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A Case for an Injury Prevention and Self-Care Program for Bridgewater State University's
Department of Dance

Meghan Stanton

Submitted in Partial Completion of the
Requirements for Departmental Honors in Dance

Bridgewater State University

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Abstract

Dancers are a unique kind of athlete, who blend athletic ability and artistic expression into their physical performance. Researchers are beginning to see the need for dancers to have access to rehabilitation and injury prevention programs like most collegiate sports athletes. This project researched and created a case for an injury prevention and self-care program to be implemented at Bridgewater State University. The research examined articles and books on different on-site dance medicine programs and the roles of athletic trainers with dancers, communicated with a current health care provider at Body Dynamics Inc., Jenna Calo, Boston University's dance director, Micki Taylor-Pinney, Dean College's athletic trainer, Amanda Donahue and through my own research and experience. The research defines a case that can be presented to Bridgewater State University Department of Dance, the Dean of Humanities and Social Sciences, and the President's Council.

Introduction

Collegiate sports athletes have continuous access to certified athletic trainers to take care of injuries sustained through game play or practice. The athletic trainers help “provide preventative services, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions” (NATA 2016). However, athletic trainers only treat collegiate sports athletes within their school. The NATA is the National Athletic Training Association is a professional membership association for certified athletic trainers, that aided in setting up professional standards for all athletic trainers. According to Jatin Ambegaonkar and Shane Caswell for George Mason University, “dancers are ‘aesthetic athletes’ who endure years of intense and physically demanding practice with the aim of honing their skills for peak performance in front of an audience” (Ambegaonkar and Caswell, 17). Dancers essentially practice the same way as sports athletes practice just as a part of their academic requirements for the major.

Dancers sustain similar injuries to those sport athletes sustaining ankle sprains, stress fractures, muscle strains and even concussions. In the article, *Bringing Athletic Training and Therapy to Dancers: A Dance- Medicine Facility*, three associate professors, David Kaiser, Lee Wakefield, and Gaye Merrill, proposed to Brigham Young University an on-site dance facility. David Kaiser is an associate professor in physical education and the director of the athletic training education program. Lee Wakefield is an associate in physical education and the chairman of the Dance Department and Gaye Merrill is an associate professor in physical education and the clinical coordinator for the athletic training program and an assistant athletic trainer at Brigham Young University. According to David Kaiser, Lee Wakefield and Gaye Merrill, “The body is obviously subjected to stress that can result in both acute and chronic

injuries similar to those seen in more traditional athletic activities” (Kaiser, Wakefield and Merrill, 16). The difference is that sports athletes get treatment from athletic trainers, while dancers learn about the self-care techniques from anatomy classes, instructors and fellow dancers within their program. In the article, *Self-Reported Injury and Management in a Liberal Arts College Dance*, Sarah DiPasquale, Nicole Becker, Sarah Green and Kim Sauers stated that dancers react to their environment when it comes to self-care (DiPasquale, Becker, Green, and Sauers, 2015). Sarah DiPasquale is an assistant professor at Skidmore College, who supported and mentored three dance major students, Nicole Becker, Sarah Green, and Kim Sauers. Sarah DiPasquale has her Doctorate in Physical Therapy from Sage Graduate School and a Bachelor of Science in Health and Exercise Science from Syracuse University. DiPasquale trained at The Center for Ballet and Dance Arts in Syracuse, New York, at the Boston Conservatory, and danced with Ellen Sinopoli Dance Company. Nicole Becker received a Bachelor of Science in a Dance Science and Chemistry major from Skidmore College in 2016 and currently a Physical Medicine and Rehabilitation Research Assistant at University of Pennsylvania. Also, Sarah Green received a Bachelor of Arts in psychology and dance from Skidmore College in 2016 and currently a TEDx applicant’s contractor. Lastly, Kim Sauers received a Bachelor of Arts in Dance Performance and Choreography from Skidmore College in 2016. According to Sarah DiPasquale, Nicole Becker, Sarah Green, and Kim Sauers, “dancers may ignore any previous self-care education if the environment created by instructors, choreographers, and peers is not perceived as supportive to injury management” (DiPasquale, Becker, Green, and Sauers, 229). Reinforcement from a certified athletic trainer or a health care professional can aid in reducing the amount of injuries sustained and improving education about self-care.

