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Implementing Physical Therapy Services and Screenings for the Students of the UNLV College of Fine Arts for Health and Injury Prevention: A Service-Learning Approach

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IMPLEMENTING PHYSICAL THERAPY SERVICES AND SCREENINGS FOR THE
STUDENTS OF THE UNLV COLLEGE OF FINE ARTS FOR HEALTH AND
INJURY PREVENTION: A SERVICE-LEARNING APPROACH

By

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

Doctor of Physical Therapy

Department of Physical Therapy
School of Integrated Health Sciences
The Graduate College

University of Nevada, Las Vegas
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Doctoral Project Approval

The Graduate College
The University of Nevada, Las Vegas

May 9, 2024

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College of Fine Arts for Health and Injury Prevention: A Service-Learning Approach

is approved in partial fulfillment of the requirements for the degree of

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Abstract

Individuals who participate in Fine Arts such as orchestra, dance, and theater at high levels are predisposed to injury. Many of these injuries are preventable, and when not adequately managed, they can result in lost rehearsal time and prevent participation in performances required for degree completion. While collegiate athletes typically have access to healthcare resources such as a team physician, athletic trainer, and physical therapist, collegiate performing artists often must navigate the healthcare environment on their own. Furthermore, available healthcare providers may lack knowledge and experience working with performing artists and be less able to treat the unique healthcare needs of these individuals adequately. Thus, the purpose of this service-learning project is to create a mutually beneficial relationship between the University of Nevada Las Vegas Department of Physical Therapy (UNLVPT) and College of Fine Arts (CFA) for the benefit of students from both disciplines.

To address this local gap in healthcare, a group of six second year UNLVPT students completed five hours of professional development coursework related to screening and treating performing artists and then provided pro-bono physical therapy services and dance screens for CFA students over one academic year. Through hands-on practice of clinical skills coupled with faculty mentorship and grand rounds, student physical therapists refined their clinical reasoning and enhanced peer collaboration. Student physical therapists and faculty mentors met regularly to discuss quality improvement strategies in real time to refine and enhance clinic operating procedures.

During this project, student physical therapists provided 16 individual patients a total of 48 skilled physical therapy treatment sessions, and three individuals received an evidence-based injury prevention screen for dancers. This project's outcomes were

assessed via satisfaction surveys for CFA students, post-project reflective journaling for PT students, and an information interview with one CFA faculty member. Given that verbal feedback was received from only one professor in the CFA, the generalizability of the faculty satisfaction assessment is limited. The response rate for the CFA student satisfaction survey was 37%, and 24% of CFA students met all therapy goals. Common themes found in the comments from the CFA student satisfaction survey included attentiveness of PT students to patients' needs and desire for increased clinic hours of operation. Common themes found in the reflections of the PT students included improved confidence and opportunity to enhance clinical reasoning skills with mentorship. While no definite conclusions can be drawn from this limited data from CFA students and faculty, the positive feedback and constructive criticism offers promise for the continued improvement of the project and ongoing collaboration between the Department of Physical Therapy and the College of Fine Arts.

This project outlines a potential model for student physical therapist service learning that can enrich physical therapy education, while also enhancing the unique skills of physical therapists to better serve individuals within the collegiate performing arts community who may be underserved. This service-learning project design may inform similar projects in academic settings and with similar community needs.

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1. Introduction

Evidence supports the need for finding effective treatments for the musculoskeletal injuries sustained by professional and pre-professional performing artists.¹ This need is highlighted by the increased incidence of musculoskeletal injury in pre-professional dancers which was observed to be 76% over the span of 4 years of training.² Injury rates are also impacted by the style of dance which can also predispose an artist to different types of injuries. For example, while a higher incidence of foot and ankle-associated injuries is found in ballet dancers,¹ other forms of dance present a higher incidence of hip and groin injuries.² However, musculoskeletal injuries are not unique to dancers. A study of professional Australian orchestral musicians found that 84% of musicians reported their performance was affected by persistent injuries.³ More than half of musicians suffer injuries from playing their instruments,⁴ and this prevalence increases with age.⁵ This high incidence of injury in fine arts performers demonstrates the need for effective and efficient healthcare solutions.

Previous research has shown that screening and intervention performed by physical therapists are effective ways to prevent and treat injuries in the ballet dancer population.^{1,6} Ballet dancers have benefitted from physical therapy interventions such as manual therapy, shockwave treatments, home exercise programs, and dry needling. These benefits included decreased pain, increased range of motion, improved functional status, posture, gait, and quality of life.¹ Furthermore, when provided with on-site physical therapy services, orchestral musicians who received triage sessions consisting of patient education, basic management of acute injuries, and referral to necessary healthcare providers self-reported these services to be beneficial.³ One study observed that most injuries experienced by musicians were considered to be

preventable or manageable through education and physical therapy interventions.³

Overall, the literature supports the benefit of physical therapy for performing artists in treating and preventing injuries.

While there is sufficient evidence to suggest that physical therapy can be effective, performing artists face several obstacles when seeking this type of medical care. One of these barriers includes the lack of access to healthcare providers who fully appreciate the physical demands associated with their discipline.⁷ When being compared to more traditional sports at the same level of competition, pre-professional dancers typically do not have equivalent access to healthcare.⁷ For example, collegiate athletes have several healthcare resources at their disposal including team physicians, athletic trainers, and sometimes physical therapists, while performing artists are often left to seek out their own services.⁸ A 2018 study found that 55% of 211 university level dancers who sought medical attention had a negative experience with the care they received.⁸ The same study found that the main contributor to their poor experience was the lack of relevant and applicable care.⁸ Healthcare practitioners may lack the specific knowledge necessary to fully understand dance-related injuries and what is required for dancers to perform at the highest levels.⁸ Additionally, students are often already burdened with financial hardship due to student loans and costs associated with seeking higher education, causing them to be less likely to seek professional healthcare even after injury.⁹ The combination of these factors creates a pressing need for affordable and accessible healthcare for fine arts students.

A free physical therapy clinic at UNLV has the potential to reach hundreds of students enrolled in the College of Fine Arts (CFA).¹⁰ This clinic can help to address the need in this underserved population.

2. Purpose/Objectives

This service-learning project had three aims. The first aim was to provide the students of the underserved CFA with specialized, pro-bono physical therapy services. The second aim was to create an opportunity for physical therapy students to gain experience with all elements of physical therapy patient/client management under the supervision of a licensed physical therapist. The third aim was to provide a service that is valued and utilized by the CFA faculty.

3. Methods

Participants

Given the nature of a service-learning project, multiple stakeholder groups can be identified as participants. For clarity, CFA patients will be defined as CFA students who received physical therapy treatment at the clinic. Screening clients will be defined as CFA students who participated in the evidence-based dance screen. CFA faculty will be defined as the professors and administrators who teach or oversee students in the CFA, and PT students are defined as graduate students enrolled in an entry-level Doctor of Physical Therapy program who provide physical therapy intervention in the clinic.

CFA patients included students majoring in dance, art, film, theatre, architecture, music, performing arts, or entertainment engineering and design. Screening clients were dancers only. Recruiting efforts were carried out by the PT students. Recruiting methods included posting flyers with a scannable QR code inside the Fine Arts College buildings and presenting information about the clinic to classes of current music and dance students. Some CFA patients were also referred to the clinic by CFA faculty or other CFA patients.

Project Design

The clinic offered two types of appointments for CFA students: dancer injury risk screenings and PT evaluations. CFA patients and screening clients both scheduled appointments by the email found on the informational flyer or by scanning a QR code that redirected them to an online scheduling service (<https://youcanbook.me>).

For screening clients, PT students offered an evidence-based preventative screening protocol designed by Bronner⁶ (Appendix A). The original published protocol included measures of height, body mass, blood pressure, postural analysis, balance, joint range of motion (ROM), joint hypermobility, turnout, muscle strength, muscle flexibility, aerobic fitness, and dance technique analysis, to determine if the person being screened was at an increased risk of injury resulting from poor biomechanics or overuse.^{2,6} For time efficiency, height, body mass, and blood pressure were not included as part of the screening protocol during this service learning project as they were of secondary importance to quantifying injury risk. At the end of the screening, PT students analyzed the results and gave recommendations to improve deficits. Given the standardized nature of the screening assessment, a licensed PT was not required to supervise these screening appointments. Screening clients received one follow-up email after the screening in which PT students explained the findings and made general recommendations regarding areas needing improvement. No further follow-up was conducted for screening clients. Based on a current lack of evidence for injury prevention screenings specific to musicians and other performance majors, standard physical therapy evaluations were offered for these populations.

For students who scheduled a 1-hour, new-patient appointment as a CFA patient, they began by filling out an informed consent form to confirm their understanding and willingness to receive physical therapy services provided by student physical therapists in this service-learning project. PT students then performed a physical therapy evaluation, developed a treatment plan, and prescribed interventions under the supervision of a licensed physical therapist. The progress of the CFA patients

was monitored with follow-up appointments and re-evaluations to ensure they were experiencing benefits from physical therapy interventions.

