries. She also gave simple corrections if she saw anything wrong with their form or how to better their nutrition intake. Her schedule was completely booked and she had two other patients come in trying to seek immediate help for pain. Mavis had to turn one away due to a full schedule and saw one quickly because she had a performance that weekend, but the only advice she could give was to rest the injury.

## What am I learning?

- How to make/give health screenings and what things are important to notice in dancers.
- Looking for any deviations in joints, muscles, or exercise forms in patients that could predispose them to injury.
- Physical therapists might not always have the time they need to help all of their patients.

#### What comes naturally?

- Noticing deviations from the norms in posture, musculature, and joints.
- Noticing when patients are expressing unhealthy habits, and knowing general guidelines that can help them improve.

#### What is challenging for me?

- Understanding that it might be necessary to turn patients away.
- I think it would be very hard for me to turn a patient away who is coming in crying because of how much pain he/she is experiencing, which I witnessed in the lab today.
- It is difficult to not be able to give the full time you want to patients and to not be able to see everyone that needs help.

#### What do I really enjoy doing and learning?

- Noticing deviations from the norms in patients' body structures.
- Learning about how these deviations can cause injury and if any exercises can be given to prevent these injuries from occurring.

#### What have I learned about people?

- When people have unhealthy habits, they are generally aware of them, yet they continue to live this way.
- The college population can have more difficulties with health due to food options, lack of sleep, alcohol intake, and stress.

#### What have I learned about myself?

• I also fall victim to some of the unhealthy habits of college students due to stress and a heavy school workload.

## November 7, 2014

## What am I doing? Describe the work in detail

Today while I was with Mavis two patients were seen. The first was being seen for back pain. I observed Mavis giving here some exercises and postural corrections to try to minimalize her pain. Mavis gave exercises to work on her strength in turnout as well as abdominal strength, to focus on placing less extension pressure on her back. She instructed the patient to keep her external rotators engaged when in turnout to prevent moving into hyperextension in her spine. She then showed some abdominal exercises and explained the difference between working the upper and lower abdominals to the patient. The second patient came in for a recent injury to her foot that had resulted in a large, painful bruise. She landed incorrectly on her foot during a cartwheel exercise in her modern class. She described having pain when pushing off for turns and jumping. She still has full sensation in

her foot and the bruise seemed to be improving. Mavis does not suspect a fracture to her foot because the patient is not experiencing any localized pain. Mavis instructed the patient to ice often, wiggle her toes often or stand on a tennis ball to prevent stiffness, and wear tennis shoes to protect her injured foot. Mavis believes that at this point, there is no need for any further physical therapy intervention.

#### What am I learning?

- If the right muscles aren't used for support in turnout, compensation can lead to injury in the back or lower leg.
- Hyperextension should be prevented in the joints because it places extra stress on the structures.
- Strengthening the abdominals can take some of the stress of the back and relieve back pain.
- It is important to not if patient has sensation in his/her injured area.
- With soft tissue injuries, dancers just need to modify their performance and training until the condition improves.
- When a dancer is injured, he/she must take time easing back into 100% and listen to the body and pain level.
- The foot is used very often in daily life, and even more often in dance, making it often difficult to rest properly following injury.
- Fractures have a very sharp, localized spot of pain.
- Compensating during an injury can lead to further soreness.

## What comes naturally?

- Listening to the patient explain what happened and why they are there.
- Understanding what muscles need to be strengthened after injury to a specific body part.

## What is challenging for me?

- Understanding what type of pain is associated with injuries to different tissues in the body.
- What length of time to tell a dancer they need to rest vs. amount they can modify.

## What do I really enjoy doing and learning?

- Trying to figure out what specific injury the dancer has.
- Coming up with strength exercises for the dancers to do to improve the injured site.

## What have I learned about people?

• Dancers, or other athletes, generally don't want to sit out of practice/rehearsals to have to rest an injured area. It can be difficult to make them understand the importance of resting an injury to prevent worsening it.

#### November 14, 2014

## What am I doing? Describe the work in detail.

Today a patient came in complaining of back pain that has not improved since the last time she visited Mavis. It is most painful when she moves into back extension. The pain was taking place in her right quadratus lumborum. Mavis wanted to strengthen both her abdominals and back muscles around the injury. She instructed the patient to try doing planks every day for strengthening. I assisted the patient with performing planks and watched for proper form. The patient expressed that she has noticed she is able to move further into back extension than when she first came in to see Mavis, even though she still has pain with the exercise.

#### What am I learning?

- Sometimes with back injuries the abdominals are no longer working properly and you need to retrain them in a patient.
- Patient needs to be able to tighten and contract the abdominals to release pain and tightness that occurs in the back.
- It is important to trust the body when deciding to return to dance, however you must also listen to pain levels and understand when you will benefit more from rest to the area.
- Using muscles in the upper arm prevents wrist and elbow pain in the plank position.
- More dancers will come in for physical therapy when a show is coming up, which is usually due to injuries from overuse during the extra rehearsals taking place.
- Back injuries are very common in dancers due to the amount of flexibility that is demanded of their spine and the constant extension they must perform. I want to research a lower back injury and focus one of my pamphlets on this injury.

#### What comes naturally?

- Understanding proper body alignment during exercises.
- Understanding that with back pain, weak abdominals can often be a cause or predisposition to injury.

## What is challenging for me?

 Figuring out how long or how many repetitions of an exercise a patient should be doing.

## What parts of the work don't really appeal to me, but I see the necessity?

• Having to document everything that occurred during each session with a patient.

#### What have I learned about myself?

- I like working with patients that are motivated to get better
- I find the injuries of my peers to be very interesting because I have experienced pain in many of the same areas from my own dancing.
- I have a strong interest in injury prevention and I was to learn more about injury prevention implementation and programs among athletes.

#### What questions do I have?

- Are there any exercises that dancers can do to prevent back injuries, since they are so common?
- When is it more appropriate to use ice vs. heat during rehabilitation?
- What advice can you give an athlete that refuses to rest from an injury? Is there anyway you can help these athletes even though they are doing more harm than good to their body?

## February 2, 2015

#### What am I doing? Describe the work in detail

Today a patient came in who has been seeing Mavis for a reoccurring hamstring strain. The patient told Mavis that she has been feeling better, but is still having a difficult with control during jumps. Mavis explained that she has less mobility in her injured hamstring than her non-injured side and her injured hip is also weaker. Mavis wants to focus her rehabilitation on strengthening her gluteal muscles. She had the patient perform hip strengthening exercises including clams, side lying hip abduction, and various bridging exercises. She then had the patient perform exercises on the reformer with her feet in the leg straps to strengthen her hamstrings. Mavis' ultimate goal with this patient is to strengthen and restore 100% of her flexibility. She then had the patient stretch the hamstring passively for five minutes.

## What am I learning?

- Holding a stretch passively for five minutes allows the tissue to go beyond its elastic range and can help to decrease scar tissue that has accumulated during injury. According to Mavis, it is good to do this three times per week after the muscle is warm. However this should only be done to injured tissue and only 30 seconds of stretching is recommended for healthy tissue.
- A patient should not experience pain with a stretch; he/she should only experience a tug. Pain is a cue to lessen the stretch or stop the stretch all together if it does not decrease.
- How to use exercise equipment, such as a reformer, to create different strengthening exercises for patients.

#### What comes naturally?

- Knowing the importance of both strengthening and stretching to injured tissues.
- Noticing the differences presented in a patient's injured and non-injured side.
- Knowing hip and hamstring strengthening exercises.

#### What is challenging for me?

• Knowing which exercises are okay for a patient to perform with a strain and which exercises need to be avoided until he/she is fully healed.

#### What surprises me?

• It is only recommended to hold a stretch for 30 seconds in healthy tissue. I find this surprising because throughout my dance training I have been taught to hold stretches for several minutes to increase flexibility. But in reality, it is more beneficial to only hold for 30 seconds and do more repetition of the stretch if needed.

#### What do I really enjoy doing and learning?

- How the muscle recovers and heals itself following an injury.
- The difference in injured and non-injured tissue in regards to strengthening and stretching recommendations.
- Using the reformer for exercises because it offers more resistance than just body weighted exercises and requires alignment awareness from the patient.

#### What questions do I have?

- Can strained muscles be stretched immediately following injury or do they need some time to heal before being stretched?
- Why might someone's strain be reoccurring? Does this mean the muscle did not completely heal all the way?
- Interest in doing a pamphlet on muscles strains in general

## <u>February 9, 2015</u>

## What am I doing? Describe the work in detail

Today no patients came in to visit Mavis while I was interning. I focused on conducting research for the handouts I still needed more focus on. I decided to research muscle strains after recently learning about them in my Therapeutic Rehabilitation class and witness one in a patient last week. I used one of my textbooks as a reference and searched through scholarly articles online.

#### What am I learning?

- I learned that a strain is a stretching or tearing of a muscle.
- The severity of a strain is based on the number of fibers damaged and the extent of the injury.
- There are three grades of strains (Grade I, Grade II, and Grade III). Grade III is the worst type of strain and it involves a complete tear of the muscle and results in a complete loss of function.

#### What comes naturally?

- Understanding the explanation and physiological processes of an injury.
- Finding articles based on the topics I need to find more specificity on.
- Finding an interest in injury articles and discussions of new treatments.

#### What is challenging for me?

- Deciding the final injuries to create handouts on.
- Deciding how to structure my handouts to be visually effective and informational.
- Weeding out articles that have the most information for dancers, but are not medically accurate or reliable.

#### What do I really enjoy doing and learning?

- How a tissue responds to injury and the body's natural healing process.
- The mechanisms that lead to injuries.

## What questions do I have?

- How long does a grade III strain take to heal compared to a grade I strain?
- What is the difference in treatment between the types of strains?

## MARINA PHYSICAL THERAPY

Entries every week of job

## Week 1: (2/16)

## What am I doing? Describe the work in detail.

Today was my first day working as a rehabilitation aide at Marina Physical Therapy. I was given an introduction in the morning and the tasks that were expected of me were described. The main responsibility of my job is to describe exercises to patients and make sure they are performing them correctly. Usually the therapist will give me a list of exercises and I will then explain the exercises to patients. I will also have to do laundry, cleaning, and general tidying of the facility. One of the therapists began teaching me some of the exercises that are most commonly prescribed to patients and I was happy that I

already knew most of them, or had seen them at my summer internship. I also filled out my basic employment paperwork and learned about the expectations and requirements

#### What am I learning?

- Exercises that are commonly used for injuries to different body parts.
- The way the physical therapists at this facility treat patients and the expectations of the clinic.
- How to notice flaws in exercise performance and correct them in patients.
- How to be professional when working with patients and how to communicate with them.
- To ask the physical therapists for help if I have any questions.
- How to use e-stim and ultrasound on patients.