Dancers do not currently have access to certified athletic trainers within colleges or universities in the United States. Only a few departments of dance across the country have created and implemented injury prevention and self-care programs that treat dancers like Dean College, Indiana University, Ohio University, North Carolina School of the Arts, George Mason University, and AMDA in Los Angeles. In the article, *Development and Implementation of an In-House Healthcare Program for University-Level Performing Artist*, Jatin P. Ambegaonkar and Shane V. Caswell made a case for an on-site health wellness program through statistics (Ambegaonkar and Caswell, 2009). Ambegaonkar and Caswell are associate professors at George Mason University and are co-directors of the Sports Medicine Assessment Research and Testing (S.M.A.R.T.) Laboratory. Ambegaonkar is a certified athletic trainer, strength and conditioning specialist, and occupation therapist, while Caswell is a professor of Athletic Training program. Both professors conduct research to prevent injuries through the S.M.A.R.T. Laboratory. Ambegaonkar and Caswell said that “In 1999, it was estimated that 121,000 professional and student dancers were active in the United States alone. Of these, 76,000 were reported to be professional dancers (38,000 full-time, 38,000 part time) and 45,000 student dancers (colleges and universities)” (Ambegaonkar and Caswell, 2009, 262). The article described a model of an in-house health service for university level performing artists. This program offered injury prevention and rehabilitation to improve function and performance of the artists and reduced the amount of injuries and improved overall health. This research demonstrates that there are a large amount of active individuals who are lacking access or treatment when injured. In addition, these active individuals have chosen a program of study that requires both physical, mental and emotional demands through their studies.

However, there have been some improvements in the professional dance world as it recognizes this significant issue. Dance/USA task force was created to maintain the health, safety and well-being of dancers. This task force is a group of healthcare professionals that care for professional dancers by providing educational workshops, injury prevention, rehabilitation and supporting the overall health of the dancer. In addition, “this taskforce on Dancer Health made recommendations on injury and illness preventions strategies and established screening protocols” (Ambegaonkar and Caswell, 2011, 262). Small changes have reduced the amount of injuries sustained in the professional world, however a substantial portion of the dance population in colleges or universities sustain injuries without access to professional care. Programs need to be developed within universities and colleges that have dance programs to add intervention and prevention treatment for these dancers. These dancers will then have a skill set of awareness around their bodies to prevent injuries, manage self-care practices, and to ask for help when the dancers entering into professional world.

The primary goal of this project is to provide Bridgewater State University with a proposal for an injury prevention and self-care program for the Department of Dance. This project examined articles and books discussing on how to develop an injury prevention and self-care program within a university setting. In addition, communication with a current professional health care provider in the dance science field aided in making this case for a dance-medicine program for the Bridgewater State University Department of Dance realistic and achievable.

What do athletic trainers do? How might they aid dancers?

Athletic trainers are used at high school, college and professional level sports games and at private physical therapy and sports medicine facilities. Athletic trainers mainly focus on injury prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries (Cooper, 2015). These professionals are most commonly used for student sport athletes, however there are other physically active students and professionals out there for athletic trainers to help. For example, there was a call for athletic trainers in the Olympic Games in the early twentieth century to treat injured sport athletes and prevent more serious injuries (Jenkins, 2015). However, the need for athletic trainers became more prevalent when football became a national sport in the United States of America. In the article, *Athletic Trainers: Providing Healthcare for Athletes of All Kinds*, C. Brett Lockard expands the notion of who should benefit from an athletic trainer (Lockard, 2005). Lockard is an economist in the United States Office of Occupational Statistics and Employment Projection, who studied the roles and responsibilities athletic trainers have to athletic people. Lockard states: “Athletic trainers help prevent and treat injuries for people who are physically active. Their clients include everyone from professional sport athletes to industrial workers” (Lockard, 2005, 38). Lockard states that athletic trainers have a broader responsibility than what is generally perceived. George G.A. Pujalte addresses the idea that athletic trainers treat more than sport athletes (Pujalte, 2015). Pujalte is a doctor, who is an assistant professor at the Mayo Clinic College of Medicine that specializes in sports medicine. Pujalte stated that “Athletic trainers are health-care personnel who are specifically trained to help diagnose, treat, and prevent sports injuries in various settings” (Pujalte, 2015, 1). Both experts agree that athletic trainers are meant for physically active people, not just for sport athletes.

Athletic trainers are first responders and health care professionals that care for those people, who are physically active.