At the conclusion of the service-learning project, CFA patients were asked to complete a brief satisfaction survey (Appendix B) regarding the status of their health condition after therapy, their perception of the clinic, and whether they felt they had received specialized care.

Physical therapy students prepared to assume the role of clinic management through continuing education and observation. Three to four months before beginning evaluations and treatment of CFA students, the PT students each observed at least one treatment session performed by senior PT students with experience operating the clinic during the year prior. One to two months before beginning clinic operations, PT students completed three continuing education courses. Continuing education was conducted via MedBridge Inc. (Seattle, WA), a continuing education platform, that provided information regarding performance-related terminology, the general physiological demands of dancers, and common injuries seen among these performers. The online training courses were “Pre-Professional Dancer Preseason Screening: Parts 1 & 2” and “Ballet Technique: Vocabulary, Mechanics, Stressors, & Modifications”. The training did not include any courses related to treating fine arts students other than dancers. The PT students then evaluated and treated CFA patients and screening clients under the supervision of several licensed physical therapists for nine months.

Physical therapy students had multiple opportunities for reflection throughout the course of clinic operation. After each treatment session, PT students participated in informal discussions with faculty mentors, who are licensed physical therapists in

Nevada. PT students and faculty mentors reflected on student clinical decision-making skills and the CFA patient's response to the plan of care. Faculty mentors also provided written feedback on the PT students' documentation notes, which were submitted to a shared electronic folder within 72 hours of each treatment session. Additionally, during the 7th and 8th months of clinic operation, the PT students participated in three 45-minute sessions of virtual grand rounds via Zoom to discuss complex patient cases amongst themselves and their faculty mentors. The decision to add these weekly meetings to the schedule was made by the PT students, who wanted an opportunity to share ideas and gather insight from each other and faculty mentors regarding challenging cases. Lastly, at the conclusion of the project, PT students wrote individual reflections (Appendix C) which included their acknowledgment of the following prompts:

- Discuss your personal and professional growth throughout the project
- Describe any specific interactions that contributed to emotional responses and enhanced your growth throughout the project
- Reflect on how you provided PT services in alignment with the American

Physical Therapy Association's core values and code of ethics

- Core values¹¹: accountability, altruism, collaboration, duty, excellence, inclusion, integrity, and social responsibility
- Code of ethics¹²:
 - Principle #1: Physical therapists shall respect the inherent dignity and rights of all individuals.

- Principle #2: Physical therapists shall be trustworthy and compassionate in addressing the rights and needs of patients and clients.
- Principle #3: Physical therapists shall be accountable for making sound professional judgments.
- Principle #4: Physical therapists shall demonstrate integrity in their relationships with patients and clients, families, colleagues, students, research participants, other health care providers, employers, payers, and the public.
- Principle #5: Physical therapists shall fulfill their legal and professional obligations.
- Principle #6: Physical therapists shall enhance their expertise through the lifelong acquisition and refinement of knowledge, skills, abilities, and professional behaviors.
- Principle #7: Physical therapists shall promote organizational behaviors and business practices that benefit patients and clients and society.
- Principle #8: Physical therapists shall participate in efforts to meet the health needs of people locally, nationally, or globally.
- Reflect on the perspectives and needs of the three stakeholders in this project (CFA faculty, CFA students, and PT students)

Physical therapy students designed a brief survey intended to be sent to the CFA faculty asking them to reflect on the clinic's outcomes on a broad scale. However,

the surveys were not sent to CFA faculty due to faulty communication over the responsibility of sending faculty surveys. Instead, PT students sought feedback directly from the main CFA faculty member who helped make the clinic possible in the form of an unstructured, open reflective discussion held virtually at the conclusion of the project. Details about the items included in the faculty survey can be viewed in Appendix D.

4. Outcomes

The CFA Clinic treated a total of 16 patients and performed three injury risk screenings over nine months. One patient was evaluated twice for two separate injuries, which was counted as two cases. The number of cases per major can be visualized in Figure 1. Out of the total number of patients, 10 (62%) returned for at least one follow-up appointment after their initial eval, while 7 (43%) patients returned for two or more follow-up appointments. At the conclusion of the project, the final CFA patient satisfaction survey received a total of 6 responses (37%). While the patient satisfaction survey only received 6 responses, all 6 (100%) of respondents rated the overall benefit of the clinic as “Excellent”. When asked what patients liked best about the clinic, one patient reported they liked “the attentiveness [to] my injury and helping me reach my goal of strengthening my ankle”. Another respondent echoed a similar sentiment regarding staff being “very helpful and attentive”, while one patient noted “after the appointment, multiple emails were sent following up on my condition which I really appreciated”. When asked about how the clinic could improve, responses addressed the limitations in scheduling hours, location of the clinic, and clinic size. In the additional comments section, respondents expressed the desire to return to the clinic when it reopens the following semester with the next cohort of PT students.

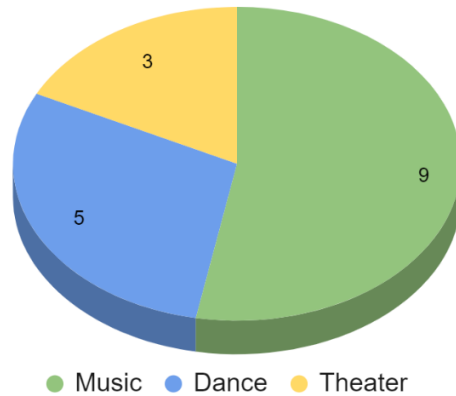


Figure 1: Distribution of participants from the CFA by major (n = 17)

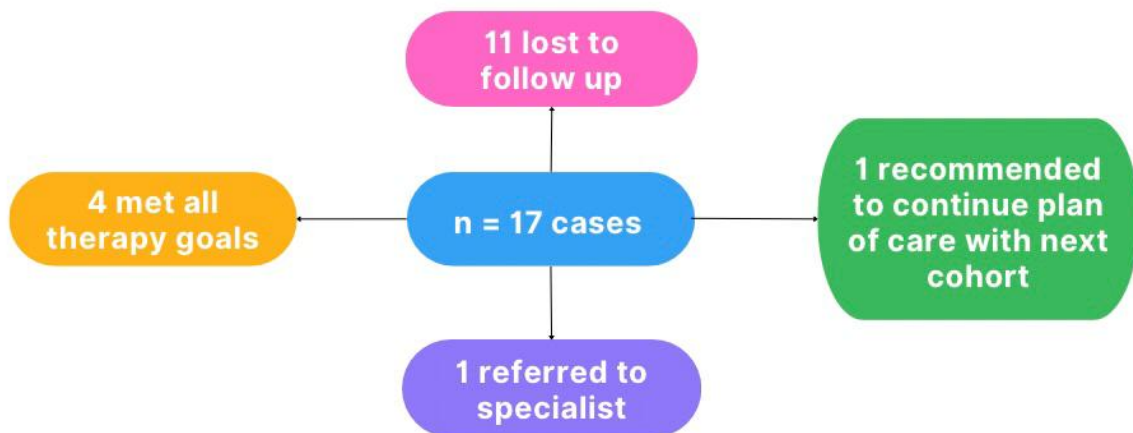


Figure 2: Concept map detailing results of all plans of care throughout the 9-month patient treatment phase of service-learning project.
 "Lost to follow up" refers to patients who did not schedule follow-up appointments despite reminder emails.

Each student physical therapist participated in at least one of each of the following: evaluations, follow-up appointments, and injury risk screens. Follow-up

appointments included treatment sessions where the student was either the primary care provider or was co-treating with another student (Table 1). Three patients were discharged because they met their goals in the clinic. Nine patients self-discharged as they did not make additional follow up appointments. One patient was discharged because their injury required a referral to a healthcare provider outside the CFA Clinic.

The PT students reflected on their personal growth, alignment with APTA Core Values, and collaborations with the students and Dean of the CFA (Appendix C). All six PT students involved in the project noted experiencing growth and improvement in technique, communication, documentation, and clinical reasoning skills. Common themes among all PT student reflections included identifying personal limitations, receiving mentorship, collaborating with one another, growing as a clinician, and finding fulfillment while participating in this service-learning project.

	Number of Evaluations Performed	Number of follow-ups performed	Number of Injury Risk Screens each student assisted with
B. Ganzon	4	6	1
P. Mack	6	6	1
S. Barajas	2	4	2
T. Mueller	4	12	2
K. Metzger	5	11	3
J. Dietrich	3	11	1

Table 1: PT Student Participation in CFA Clinic Operations

Each PT student participated in evaluations, follow-up appointments and injury risk screens over the course of Fall 2022 and Spring 2023 semesters. During each visit, anywhere from one to three PT students were present to conduct the session and/or assist.