#### What comes naturally?

- Talking with the therapists and understanding the purpose of the exercises they are giving me.
- Communicating with patients and feeling comfortable around them.
- Understanding what to do in a clinic setting based on my previous internship experience.

#### What is challenging for me?

Not being afraid to ask for help when I don't understand an exercise or treatment.

## What surprises me?

- How many similarities I see in exercises with the facility I did my summer internship.
- I fit in right away to the facility and felt comfortable within a couple hours of being there.

## What have I learned about myself?

- I know a lot of my anatomy and have a good understanding of injuries
- I have learned a lot about common injuries from my classes at LMU and this can help me understand what has happened to the patients.

## Week 2: (2/25, 2/27)

## What am I doing? Describe the work in detail.

I am getting more adjusted and comfortable at working in this facility. I am getting along well with the physical therapists and the other aides. I am remembering some more of the exercises and continuing to learn more treatments. I was even tested to see if I could plan some of my own exercises for patients and was just given the direction to perform hip strengthening exercises with one of the patients.

#### What am I learning?

- The proper way to perform the commonly used exercises at this clinic.
- The therapist's here really care for their patients and the patients enjoy coming to treatment.
- That it is okay to ask questions and for clarification when I don't understand something.
- To consistently ask patients how they are feeling with exercises and constantly check in with their pain levels.

#### What comes naturally?

- Having to multitask. I am discovering that I like working with multiple patients with a time and I don't get overwhelmed when a lot is going on.
- Understanding what muscle groups are being targeted with exercises and how strengthening these muscles can help with the patient's injury.
- Feeling compassion for the patients and wanting to help them get better.

#### What is challenging for me?

- Getting used to the e-stim machines and remembering the specific settings.
- Figuring out what to do when there are no patients in the facility and all the cleaning tasks have been completed. I am still finding ways that I can keep busy so I am never just sitting around in the facility and not contributing.
- Remembering a long list of exercises. So far I have been able to recall all the exercises a therapist has given me, but they will generally give me a list of five or six exercises and I will have to remember all of them, which is a challenge.

## What surprises me?

- I feel very relaxed in the clinic and I do not feel overly nervous when talking to my supervisor. I still feel a lot of pressure to perform at my best, but everyone has made me feel comfortable very quickly.
- How easily I was able to come up with exercises for a patient when I was put on the spot. I learned a lot in my Principles of Strength and Conditioning class that is very applicable to this job.

## What do I really enjoy doing and learning?

- I really enjoy coming up with exercises for patients and receiving positive feedback from them for the exercises I have given them.
- Observing the manual therapy the therapists are performing on patients as it is something that I still haven't learned in school and I look forward to gaining an understanding of in my graduate studies.

#### What parts of the work don't really appeal to me, but I see the necessity?

• The cleaning aspect, but I understand that it is important to maintain a sterile environment for patients and that a facility needs to look nice to patients.

#### What have I learned about people?

- The patients at this facility have been very friendly overall.
- The last facility I was at had a more sports medicine concentration than this facility, but the patients for the most part are still open to their exercises and motivated to do well with them.
- If you maintain a professional manner and give patients your full attention, they are more willing to work with you and more trusting of the exercises you are giving them.

## Week 3: (3/2, 3/4)

#### What am I doing? Describe the work in detail.

I am continuing to guide patients with their exercises and I am becoming more confident in my ability to help patients with their treatments. I have been building relationships with patients and learning more about the different ways individual patients learn and approach assigned exercises.

## What am I learning?

- Some patients can handle more instructions than others. It is important to make sure patients have proper form, but some patients can only focus on one given correction at a time. Giving some patients too many corrections can be overwhelming for them.
- The general progression of exercise. I am gaining an understanding of which exercises are assigned to patients who are weaker vs. patients who can tolerate harder exercises due to progression in their injury from treatment.
- In general, patients shouldn't have pain with any of their exercises. The exercises are given to help strengthen muscles that could have become weak from their injury, but if they are experiencing pain with the exercise it might be worsening their injury. This makes it necessary to constantly ask patients if the exercise is causing them any pain.
- Some patients won't want to perform their exercises, so it is important to give them extra motivation and explain to them that the strengthening or stretching exercises are essential to their recovery process.

## What comes naturally?

• Encouraging patients to continue with their exercises, but noticing when they are in pain and might need to stop but are not mentioning it.

• Figuring out ways to progress exercises to make them more challenging for patients such as adding weights or increasing resistance.

## What is challenging for me?

- Explaining exercise to patients that don't have a general idea of body alignment or common fitness exercises. I am used to being surrounded by dancers who are very aware of their bodies and know proper alignment, so it is challenging for me to have to describe this to patients when it has become such common knowledge to me over the years. Having to describe exercises that the general population knows for the most part, to patients that are not active and have never done them before is something that I have never had to experience before.
- Working with patients that are completely unmotivated and do not want to be in therapy. It is hard to encourage patients to do exercises when they do not want to be there and do not see the importance in recovering from their injury.

## What do I really enjoy doing and learning?

- New exercises that I have never seen before, but target muscles effectively and are very difficult.
- Giving exercises to patients that I have performed in my own physical therapy in the
  past and have helped me recover from an injury because I know that they are
  effective and can let the patient know about my own experiences.

## Week 4: (3/9, 3/11, 3/13)

## What am I doing? Describe the work in detail.

Continuing to assist patients with their exercises. Helping Karen, my supervisor, come up with new exercises to give to patients that are more fun then the general resistance training exercises that are always used. She has her patients do some crazy exercises that I have never seen before, but they are very effective at targeting muscle groups and making the patients "feel the burn" right away. A lot of the exercises require a lot of hands-on work with the patients. This week I had to stand on a patient's legs so that she could get the overall effect she wanted from an exercise.

## What am I learning?

- Karen has some ideas and exercises for patients that seem crazy and impossible when she first describes them to me. But they end up being very challenging and work very well during someone's treatment. I am learning to just trust her when she has a new idea and to just go with it.
- Something else I am learning from Karen is that not everything will work out the
  way you want it to and that is okay. Some of the exercises she comes up with in her
  head don't really end up working out, but then she just tries to come up with a

- different idea. She never gives up and I am learning that this is an important trait to have for this profession.
- Every therapist has their own techniques and different ideas for treating their patients. I have learned the importance of sharing new knowledge with those you work with if you find a new exercise or asking for help if you are trying to come up with something new.
- Don't be afraid to try something out of the box and out of the ordinary. Patients feel like they are getting a lot of attention when you are trying to figure out a brand new exercise just for them.

#### What comes naturally?

• Staying motivated throughout the day and when working with patients. Even on days when I am tired or have a lot of things I am stressed about, I still find it easy to stay motivated to perform well at my job. I enjoy coming into work and I like the patients and therapists that I am working with.

#### What is challenging for me?

- Describing new exercises that I just learned and that are different than ones I am used to is making me step out of my comfort zone a little bit, but it is making me grow as an aide.
- Getting asked questions that I don't know the answer to because I haven't learned it yet. Everyday patients ask me questions that I don't know the answer to, but I don't want them to think that I am not knowledgeable enough for this position. I am learning that it is okay to not know the answer to everything and the therapists are there to answer questions the patients might have and I don't need to be afraid to ask them for the patient.

## What surprises me?

• How quickly my full workdays pass by. On two days a week, I work 8 hour shifts and I am constantly surprised how quickly time passes sometimes. I think this is a major benefit to finding a career that I love and I hope that I continue with my interest in physical therapy throughout the years.

## What parts of the work don't really appeal to me, but I see the necessity?

• Filing paperwork for patients. There is a lot of paperwork that needs to be managed at a physical therapy clinic and this week I learned how to file paperwork when the receptionists are too busy or there are no patients for me to work with. The organization of the patient folders is not the best at the clinic so sometimes it is difficult and frustrating to find the correct file.

## What have I learned about people?

Not everyone is willing to be adventurous with his/her exercises. Many of the
elderly patients or patients who experienced a severe injury that I have worked
with are too afraid to try some of the exercises and believe that their bodies are not

ready yet. It is okay to encourage people, but I have learned not to push people to their extremes and if they are really uncomfortable with trying an exercise, it is always possible to come up with a different exercise that they will feel more comfortable with.

## Week 5: (3/16, 3/18, 3/20)

## What am I doing? Describe the work in detail.

Instructing patients with exercises and getting more comfortable with giving corrections as I am noticing more improper techniques that are commonly used by patients. I have become more familiar with the usual patients and how each individual needs to be approached with his/her treatment. I am now very comfortable with performing e-stim and ultrasound and I am making little mistakes less often with patients.

#### What am I learning?

- It is impossible to fully satisfy every patient that comes in because some people are hard to please. Some patients might be unhappy with the treatment they are receiving, and that doesn't necessarily mean that I didn't do what I was supposed to be doing. Some patients won't take corrections well and you can't let that affect your work with the rest of your patients.
- It is important to always listen to your patient and know their goals with treatment. Some people want to be able to perform at athletic levels, while others just want to be able to spend a day without pain.
- A lot of people have pain due to postural deviations that have become worsened by desk jobs.
- Many people like to perform their exercises as quickly as possible, but most of the
  exercises used work most effectively when they are performed slowly and the
  patient really has to focus on muscular control.

## What comes naturally?

• I still feel very comfortable talking to patients. There is always a conversation that can be made with someone, and people will generally enjoy striking up a conversation about their interests.

## What is challenging for me?

- Constantly having to give a patient a correction over and over. Some patients find it
  difficult to remember how to perform an exercise properly, but it can be difficult
  when you have to give the same correction several times in the same therapy
  session.
- The patients who are more difficult to work with or don't want to do their exercises at all. This week one of the patient's I was working with came in, only performed one exercise, and then walked out because he didn't want to do anymore. His

therapist told me not to worry because he has done that before and it was his last appointment, but it can be difficult to not get frustrated with patients.

#### What have I learned about myself?

- I really enjoy working with patients. I have always had an interest in the physical therapy profession, but this is my first experience really working with patients and I am enjoying it.
- The people I work with are constantly inspiring me and I want to work towards maintaining some of their best qualities in my future PT career.