Dancers are a type of physically active people, who devote their time to an art form to perfect technique and to perform for others. These aesthetic athletes have chosen an activity that is more than just movement. In the article, *Dance Wellness: Why, How, and the Future; A Model at Case Western Reserve University*, Karen Potter and Gary Galbraith discuss the challenges a dancer faces developing their skills at the university level and define dance (Potter and Galbraith). Potter is the Chair of the Department of Dance at Case Western, where she helped implement a dance wellness program. She also created programs at Ohio State University, Texas A & M University, Western Michigan University, Montclair State University, Muhlenberg College, Goucher College, and Northwest Vista Community College. Gary Galbraith is a professor at the dance program at Case Western and was a principal dancer in the Martha Graham Dance Company. After Galbraith's professional dance career, he focused on choreography and on dance science and medicine and his work is recognized internationally. Potter and Galbraith describe dance as: "a demanding neuromuscular, skeletal event, a temporal, spatial, kinetic interface, a kinesthetic, aesthetic syzygy anchored by the universality of human motion and propelled by creative forces" (Galbraith and Potter, 1). Dancers can sustain a variety of injuries depending on the style of the technique, amount of hours devoted to dance per week, whether the dancers are properly training the body to be strong, if the dancer is in correct alignment to avoid further injury, and the facility where the dance. Dancers can sustain both chronic and acute injuries.

The article, *Athletic Training and Therapy to Dancers: A Dance- Medicine Faculty*, David A. Kaiser addresses injuries that occur in the lower and upper extremities. Dancers can

sustain sprains, strains, fractured toes, feet and ankle, meniscal tears in the knee, ankle sprains, lower back strains, shin splints, achilles tendonitis, groin strains, hamstring strains, arch strains, plantar fasciitis, patellofemoral syndrome, piriformis syndrome and sprained toes that occur in the lower extremities (Kaiser, 2002, 16). Dancers can also sustain wrist sprains, rotator cuff strains, shoulder impingement, rib fractures, trapezius strains and strained rhomboids in the upper extremities (Kaiser, 2002, 16). This is only a small list of injuries that dancers can sustain through their practice. Dance is a physically and emotionally demanding art form that requires years of focus and dedication to maintain a healthy body and mind.

Types of Injuries Dancers' Sustain

A strain is a type of injury that is caused by overuse of a muscle that causes the muscle fibers to stretch beyond their limits and potentially tear. On the other hand, a sprain is a type of injury that affects the ligaments that connect bones to joints, where the ligaments are over stretched or torn due to an acute injury. An acute injury is a type of injury that occurs quickly due to a traumatic event, while a chronic injury develops over time within the body. Chronic injuries are commonly referred to as over-use injuries and can lead to an acute injury to occur. Kaiser stated that "...in dance, the body is obviously subjected to stress that can result in both acute and chronic injuries similar to those seen in more traditional athletic activities" (Kaiser, 2002, 16). Dancers do not know when to stop and listen to their bodies due to the demands of their activity. This activity requires performance, even with an acute injury. In addition, dancers do not like to take time to rest because they might fall behind in improving their technique, which would negatively impact their career. However, a serious injury can be a career ending injury to that dancer. "Good" pain usually referred as muscle soreness or tightness from previous technique classes that usually gets better over a day or two. "Bad" pain usually refers to a

warning sign to an injury and can hinder how you perform. This pain lasts longer and can get worse if not treated in time. Dancers need to learn how to listen to their bodies and know when the pain is “good” pain or “bad” pain.

Dancers practice and perform, just as sport athletes practice and play competitive games throughout the year. Dancers’ practices can be anywhere from two to six hours long on a daily basis, which is comparable to athletic practices. Both have week-long practices in preparation for a big event or competition. Sport athletes tend to have practice every day in preparation for a big game like a championship. Dancers have practice every day, called tech week, in preparation for a performance or for a dance competition. Dancers must be powerful, precise and artistic with every movement they execute through performance. Without access to proper resources, dancers are often left with few choices.

Historically, dancers who were injured had few medical professionals conversant in the specifics of their art form. Often, injured dancers lacked basic health information for self-care or the financial means to obtain high quality medical care (Potter and Galbraith, 1).

On the other hand, sports athletes have an athletic trainer present and accessible during every practice, game or tournament even when the teams travel. In the article, *Certified Athletic Trainers as Certified Teachers: A Model for Making it Happen*, Nita Unruh discusses the importance of handling an emergency situation correctly (Unruh, Unruh, and Scantling, 2008). Unruh is the Chair and Professor of Kinesiology and Sport Sciences at University of Nebraska Kearney, who is sports marketing and management and administration of sport. Scott Unruh is also a professor of Kinesiology and Sports Sciences at University of Nebraska Kearny, where his focus is on athletic training education and assessment of student learning and program effectiveness. Lastly, Ed Scantling is the Associate Vice Chancellor for Academic Services and Enrollment Management, Dean of Education and a Professor of Kinesiology and Sports