In the reflective discussion between PT students and the clinic's primary CFA faculty partner, he shared that they were "pleased" with the services provided to the students by the clinic. Furthermore, the faculty member shared that several students reported that they had attended the clinic and their injuries had improved after physical therapy intervention. When asked how the clinic could be improved, the faculty suggested that PT students utilize more diverse recruiting strategies for the clinic including giving a presentation at new student orientation. As the main community partner stakeholder, they agreed to assist with participant recruitment by encouraging CFA faculty to promote the clinic in their course syllabi.

4a. Deviations from original project design

Throughout the course of the service-learning project, the physical therapy students encountered many complications that necessitated deviation from the original project plan. The first complication involved scheduling. Initially, two PT students were designated to monitor and respond to incoming email requests for appointments, and these appointments were made on a “first come, first served” basis. However, this proved to be difficult and inefficient because of the lag in response time between emails from both parties. Occasionally, two patients would request the same time slot in close succession and the first to respond would get the appointment, causing slow email communication with the second patient to continue for a few more days before a new time slot could be chosen. Furthermore, email communication time was extended as the PT students had to inquire about the nature of the CFA student’s injury in order to send the appropriate intake forms before the appointment. To remedy this inefficient process, the PT students adopted an appointment scheduling website which allowed CFA students to view a calendar of available appointment times. After a time slot was selected, it would disappear from the available options. Additionally, the PT students were able to set up questions within the appointment booking process to obtain the brief description of the injury that was needed to prepare for the evaluation.

Another complication that limited achievements for the PT students was lack of availability of supervising licensed physical therapists. During the first four months of this service-learning project, only one licensed physical therapist was available, limiting the clinic to a maximum of six available hours per week. However, due to scheduling conflicts, clinic hours were limited to three available hours for nine of the first 13 weeks of operation. In consideration of these reduced hours, the PT students made the

decision to work in pairs in order to gain as much exposure to patient care as possible given the circumstances. The majority of evaluations and treatments were performed by one primary PT student and one assisting PT student. The primary PT student took the lead with performing the evaluation and interventions, and the assisting student was present for the duration of the session; available to make suggestions, help answer questions, or improve work flow by taking notes and outlining the documentation. This change in design allowed for improved continuity of care. If the primary provider was unavailable one day, the assisting provider could easily treat the patient in their absence, having observed and participated in their care from the beginning.

During the last four months of the service-learning project, additional faculty from the Physical Therapy department participated, increasing the number of supervising licensed physical therapists from one to three. This supported our ability to extend available clinic hours to an average of seven hours per week, typically across two days per week (Wednesdays and Fridays) which allowed more CFA patients to be scheduled for evaluations and follow-up treatment. This adjustment was beneficial for all stakeholders as it expanded the opportunity for PT students to get more hands-on experience and diverse professional feedback. Expanded clinic hours made it easier for CFA patients to schedule appointments that fit within their class schedules. Despite the change, the PT students continued to work in pairs during most appointments because it was found to be effective and enjoyable by the PT students.

4b. Limitations

One of the main limitations of this service-learning project was the lack of participation from CFA students from the Department of Dance. Only 29% of patient cases were Dance majors. Given the existing evidence that dancers lack access to specialized healthcare, the PT students were puzzled by the fact that CFA patient numbers seem to indicate that the clinic was underutilized by this population. Possible factors that limited dancer participation may include lack of available clinic hours that fit within students' busy class schedules, insufficient advertising to the Department of Dance, and fear of missing dance class time or performances due to provider recommendation for rest. These factors may be mitigated by expanding the clinic's hours of operation, diversifying recruitment strategies to reach to a larger dancer population, and developing relationships with Dance faculty who may serve as referral sources for dance students. Physical therapy students can also begin to remove this barrier to accessing care by educating dancers on the physical longevity that may be possible when injuries are treated promptly and biomechanics are evaluated preemptively. This information may be included in the advertisement for the clinic including the flyers and classroom presentations.

Interestingly, over half of the CFA students who participated in the clinic were from the Department of Music. This may indicate a previous underestimation of the need for physical therapy services among musicians at UNLV in addition to dancers. This finding supports the need for site-specific epidemiological studies to better determine the prevalence of musculoskeletal injuries among Music majors at UNLV. This has the potential to support college level decision making to ensure healthcare

needs of these performing artists are being met, facilitating the timely progression of their degree programs. Future service-learning projects may consider investigating these topics as well as adding an education course addressing common injuries in musicians and the general physical demands of playing an instrument in order to better serve this population.

Another limitation was the low response rate for the CFA patient satisfaction surveys. Potential contributing factors for the low response rate in these surveys include survey administration timing, and lack of attention to detail in forming therapeutic alliances with CFA students. Surveys were sent out to all CFA student participants in the 9th month of clinic operation, regardless of when the student was treated at the clinic. For some, the gap in time between receiving treatment and receiving a survey could have been too large. Furthermore, the surveys were distributed after the formal university semester had ended, so it is possible that students had ceased to monitor their school-related email addresses and did not see the survey. Lastly, CFA students may not have been compelled to complete the survey if the PT student had not communicated to the CFA student the importance of the survey at the end of treatment. CFA patients may have been more likely to complete the survey if their student PT had discussed the importance of the survey with them during their last clinic visit, rather than via email.

Lastly, the satisfaction of the CFA faculty was not able to be assessed completely as surveys were not distributed to CFA faculty due to aforementioned reasons. This problem could have been remedied by better group communication and assigning clear roles to each individual with deadlines for completion. Furthermore, the

PT student who sends the survey could CC all other PT students on the email to make it easier for everyone to track which faculty received surveys.

4c. Recommendations

Recommendations for future iterations of this project include a focus on improved recruitment strategies and making PT services easier to access for CFA students. For example, one potential method for administering the dancer injury prevention screening to as many students as possible would be to hold a screening event on a weekend day at the beginning of the semester. The screening can be organized by setting up various stations where one test is completed at each station. When a dancer has completed every station, they can discuss their results with a PT student at the end of the screening. Such an event could also serve as an effective recruitment strategy for dancers with pre-existing injuries to learn about the clinic at the beginning of the semester, before their training load suddenly increases and the injury worsens.

More attempts should also be made to systematically contact CFA students, perhaps during events such as Student Orientation or the campus Involvement Fair. When PT students recruit participants by visiting music and dance classes, they are limited to only the classes that are occurring while the PT student does not also have a scheduled class to attend. This method is also dependent on the instructor setting aside time for the PT students to present in each class. In future projects, additional recruitment strategies may include heightened social media marketing, structured communication with dance professors who can serve as a referral source and attending performance rehearsals to advertise clinic services. Improving recruitment strategies can benefit all stakeholders and help create more robust outcomes for this service-learning project.

To improve the response rate of CFA student satisfaction surveys, PT students should discuss the survey and its importance to the clinic during the CFA student's first and final visit to the clinic. All CFA students are required to sign an informed consent form, which allows them to acknowledge that they are a participant in a service-learning project. Perhaps this form may also require agreement to complete the survey as a stipulation to participation. This would help CFA students know to expect a survey at the conclusion of their treatment and may make them more likely to complete it. The survey should also be sent immediately following the CFA student's final visit to the clinic instead of at the end of the academic semester.

5. Conclusion

A successful collaborative relationship between the Department of Physical Therapy and the College of Fine Arts indicates benefits for most stakeholders in this service-learning project. While the benefit for PT students is clear given the extensive data gathered in their personal reflections, no certain conclusions can be drawn regarding the benefit for CFA students and CFA faculty due to low survey response rate. Despite the limited number of responses, satisfaction surveys indicate that CFA students were content with the professionalism, attentiveness, and knowledge of the PT students, leading to 24% of CFA students meeting all their therapy goals. While faculty surveys were not distributed as originally planned, feedback from the clinic's main CFA faculty partner indicated that the clinic was valued. Future project designs should emphasize increased survey participation from CFA faculty and students in order to gain insight that is more representative of the entire population, as well as patient retention in order to optimize clinic effectiveness. This service-learning project design may inform similar projects in academic settings and with similar community needs.