## Week 6: (3/23, 3/25, 3/27)

#### What am I doing? Describe the work in detail.

I am gaining experience working with all different types of patients. This week I gained experience working with patients who are handicapped and can't walk. One patient I have witnessed major improvements in since she has been coming. She uses a walker and almost doesn't need it anymore. I get excited when she talked about it with me because she explained that she didn't think she would ever be walking without a walker again. I worked with more patients than usual with one of the aides being on vacation and a new therapist began working in the clinic. I had to balance three patients with different exercises at once, which was I challenge, but I thought it was fun and it kept me busy.

#### What am I learning?

• The importance of being on time. When a therapist comes in late to work it affects everyone else in the clinic. The patients are seen late and feel neglected. The other therapists also feel the need to pick up on the slack and have to figure out treatment for patients that aren't being seen.

## What comes naturally?

Handling many things at once and focusing on multiple patients at a time.

## What is challenging for me?

• Working with patients that have given up and are experiencing a lot of pain. This week I worked with an elderly patient that is handicapped and in so much pain that during the whole treatment session she asked if it was time for her to leave yet. She felt so much pain during the simple, small exercises I was doing with her that she said she hopes she dies. It was very hard for me to witness this and the therapist said she has never seen her that upset before. I have never witnessed someone saying that before, so that was very hard for me. It opened my eyes to the fact that I might have to deal with some patients that are in very poor condition and will have completely given up. It was a challenge for me to remain positive after this, but I had to remember that there were other patients that I could help and to hope she feels better.

#### What do I really enjoy doing and learning?

• Working with patients that are recovering from athletic injuries. One patient this week is recovering from a dislocated shoulder due to a football injury. This patient was fun for me to work with because we got to come up with exercises that were really challenging for him that most patients would be incapable of performing. It was nice to work with such a healthy individual that was interested in fitness after experiencing an elderly woman that was in so much pain and could barely move.

#### What have I learned about people?

• Everyone has a different level of tolerance and some people might reach their breaking point during physical therapy, but it is important that the therapist remains positive and continues to help the patient in any way that he/she can.

#### What have I learned about myself?

• In the future, I will work best in outpatient settings with clients that are healthy individuals. I think I would find it challenging to work in a hospital setting with clients that have more upsetting conditions.

## Week 7: (3/30, 3/31, 4/1, 4/3)

## What am I doing? Describe the work in detail.

Continuing to work with patients and demonstrate exercises as needed. I am improving with giving corrections and noticing any improper form. I feel very comfortable now working with patients and I feel like they are getting more trusting of me as well. I am noticing improvements in many of the patients that I have been seeing since I started working at the facility. I am noticing how appreciative patients are and how much they enjoy coming to this clinic. Several patients have told me they have been coming here for different injuries for several years, and it is good to hear from patients that they have that much trust in the therapists I am learning from. I am constantly being mentored by the therapists I work with and I am continuing to learn new things about the human body and how to delegate exercises.

## What am I learning?

• Tips for deciding where to go for my graduate studies. This week the new therapist, who is a recent graduate and currently doing a residency with Kaiser, was explaining to me some important aspects to look for in graduate school. She told me to research professors of places I am interested in to see if I would enjoy learning from them and to find somewhere that is suited for what I need. She also further instilled in me the importance of asking her and the other therapists questions if I

- have any about any of the treatment the patients are receiving. She explained that the more I learn and understand now, the easier PT school will be.
- I was reminded this week how much knowledge the physical therapists I work with have and that I should be asking them advice for any questions I have about PT school or treatment that is given to patients.

#### What comes naturally?

- Talking about my future. This used to be such a scary thing for me, as for most of my life I had no clue what career I wanted to pursue. Now I am confident that I have found a path that aligns with my aspirations and interests. I am no longer afraid to bring up my future and I get excited discussing it with the PTs and patients.
- Taking criticism and feedback from my supervisors. Many people don't take criticism very well, but I have learned that if someone is helping you with something you have done wrong it is usually because they see potential in you and are trying to make you better at what you are doing.

#### What is challenging for me?

• This week I found it very hard to balance my job and schoolwork with a heavier workload than normal. It was difficult for me to stay focused at work when I was thinking about school. This is a lesson I can learn from because there will always be other things going on in life, but as a therapist it is important to stay focused on your patient and ensure that they are constantly receiving the best care you can give them.

## What do I really enjoy doing and learning?

• Working with different types of people. People of various age and lifestyles come in to this clinic and I enjoy that I get to experience working with different type of people. I find that I have more positive experiences on the days that I get to work with patients with different personalities because it reminds me that every client is different and not all patients can be treated in the same way.

## What have I learned about myself?

• Throughout the years I am becoming more and more outgoing. I used to be very shy when I was younger and I am now noticing that I have no problem talking with people and I enjoy having conversations with the people I work with. Being able to constantly communicate with patients is a necessity for a physical therapist.

## Week 8: (4/6, 4/8, 4/10)

## What am I doing? Describe the work in detail.

I am beginning to understand the main tendencies and types of treatments that the different therapists use at the facility. I have also noticed that the patients get used to these tendencies and they notice a difference when they are working with other therapists. I am continuing to work with patients, mostly one on one, which allows me to really focus on

how they are performing the exercises and if they are feeling the activation of the right muscles.

#### What am I learning?

• Some patients have a lower tolerance when it comes to exercises and they will express they are feeling pain. I have learned that it is important to distinguish if they are feeling pain in their injured site, or if what they are feeling is really just the muscle working. Some patients aren't accustomed to the "burn" sensation that is felt when muscles are activated during exercise, which is just a sign that the muscle is working the way it is supposed to. I have learned to ask follow up questions when a patient tell me they have pain because if it is only the muscle working that generally isn't a sign to stop the exercise.

#### What comes naturally?

• Talking patients through an exercise. A lot of the time patients will want to quit when they are becoming fatigued during activity and I enjoy trying to motivate them to continue with the exercise.

#### What is challenging for me?

• From having a background in anatomy and athletics, I have grown accustomed to being able to fire and activate specific muscles that are needed during an exercise. Something that has been challenging for me is getting the patient to feel the right muscle working when they don't feel the exercise doing anything. Usually only minor adjustments need to be made to their technique, but sometimes it is difficult for me to figure out what adjustment will help them further activate the muscle.

## What have I learned about people?

• Most people coming into treatment want to know the specifics of what certain modalities or exercises are doing to help with their injuries. Patients are usually more trusting of an exercise when I explain to them the importance of it and how it will help them with their recovery process.

## Week 9: (4/15, 4/17)

## What am I doing? Describe the work in detail.

This week I was pulled aside by my supervisor and was told that I need to be more proactive with continuously correcting patients throughout their exercises and constantly make sure they are doing everything correctly. I then tried to make sure that I fully understood any exercise that I usually do with patients and I asked her for clarification with some exercises that I was confused about.

#### What am I learning?

• It is extremely important that patients have proper alignment and form in all aspects of an exercise. Karen told me that if there is anything that is even slightly wrong it needs to be fixed because they patient will not be getting everything out of the exercise, and will not recovery as quickly.

#### What is challenging for me?

• Understanding some of the exercises that are not ones I am used to and have been newly discovered at our facility. Many of the exercises involve alignment that is opposite of some that I have always learned with my dance training so it is difficult to figure out when the patient is doing it properly.

#### What questions do I have?

 What are the best way to instruct patients through exercises without them getting overwhelmed?

## Week 10: (4/20, 4/22, 4/24)

#### What am I doing? Describe the work in detail.

This week I really tried to focus on Karen's advice and I corrected anything that I saw wrong in a patient's performance even if it was a tiny adjustment. I am trying to figure out a way to balance the constant corrections without overwhelming the patients, because some of the patients have a hard time performing multiple corrections.

#### What am I learning?

• Patients are more appreciative when you give them corrections with the exercises. One patient I worked with was performing various planking exercises and I corrected him on even the slightest deviations I saw. After we were finished with his exercises he thanked me for making sure he was doing the exercise properly and not letting him slack off. He said that not many people do that and it made me happy that I was able to teach him how to do his exercises the right way.

## What comes naturally?

Having compassion for patients and knowing when they need to take it easy. Some
days patients will come in with more pain than usual and I am naturally very
understanding of this because I don't want them to leave with more pain than they
came in with. I have learned how to adjust exercises to ensure that they put less
stress on the body so the patient doesn't have to be in pain.

#### What is challenging for me?

• Staying motivated at work with a heavier school load. I had a heavy school load this week with projects and tests, so I always felt like I had other things that were more important to do than being at work. With that being said, I am trying to find ways to stay focused on my work and stay positive throughout the day because there will be many times when I am working as a physical therapist that I will have other things going on. It is important to keep any baggage outside of the clinic to give the patient the best care possible.

#### What have I learned about people?

• Everyone has their good days and their bad days. There will be times that patients will come in from a really bad day and this might make them like focused and committed during their session. I have found that remaining positive when working with the patients can help them feel better and can sometimes get them out of a bad mood they may have had open arrival.

#### What questions do I have?

• What lessons from my aide position are most important to remember and continue to improve upon in my future practice?

#### PHYSICAL THERAPY GRADUATE EDUCATION

#### **DOCTORATE OF PHYSICAL THEARPY APPLICATION REQUIREMENTS**

According to the American Physical Therapy Association (APTA) the course prerequisites for Doctorate of Physical Therapy programs across the United States are as follows:

#### **Anatomy and Physiology**

98% require at least one course in anatomy, physiology, anatomy & physiology I (A&P I), or anatomy & physiology II (A&P II).

#### **Biology**

86% require one or more courses in biology or biological science

#### Chemistry

98% require one or more courses in chemistry

#### **Physics**

100% require one or more courses in physics

#### Math

24% require one or more courses in physics

#### Social and Behavioral Sciences

94% require one or more courses in psychology or social/behavioral science

#### Statistics

96% require a course in statistics

#### Other Application Requirements:

These are variable depending on the graduate program, but the majority of schools require the completion/submission of:

- A minimum cumulative GPA
- GRE scores
- Letters of recommendation
- PT observation hours
- PTCAS (Physical Therapist Centralized Application Service) application
- Program specific supplemental application

# SPECIFIC D.P.T. PROGRAM REQUIREMENTS

# UNIVERSITY OF SOUTHERN CALIFORNIA

The Doctor of Physical Therapy program at USC is one of the premier programs in the country. This distinction derives from a mission that includes the advancement of physical therapy education, practice, and research. Because of this, students in our program benefit from a dynamic learning environment where patient care and research are actively integrated. Faculty are national and international leaders engaged in teaching and research with a focus on increasing the quality and understanding of physical therapy practice and science.