Sciences, who is interested in sport pedagogy and fitness education. Nita Unruh, Scoot Unruh and Ed Scantlin stated that “having a trained professional at practices and games ensures some measure of awareness of how to handle these emergency situations and may reduce some of the incidence of collateral damage due to the improper handling of an emergency scenario” (Unruh, Unruh, Scantling, 2008, 33). Many college and university dancers only have the knowledge gained from past injuries, other dancers, professors, or classes that were taken that relate to injury prevention and self-care. Many dancers without programs have to either seek help on their own, try to care for the injury by themselves, or completely ignore the injury and push through the rehearsal or performance. According to the article, *Pushing Through Pain*, Debbie Malina interviewed Anna Turgoose and Sarah McGrail on why dancers push through the pain and if there are consequences to dancers’ actions. Anna Turgoose, who is a physiotherapist with experience with dancers, and Sarah McGrail, who is also a physiotherapist interested in the area of sports medicine especially dancers. One question asked and answered was:

Debbie Malina: Do dancers have a higher pain threshold than most people?

Anna Turgoose: Dancers are incredibly focused and determined individuals, accustomed to pushing physical boundaries that are sometimes painful but not actually injurious...

Sarah McGrail: Dancers are elite athletes and tend to disregard a certain amount of pain... (Malina, 2016, 106)

Since dancers are dedicated to the art form, the dancers push through pain and that can lead to either a chronic or over use injury in the dancer. In addition, Debbie Malina asked if there are any consequences for dancers for pushing through their pain, and both physiotherapists, Anna Turgoose and Sarah McGrail, agreed that the dancer would have a longer recovery time and could cause irreversible damage to their bodies. In the article, *Preventing Injuries To Dancers, Part 2: Keeping Dancers On Their Feet*, Kimberly S. Peer and Karlene Dubois address the issue of overtraining and the time commitment dancers make for their art form (Peer and Dubois,

2005). Kimberly S. Peer is the coordinator of the Athletic Training Education Program at Kent State University, who specializes in health care ethics, athletic training, and medical technology. Karlene Dubois is a certified athletic trainer, who completed her doctorate of physical therapy at Slippery Rock University. Peer and Dubois stated “overtraining and performance schedules are additional extrinsic factors related to dance injuries. Because of the limited number of performers, dancers typically are not provided adequate rest time between rehearsals and performances” (Peer and Dubois, 2005, 47). Insufficient rest leads to a chronic injuries that could over time cause an even bigger more acute injuries.

Why is there a Need for Self-care and Injury Prevention Programs for Dancers?

Over the years, there has been an increasing call for dancers to have access to medical healthcare professionals like athletic trainers and physical therapists just like the sports athletes. This pressure for a fundamental change in the way universities think about their dance majors is due to the increase in research in dance science. In the article, *Development and Implementation of an In-House Healthcare Program for University-Level Performing Artists*, Christine Guptill makes the case for these performers (Guptil, Ambegaonkar, Caswell, 2014). Christine Guptill is an Assistant Professor in Rehabilitation Medicine and Occupational Therapy at University of Alberta and focuses on health and occupational performance of musicians. Dancers are now considered “aesthetic athletes” and “have been suggested to be ‘super-athletes’ who not only must to be at the ‘top of their game’ but also must perform according to rigorous aesthetic demands while doing it” (Guptil, Ambegaonkar, Caswell, 2014, 262). Dancers deserve the same resources as sport athletes because of the similar physical demand on their bodies due to the year round nature of the art form. If dancers had access to an on-site dance medicine facility there

would be a decreased liability to the university, an increase in injury prevention, and dancers would be educated about self-care that would help them to maintain optimal health.

Sport athletes are ensured on-site health care for any injury that may occur during a practice or game. However, this kind of system is not in place for dancers at a university level due to the lack of understanding of what dancers do during technique classes or performances. In the article, *Dance Program Administrators' Perceptions of Athletic Training Services*, Ambegaonkar states “the number of dance students at college and universities is estimated to be between 9,000 and 45,000” (Ambegaonkar and Caswell, 2009, 17). Although the range is big, there are still many students that do not receive access or treatment for their injuries. This is a high number of aesthetic athletes in university settings that are not receiving proper health care from their university and most likely pushing through the pain of the injury to keep up with the choreography or class.

However, many schools do not have access to a “Performing Arts Medicine Program” like George Mason University. These professionals in programs need to speak up and bring awareness to the increasing injuries with lack of medical care that occur within the department. Scott A.G. M. Crawford addresses the need for both professors and administrators to provide funding for a healthcare professional for dancers. Crawford is a retired professor of kinesiology and sports studies from Eastern Illinois University. Scott A. G. M. Crawford said that “administrators have no choice but to embrace an ethos of professional care for dancers. Funding priorities need to be refocused so that ‘dancer protection will become the norm, not the exception that it is today” (Crawford, 2006, 12).