Appendix A: Pre-participation Injury Risk Screening for Dancers

Section One

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

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

Scoring:

Low: 0-2

Medium: 3-4

High: 5-9

Low and High may be at increased risk of injury

Section Two

Posture and Turnout

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

Look for:	Check box if observed	Notes (L or R, clarification)
Forward head		

Kyphosis		
Pelvic malalignment		
Locking knees in genu recurvatum		
Foot pronation		
Hallux valgus		

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

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

Scoring:

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

Section Three

Lower Extremity Muscle Flexibility Test

Muscle	Test	Result	Circle One		L/R/Both
Hamstrings	Passive SLR	Reaches 90 degrees	No	Yes	
Iliopsoas	Modified Thomas Test	Hip flexion= 0 degrees	No	Yes	
Rectus Femoris	Modified	Knee flexion < 90	No	Yes	

	Thomas Test	degrees			
IT band	Ober's test	Knee touches mat	No	Yes	

Section Four

Strength—Abdominal Leg Lowering Test

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

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

Scoring:

Normal 5/5: Dancer lowers legs to the table

Good 4/5: Dancer reaches 30 degrees from the table

Fair 3/5: Dancer reaches 60 degrees from the table

Poor 2/5: Dancer reaches 65 degrees or higher from the table

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

Section Five

Dance Position Form and Technique

Sequence/Position	Problem	Assessment (circle one)	
2 nd Position Grand Plié at barre	Lumbopelvic: lordosis (ant tilt) or tucking (post tilt)	Problem	WNL
	Hip: maintenance of turnout	Problem	WNL
	Knee: rolling in	Problem	WNL
	Ankle/foot: pronation	Problem	WNL
Développé a la seconde from 1 st	Lumbopelvic: lordosis (ant tilt) or tucking (post tilt)	Problem	WNL

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

Scoring:

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

Section Six

Balance—Single Leg Stance

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

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

Attempt to hold position for 60 seconds

May have a second attempt

	Seconds	Touch	Break	Hop	N/A
Left					
Right					

Scoring:

Touch= touching foot down on ground

Break= sudden shift at any joint (usually waist)

Hop= jumping to try and maintain balance

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

Section Seven

Single Leg Step Down Test

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

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

Scoring:

If dancer fails 2 or more for one side = fail

If dancer fails 0 or 1 for one side = pass

Section Eight

Aerobic Fitness—Accelerated 3 min step test

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

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

Scoring:

FITNESS CATEGORY	18-25	26-35	36-45	46-55	56-65
MEN					
EXCELLENT	<79	<81	<83	<87	<86
GOOD	79-89	81-89	83-96	87-97	86-97
ABOVE AVERAGE	90-99	90-99	97-103	98-105	98-103
AVERAGE	100-105	100-107	104-112	106-116	104-112
BELOW AVERAGE	106-116	108-117	113-119	117-122	113-120
POOR	117-128	118-128	120-130	123-132	121-129
VERY POOR	>128	>128	>130	>132	>129
WOMEN					
EXCELLENT	<85	<88	<90	<94	<95
GOOD	85-98	88-99	90-102	94-104	95-104
ABOVE AVERAGE	99-108	100-111	103-110	105-115	105-112
AVERAGE	109-117	112-119	111-118	116-120	113-118
BELOW AVERAGE	118-126	120-126	119-128	121-126	119-128
POOR	127-140	127-138	129-140	127-135	129-139
VERY POOR	>140	>138	>140	>135	>139

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

Recommendations

Section	Notes
Hypermobility	
Posture	
Turnout	
Muscle Flexibility	
Strength	

Dance form and technique	
Balance	
Single Leg step down test	
Aerobic Fitness	

Beighton hypermobility scale:

Carter, C., & Wilkinson, J. (1964). Persistent joint laxity and congenital dislocation of the hip. *The Journal of Bone & Joint Surgery British Volume*, 46-B(1), 40-45.
<https://doi.org/10.1302/0301-620X.46B1.40>

Appendix B: Patient Satisfaction Survey Questions

Question	Response Options			
What is your major and expected graduation year?	Free response			
Please rate the following statements as they pertain to the care you received at the CFA clinic:				
Friendly and courteous behavior	excellent	good	fair	Poor
professionalism	excellent	good	fair	Poor
Therapist's knowledge/understanding of your injury/condition	excellent	good	fair	Poor
Therapist attentiveness to your needs	excellent	good	fair	Poor
Ease of scheduling an appointment	excellent	good	fair	Poor
Having clinic hours that work for your schedule	excellent	good	fair	Poor
Condition and cleanliness of clinic	excellent	good	fair	Poor
Your goals have been met	excellent	good	fair	Poor
Overall benefit of the UNLVPT CFA clinic	excellent	good	fair	Poor
What do you like best about our clinic?	Free response			
What would you recommend we do to improve the quality of our clinic?	Free response			

Appendix C: Student Reflections Performed at Completion of Project

Brenna Ganzon

Reflecting back on this service-learning project, I've taken away invaluable lessons from being able to get hands-on experience with patients in an outpatient setting with supervision by licensed clinicians. First and foremost, I identified personal limitations during the time of this project as being a lack of confidence in my skills and knowledge, goal writing, creating thorough documentation, and the structure and organization of my evaluations. Feedback from the mentors during and following each evaluation and treatment session allowed me to reflect and identify the areas for improvement and gave me the opportunity to focus on increasing the quality of care I was providing patients and think more critically about each intervention I had planned and discussed with my patient.

Considering the APTA core value of collaboration, I think the service-learning project afforded me the opportunity to collaborate with my fellow team members and consider different approaches to treatment for the same condition and understand the clinical decision making behind their choices. I appreciated the rounds meetings we had to discuss patient cases that were more complex with both our fellow team members and the supervising clinicians, our professors in an effort to increase the quality of care and troubleshoot when patient progress stagnated. When patient care required attention outside of the scope of physical therapy practice, the service-learning team used the resources at their disposal to refer patient's out to the appropriate healthcare provider, which echoes the APTA core value of altruism.

Partaking in the service-learning project was ultimately a fulfilling learning experience that truly highlighted how the fine arts population has been historically underserved. This sentiment was echoed by the clinic's CFA faculty partner. Unlike college sports teams, the fine arts students apply similar effort into rigorous endeavors, but receive scant medical and healthcare attention comparatively. Being able to learn the nuances of the differences in strength and function between theater directors, dancers, and musicians and listen to how thankful they were for free evaluation and treatment specifically for them made me feel like we were truly making a difference in their academic careers.

I look forward to seeing the growth of this service-learning project in the future as the incoming physical therapy students take over the fine arts clinic and serve as many fine arts students as possible.

Payton Mack

Participating in this Service-Learning project has contributed significantly to my growth as a student and future clinician. I was able to identify personal limitations that I was not previously aware of and work with intention to improve those areas. These limitations included the organization of my evaluations and treatments as well as the quality and efficiency of my documentation. With lots of practice and the mentorship provided by licensed physical therapists, I was able to address those limitations while still serving this unique and underserved population at UNLV. By the end of this project, my approach to care became much more systematic and I became much more efficient with my documentation. Specifically, the quality of my goal-writing improved as I was able to make it more specific and relevant to performing artists.

My participation in this project has called to mind several of the APTA's Core Values. Duty was a core value that often arose during this project as I kept my patient's goals at the forefront of their treatment in order to deliver optimal specialized care. Collaboration was another core value that was essential to this project. It was evident in rounding sessions that allowed us to discuss complex patient cases as a clinic. Lastly, the APTA Core Value of Inclusion was essential to this service-learning project. The UNLVPT CFA Clinic created a welcoming environment for all students regardless of major, level of activity, past injuries, or nature of injury. Most importantly, our pro-bono services eliminated the financial barrier that many college students face when seeking healthcare. As a student physical therapist, it was rewarding to provide care to an underserved population at UNLV while also emulating several of APTA's Core Values. Towards the end of our project, we had the opportunity to communicate directly with a faculty member of the UNLV CFA, Dr. Stephen Caplan. He highlighted the disparity in medical care for an athlete compared to a performing artist and emphasized the importance that this disparity be addressed. His appreciation for our efforts was impactful and truly made me feel like I had made a difference at UNLV. However, it became clear following this discussion that there is still work to be done to improve healthcare for performing artists at UNLV and for this population as a whole. Ultimately, the opportunities for learning provided by this project allowed me to work on skills that I will carry into my professional career and has made me more aware of how physical therapists can address the unique needs of performing artists.

Selene Barajas

Having the opportunity to be a part of this Service-Learning project has allowed me time to reflect on areas I need to improve to become a fully competent practitioner. These personal limitations included lacking full confidence in myself when performing evaluations and second guessing my clinical reasoning. Due to unforeseen personal circumstances involving my pregnancy during the second semester of this project, I could not perform as many evaluations as I intended to address my confidence limitation. However, I tried to co-treat as many patients as possible around school and prenatal appointments to get more exposure to different patient cases. Collaboration with other students helped me become more confident in my clinical reasoning skills as we shared similar ideas and learned from each other. It was also helpful to have the mentorship along the way from a licensed physical therapist, which provided me with more insight and thought-provoking questions to better understand each patient case.

This Service-Learning project incorporated several of the APTA's core values. Accountability played a major role in this project as each one of us was accountable for our own learning experiences. We were able to take on any quantity of patients, however, it was also our duty to commit to providing the best service to this underserved population. This sometimes meant collaborating between other students in this project to accommodate the patient's schedule or if there were time conflicts with our availability.