# **Prerequisite Courses**

- Biological Sciences- 4 semesters
  - o Must include Human Anatomy & Physiology I/II
- Chemistry- 2 semesters
- Physics- 2 semesters
- Psychology- 2 courses
- Statistics and Mathematics- 1 statistics course

#### **GPA**

Minimum cumulative undergraduate GPA of 3.0

## **Letters of Recommendation**

- 1 from a licensed PT
- 1 from a professor
- 1 from a PT, professor in major, academic, superviser/employer, pre-PT advisor, or health care professional

# Work Experience

• 150 hours of paid or volunteer experience

# **Graduate Record Exam (GRE)**

 A minimum score of 500 (General Test) or 150 (Revised General Test) for each component

#### Application

- PTCAS Application
- USC Graduate School Supplemental Application
- Deadline: December 1, 2015

Website: http://pt.usc.edu/DPT/

# UNIVERSITY OF CALIFORNIA, SAN FRANCISO

The Entry-level Doctor of Physical Therapy (DPT) degree is a 3 year joint program between University of California, San Francisco (UCSF) and San Francisco State University (SFSU). The program runs for 36 continuous months beginning in June and includes 32 weeks of full-time clinical affiliations. This program is designed to prepare scholarly clinicians, educators, collaborative clinical researchers, administrative managers and community leaders. The program accepts 50 students each year. The curriculum is built on a strong theoretical foundation in basic, medical and applied sciences. Critical thinking and clinical reasoning skills are developed within an integrated program that prepares students to work collaboratively with patients across the lifespan to improve health and wellness, address disability challenges, and optimize function.

# **Prerequisite Courses**

- General Chemistry with Lab- 2 semesters
- General Physics with Lab- 2 semesters
- Human Anatomy and Physiology with Lab- 2 semesters
- General Microbiology/ Upper Division Biology- 1 course
- Abnormal Psychology- 1 course
- Introduction to Statistics- 1 course

#### **GPA**

Minimum cumulate undergraduate GPA of 3.0

#### Letters of Recommendation

- 1 from a licensed PT
- 2 from science professor, health professional, employer

#### Work Experience

• 150 hours of paid or volunteer experience

## Graduate Record Exam (GRE)

- Minimum 50<sup>th</sup> percentile on both verbal and quantitative reasoning sections
- Minimum 4.5 on analytical writing section

#### **Application**

- PTCAS Application
- UCSF Supplemental Application
- Deadline: October 1, 2015

Website: http://ptrehab.ucsf.edu/education/dpt

# MGH INSTITUTE OF HEALTH PROFESSIONALS

The Physical Therapy Program at the Institute prepares clinicians who recognize that physical therapist practice is centered on the human movement system. The faculty embrace the view that active adult learning is a process by which students employ an ongoing interpretive and reflective process that synthesizes prior and current experiences into new learning. This best happens within a learning community that continually strives for clinical excellence and professionalism among faculty, students and graduates. The program is structured to be fluid, proactive and responsive in meeting the present and future needs of its students and of health care, including the incorporation of modern technology and innovation into education and practice. Recognizing the responsibility to prepare members of a doctoring profession, the program prepares self-directed, life-long, collaborative learners who are able to use scientific and analytic approaches to clinical decision-making to achieve optimal patient care through evidenced-based practice.

# **Prerequisite Courses**

- Biology-1 course
- Chemistry with Lab- 2 semesters
- Physics with Lab- 2 semesters
- Human Anatomy and Physiology with Lab- 2 semesters
- Exercise Physiology- 1 course
- General Psychology- 1 course
- Statistics- 1 course

#### **GPA**

Minimum cumulate undergraduate GPA of 3.0

# Letters of Recommendation

- 1 from an academic advisor or professor
- 2 an academic advisor, PT, professor, supervisor/employer, pre-PT advisor, or health care professional

# **Work Experience**

• 10 hours of paid or volunteer experience

# **Graduate Record Exam (GRE)**

No minimum score requirement.

# Application

- PTCAS Application
- MGH Supplemental Application
- Deadline: November 1, 2015

**Website:** http://www.mghihp.edu/academics/physical-therapy/doctor-of-physical-therapy/default.asp

# UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

The faculty of the UNC Division of Physical Therapy are committed to developing graduates who are effective communicators, critical thinkers, and skilled at integrating evidence into practice. Graduates demonstrate excellence in diagnosis, intervention, consultation, and teaching, administration and are effective at working with patients across the lifespan and the continuum of care. Our educational focus is on preparing clinicians as skilled direct access ready physical therapists with a broad background upon which they may later choose to develop expertise as a specialist. In addition, our graduates gain an appreciation for a life-long career commitment and professional development for integration with other health care disciplines and for community service.

# **Prerequisite Courses**

- Biology with Lab- 1 semester
- Chemistry with Lab- 1 semester
- Physics with Lab- 2 semesters
- Human Anatomy and Physiology with Lab- 2 semesters
- Exercise Physiology- 1 course
- Abnormal or General Psychology- 1 course
- Developmental or Child Psychology- 1 course
- Statistics- 1 course

#### **GPA**

- Minimum cumulate undergraduate GPA of 3.0
- Minimum prerequisite GPA of 3.2

#### Letters of Recommendation

- 1 from a licensed PT
- 2 an academic advisor, PT, professor, supervisor/employer, pre-PT advisor, health care professional, clergy, co-worker, PTA, teaching assistant, or politician

# Work Experience

• No minimum requirement

# **Graduate Record Exam (GRE)**

Minimum 20<sup>th</sup> percentile in all categories

# **Application**

- PTCAS Application
- UNC Supplemental Application
- Deadline: October 15, 2015

Website: http://www.med.unc.edu/ahs/physical/programs/DPT

#### NORTHWESTERN UNIVERSITY

The Department of Physical Therapy and Human Movement Sciences maintains the richest possible educational environment through the enrollment of a diverse student body, one that represents applicants from underrepresented populations, applicants with work experience, and applicants from the smallest to the largest of our nation's colleges and universities. Our department attracts faculty and students from all areas of the United States and from around the world. The Admissions Committee looks for evidence of emotional maturity, motivation, achievement, character, and academic excellence. A premium is placed on the breadth, depth and rigor of the academic program, life experiences, and clinical and research exposure.

# **Prerequisite Courses**

- Behavioral Sciences- 12 semester hours
- Biological Sciences- 12 semester hours
- Calculus- 3 semester hours
- Chemistry- 8 semester hours
- Composition/Writing- 3 semester hours
- Physics- 8 semester hours
- Statistics- 3 semester hours

#### **GPA**

- Minimum cumulative undergraduate GPA of 3.0
- Minimum prerequisite GPA of 3.0

# Letters of Recommendation

- 1 from a licensed PT
- 1 from a professor
- 1 from an employer/supervisor

#### Work Experience

Hours are required, but no minimum amount

## **Graduate Record Exam (GRE)**

• No minimum score requirement.

## Application

- PTCAS Application
- Northwestern Supplemental Application
- Deadline: October 1, 2015

#### Website:

http://www.feinberg.northwestern.edu/sites/pthms/admissions/dpt/index.html

# **BOSTON UNIVERSITY**

The physical therapy program at Boston University is designed to educate physical therapists to be lifelong learners, critical thinkers, evidence-based practitioners, ethical care givers and effective clinicians who will creatively and successfully meet the challenges of the evolving health care system. We believe that altered human movement is best understood using a functional systems approach. It is the examination of function that drives the subsequent comprehensive physical therapy examination and intervention. Our faculty include master clinicians, most with clinical specialization certification, and world-renowned rehabilitation researchers who bring their expertise and passion to the classroom. Evidence based practice is a core value of the physical therapy program, as are health promotion, wellness, and prevention of injury or disease. The design of the curriculum fully prepares our graduates as generalists who can pursue careers in any clinical practice setting.

# **Prerequisite Courses**

- Human Anatomy and Physiology- 8 semester hours
- Biology- 4 semester hours
- Chemistry- 8 semester hours
- Exercise Physiology- 4 semester hours
- Composition/Writing- 3 semester hours
- General or Developmental Psychology- 3 semester hours
- Statistics- 3 semester hours

#### **GPA**

Minimum prerequisite GPA of 3.82

# Letters of Recommendation

- 1 from an academic advisor or professor
- 2 from PT, professor, employer/supervisor, teaching assistant, PTA, pre-PT advisor, health care professional, or co-worker

# **Work Experience**

Minimum 30 hours of paid or unpaid experience required

# **Graduate Record Exam (GRE)**

- Minimum score of 150 on verbal reasoning
- Minimum score of 141 on quantitative reasoning
- Minimum 3.5 on analytical writing scaled score

# Application

- PTCAS Application
- Deadline: December 15, 2015

**Website:** http://www.bu.edu/sargent/academics/programs/physical-therapy/doctor-of-physical-therapy/

# **COLUMBIA UNIVERSITY**

The Program is one of the oldest yet exceptionally progressive programs to educate students wishing to enter the profession of physical therapy. As an integral part of the College of Physicians and Surgeons, the Program is guided by the principle that the acquisition of knowledge and skills is important in professional education, but far more vital is an understanding of the science, the art and the ethic within which both knowledge and skill are applied. The Program builds its curriculum, selects its faculty and assembles its clinical experiences to develop in its students this understanding of physical therapy.