In the meantime, dancers usually ask advice from a trusted professor within the program. Professors then provide information based on their knowledge about the body and how to care

for it when injured. Also, many professors pull from previous experiences to provide advice to the dancer because the professors have found a method of self-care that works best for their body and their injury. This can be problematic due to the specific needs of each individual dancer. Each body has a different need and responds differently to certain rehabilitation exercises or practices. Each assessment and treatment is unique to that dancer's body. Another source dancers turn to their peers to seek advice. Within a program, dancers become very close and know each other very well on an emotional and physical level. Fellow dancers utilize prior experience to give advice on how to care for the body based on the injury. This can be problematic because of the varying levels of understanding about the musculoskeletal system and self-care dancers might have about their bodies. A dancer might be doing a technique wrong or treating the wrong part of the body, so taking advice from others could cause longer recovery time or make the injury worse. These sources of information are not the most reliable advice, because dancers have different bodies with differing degrees of the injury. Also, being injured does not make a dance student an expert or able to diagnose someone else. The best source a dancer could go to for an evaluation, without having access to athletic treatment on campus, is a doctor. Preferably, the dancer should make an appointment with their regular doctor or a doctor that specializes in dance. However, dancers face difficulty seeing their own doctor or a specialty doctor because the dancer must set up an appointment, then make time to travel either to the specialist doctor or travel home to their town. Some dancers live very far from their home, so the dancers would need to miss class or work to see the doctor. Lastly, since dancers are a unique kind of athlete, doctors do not always know how to treat dancers because the doctors want the dancers to rest, which is nearly impossible in this field of study. Having a doctor that specializes in dance and understands the physical and emotional demands is ideal. However, it may be hard to get an

appointment or even afford this specialist. Dancers rely on their own sources of advice to treat the injuries and cope with the pain that comes with that particular injury, without missing a class or performance. As a result, injuries could become worse, take a longer recovery time, and never fully heal causing future problems for the dancer.

As a result of dancers relying on their own sources of advice to treat injuries, many dancers become injured and sustain those injuries longer. In the study, *Self-Reported Injury and Management in a Liberal Arts College Dance Department*, the researchers tracked injuries that occurred over one semester. The study tracked 168 students registered in the technique classes, which includes dance majors, dance minors, and non-dancers who attend the university. If an injury occurred, the student would fill out an injury questionnaire immediately following the injury. The results of this study showed there were 46 injuries out of 168 students over the course of one semester (DiPasquale, Becker, Green, and Sauers, 2015). The questionnaire also addressed whether or not the student would seek help from an on campus athletic trainer or physical therapist or seek medical help off campus. The study showed that “89.1% of participants indicated that they would use a direct-access, on-campus physical therapist or athletic trainer if available, though 45.7% of injured participants indicated that they would seek treatment off campus” (DiPasquale, 2015, 224). This study shows that there is an interest and demand for an on-campus athletic trainer or physical therapist to be present for that dance program. The athletic trainer or physical therapist would treat dance majors and minors and non-dancers who took the technique class. The next step the study would take is implementing an on-site dance medicine facility to care for the 168 students that attend the technique classes, like that at George Mason University.

In the article, *Development and Implementation of an In-House Healthcare Program for University-Level Performing Artists*, George Mason University proposed to implement an on-site dance medicine program called the Performing Arts Medicine or PAM. George Mason University has about 80 dedicated dance majors and 1000 students that take dance classes or are considered dance minors (Guptill, Ambegaonkar, and Caswell, 2011). This university selected a room located near the dance studios to be used for prevention, rehabilitation, and education for the students within the program. In addition, the PAM program collected data that indicated significant use.

The statistics from year one of the program demonstrated that the program was highly utilized by the performing arts students. Specifically, nearly 100 different injuries and 300 clinician healthcare sessions were provided to the dancers in the first year of the program alone (Guptill et al, 2011, 265).

This program will continue to provide care and support to the dedicated students within the department of dance at George Mason University. In the study, *Injuries in a Modern Dance Company Effect of Comprehensive Management on Injury Incidence and Cost*, Sheyi Ojofeitimi and Shaw Bronner address the results of having comprehensive injury management with a professional company (Ojofeitimi and Bronner, 2011). Sheyi Ojofeitimi is a research associate at the Analysis of Dance and Movement (ADAM) Center, in Long Island University, Brooklyn, New York and Shaw Bronner is an associate professor of Research and Director of ADAM Center. Ojofeitimi and Bronner state: “It was found that comprehensive management resulted in 34% decline in total injury incidence, 66% decrease in Workers Compensation claims, and 56% decrease in lost days” (Ojofeitimi and Bronner, 2011, 116). This study shows that in a professional setting, having injury management professional care for these dancers can improve overall health costs for the company. In addition, if implemented at a university level, this can

decrease liability for Bridgewater State University because it not only provides prevention and rehabilitation for the students, but also provides educational programs.