As the project ended, we asked patients to complete satisfaction surveys where they were able to give us feedback. It was clear that this pro bono clinic was making a difference in this underserved population based on their positive responses, however, there was still a challenge in the way which included availability. It brings a good feeling

to know you can make a difference for a population in need but there is still work to be done to provide them with the services they need. Future classes should potentially look into making weekend workshops or screenings available to these students to reach more students at the CFA. Overall, I felt like this project allowed me the opportunity to learn more about my capabilities and opened my eyes to areas of growth. I will use this to build myself into a better practitioner. A practitioner who is not afraid to keep learning and growing as a person and a professional.

Tanner Mueller

Throughout the completion of this service-learning project I was fortunate to gain plenty of hands-on experience working with the specialized population of performing artists. This experience not only helped to improve my clinical decision making but also helped facilitate my overall growth as a clinician. At the beginning of the project, I struggled to adapt my treatment plans to fit the incredibly unique needs of this population. However, the guidance and continued mentorship of licensed and experienced physical therapists helped me to overcome this. For me, the most beneficial part of this mentorship was being able to debrief/discuss patient cases with them (PT faculty) and see how they would approach different situations. This allowed me to act independently and work on developing my own clinical decision making in the moment and then gave the opportunity for feedback and growth after. By the end of the project, I definitely felt much more confident in my ability to provide physical therapy to the population of performing artists.

When thinking about this service-learning project, I can't help but to also think about the APTA core values. The specific core values that come to mind are

Collaboration, Duty, Excellence, and Social Responsibility. This project would not have been possible if we did not show good collaboration and communication throughout. Not only did we show great collaboration between student physical therapists in operating the clinic, but also did a great job collaborating with the overseeing licensed physical therapists and with the College of Fine Arts (CFA). For me, the core values of duty and excellence go together. I felt that if we were going to be providing care to the CFA then it is our duty to provide excellent care at the highest of our capabilities. To help achieve this we received training specific to this population and I always tried my best to find research relating to this population to help guide treatment. Lastly, when looking at the statistics on the risk of injury and prevalence of injury in this population, and then realizing how underserved they are, there is a clear social responsibility to provide care for this group.

One of the most important aspects of this service-learning project is that we help to meet a crucial unmet need for the College of Fine Arts and that we help to make a difference. When speaking to the clinic's CFA faculty partner, he assured us of the difference we were making and made it very clear that he supports and encourages what we have been doing. With the deans continued support I am very excited to see the improvements and the growth of the clinic in coming years. Overall, I'm proud of our groups work with this project and am grateful to have had this opportunity to challenge myself throughout and to grow as a physical therapist.

Katherine Metzger

Over the course of this experience, I have grown tremendously as a future healthcare provider. In the early days of this service-learning project, I was very hesitant

to start treating patients because I did not feel confident in my abilities. I started by observing one of my peers perform a patient evaluation and occasionally offering suggestions. After about one month of assisting my peer as he took the lead with patient care, I performed my first evaluation as the primary provider. I was not at all satisfied with my performance and spent a lot of time preparing for every possible scenario before the patient returned for a follow-up appointment. As someone who highly values excellence, accountability, and professional duty, I was determined to make my next encounter with the patient perfect.

It took me a few more months to realize that preparing for every possibility with a patient is neither effective nor feasible. About 4 months after my initial attempt at evaluation, I performed a second evaluation as the primary provider. During this encounter, I received excellent guidance from the supervising licensed physical therapist, who helped me prepare for the evaluation in a more reasonable way and encouraged me to be thorough, thoughtful, and to think critically. I experienced a “lightbulb moment” during which I felt that I finally understood how all the puzzle pieces of my professional education fit together. I left that day with a renewed sense of confidence that I could be more accountable for making sound professional judgements.

While the dancer-specific training I received was very helpful in regard to understanding and performing injury risk screenings, I did not personally treat many dancers as physical therapy patients. Rather, the musicians I evaluated and treated seemed to have a great need for physical therapy intervention, and it was very rewarding to see their improvement with some exercise and education.

Justin Dietrich

The College of Fine Arts-Service Learning Project allowed me a great opportunity to improve myself as a student and a future Physical Therapist. When I finished my first clinical rotation of PT school, one of the biggest things my CI told me to improve on was my confidence in my patient education. I used a lot of “I think this will help you” and “This should make you feel better” statements when talking to the patients I worked with instead of being confident in myself as a future healthcare provider and telling them they would definitely benefit from my PT intervention. When I started treatments in the Fine Arts Clinic, my goal was to deliver confident patient education. By the end of my time in the clinic, I felt that I had become a much more confident physical therapy student. There was one participant in particular that helped me to achieve this confidence. I performed their initial evaluation and they came in for several follow up appointments, which provided me with a very realistic patient experience. This participant demonstrated a lot of emotions regarding their injury, therefore, I had to demonstrate as much confidence in myself as I could to establish trust in me as a provider.

There were several aspects about the Fine Arts Clinic that aligned with the APTA core values. The core values that stood out to me include social responsibility and collaboration. This clinic promoted social responsibility because it allowed us as students and representatives of the physical therapy profession, to develop trust between an underserved population on UNLV’s campus. Of the students in the College of Fine Arts, we worked with dancers, musicians, and theater majors. When I started providing treatments in the clinic, I thought I would be treating mostly dancers due to the physical demands placed on them as athletes. However, I was surprised to find I treated mostly musicians. This widened my perspective that there was a larger group within the

College of Fine Arts that intervention for their health and ability to participate in what they enjoy doing. The clinic promoted the core value of collaboration between me as a student, my professors/supervising licensed physical therapists, my partners within the clinic, and the participants I was treating. I am lucky to have had the opportunity to have received feedback on my treatments and documentation notes, as well as suggestions for improvement from skilled, licensed physical therapists. I also benefited from working with my partners in the clinic to set up available times to treat and cover for each other. Collaborating with participants on when they would come in for treatment also provided a valuable experience for me. I believe that this service-learning project provided me with such a great experience as a physical therapy student and the skills I have developed will definitely benefit me during my long term clinicals.

At the end of our service-learning project, our group spoke with the clinic's CFA faculty partner to discuss how the students of the College of Fine Arts, the CFA faculty, and us as PT students benefitted from this opportunity. I felt fulfilled when Dr. Caplan told us that he had heard great things from his students about the clinic and that he was looking forward to further growing the relationship between the College of Fine Arts and UNLV PT. I am hopeful that this service-learning project continues to grow and will provide future PT students with the same, if not more opportunities to improve themselves as I had.

Appendix D: CFA Faculty Survey Questions*

*Survey was designed for questions to change based on respondent answers

Section 1 of 9

UNLVPT College of Fine Arts Clinic

Students of UNLV's Doctoral Physical Therapy program are currently taking part in a service-learning project that involves providing free physical therapy services and injury risk screenings to the students of the College of Fine Arts. The care is conducted by UNLV physical therapy students under the supervision of a licensed physical therapist. The following survey is to gather information from the CFA faculty regarding knowledge of the clinic and its perceived benefit to the College of Fine Arts.

What is your department?

☐ Dance

☐ Music

☐ Theater

☐ Other...

Were you aware of the UNLVPT CFA Clinic before taking this survey?

☐ Yes

☐ No

If yes to above question:

Section 2 of 9

Description (optional)

How did you come to know about the clinic?

Short answer text

Section 3 of 9

Description (optional)



Were you aware of the types services being offered at the UNLVPT CFA Clinic prior to receiving this survey?

☐ Yes

☐ No

Have you referred any of your students directly to the UNLVPT CFA Clinic?

☐ Yes

☐ No

If faculty member answered yes to referring students:

Section 4 of 9

Description (optional)



How many students to date would you estimate that you have referred to the clinic?

☐ 0-5

☐ 5-10

☐ More than 10

Section 5 of 9



Description (optional)

To your knowledge, did any of your students receive physical therapy services at the CFA Clinic?



- ☐ Yes
- ☐ No
- ☐ Unknown
- ☐ Other...

Would you recommend the UNLVPT CFA Clinic to your students?

- ☐ Yes
- ☐ No
- ☐ Other...

If faculty member answered yes to recommending CFA Clinic to students in future:

Section 6 of 9

Would you recommend the UNLVPT CFA Clinic to your students?  



Description (optional)

If yes, what makes you say this?

Short answer text
.....

If faculty member answered to recommending CFA Clinic to students in future:

Section 7 of 9

Would you recommend the UNLVPT CFA Clinic to your students?  

Description (optional)

If no, what makes you say this?

Short answer text
.....

...

What additional information about the clinic, if any, would make you more likely to refer a student to the clinic?

Long answer text
.....

Section 8 of 9

To what extent do you agree with the following statements?



Description (optional)

CFA students demonstrate specific needs that warrant a pro-bono physical therapy clinic on campus.

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

The available hours of the pro-bono clinic meets the needs of CFA students.

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

The current quality of care offered at the pro-bono clinic meets the needs of CFA students.