# **Prerequisite Courses**

- Human Anatomy and Physiology- 8 semester hours
- Biology- 8 semester hours
- Upper Division Biology- 3 semester hours
- Chemistry- 8 semester hours
- Physics- 8 semester hours
- Humanities and Social Sciences- 5 courses
- Psychology- 6 semester hours
- Statistics- 3 semester hours

# **GPA**

- Minimum cumulative undergraduate GPA of 2.75
- Minimum prerequisite GPA of 2.75

#### Letters of Recommendation

- 2 from a professor
- 1 from a licensed PT
- 2 from PT, professor, employer/supervisor, teaching assistant, PTA, pre-PT advisor, health care professional, or co-worker

# **Work Experience**

Minimum 75 hours of paid or unpaid experience required

# **Graduate Record Exam (GRE)**

- Minimum score of 156 on verbal reasoning
- Minimum score of 146 on quantitative reasoning
- Minimum 3.5 on analytical writing scaled score

# Application

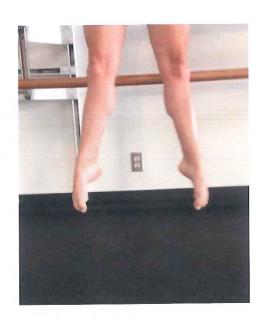
- PTCAS Application
- Deadline: December 1, 2015

Website http://www.columbiaphysicaltherapy.org/about-us

# DANCE INJURY PAMPHLETS

# Patellar Tendinitis

(Jumper's Knee)



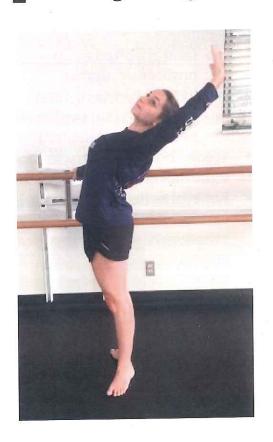
**DANCE 461: Senior Thesis Project** 

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

By: Tegan Hayek

# **Spondylolysis**



**DANCE 461: Senior Thesis Project** 

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

# Shoulder Impingement



**DANC 461: Senior Thesis Project** 

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

By: Tegan Hayek

# Hamstring Strain



DANC 461: Senior Thesis Project

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

# Lateral Ankle Sprain



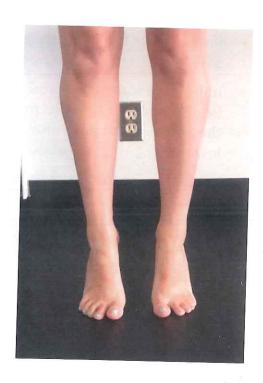
DANC 461: Senior Thesis Project

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

By: Tegan Hayek

# Medial Tibial Stress Syndrome (Shin Splints)



**DANCE 461: Senior Thesis Project** 

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

# Coxa Saltans (Snapping Hip Syndrome)



DANC 461: Senior Thesis Project

# EXPLORING PHYSICAL THERAPY:

Gaining Career Perspectives and Knowledge of Injuries

By: Tegan Hayek

# Achilles Tendinitis



DANC 461: Senior Thesis Project

# **EXPLORING PHYSICAL THERAPY:**

Gaining Career Perspectives and Knowledge of Injuries

# LMU POST REFLECTION In response to the LMU Mission Statement

Throughout my time at LMU and concentration towards my double majors, I found it challenging to assimilate my dance and science majors and find a way to connect these academics. Unexpectedly, my thesis promoted an understanding of academic-artistry and an integration of these two passions, as I was able to combine both the academic aspect of human sciences research with my dance artistry. During my multiple internship experiences, I discovered that physical therapists are unexpected artists. It takes great artistry to be able to constantly envision new rehabilitation methods and create treatment plans that are unique for each individual. My artistry has molded me into the person that I am—it has given me a stubborn persistence, curiosity, and a perseverance that I would not have without my dance experience. I think all of these qualities combined with a constant yearning to continue with my individual growth and academia will make me a well-educated physical therapist.

To treat patients at the best of your ability the full being (mind, body, and spirit) must be devoted to their care. Any health profession is going to involve constant exploration of the mind and rely heavily on medical knowledge. Physical therapists must have a constant awareness to be able to assess patients rationally and formulate a plan of treatment thoughtfully. The body is used as a tool to implement therapeutic techniques and perform functional exercises that assist the patient throughout the recovery process. The spirit is what motivates the therapist to treat the patient. After observing more than ten therapists in three different settings, I noticed a common ambition and desire to help

people. The human spirit is what drives this aspiration and yearning to make people feel better than when they first came in for treatment.

There is the quality of selflessness in admirable physical therapists that I believe appeals to the service of faith and promotion of justice. It can easily be argued that medical professionals contribute to the greater good and promote justice by treating patients and helping everyone progress towards a healthier and happier lifestyle. But what I believe truly promotes a greater good is doing more for the community than what your profession already requires of you. What I learned during my thesis was that physical therapists have the ability to use their knowledge beyond clinical practice and become a compassionate and integrative member of society.

With my first internship I became increasingly aware of this with their injury treatment and prevention programs that were set up with three of the local high schools. Medical professionals have the capability of spreading their expertise throughout the community and helping those that may not have the educational knowledge, financial capacity, or amenities necessary to become the healthiest individuals that they can be. From working with patients and alongside extremely kindhearted therapists, I learned more about my determination to be mindful of others, treat all individuals with authentic generosity, and become a trustworthy health professional that encourages a greater well-being of others.

# DANCE PERSPECTIVES ESSAY

# The Problem with Hypermobility Among Dancers

The Extreme Demands of Dance as an Art Form

Dance is an art form with elevated aesthetic value. Dance often requires extreme emotional, psychological, and physiological demands of the body. Dancers place a great capacity of stressors on their bodies and often perform with a limited off-season. Due to the limited rest received and high intensity placed on the musculoskeletal system, dancers are habitually prone to injury. Any injury suffered by a dancer can be a cause for serious concern. A severe injury can jeopardize a dance career and a minor injury can impair a dancer's ability to perform for any given amount of time. Many dance forms, particularly contemporary and ballet, demand bodies that are exceedingly flexible and can extend to remarkable ranges of motion. Due to these flexibility requirements, it is often questioned whether hypermobility is a commonality among dancers, and if it allows for a more successful career. If prevalent, it then needs to be considered whether hypermobility is advantageous or detrimental in dance forms that value flexibility aesthetics.

# Hypermobility Defined and Related to Dance

Hypermobility is defined as a greater than normal range of motion in a joint. Two conditions of hypermobility are general joint hypermobility (GJH) and joint hypermobility syndrome (JHS). General joint hypermobility can either be hereditary, gained through training, or due to an onset of injury. With ballet and contemporary dancers constantly training towards gains in range of motion, general joint hypermobility could be a relevant concern. Repetitively pushing joints to extremes can permit dancers to develop general joint hypermobility over a period of time. Joint hypermobility syndrome is only hereditary and cannot be developed through

any other etiology or conditioning. Dancers will not be able to develop JHS from training; they will only be exposed to it genetically. JHS commonly goes overlooked and "includes local or widespread musculoskeletal symptoms and joint laxity" (Ruemper 161). It is thought that JHS can affect the encoding of the connective tissue protein's collagen. A side effect of JHS is "likely to be a lack or control of the hypermobile joint range, the issue then being joint stability" (Ruemper 162). Due to the stresses on the musculoskeletal system, dancers with JHS could have further risk for injuries than dancers with GJH. Dance performance requires stability and control, which could be lacking with JHS. If a dancer has JHS, further strength conditioning may be needed in his or her dance training to develop joint stability.

# The Commonality of Hypermobility in Dancers

Hypermobility is very common among dancers; "epidemiological studies suggest that hypermobility among dancers can be as high as 44%, especially in students" (Day 485) It is debated whether hypermobility is an asset or a deficit for dancers, especially those that perform flexibility tasks. Hypermobility can appear as an advantage amongst both contemporary and ballet students. These dancers need the ability to perform elongated and extended movement as a requirement to the dance form's aesthetic values. Dancers with hypermobile joints are often seen as an asset to a dance company and are frequently chosen in an audition because their lines appear more lengthened. Artistic directors and choreographers often desire dancers who are flexible to perform their intended choreography. Dancers who are hypermobile can usually place their bodies in further ranges than those that are not, which can often give hypermobile dancers a favorable advantage in the dancer selection process (Grahame 111).

An essential component of many dance forms, especially contemporary and ballet, is flexibility; "flexibility of the spine, hips, and ankles is, of course, the hall-mark of the ballet dancer and the presence of hypermobility of these joints would be attributable to training"

(Grahame 109). Hypermobile dancers often have greater flexibility because their lax ligaments are less resistive to stretch than firm ligaments (Grahame 111). Hypermobility may appear as beneficial due to flexibility desires, but a dancer with extreme hypermobility and flexibility is has tremendous risk for injury if they are not getting proper strength training. Hypermobility has been seen to increase from dance training; it is not always fully inherited from genetics. However, since "training is not directed to hyperextending these joints [knees, elbows, and fingers] the presence of hypermobility in them is likely to have been hereditary rather than acquired" (Grahame 111). Dance training often does not favor joints where hypermobility is prevalent, determining a hereditary predisposition factor of hypermobile dancers. Although hypermobility may allow dancers to be selectively chosen, there are many risks associated with joints that are highly mobile.

# Hypermobility and Increased Risk of Injury

It is strongly arguable that being chosen by choreographers is "the only advantage [to hypermobility] as the biological cost of such a capacity is high" (Day 486). The resulting risk of injury from hypermobility in dancers can strongly outweigh the benefit of having an advantage in the audition process. Joints with extreme laxity are more prone to injury due to their fragile structure. Being chosen in an audition for hypermobile joints seems less beneficial if the dancer cannot sustain a career in dance due to constant injury.

Hypermobile individuals have a predisposition for musculoskeletal injuries due to the instability of the joints. Hypermobility is defined by a laxity in joints, which "is at a mechanical disadvantage to the stable joint because extra-muscular effort is required to procure stability before it is moved. This leads to overuse syndromes..." (Bird 585). Joints must enforce stability in order to sustain from injury. This stability will often need further gains through strength training for hypermobile individuals. Dancers with hypermobility may experience a setback

because "people with hypermobility are less accurate in tests of balance and judgment of joint angles. They appear to have an especially difficult time detecting the end-range of movement" (Ruemper 161). With the extreme positions required in dance, it is essential that dancers know the limits of their bodies and how far they can extend their extremities.

Dancers with hypermobility lack firm ligaments, which are essential to strength, power, and even endurance. Instability in the joints decreases a dancer's ability to balance, which is necessary in his or her training. If dancers cannot detect the appropriate end-range of movement, they may force their bodies beyond its limits, which can lead to muscle strains, ligament sprains, or tears. Ligaments allow for control of the joints, and a lack in this can result in a giving way causing numerous injuries ranging in severity. Hypermobility makes a dancer's musculoskeletal structures more susceptible to injury.

# Hypermobility and Pursuing Professional Dance

Studies have seen that "injury rates in hypermobile dancers confirm that they have substantially more tendon injuries and longer healing times than normal dancers" (Day 488). If an injury occurs, the recovery may take longer because the dancer will have to put more effort into gaining strength since he or she was already lacking in this the ligament structures. When the increased risk for injury from hypermobility is combined with the high stress dance places on the body and long rehearsals dancers endure, hypermobility can be seen as a significant deficit to a dancer's career.