Through all the evidence collected, many colleges and universities have managed to create a case to implement an injury prevention and self-care program. Some universities and colleges include Boston University, Dean College and Western Reserve University. Each school has set up a program that meets the needs of their dancers and utilizes the resources they have. Each program has created a different case and utilized different aspects of their school to create an on-site dance medicine facility for the university or college dancers.

Is there a need for an injury prevention and self-care program at Bridgewater State University?

There is a need for attention to be brought to the dancers of Bridgewater State University based on the survey results from the research project *Self-Care and Injury Prevention for Bridgewater State Dance Majors and Minors* that I completed as part of an ATP Summer Grant in 2016. This project developed a survey that was a blind study to gather information about the Bridgewater State University dance majors and minors knowledge about injuries and self-care. The survey covered concepts of injuries sustained, types of self-care provided, and if the dancer accessed a medical professional. At Bridgewater State University, the dance program has about fifty to sixty dance majors and minors within the department of dance, not including students who take dance classes for an fine arts credit or recreationally. The survey was only sent out to the dance majors and minors of the program. As a result, about 47% of the dance majors and minors responded and participated in this survey for research anonymously.

The results of the survey showed that the dancers at Bridgewater State University were getting injured and sustaining those injuries. First, 94.44% of the dance majors and minors responded to sustaining an injury while dancing at Bridgewater State University. Next, 70% of the dance majors and minors did not take the time to rest from dance to allow the injury to heal, which resulted in 70.37% dancers saying that the injury never healed and 80% of the dancers saying that the injury returned. Lastly, 83.33% of the dancers responded that they would seek help from an athletic trainer if it was available to the dancers at Bridgewater State University, Department of Dance. This research showed that there is a need for the Bridgewater State University dance majors and minors to have access to an athletic trainer specialized in dance.

What programs exist in university settings?

To discover the best fit program for Bridgewater State University's Department of dance, I interviewed two schools, examined an article and communicated with a healthcare professional. My first interview was with Micki Taylor-Pinney at Boston University. We had a half hour phone interview, where I asked her about ten questions that investigated the program that is set up for the dancers at Boston University. My second interview was with Amanda Donahue, who is the athletic trainer at Dean College. I contacted her with a phone call and we decided on doing an email interview. I sent her the ten interview questions to her email and she responded with the questions filled out. Next, I examined an article from Western Reserve University, where they explained the program they implemented at the school. The article contained things from the goals of the program to how the program was obtained. Finally, I conducted another email interview with Jenna Calo from Body Dynamics Inc. Jenna Calo received the questions through email and she sent them back with answers. Jenna Calo gave me information on how to start and create a program for Bridgewater State University. Each person was chosen because they had very different programs and approaches for providing injury prevention and self-care to their dancers. Having the variety helped shape my view on the program that would be best at Bridgewater State University.

Boston University

The first program that was investigated was at Boston University. Boston University offers a dance minor and a student dance company that is classified as a club sport under the university. The dance minor program is run by Micki Taylor-Pinney, who has her bachelor of science from University of Massachusetts, Amherst and a master of fine arts from University of North Carolina, Greensboro. Micki Taylor-Pinney directs the dance minor program and advises the student dance company.

At Boston University, the dance minor program is classified under the physical education program. The student dance company is considered an adjunct club sport under athletics. This allows the student dance company to have access to an athletic trainer. However, the 65 students involved with this company have to pay a thirty dollar fee to use these resource. The dancers at Boston University achieved access to the athletic trainers because it “came about as a desire of not to risk management at BU to minimize the number of injuries and reduce the dancers to go back to their activities without sufficient knowledge” (Pinney-Taylor, 2017). This desire to reduce risk management allowed the student company to become an adjunct club sport. The dancers have access to the athletic training room and athletic trainers. In addition, dancers can go to the health center and receive treatment. Also, the dancers can get references to local physical therapists and specialists for dancers. Since dance straddles both sports and arts, the students need access to medical professionals to take care of their bodies and the injuries they sustain throughout the year.

Dean College

The second program that was investigated was the private college in Franklin, Massachusetts, Dean College. Dean College has a unique set-up for the dance program, where the college offers a full time athletic trainer that specializes in dance. The dance program is centered within the Palladino School of Dance where a Bachelor of Arts in dance is offered. The Bachelor of Arts is either dance, dance studies specialization, performance and choreography specialization, a studio management and teaching. In addition, Dean College offers a two year dance program to obtain an associate's degree in dance. Amanda Donahue is currently the full time athletic trainer at the Palladino School of Dance, where she has a master of science in kinesiology from the University of Illinois and a bachelor of science in athletic trainer from northeastern University.