	1	2	3	4	5	
Strongly disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly agree

Section 9 of 9

Additional comments.



Description (optional)

Is there anything else you would like us to know regarding the UNLVPT CFA Clinic?

Long answer text

.....

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Curriculum Vitae

Selene Barajas PT, DPT

navidbarajas@hotmail.com

Education

- June 2021- May 2024
University of Nevada, Las Vegas
Doctor of Physical Therapy
- August 2015- May 2020
University of Nevada, Las Vegas
Bachelors of Kinesiology

Work History

- Associated Experience:
 - January 2024 – March 2024 Outpatient Orthopedic Rotation:
Comprehensive Therapy Centers – Jeffreys St.
 - I developed POC for patients with orthopedic problems, neurological conditions, sports/ work-related injuries, and balance disorders using a holistic approach. The McKenzie Method was also highly used at this facility to help assess, treat and prevent back, neck and extremity injuries. Manual techniques and strength/cardio equipment were used as interventions to individualize and create the most effective rehabilitation program for the patient. I created goals realistic for the patient to approach prior level of function and improve quality of life.
 - September 2023- December 2023 SNF Rotation: Advanced Healthcare of Las Vegas –Sunset
 - The goal for every patient was to help them attain their maximum potential, restore functional abilities and confidence necessary for independent living. I created realistic goals with each patient and aimed to make the best of our time together to shorten their stay and get them home as soon as possible. I collaborated with a team of OTs and Speech therapists to ensure the best POC was developed for each patient.

- July 2023- September 2023 Acute Rotation: St. Rose Dominican Hospital—Siena
 - I educated patients and family members on proper assistive device fitting and usage. I also made discharge recommendations appropriate for each patient's individual needs. I developed goals with the patient to improve their mobility and manage their pain.
- June 2022- July 2022 Outpatient Orthopedic Rotation: Dignity Health Physical Therapy –Centennial Hills
 - I evaluated and developed POC for patients of all ages. I used individualized manual therapy and therapeutic exercise to help patients return to their prior level of function. I educated patients on pain, pain management, and home exercise programs that gave patients tools to take part in their own rehabilitation.
- May 2019- May 2021 Physical Therapy Technician at Kelly Hawkins Physical Therapy
 - I taught exercise programs to patients and verified comprehension of instructions. I monitored the patient's safety and response to exercise intensity and discussed it with the patient's physical therapist. I followed all HIPPA rules and regulations regarding patient confidentiality.

Additional Employment History

- June 2015-May 2019 Sales Manager at Adidas
 - I managed a team of 50 sales associates and used my time management skills to efficiently schedule associates and ensure appropriate coverage. I educated associates on adapting to different customers and how to increase productivity

Volunteer Work

- November 2022- Project Hero Honor Ride
 - I assisted in this event by interacting with veterans and their families before the cycling event began. I also assisted with serving breakfast and selling merchandise.

- October 2022- Spanish Club
 - I was one of the Presidents of the Spanish club, in which I put together resources for our members to help them connect with Spanish-speaking patients. These resources include general anatomy and conversational terms as well as how to perform an evaluation with commonly used Spanish terms. We also arrange practice scenarios for our members to get practice before applying what they learned on their own.
- September 2022- STEADI Screenings
 - I participated in multiple fall prevention screenings by administering STEADI to the participants of these events. I also administered the mini-cog test and explained the results of their performances in all administered tests.
- September 2022-2023 –Fine Arts Clinic a Service-Learning Project
 - With the supervision of my faculty advisor, I performed evaluations and created treatment plans for students at the Fine Arts College at UNLV. I also provided screenings for dancers in the Fine Arts College to decrease the risk of injury to this population. All services were free with the intent to provide free care to students without health insurance and a learning opportunity for the students involved in this service-learning project with myself.

Professional Memberships

- Member Academy of Geriatrics of the American Physical Therapy Association (2022- present)
- Member Academy of Hand & Upper Extremity of the American Physical Therapy Association (2022- present)
- Member American Physical Therapy Association (2021-present)

Continuing Education

- October 2022 - Tales of the Heart: Inspiration to Motivate Change in Clinical Practice and Education – Dr. Ellen Hillegass
- October 2022 - OTAGO Certification
- September 2022 - STEADI Training

Justin Dietrich

Mobile: 702-506-8504 Email: dietrichjustin13@gmail.com

Education

- Doctorate, Physical Therapy, University of Nevada Las Vegas, 2021-2024
- B.S. Exercise Science, Cum Laude, California Lutheran University, 2016-2020

Employment History

- January 2024- March 2024 Physical Therapy Student at Prepare, Perform, Prosper (PPP)
 - I worked as an outpatient-sports physical therapy student at PPP, where I evaluated and treated patients that are high level athletes looking to return to play. In addition to my manual treatment and therapeutic exercise program, I practiced using many modalities including Sound wave therapy, instrument assisted soft tissue massage, and cupping. I primarily worked with high level athletes, however I also had experience with working with active older adults.
- September 2023-December 2023- Physical Therapy Student at Encompass Health Rehabilitation Hospital of Las Vegas
 - I worked as an inpatient rehabilitation physical therapy student at Encompass Health Rehabilitation Hospital, where I worked with patients of varying ages and conditions. I interacted with physicians, occupational therapists, speech language pathologists, and nurses daily to provide my patients with the opportunity to improve their mobility, limit pain, and limit future impairments. My primary roles were to evaluate and treat patients in addition to providing necessary patient education to patient caregivers.
- July 2023-September 2023- Physical Therapy Student at Centennial Hills Hospital
 - I worked as an inpatient acute care physical therapy student at Centennial Hills Hospital. I evaluated and treated patients who suffered urgent injuries and/or illnesses to improve their condition as well as improve patient quality of life. I gained invaluable experience as a physical therapist student by treating patients during COVID 19.

- June 2022-July 2022- Physical Therapy Student at Fit Physical Therapy- Overton
 - I worked as an outpatient physical therapy student in Overton, Nevada, which is a rural setting with limited accessibility to health care services. I gained great experience from evaluating and treating a wide variety of patient injuries. While at Fit Physical Therapy, I learned about manual therapy techniques and the culture of working in a rural healthcare setting from my Clinical Instructor.
- July 2020- May 2021- Full time Physical Therapy Aide at Family and Sports Physical Therapy
 - I worked full time as a physical therapy aide at Family and Sports Physical Therapy. My primary roles were to work with patients as directed by the physical therapists, schedule patients, clean the facility, and do laundry. I had the opportunity to work with patients of many different ages, races, ethnicities, religions, and sexual orientations during my time at this clinic.
- June 2016- August 2019- Part-time physical therapy aide at Family and Sports Physical Therapy
 - During my summers (May-August) when I returned to Las Vegas from California, I worked at Family and Sports Physical Therapy as a physical therapy aide. My primary roles were to work with patients as advised by the physical therapists, schedule patients, clean the facility, and do laundry. I had the opportunity to work with patients of many different ages, races, ethnicities, religions, and sexual orientations during my time at this clinic.

Volunteer Work

- September 2022- April 2023- Rock Steady Boxing
 - Attend the Saturday class where people with Parkinson's Disease attended an hour of boxing exercises. I volunteered several times and enjoyed getting to know the attendees in the class. My role in this experience was to encourage attendees, spot them while they are exercising, and call out combinations for their punching routine.
- October 2022- Nevada Senior Games
 - The Nevada Senior Games is an event for adults age 50 years and older that encourages a healthy lifestyle through exercise and competition. I volunteered at the long jump station where I raked the pit after each athlete jumped to level out the surface.

- September 2022- Free Community Balance and Memory Screening
 - The Free Community Balance and Memory Screening was an event to screen older adults for their risk of falling in the future, as well to provide advice and information on how to avoid falls in the future. My role at this event was to interpret participant results for the following tests: Stopping Elderly Accidents, Deaths & Injuries (STEADI) test, mini-cog, AD8 Dementia Screening, and the Stay Independent Questionnaire. I also spent time conducting STEADI tests and the mini-cog.
- October 2021- PT Day of Service: Created motivational signs for Las Vegas AMBUCS; Wrote letters to individuals in isolation during COVID
 - Las Vegas AMBUCS is an organization that gives Amtryke Therapeutic tricycles to children who are unable to ride a traditional two-wheeled bicycle. When the AMBUCS are given to children, there is a big event where people are cheering for and encouraging them. At this volunteer experience, I made posters, with words of encouragement, for the people that attend the event to hold. At this same volunteer event, I wrote letters to individuals in isolation due to COVID 19. The letters were meant to convey that these people in isolation are seen, loved, and not alone.
- November (2019, 2017, 2016) – Special Olympics
 - The Special Olympics were an event I would attend in Fountain Valley, California where there were several different sports competitions for individuals of all ages, who are disabled. At these events I would cheer for the participants and talk to them in between competitions.