Although many dance forms have flexibility requirements, hypermobility is not essential for success. Hypermobility is not always seen to be prevalent with professional dancers; "epidemiological studies of hypermobile dancers indicate that although students are selected for hypermobility when auditioning for vocational schools, they are not represented in the higher ranks of professional companies" (Day 487). A decrease in hypermobile dancers from schools to

professional companies could be due to severe injuries that ended the careers of many dancers. If a dancer is extremely hypermobile, the stresses placed on their joints during their training could have severe consequences. A hypermobile dancer might not last to a professional dance career due to a lack of stability in his or her joints. The lack of stability could cause an irreversible injury making it impossible for the dancer to pursue a professional dance career. This indicates the fundamental need for proper technique and strength training for dancers. By strengthening the musculoskeletal structure, hypermobile dancers could decrease the risk for injuries.

# Contemporary Conservatory Research Study

An injury study conducted at a contemporary dance conservatory including a total of 85 contemporary dance students found that 69% of the participants had GJH and 33% of the participants had JHS. This reflects the expected prominence of hypermobility amongst dancers and indicates that hypermobility is a common attribute of contemporary dance students. The results of the study found that 71.76% of the 85 participants had sustained one or more injuries over a one year training period, totaling in 124 injuries overall. The injuries were classified as either physical complaints, medical in nature, or time-loss injuries. The time-loss injuries were the most detrimental to dancers in severity and training loss during a recovery period (Ruemper 161-165).

Further observations revealed that the JHS participants accounted for 58 injuries, GJH participants accounted for 79 injuries, and those with no hypermobility had a total of 30 injuries. Therefore, most of the injuries sustained from the dancers in this study were from those suffering from hypermobility. There was a significant correlation seen been time-loss injuries and those with JHS. 71% of all the time-loss injuries, which were most severe, were found in the JHS participants (Ruemper 161-165). Time-loss injuries are detrimental to a dance career because the dancer can experience atrophy and a decrease in endurance while resting from training. This

could result in a larger deficit when the dancer returns to training, as he or she will have to rebuild the strength that was lost.

This study exposed that for this particular dance conservatory, a large majority of the students have a hypermobility condition. Much of these particular circumstances were more likely hereditary, however contemporary dance training most could also have contribution to some of the GJH cases. A main goal for these dancers was to increase their ranges of motion, as flexibility is an essential component of contemporary dance. The stretching performed in dance training to increase range of motion can contribute to the laxity in ligaments, which can increase risk of injury. Risk of injury is especially high if proper strengthening is not included in the dance training and hypermobility is not supported with appropriate muscular strength.

Another finding of this study was that "the prevalence of JHS appeared to decrease as the dancers progressed from student to professional status...suggesting dancers with JHS most likely become to injured to continue dancing at the professional level" (Ruemper 162). If proper strengthening is not applied for the musculature to support the joints, hypermobile dancers may experience injury severity that has potential to end their dance career. Hypermobile dancers need to pursue further precautions to prevent damage to their bodies that could end a career they have put immense training towards. Dance teachers and directors should also be made aware of the susceptibility for injuries with further ranges of motion and should include exercises to prevent injury in their repertoire.

# Professional Ballet Injury Risk Study

The Cape Performing Arts Board conducted a study among a professional ballet company to determine the prevalence of hypermobility and injuries sustained over a ten-year period with the purpose of determining the role of hypermobility as a risk factor to injury. This study did not find significance between hypermobility and increased injury risk because only two of the ballet

dancers were classified as hypermobile. The study did find that "soft tissue injuries involving ligaments and muscles were encountered most frequently" (Klemp 145). Hypermobile individuals are more vulnerable to ligament and musculature injuries as previously discussed, however this study only had two individuals that were hypermobile accounting for the lack of correlation in the research. It could also be noted from this study that the professional ballet had a lack of hypermobile dancers, which could be due to injuries that prevented dancers from pursuing a professional career.

Hypermobility is often accompanied by permissive ligaments, which presents a greater risk for musculoskeletal injuries. A dancer already has a predisposed risk for ligament injuries due to the heavy amount of stress placed on the muscles and joints with inadequate rest periods. Hypermobility can further allow for ligament injuries and increase the risk for severity. With musculoskeletal injuries being the most common among dancers, hypermobile individuals must be careful to ensure that they attempt to not place unneeded stress on their more lenient joints. Dance training requires extreme athleticism, and dancers need to train their bodies to withstand the great forces that come with performance.

# Hypermobility Awareness and Injury Prevention

If dancers who have a hypermobility syndrome are made aware of their conditions, proper training can be enforced to prevent injury. Stability can be improved among hypermobile dancers with strength conditioning to increase muscular control. Dancers should be taught to prevent fully giving into their hyperextension because it applies unwanted pressure on the musculoskeletal system. Hypermobility is an aesthetic component of dance and increasing range of motion is an important part of dance training. However, this increase in mobility needs to be supported with proper muscular control to prevent the giving way of joints. Dancers and dance educators should be made aware of the risks with hypermobility and injury prevention programs

should be implemented. Injuries can be further avoided with a close collaboration of choreographers and the company physician or physical therapist. Hypermobility may predispose dancers to injury, but if proper measures are taken in training, the pursuit of a professional dance career is a successful possibility.

# Bibliography

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# The Problem with Hypermobility Among Dancers

Dance 459: Senior Thesis

Tegan Hayek

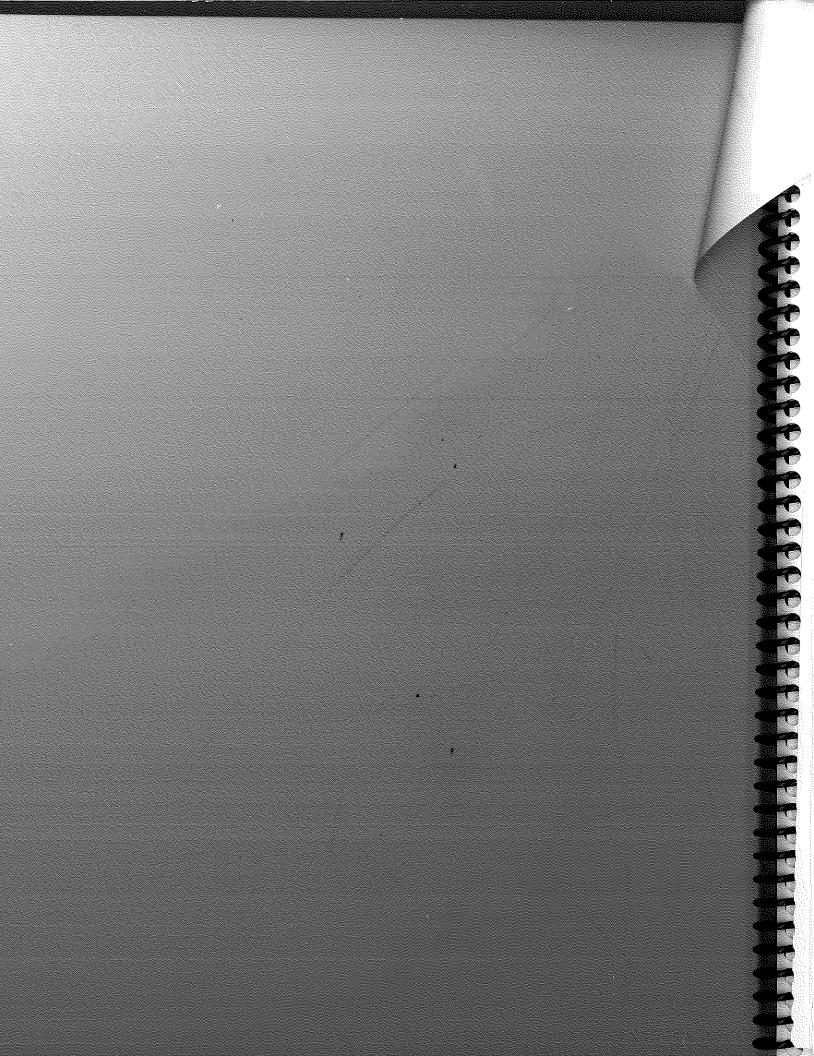
December 12, 2014

# The Extreme Demands of Dance as an Art Form

Dance is an art form with elevated aesthetic value. Dance often requires extreme emotional, psychological, and physiological demands of the body. Dancers place a great capacity of stressors on their bodies and often perform with a limited off-season. Due to the limited rest received and high intensity placed on the musculoskeletal system, dancers are habitually prone to injury. Any injury suffered by a dancer can be a cause for serious concern. A severe injury can jeopardize a dance career and a minor injury can impair a dancer's ability to perform for any given amount of time. Many dance forms, particularly contemporary and ballet, demand bodies that are exceedingly flexible and can extend to remarkable ranges of motion. Due to these flexibility requirements, it is often questioned whether hypermobility is a commonality among dancers, and if it allows for a more successful career. If prevalent, it then needs to be considered whether hypermobility is advantageous or detrimental in dance forms that value flexibility

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widespread musculoskeletal symptoms and joint laxity" (Ruemper 161). It is thought that JHS can affect the encoding of the connective tissue protein's collagen. A side effect of JHS is "likely to be a lack or control of the hypermobile joint range, the issue then being joint stability" (Ruemper 162). Due to the stresses on the musculoskeletal system, dancers with JHS could have further risk for injuries than dancers with GJH. Dance performance requires stability and control, which could be lacking with JHS. If a dancer has JHS, further strength conditioning may be needed in his or her dance training to develop joint stability.

The Commonality of Hypermobility in Dancers

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An essential component of many dance form, especially contemporary and ballet, is flexibility; "flexibility of the spine, hips, and ankles is, of course, the hall-mark of the ballet dancer and the presence of hypermobility of these joints would be attributable to training" (Grahame 109). Hypermobile dancers often have greater flexibility because their lax ligaments

are less resistive to stretch than firm ligaments (Grahame 111). Hypermobility may appear as beneficial due to flexibility desires, but a dancer with extreme hypermobility and flexibility is has tremendous risk for injury if they are not getting proper strength training. Hypermobility has been seen to increase from dance training; it is not always fully inherited from genetics. However, since "training is not directed to hyperextending these joints [knees, elbows, and fingers] the presence of hypermobility in them is likely to have been hereditary rather than acquired" (Grahame 111). Dance training often does not favor joints where hypermobility is prevalent, determining a hereditary predisposition factor of hypermobile dancers. Although hypermobility may allow dancers to be selectively chosen, there are many risks associated with joints that are highly mobile.