At the Palladino School of Dance, the dancers have their own on-site dance medicine facility near the studios. This allows dancers the space to go to have their injuries treated and be rehabilitated by an athletic trainer. There are only five other schools with this type of set up: Indiana University, Ohio University, North Carolina School of the Arts, George Mason University, and AMDA in Los Angeles. This college offers the best form of treatment and availability for the dancers in the Palladino School of Dance. However, hiring of a full time athletic trainer was not an easy task to achieve for the Palladino School of Dance. According to Amanda Donahue, "My position at Dean took about 4 years to create. Have patience. But start collecting the data and get the dance department communicating with the athletic training department" (Donahue, 2017). These dancers are very lucky to have an athletic trainer that they get to know over two or four years who understands their personal needs and past history with injuries.

Western Reserve University

The third program that was investigated Western Reserve University located in Cleveland, Ohio. This university has multiple programs for students interested in pursuing dance as a degree. Western Reserve University offers a bachelor of arts, a minor, a master of fine arts and a master of arts in dance. This university offers an extensive study within the art form of dance and provides its own on-site dance medicine facility.

At Western Reserve University, the on-site dance medicine facility is called Dancer Wellness Program. They provide an article and website for other universities to use to build their own program. In Dancer Wellness Program the “general structure includes an annual screen, education modules, seminars or roundtable discussions, the integration of theory in lecture classes such as kinesiology, review sessions and evaluations” (Potter, 3). This program focuses on:

making the dancers’ training more efficient and effective, preventing injuries, rehabilitation of injuries, Promote career longevity as a dancer, assist educators and medical care professionals who work with dancers, develops quantifiable data that addresses the physical characteristics and demands of dancers’ musculoskeletal system to promote the research into dancer health (Potter, 3).

The program is the example that is used by many universities to create programs that will best fit the needs of their dancers. The program not only provides self-care and injury prevention practices, but also collects research in support of the need for athletic trainers specialized in dance for dancers at a university setting.

Body Dynamics Inc.

Jenna Calo from *Body Dynamics Inc.* in Falls Church, Virginia was interviewed about implementing an on-site dance medicine program. Jenna Calo received her Doctorate of Physical Therapy from University of St. Augustine in San Diego, California. Calo also received a Bachelor of Fine Arts in Dance and a Bachelor of Science in Exercise Science at Rutgers University in New Jersey and is a Board-Certified Orthopedic Clinical Specialist. Jenna Calo specializes in working with dancers and works with The Washington Ballet and students at Washington School of Ballet.

Jenna Calo suggested that the first step in creating this program for Bridgewater State University would be to gather statistics on how many need education or have sustained injuries. This will help build a case and determine that a program of this nature is valuable to the Department of Dance. In addition, it would be advisable to start building health and wellness workshops for dance majors and minors. The dancers would have a fuller understanding of their bodies and injuries and how the dancer can address the injury. These workshops could also attract potential new students who are dancers interested in the dance science field.

Next, Calo addressed what resources would be needed to implement this program like space, supplies, and assessments for dancers. A professional health care provider like a physical therapist or athletic trainer who specializes in dancers would be best fit for this program. Jenna Calo stated “Minimal space needed. The lead clinician needs a treatment table and limited supplies to get going” (Calo, 2017). This person could perform pre-assessments, injury assessments, rehabilitation and education for dancers in the small space. However, first steps would be to collect statistics, build educational workshops for dancers and try to implement a pre-assessment program for Bridgewater State University (Calo, 2017).

Best Fit Program for Bridgewater State University

There are many different approaches and ideas for creating access to an athletic trainer specializing in dance or proposing a new on-site dance medicine facility. Some schools are fortunate enough to gain the funds to create an on-site dance facility that are close to the studios, so it is easily accessible to dancers like at Dean College and Western Reserve University. Other schools utilize the athletic trainers under athletics and health services offered to students to provide their injury prevention and self-care for their dancers like Boston University. Bridgewater State University would benefit from both programs in the future, but which one would be the best fit for this demographic of students and state university setting?

After talking with the Bridgewater State University dance faculty and researching multiple sources on dance injury prevention and self-care, the best fit program would be to create a workshop that covers injury prevention and self-care and to create a relationship with the athletic training department. This program will enhance the knowledge about self-care and injury prevention within the dance majors and minors. In addition, it will benefit both the athletic training and dance programs and their students at Bridgewater State University.