Professional Membership

- Member American Physical Therapy Association (2021 to present)
- Member Academy of Orthopedics of the American Physical Therapy Association (2022 to present)
- Member Academy of Geriatrics of the American Physical Therapy Association (2022 to present)

Continuing Education

- October 2022- Professionalism Module 3: Ethical Compass- American Physical Therapy Association-2 hours
- October 2022- Professionalism Module 2: History of Professionalism in Physical Therapy American Physical Therapy Association – 2 hours
- October 2022- Professionalism Module 1: Introduction to Professionalism- American Physical Therapy Association – 2 hours

BRENNA GANZON PT, DPT

Henderson, Nevada | brenna.ganz@gmail.com

EDUCATION

<i>June 2020 – May 2024</i>	Doctor of Physical Therapy University of Nevada, Las Vegas (UNLV) – Las Vegas, NV
<i>September 2013 – September 2016</i>	Bachelor of Arts, Sociology University of California, Irvine – Irvine, CA

LICENSURE

<i>May 2024</i>	Nevada State Board of Physical Therapy Examiners Pending
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CERTIFICATIONS AND TRAINING

<i>2021 – 2024</i>	Basic Life Support Certification (BLS) American Heart Association (AHA)
<i>Fall 2022</i>	Otago Exercise Program: Falls Prevention Training University of North Carolina
<i>Fall 2022</i>	STEADI Training Centers for Disease Control and Prevention (CDC)
<i>Summer 2020</i>	Bloodborne Pathogens Training UNLV Risk Management and Safety
<i>Summer 2020</i>	HIPAA Training UNLV Risk Management and Safety

PHYSICAL THERAPY CLINICAL ROTATIONS & SERVICE LEARNING

<i>January 2024 – March 2024</i>	Dignity Health Outpatient Neurologic Physical Therapy, Henderson, Nevada Spent 10 weeks at an outpatient neurologic clinic in Nevada mainly treating individuals with Parkinson's Disease and stroke.
<i>September 2023 – December 2023</i>	Henderson Health & Rehab, Henderson, Nevada Spent 10 weeks in a skilled nursing facility providing care to a primarily geriatric population with increased fall risk.

<i>July 2023 – September 2023</i>	Flagstaff Medical Center, Flagstaff, Arizona Spent 10 weeks in an acute care hospital providing care to majority post-operative patients and made recommendations for discharge to appropriate facilities.
<i>August 2022 - May 2022</i>	UNLV College of Fine Arts Clinic for Health and Injury Prevention Evaluated and treated students from the UNLV College of Fine Arts, specifically performing artists, such as dancers and musicians.
<i>June 2022 – July 2022</i>	Select Physical Therapy Peachwood, Glendora, California Spent 5 weeks at an outpatient orthopedic clinic treating individuals primarily affected by chronic low back pain and shoulder pain.

SERVICE

Professional

<i>November 2023</i>	UNLVPT Interviews (3 hours) Escorted prospective students to interviews with faculty and alumni, answered interviewee questions regarding the UNLVPT program, and assisted in set-up.
<i>November 2022</i>	UNLVPT Interviews (6 hours) Mingled with prospective students, answered interviewee questions regarding the UNLVPT program, and assisted in set-up.
<i>May 2022</i>	APTA Spring into Action Event (4 hours) Attended APTA student development fair and helped to set up tables and decorations for the event.

LEADERSHIP EXPERIENCES

<i>August 2022 – May 2023</i>	President: UNLVPT Diversity, Equity, and Inclusion Club Organize guest speakers, workshops, and volunteer opportunities to promote diversity, equity, inclusion within physical therapy and the UNLVPT program.
<i>August 2022 – May 2023</i>	Director of Social Media: UNLVPT Sports Medicine Club Create marketing and promotional materials to be circulated on social media for the Sports Medicine Club.

PAYTON MACK

paytonjet@gmail.com

EDUCATION & ATHLETIC EXPERIENCE	<p>GONZAGA UNIVERSITY, SPOKANE, WA <i>Bachelor of Science in Human Physiology with a minor in Psychology, August 2016 – May 2020</i></p> <ul style="list-style-type: none">• Dean's List Fall 2016 and Spring of 2017• President's List Spring 2019 and Spring 2020 <p>GONZAGA UNIVERSITY VOLLEYBALL TEAM, SPOKANE, WA <i>Division 1, Middle Blocker, September 2016 – November 2019</i></p> <p>UNIVERSITY OF NEVADA, LAS VEGAS, LAS VEGAS, NV <i>Doctor of Physical Therapy, June 2021 – May 2024</i></p>
PROFESSIONAL EXPERIENCE	<p>SPOKANE COUNTY PARKS, RECREATION, AND GOLF, SPOKANE, WA <i>Volleyball gym supervisor, March 2020</i></p> <ul style="list-style-type: none">• Responsibilities included set up, check in, and supervision of game play <p>OPTIMAL PHYSICAL THERAPY, LAS VEGAS, NV <i>Physical Therapy Technician, June 2020-August 2021</i></p> <ul style="list-style-type: none">• Guided patients through exercise protocols assigned by the physical therapists• Sanitized and organized equipment and tools <p>UNIVERSITY OF NEVADA, LAS VEGAS DEPARTMENT OF PHYSICAL THERAPY, LAS VEGAS, NV <i>Teaching Assistant, August 2022-June 2023</i></p> <ul style="list-style-type: none">• Attended lectures for Musculoskeletal I course and answered student questions• Assisted in grading• Conducted review sessions and designed study material

**CLINICAL
EDUCATION
EXPERIENCE**

ZK OUTPATIENT REHABILITATION CENTER, LAS VEGAS, NV
Student Physical Therapist, June 2022-July 2022

- Participated in 5 week clinical rotation under supervision of licensed physical therapist
- Conducted physical therapy evaluations and treatments for patients with orthopedic, neurological, and cardiopulmonary conditions in outpatient setting

ADVANCED HEALTHCARE OF HENDERSON, HENDERSON, NV

Student Physical Therapist, July 2022-September 2023

- Participated in 10-week clinical rotation under supervision of licensed physical therapist
- Conducted physical therapy evaluations and treatments for patients with impaired functional mobility at this Skilled Nursing Facility
- Worked with patients with neurologic, cardiopulmonary, orthopedic, renal, and cognitive conditions

PHYSICAL THERAPY AND BALANCE CENTERS, WHITNEY RANCH, HENDERSON, NV

Student Physical Therapist, September 2023-December 2023

- Participated in 10-week clinical rotation under supervision of licensed physical therapist
- Conducted physical therapy evaluations and treatments for patients with orthopedic, neurological, vestibular, and balance disorders in an outpatient setting
- Conducted Sensory Organization Testing using Neurocom Smart Balance Master and explained results of Sensory Organization Testing with patients

DESERT VIEW HOSPITAL, PAHRUMP, NV

Student Physical Therapist, September 2023-December 2023

- Participated in 10-week clinical rotation under supervision of licensed physical therapist
- Conducted physical therapy evaluations and treatments for patients in this rural at this critical access hospital
- Conducted inpatient and outpatient wound care evaluations and treatments
- Made appropriate recommendations for discharge planning
- Participated in interdisciplinary team meetings

VOLUNTEER EXPERIENCE

DOWNTOWN SENIOR FALL RISK EVENT SCREENING EVENT, LAS VEGAS, NV

Volunteer, September 2022

- Conducted MiniCog and STEADI assessments
- Discussed results and resources with participants based on their performance

DESERT VISTA COMMUNITY CENTER FALL RISK SCREENING EVENT, LAS VEGAS, NV

Volunteer, September 2022

- Checked participants into event
- Assisted with set up and takedown of event materials

NEVADA SENIOR GAMES, LAS VEGAS, NV

Volunteer, October 2022

- Assisted with set up
- Recorded distances for shotput and javelin events

UNLV INTERVIEW DAY, LAS VEGAS, NV

Volunteer, January 2022

- Escorted interviewees to correct interview rooms
- Socialized and with interviewees

LAMBDA KAPPA DELTA STUDENT PANEL, LAS VEGAS, NV

Volunteer, April 2022

- Participated in panel of fellow DPT students answering questions of members of LKD pre-physical therapy honor society at UNLV

NEVADA SCIENCE OLYMPIAD, LAS VEGAS, NV

Volunteer, March 2023

- Assisted in directing students, coaches, and parents to correct buildings on campus

LEADERSHIP

DIVERSITY, EQUITY, AND INCLUSION CLUB, University of Nevada, Las Vegas

Vice President, August 2022-May 2023

HONORS & AWARDS

Honor Society of Phi Kappa Phi, *Member* (ID: 12710149), *April 2022— present*

American Council of Academic Physical

Therapy National Student Honors Society, *Inductee*, *March 2024*

UNLVPT Recognition of Achievement Award, *February 2024*

KATHERINE METZGER

Las Vegas, NV
Metzger.katie@outlook.com

EDUCATION

DOCTORATE, PHYSICAL THERAPY (2021-2024)