# Hypermobility and Increased Risk of Injury

It is strongly arguable that being chosen by choreographers is "the only advantage [to hypermobility] as the biological cost of such a capacity is high" (Day 486). The resulting risk of injury from hypermobility in dancers can strongly outweigh the benefit of having an advantage in the audition process. Joints with extreme laxity are more prone to injury due to their fragile structure. Being chosen in an audition for hypermobile joints seems less beneficial if the dancer cannot sustain a career in dance due to constant injury.

Hypermobile individuals have a predisposition for musculoskeletal injuries due to the instability of the joints. Hypermobility is defined by a laxity in joints, which "is at a mechanical disadvantage to the stable joint because extra-muscular effort is required to procure stability before it is moved. This leads to overuse syndromes..." (Bird 585). Joints must enforce stability in order to sustain from injury. This stability will often need further gains through strength training for hypermobile individuals. Dancers with hypermobility may experience a setback

1000 1000 1000 because "people with hypermobility are less accurate in tests of balance and judgment of joint angles. They appear to have an especially difficult time detecting the end-range of movement" (Ruemper 161). With the extreme positions required in dance, it is essential that dancers know the limits of their bodies and how far they can extend their extremities.

Dancers with hypermobility lack firm ligaments, which are essential to strength, power, and even endurance. Instability in the joints decreases a dancer's ability to balance, which is necessary in his or her training. If dancers cannot detect the appropriate end-range of movement, they may force their bodies beyond its limits, which can lead to muscle strains, ligament sprains, or tears. Ligaments allow for control of the joints, and a lack in this can result in a giving way causing numerous injuries ranging in severity. Hypermobility makes a dancer's musculoskeletal structures more susceptible to injury.

# Hypermobility and Pursuing Professional Dance

Studies have seen that "injury rates in hypermobile dancers confirm that they have substantially more tendon injuries and longer healing times than normal dancers" (Day 488). If an injury occurs, the recovery may take longer because the dancer will have to put more effort into gaining strength since he or she was already lacking in this the ligament structures. When the increased risk for injury from hypermobility is combined with the high stress dance places on the body and long rehearsals dancers endure, hypermobility can be seen as a significant deficit to a dancer's career.

Although many dance forms have flexibility requirements, hypermobility is not essential for success. Hypermobility is not always seen to be prevalent with professional dancers; "epidemiological studies of hypermobile dancers indicate that although students are selected for hypermobility when auditioning for vocational schools, they are not represented in the higher

ranks of professional companies" (Day 487). A decrease in hypermobile dancers from schools to professional companies could be due to severe injuries that ended the careers of many dancers. If a dancer is extremely hypermobile, the stresses placed on their joints during their training could have severe consequences. A hypermobile dancer might not last to a professional dance career due to a lack of stability in his or her joints. The lack of stability could cause an irreversible injury making it impossible for the dancer to pursue a professional dance career. This indicates the fundamental need for proper technique and strength training for dancers. By strengthening the musculoskeletal structure, hypermobile dancers could decrease the risk for injuries.

# Contemporary Conservatory Research Study

An injury study conducted at a contemporary dance conservatory including a total of 85 contemporary dance students found that 69% of the participants had GJH and 33% of the participants had JHS. This reflects the expected prominence of hypermobility amongst dancers and indicates that hypermobility is a common attribute of contemporary dance students. The results of the study found that 71.76% of the 85 participants had sustained one or more injuries over a one year training period, totaling in 124 injuries overall. The injuries were classified as either physical complaints, medical in nature, or time-loss injuries. The time-loss injuries were the most detrimental to dancers in severity and training loss during a recovery period (Ruemper 161-165).

Further observations revealed that the JHS participants accounted for 58 injuries, GJH participants accounted for 79 injuries, and those with no hypermobility had a total of 30 injuries. Therefore, most of the injuries sustained from the dancers in this study were from those suffering from hypermobility. There was a significant correlation seen been time-loss injuries and those with JHS. 71% of all the time-loss injuries, which were most severe, were found in the JHS

participants (Ruemper 161-165). Time-loss injuries are detrimental to a dance career because the dancer can experience atrophy and a decrease in endurance while resting from training. This could result in a larger deficit when the dancer returns to training, as he or she will have to rebuild the strength that was lost.

This study exposed that for this particular dance conservatory, a large majority of the students have a hypermobility condition. Much of these particular circumstances were more likely hereditary, however contemporary dance training most could also have contribution to some of the GJH cases. A main goal for these dancers was to increase their ranges of motion, as flexibility is an essential component of contemporary dance. The stretching performed in dance training to increase range of motion can contribute to the laxity in ligaments, which can increase risk of injury. Risk of injury is especially high if proper strengthening is not included in the dance training and hypermobility is not supported with appropriate muscular strength.

Another finding of this study was that "the prevalence of JHS appeared to decrease as the dancers progressed from student to professional status... suggesting dancers with JHS most likely become to injured to continue dancing at the professional level" (Ruemper 162). If proper strengthening is not applied for the musculature to support the joints, hypermobile dancers may experience injury severity that has potential to end their dance career. Hypermobile dancers need to pursue further precautions to prevent damage to their bodies that could end a career they have put immense training towards. Dance teachers and directors should also be made aware of the susceptibility for injuries with further ranges of motion and should include exercises to prevent injury in their repertoire.

Professional Ballet Injury Risk Study

The Cape Performing Arts Board conducted a study among a professional ballet company to determine the prevalence of hypermobility and injuries sustained over a ten-year period with the purpose of determining the role of hypermobility as a risk factor to injury. This study did not find significance between hypermobility and increased injury risk because only two of the ballet dancers were classified as hypermobile. The study did find that "soft tissue injuries involving ligaments and muscles were encountered most frequently" (Klemp 145). Hypermobile individuals are more vulnerable to ligament and musculature injuries as previously discussed, however this study only had two individuals that were hypermobile accounting for the lack of correlation in the research. It could also be noted from this study that the professional ballet had a lack of hypermobile dancers, which could be due to injuries that prevented dancers from pursuing a professional career.

Hypermobility is often accompanied by permissive ligaments, which presents a greater risk for musculoskeletal injuries. A dancer already has a predisposed risk for ligament injuries due to the heavy amount of stress placed on the muscles and joints with inadequate rest periods. Hypermobility can further allow for ligament injuries and increase the risk for severity. With musculoskeletal injuries being the most common among dancers, hypermobile individuals must be careful to ensure that they attempt to not place unneeded stress on their more lenient joints. Dance training requires extreme athleticism, and dancers need to train their bodies to withstand the great forces that come with performance.

Hypermobility Awareness and Injury Prevention

If dancers who have a hypermobility syndrome are made aware of their conditions, proper training can be enforced to prevent injury. Stability can be improved among hypermobile dancers with strength conditioning to increase muscular control. Dancers should be taught to

prevent fully giving into their hyperextension because it applies unwanted pressure on the musculoskeletal system. Hypermobility is an aesthetic component of dance and increasing range of motion is an important part of dance training. However, this increase in mobility needs to be supported with proper muscular control to prevent the giving way of joints. Dancers and dance educators should be made aware of the risks with hypermobility and injury prevention programs should be implemented. Injuries can be further avoided with a close collaboration of choreographers and the company physician or physical therapist. Hypermobility may predispose dancers to injury, but if proper measures are taken in training, the pursuit of a professional dance career is a successful possibility.

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# **SUMMARY OF DANCE STUDIES**

# Discussed with Sean Chong-Umeda, Khayla Golucke, and Kelsey Glidewell

# Fundamentals of Dance Composition I and II

- We learned basic choreographic techniques such as space, time, and force.
- We learned ways to alter movement to make more aesthetically pleasing compositions such as repetition, augmentation, and diminution.
- There was an emphasis on having awareness of the space and what is happening around when performing.
- Stress was placed on how to move while keeping attention to all of your body parts and movements.
- We learned how to have more creative improvisations and how to turn improvisation into compositions.
- The use of both direct and indirect pathways was discussed and applied to choreography.
- We had to create a composition based off a sculpture and bring the narrative of the sculpture to life through movement.
- We had to create a partner study in which we worked with a classmate to compose a short phrase while applying the composition concepts discussed.
- We learned how to analyze and critique the compositions of others, while receiving guidance from our peers.
- We learned how to compose movement phrases quickly and embellishing them with choreographic strategies.
- We created a composition on our classmates and presented our work at the end of the spring semester for our final.
- We learned how to create both stationary and travelling movement and the importance of incorporating both into choreography.

# **Dance Styles and Forms**

- We choreographed site-specific studies and learned how to fully use the environment we perform in.
- We created a study focusing on music in which we worked to apply accents in music to our movement and compositions.
- We learned to choreograph with our peers and combine each other's creativities to make a composition.
- We learned different movement motifs and how to apply these to choreography to make it more aesthetically pleasing.
- We focused on giving and accepting constructive criticism and how to apply the

advice from our peers to our studies.

- We created a composition with our peers focusing on music cues and accents.
- A focus was given to enhancing performance skills and qualities.
- This course promoted a deeper understanding for the Laban Efforts and how to apply them to compositions.
- We worked on obtaining a personal dance style and aesthetically pleasing movement qualities.

# **Laban Movement Analysis**

- We focused on analyzing our movement in both dance and our everyday lives.
- We learned about the Laban Efforts of Time, Weight, Flow, and Space.
- We focused on finding what our own movement signatures were and analyzing our typical movement qualities.
- We spent a lot of time observing our peers and analyzing their movement qualities.
- We learned how to use Laban Notation and how to read dance phrases that are written out.
- We discussed the Kinespheres that are used in dance and the effects of directional facings.
- We learned how certain movement qualities and Efforts can portray different expressions and emotions.
- We spent most classes with some improvisational exercise to practice moving through all of the Laban Efforts.
- We learned about the history and life of Rudolph Laban and how he changed the way dance can be taught.