The workshop would be offered during the first year in the dance program. This workshop would essentially cover the knowledge about anatomy and physiology, kinesiology and injury prevention and self-care techniques. The workshop would consist of broad overview about the human body, mainly focused on the musculoskeletal system through the movement of dance. The workshop would also include basic introductory components like how to run a safe and engaging warm-up for students. Next, the workshop would begin to get into injury prevention and self-care techniques the dancers could use during their four years at Bridgewater State University. This part would focus on safe practices and correct body alignment in dance. It

would also include strength and conditioning for dancers to protect their bodies from injuries and how to properly strengthen and release muscles. In addition, it would focused on self-care of injuries and an articulation of the steps needed if one does sustain an injury that affects their dancing. This workshop would mentally and physically prepare the first year students to take care of their bodies. Similarly, it could reduce the amount of injuries that would occur during the dancer's four years at Bridgewater State University.

The next thing to do would be to form a relationship with the Bridgewater State University Athletic Training undergraduate and graduate programs. This relationship can provide the dance department with athletic trainers, who could aid in the treatment of injuries and rehabilitation of the dancers. This will also provide experience to the athletic training students with different kinds of athletes. Furthermore, this could cover the athletic training student's non-traditional athletic training setting. In the athletic training program, each student must complete a traditional setting, which is high school and university sports and a non-traditional setting like a hospital or working with dancers. Essentially, dancers would have hours open to them during the week at the athletic training room in Tinsley, where athletic training students would provide advice. This would be very limited, but also very useful to both dance and athletic training students.

This program could benefit Bridgewater State University in many ways. First, this may make the university more appealing to both athletic training and dance students. It provides dancers with access to athletic trainers and it broadens the knowledge for the athletic training students. Second, this program could decrease liability risk for the university because the dancers are being educated on good conditioning and self-care practices. Plus, the dancers are provided support through athletic trainers to treat and rehabilitate the dancer's injuries. Lastly, this

program would provide research to the dance medicine field by creating a case for the need for athletic trainers specialized in dance. The athletic trainers are required to keep records of each student, their injuries and what exercises and treatments were used for that injury. The athletic training program could collect data on the amount of injuries each year to see if the program is reducing the injuries occurring in dancers and how to improve the program. This could provide an example to other state universities with athletic training and dance programs and to the growing research and knowledge around dance science.

This program is the best fit for Bridgewater State University because it is utilizing what is already provided within the majors and on campus. This allows the dance department to expand on the “Science and Theory of Dance” course to engage the dancers both mentally and physically. The dancers are able to fully understand the information presented to them and apply this knowledge in every course that follows. Next, this program utilizes the athletic training program and their interest in forming a relationship with the dance department. Utilizing resources already on campus reduces the cost and makes the program achievable. This program can strengthen both the athletic training and dance programs at Bridgewater State University.

IMPLICATIONS FOR THE FUTURE

This research has grown into a future goal and career for me to pursue for the Department of Dance at Bridgewater State University. In the future, I plan to facilitate the conversation with the Athletics Departments and Health Services at Bridgewater State University. Further, I want to create a template that can be implemented and used across multiple universities that have both a dance and athletic training program available to future students. I hope this research will help bring awareness to the dancers at Bridgewater State University and others universities, as well. Also, I hope to travel nationally to help implement similar programs in other universities with a dance and athletic training programs.

In the spring, I will be graduating with my Bachelor of Arts in dance and will be beginning my graduate program in Athletic training. I will to begin a conversation with the Athletic Director about the location and classification of Athletic trainers and the department. At the moment, the Athletic Training Department and the Athletic trainers are under the Athletics Department because Bridgewater State University is a National Collegiate Athletic Association, NCAA, school. This means that athletic trainers are under the Athletics Department and are only allowed to treat sport athletes, who are participating in the NCAA sports. Beginning the conversation with the Athletic director, then the Medical Director and lastly with President Fred Clark, will raise awareness of the need for a recreational Athletic trainer and for the athletic trainers to be classified under health services at Bridgewater State University. I will begin this conversation with the support from Kimberly A. Wise, who is the Director of Clinical Education and Assistant Professor within the Athletic Training Program at Bridgewater State University.

After the program is set up at Bridgewater State University, I want to develop a template that is broad enough to be implemented in different university settings. This template would require a dance department and an athletic training department to form a relationship to create this program to benefit both dance and athletic training students. This template will be able to benefit two programs of study and influence more students in their studies. I would use this template bring this research to other institutions and assist them in developing their own injury prevention and rehabilitation programs. This would bring awareness to dancers as ‘aesthetic athletes’ and their need for athletic trainers specialized in dance.

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