University of Nevada, Las Vegas

B.S. KINESIOLOGY (2016-2021)

University of Nevada, Las Vegas

Minor: Spanish

University Honors, Magna Cum Laude

RESEARCH

PRESENTING AUTHOR AT APTA CSM (2/15/2024)

"A Service-Learning Approach to Health and Injury Prevention Services for Collegiate Fine Arts Students" **Katherine Danielle Metzger, SPT**, Brenna Ganzon, SPT, Justin Lee Dietrich, SPT, Payton Mack, SPT, Tanner Mueller, SPT, Selene Barajas, SPT, Keoni Mark Kins, PT, DPT, ATC, Dustin Clow, PT, DPT, Brandi Nicole Varnado, PT, DScPT and Catherine Linda Turner, PT, DPT

CO-INVESTIGATOR: SERVICE-LEARNING PROJECT (2021-2024)

"Implementing Physical Therapy Services and Screenings for the Students of the UNLV College of Fine Arts for Health and Injury Prevention: A Service-Learning Approach" **Metzger K**, Ganzon B, Barajas S, Dietrich J, Mack P, Mueller T, Kins K, Clow D, Varnado B, Turner C

EMPLOYMENT HISTORY

PATIENT SERVICE REPRESENTATIVE

June 2020 - October 2020

Kelly Hawkins Physical Therapy

REHABILITATION TECHNICIAN

December 2016 - April 2019

Accessible Space, Inc.

**ASSOCIATED
EXPERIENCE AND
CLINICAL EDUCATION**

OUTPATIENT ORTHOPEDICS, UNDERSERVED

VA, Southern Nevada Healthcare System, Las Vegas, NV

JANUARY 2024- MARCH 2024

- Planned individually designed treatment programs to restore, maintain and improve physical functioning, alleviate pain and slow the progression of disability

ACUTE CARE

Mountain View Hospital, Las Vegas, NV

SEPTEMBER 2023 - DECEMBER 2023

- Worked as part of a team of physicians, nurses, and other healthcare professionals to manage patient care by assisting with gait training, ADLs, and bedside physical therapy interventions

LONG TERM ACUTE CARE HOSPITAL

PAM Specialty Hospital, Las Vegas, NV

JULY 2023- SEPTEMBER 2023

- Aided in the management of patients who require ventilators, IV antibiotics, and dialysis

OUTPATIENT ORTHOPEDICS, RURAL

Optimal Therapy, Pahrump, NV

JUNE 2022- JULY 2022

- Assessed geriatric patients for risk of falling and prescribed strengthening exercises to prevent future falls, and performed wound care treatments on post-surgical incisions for patients recovering from orthopedic operations

**HONORS AND
AWARDS**

- 2024 American Council of Academic Physical Therapy- National Student Honors Society Inductee
- 2024 UNLV Department of Physical Therapy- Recognition of Achievement Award
- 2021 UNLV Honors College- Outstanding Student Service Award

**MEMBERSHIPS IN
PROFESSIONAL
ORGANIZATIONS**

- American Physical Therapy Association (2021-Present)
- Nevada Physical Therapy Association (2021-Present)
- Academy of Geriatrics of the American Physical Therapy Association (2022-Present)
 - Balance and Falls SIG (2022-Present)
- Academy of Federal Physical Therapy of the APTA
 - Amputation care SIG (2024-Present)
- APTA Catalyst Group: PT in Mental Health (02/2023-Present)
 - Subcommittee member: "Whole Person Care" (08/2023-Present)

VOLUNTEER WORK

- Friends of Parkinson's Funny Bunny Run / Las Vegas, NV (4/1/2023)
- GiGi's Fit Acceptance Challenge Walk/ Henderson, NV (3/25/2023)
- Baseline Concussion Testing Day / Las Vegas, NV (11/17/2022)
- Girl Scouts Outdoor Journey Badge Day / Las Vegas, NV (11/6/2022)
- Rock Steady Boxing / Las Vegas, NV (10/8/2022)
- UNLVPT Community Balance and Memory Screening/ Las Vegas, NV (9/20/2022)
- Healthy Performers Nevada Workshop / Reno, NV (8/26/2022-8/28/2022)
- Camp To Belong Summer Camp / Pathfinder Ranch, CA (7/24/2022-7/30/2022)

**CONTINUING
EDUCATION**

- Full list available upon request

CERTIFICATIONS

- OTAGO exercise program certification (October 2022)
- Basic Life Support certification, American Heart Association (April 2022)

**LANGUAGES
SPOKEN**

- Spanish (Proficient)

Tanner Mueller, PT, DPT, CSCS
Las Vegas, Nevada
Tanner.Mueller240@gmail.com

Education

DPT	University of Nevada Las Vegas	2021-2024	Physical Therapy
BS	Northern Arizona University	2017-2021	Exercise Science

Licensure

- Nevada Physical Therapy Board – May 2024

Certifications

- Certified Strength and Conditioning Specialist – NSCA, January 2024
- OTAGO Fall Prevention Certified – October 2022
- American Heart Association CPR and AED Certified – April 2022

Physical Therapy Clinical Rotations & Service Learning

Jan 2024 – March 2024	Physical Therapy Student – Project Wellbeing, Las Vegas, NV <ul style="list-style-type: none">- Working under the supervision of a board-certified physical therapist, evaluated and treated a wide variety of patients with orthopedic and sports related injuries. Worked with athletes of all age groups and of all skill levels including professional athletes.- Developed and conducted return to sport programs on a variety of athletes (football, baseball, soccer, basketball, combat athletes) with an emphasis on performance, movement efficiency, and reducing the risk of re-injury.- Developed and carried out interventions integrating sports medicine, performance training, strength and conditioning, sport specific training, and physical therapy in order to provide the highest quality of care and to maximize the athlete's full potential when returning to sport.
September 2023 – December 2023	Physical Therapy Student – Intermountain Medical Center, Murray, UT <ul style="list-style-type: none">- Working on an interprofessional healthcare team, I examined, evaluated, generated treatment plans, and treated a wide variety of patients mainly in the Neuro ICU. Participated in weekly multidisciplinary meetings aimed to optimize patient care and their potential for recovery.

July 2023 – September 2023	Physical Therapy Student – University of Utah Health Care, Salt Lake City, UT <ul style="list-style-type: none"> - Collaborated on an interprofessional healthcare team to provide treatment to patients in an inpatient rehab setting. Participated in weekly multidisciplinary team meetings discussing patient care. - Assisted in the development and the execution of individualized rehabilitation plans for a variety of neurological, orthopedic, multi-pathological. Emphasis on spinal cord injuries. - Worked with the patient and their family to develop achievable goals and choosing interventions to best support patient functionality - Completed gait analysis and conducted specific pre-gait and gait training based on patient need.
July 2022 – July 2022	Physical Therapy Student – Banner Physical Therapy, Kingman, AZ <ul style="list-style-type: none"> - Acquired clinical experience in an outpatient setting located in an underserved and rural community, working with a culturally diverse population. - Throughout the rotation, working under the supervision of a board-certified orthopedic specialist (OCS), I conducted initial evaluations and developed plans of care for a wide variety of ortho patients both post-op and non-surgical. - I progressed patients through their plan of care, worked with patients to make sure we were meeting their goals, and assisted in providing discharge recommendations.

Volunteer Work

- College of Fine Arts Clinic for Health and Injury Prevention – October 2021 - May 2024
 - Worked in and helped to grow this physical therapy clinic where we provide pro-bono physical therapy services to the underserved population of the College of Fine Arts at UNLV. Throughout my time, I gained valuable experience working with the specialized population of performing artists.
- 2022 Annual Wheelchair Rugby Tournament – November 2022 and April 2023
 - Worked with adaptive athletes and assisted with making sure the tournament ran efficiently
- Bishop Gorman High School Concussion Testing – November 2022
 - Assisted in conducting baseline concussion testing for all winter sports at Bishop Gorman High School

- Nevada Senior Olympic Games – October 2022
 - Assisted in the set up and in the conduction of multiple track and field events.
- High School Football Game Coverage – September-October 2022
 - Worked alongside the certified athletic trainer and occasionally the team physician in covering and treating the athletes before and during varsity football games.
- Fall Prevention – Balance and Memory Community Screening events – September 2022
 - Provided balance and memory screening, provided patient education, and provided the proper referrals at multiple community screening events aimed to reduce the risk of falls in the elderly community.

Membership in Professional Organizations

- Member of AASPT mentorship program (2023 - present)
- AASPT Journal club (2022 – present)
- Member American Physical Therapy Association (APTA) (2021 - present)
- Member Nevada Physical Therapy Association (APTA) (2021 - present)
- Member American Academy of Sports Physical Therapy (AASPT) (2021 - present)
- Member Research Section of the American Physical Therapy Association (APTA) (2021 - present)