# To Dance is Human: Dance, Culture, and Society

- We discussed the positive impact that the arts can have on society and culture.
- The importance of understanding and accepting other cultures was prevalent.
- We discussed the concept of bodily memory and how it can allow one to recall past experiences.
- We discussed how past experiences and culture we practice make up our identities.
- We studied the effects of dance therapy and how it has shown in improvement in the lives of war veterans.
- We focused on how movement can show relationships between people.
- We had in class discussions to assess our personal views on topics and to learn about the opinions of others.
- We learned that dance can be seen in all forms of movement, even in our daily lives.
- We developed skills to understand and analyze written text and how to connect them to our daily lives.

# **Dance History**

- Focused on the development of dance throughout the world from the court dancing to current jazz dancing.
- We were shown the evolution of dance over time and how the popularity of styles shifted.
- We focused on how dance popularity shifted with the cultural and political movements of the time.
- We learned that dance could be used to make statements relevant to issues of the time.
- We focused on how contact improvisation brought people together and made dance more popular among non-dancers.
- We learned about important choreographers of each time period who made essential developments in dance styles.
- We watched and analyzed important choreographic works of each dance movement and discussed how they impacted dance.
- We learned how to research important dance articles and how to find academic sources to cite for a topic.

# **Principles of Teaching Dance**

- Learned how to create lesson plans that address the appropriate California and national standards.
- Learned how to create assessment plans for grading students.
- We taught practice lessons and recorded videos of teaching examples
- We created a teaching portfolio and learned the requirements for teaching in a school setting.
- We focused on popular dance teaching philosophies and had to write our own teaching philosophy statements.
- We learned different teaching strategies and how to approach different types of students.
- We formed opinions about various teaching approaches and discovered which methods we agree or disagree with.

# **Improvisation**

- Learned all about contact improvisation techniques.
- We focused on how to be a soft supporting base for your partner.
- We focused on having the ability to be lifted by a partner and to trust that he or she will be there for you.
- We learned choreography that needed to be performed with a partner.
- We focused on shifted body weight and how this is different when dancing by yourself or with a partner.

- We discussed the importance of moving based on instinct.
- We focused on the idea of always controlling your body at all times.
- We learned to always move with readiness and being aware of the space and bodies around you.
- We learned about caring for our partners and our own bodies.

#### Ballet

- Focus on keeping all movement controlled.
- Focus on proper body alignment and constantly working from the core.
- We focused on always pointing the feet especially throughout transitional movement.
- Focus on finding proper arm placement and constantly holding the correct position without letting the arms drop.
- We focused on increasing flexibility and range of motion within our movements.
- We learned proper port de bras and where the arms should be in each position.
- We focused on staying light in our movement and using the floor as support for movement.
- We learned how to more precise and articulate with our movements.
- Strength and agility were highlighted in the exercises that were given to perform.
- Focused on how to take techniques applied in barre exercises into center and across the floor work.

## **Modern Dance**

- Worked to increase awareness and promote thoughtful movement.
- Performed both choreographic and improvisational exercises and learned how to combine the two.
- We focused on personal goals and how to better ourselves with our technique and performance.
- We learned how to put individuality into our movement without distracting form the purpose of the exercise.
- We gained an understanding for using the full person—mind, body, and spirit, in our dancing.
- We learned a consciousness for body placement and how to keep this while moving throughout the space.
- Gained an understanding for the concept of momentum and how to use it to our advantage while dancing.
- We learned how to use personal exploration to make discoveries about ourselves and our own movement tendencies.
- We gave a constant focus to the improvement of our technique and skill.

# Jazz

- We addressed the importance of proper technical execution of movement.
- We worked to improve stamina, strength, and flexibility.
- We learned how to perform in both a concert and commercial setting.
- We learned how to be more expressive in our movement.
- We gained an understanding for working in the professional world of dance.
- We studied both the past and present of jazz dance and learned about important choreographers of each era.
- We were challenged to pick up movement quickly and be able to perform it in front of our peers.
- We increased our understanding for musicality and articulation.
- We learned how warm-up should be progressive and lead into the center and across the floor work that would be performed.
- We learned how to give an emotional commitment to a piece of choreography.

#### **World Dance**

# Capoeira

- Gained an understanding for the development of Capoeira and where it originated from.
- Learned how to perform tricks that are used in movement.
- Learned how to take our dance training and apply it into this new form.
- We worked to gain an increase in endurance to be able to perform longer movement phrases.

# Latin Dance and Rhythms (taken at Saint Louis University, Madrid)

- Learned the basic forms of salsa, bachata, and merengue.
- We learned how to improvise movements with a partner and how to be both the leader and the follower with a partner.
- We learned the history of the basic Latin dances and how the became popularized in the culture.
- We learned choreography that was performed in a final showcase at the end of the semester.

#### **Pilates**

- Performed exercises that were given by the Pilates trainers to enhance strength.
- We learned the proper use of Pilates equipment and how to perform exercises on the reformer.
- We learned how to take care of our bodies while we are not dancing and how to prevent injury and illness.

- We learned proper placement in parallel and turned out positions and proper alignment of the spine in movement.
- We focused on developing a body awareness and learning how to have proper body placement to prevent injury
- We focused on maintaining proper breathing techniques throughout the given exercises.
- We learned how to focus on and build a strong core that is central to all dance movement.
- A proper body alignment was promoted in all exercises and was corrected when improper form was being performed.
- We learned exercises that can strengthen each body part individually to build muscle that is needed for our dance training.

# **AESTHETIC STATEMENT**

The process of creating a dance begins with an initial idea. This idea is then evolved with the creation of movement, movement execution, and performance. This process has been repeating so many times throughout history that creating a dance could be treated as a scientific or mathematical process that follows step-by-step instructions. However, dance is an *art* and should therefore be created through innovation and vision rather than using the scientific method. Dancers must be encouraged to delve further into their individual uniqueness, freedom, possibilities, and sensations.

Dance is exhilarating. There is no greater adrenaline rush than being on a dark stage just as the show is about to start, anxiously waiting for the curtain to rise. I have never experienced anything as invigorating as knowing that within seconds you are about to show a group of people a performance that you have put every ounce of effort into perfecting. I know the feeling well: heart racing, hands tremoring, frantically trying to remember how the dance starts. Then all of a sudden the curtain lifts up, the music starts, and all of the anxieties vanish as the dance begins.

Dance allows for the exploration of one's whole being, involving the mind, body, and spirit. Dancers often view it as an escape from the real world and as a sense of release from stressors. What I think is such a unique characteristic in dance is that it allows you to accomplish things that were never believed to be possible, both emotionally and physically. Agnes de Mill once said, "To dance is to be out of yourself. Larger, more beautiful, more powerful. This is power, it is glory on earth and it is yours for the taking." Dance has allowed me to accomplish things that I never knew I was capable of. The accomplishments that I am most proud of are not the physical skills that have progressed, but the ones that have made me more open to humility and experiencing human connections. For me, dance

revealed the power of forming relationships and acquiring wisdom from others. The most beautiful dancing evolves when every aspect—mind, body, and soul—are fully involved with each movement. When a group of dancers performs together, and every single individual is dancing with their whole being, the end result is truly breathtaking

Great dancers have the ability to react to their environment and those surrounding them. Dancers should not ignore others in their environment but rather connections should be formed on some level. Beautiful dancers are the ones who believe they have something to learn from other dancers and try to absorb as much as they can from their experiences. They are eager to build relationships and make physical contact with others. There is a transfer of energy with human touch that is powerful enough to stimulate experiences. These experiences can create relationships that can have various demeanors such as a feeling of support, hostility, compassion, or aggression; but they are never meaningless. Human touch promotes a reaction, and dancers must be willing to engage in this natural human instinct of being close to others.

Dance can allow one to develop meaningful relationships unlike any other art form. The most incredible performances to watch involve the dancers performing with a mental, physical, and emotional bond. There is something stunning about watching a group of dancers and hearing them all breathe in harmony with each other because they are so united. Dancers are not just performing with other bodies on stage; they are performing with individuals who have past experiences of happiness and tragedies. These past experiences can bring an emotional association with movement and connection to other dancers that creates powerful statements and aesthetics.

Dancers have the transformative ability to create movement from authentic passions and sentiment. Dancers should value their own life events, understandings, and meanings and use them to bring authenticity to movement. Humans are emotional beings and the most talented dancers are ones that are vulnerable enough to express their true feelings. Vulnerability requires courage and for a dancer to perform with vulnerability in front of others is a true act of bravery. Vulnerability and humility are essential qualities in dancers. It takes great strength to be able to dig into your emotional soul and bring that to life through movement, but that is the power of dance. Everyone has unique knowledge and opinions and being able to integrate this with dance training is a rewarding accomplishment.

Dancers should always perform from with authentic purpose. Audience members will always try to understand the purpose of a performance. People are constantly searching for the meaning of a dancer's emotion. What I look for during a dance performance is not how the dancers feel, but how the dancers make *me* feel. If dancers genuinely feel an emotion with every sense of their being while on stage and in the process I feel empathy for them, extreme joy, hostility towards them, or any other sincere emotion from watching them—the dancers have done their job. Dance has the power to make both the performer and the audience feel emotional intensity.

The most influential dancers will be so engrossed with passion during their performance that audience members will feel a relationship towards them and might recall a memory or time that they felt that same way. Great performers will reveal so much of themselves on stage that audience members will leave feeling as if they know them on a personal level, even if they have never met before. Whether it's watching a dancer with

such sense of distraught that you become teary eyed or seeing a duet that brings back memory of a past relationship, dance has the power to make you feel tremendous sensations, sentiment, and passion all in one performance and that is truly beautiful.

# MOVING TO A NEW CITY

Sacramento, California

# Dance, Yoga, and Pilates Studios:

http://www.step1danceandfitness.com/

http://www.theballroomofsacramento.com/

http://www.yogashalasac.com/

http://zudayoga.com/

http://saccore.com/

http://www.dfxpilates.com/

# **Newspapers:**

http://www.sacbee.com/

http://www.sacramentomediamarket.com/Newspapers/Weekly.html

# **Transportation:**

http://www.sacrt.com/

http://www.yolobus.com/

# Places to Live:

http://www.zillow.com/sacramento-ca/apartments/

http://www.apartmentguide.com/apartments/California/Sacramento/

http://www.trulia.com/for rent/Sacramento,CA

Arts in the Community:

http://www.sacballet.org/

http://www.sacmetroarts.org/

http://www.sacartsfest.com/

http://www.sacfinearts.org/

https://www.crockerartmuseum.org/

http://www.sacramentoartcouncil.org/

http://www.vergeart.com/

http://www.2ndsaturdaysacramento.com/