No Pain, No Gain?: An Analysis of the Social Cognitive Theory Through the Lens of Collegiate Dancers and Injury Intervention

Amanda Zawisza

HE5220_Sec001, Health Behavior Change

1 April 2018

I have neither given nor received assistance on this assignment.

Introduction

"Among athletes, dancers sustain one of the highest rates of injury" and yet, in many cases few dancers seek guidance for their injuries from health care professionals (Air, Grierson, Davenport, & Krabak, 2014, p. 241). The dance world is highly competitive and in many ways, breeds a culture of acceptance of pain. In popular culture, there is the phrase, "no pain, no gain", but often in any sort of pre-professional dance level, pain is gain. If a dancer does not feel some sort of pain in his or her body as he or she is training, they are typically instructed that that is not right. This sentiment is engrained in dancers at a young age and sticks with the dancer throughout the course of their training (Russell, 2013). As many as 60-90% of dancers ages 8-16 are injured throughout their careers, and nearly all have smaller injuries and irritations that they live and work through (Steinberg, 2016). Think of how this trend and mindset flourishes as the dancer grows and continues through pre-professional training. At the pre-professional collegiate level, nearly all dancers have been or are currently dealing with injury. Specifically, in the program here at Wayne State University, every dancer has some sort of injury – chronic, developing, recovering, or otherwise. Each semester, only one or two take the time to fully and adequately rest to treat their injury, as by this point is has progressed to the point of being unmanageable.

The Health Behavior Change: Treatment Adherence

A dancer's body *is* their career. Neglect, misuse and lack of care for this precious resource threatens the longevity of a dancer's career and furthermore the quality of life that he or she may possess in later years. With this in mind, why do dancers reject and neglect professional treatment for pain? Why is the dance culture bred to neglect and normalize pain? The central

health behavior that needs to be changed is the lack of proper injury treatment and treatment plan adherence.

Causes & Challenges. Collegiate and professional dancers in intense training have a number of factors that may cause the problem of lack of proper injury treatment and plan adherence. The first – and most central influence – of which is the specific culture that is bred in the dance world. Dance creates a world that is entirely unique. It has little to no influence in popular culture, receives no widespread support, is often underfunded and underappreciated. In many ways, dance falls victim to a certain lack of respect of the combined artistry and athleticism of the craft. There is an extra sense of apprehension from popular culture with regards to pursuing dance as a career choice – many dancers feel the need to justify their decision and have to go through the process of convincing others that their career choice is valid. This builds a culture that is extremely intrinsically focused and motivated. This kind of culture develops an "intense psyche" with extreme motivation that often "presents unique challenges to clinicians" (Russell, 2013).

Dancers at this level are constantly working, rarely taking time off, and often putting a lot of pressure on themselves for their own personal success. The same personality characteristics that are attributed to success – drive passion, motivation, and responsibility to action – also lead to a greatly increased risk of injury (Russell, 2013).

With dancers, there is no set movement, no set syllabi, no one thing that can just be avoided or reduced. It is a constant, full body effort and is often unpredictable. In the experience of dancers, many doctors do not understand that rest is often not an option, and there is no "season" for dance – it is a year-round training and performance sport (Air, et al., 2014, p. 241). Doctors tell dancers to simply rest, and this in turn breeds a pattern of self-diagnosis and self-

treatment from dancers, as they do not have the time to rest. Speaking from a more personal perspective, if the condition is something that the dancer can work through, they will do it – especially if it means a grade, degree, job opportunity, or paycheck. Hearing the same answer for a number of different injuries gets old very quickly, and thus this encourages an apprehension against seeking treatment.

This impact of internal pressures is equally matched by external pressures that influence the psyche and decision-making of a dancer. There is a normalization of injury in the dance world and with that, the idea that pain is okay and a necessary part of training in order to learn, grow, and succeed (Pollard-Smith, 2017). Seeing one's peers or co-workers dance through injuries and continue training despite pain happens often and is seen as normal. As a result, is a mutation of the perception of pain that is present in dancers (Pollard-Smith, 2017). Being able to work through and with pain is expected, and thus the level of what constitutes an injury, is much different from the perspective of a dancer in comparison to the perspective of a clinician.

These motivations also come from the close-knit and competitive nature of the dance world. As shown by a number of studies, the idea of competition for roles, recognition, opportunities, and jobs is heavily influenced by the stamina, perseverance, attitude, and promise of longevity of the dancer. In a study conducted on dance injuries in a contemporary ballet company, "dancers feared that injury, and being in care for injuries was seen as a negative influence on their career opportunities, specifically within company settings" (Pollard-Smith, 2017).

Playing off of all of these factors, in many situations, there is the logistical issue of not having access to health care or medical insurance to take care of the financial burden that treatment places on dancers. There are very few programs in the United States of America that

trains and provides consistent access of dancers to dance/performing arts specialists that can provide relatable and adequate – in the eyes of the dancers – care for injuries and ailments. With many college dance programs, there is no or very limited access to on-site health care. However, in just about all studies conducted on dance injuries, the dancers being studied have access – on-site or otherwise provided by the setting – to health care, skewing the results and neglecting the large percentage of dancers that do not have this kind of access (Air, et al., 2014, p. 248).

Level of Interaction

The nature of this health behavior issue is ultimately interpersonal. This level operates "on the assumption that other people influence our behavior" (Hayden, 2014, p. 3). Based on the causes previously discussed, one could say that the culture of the dance world is the largest influence and thus, the effect of other's thoughts, advice, experience, feelings, emotional support and assistance strongly influence one's personal thoughts and feelings on an issue (Hayden, 2014, p. 3). In conjunction with this, there is also a relatively strong indication of this taking place at an intrapersonal/individual level. Ultimately, the intrinsic factors of the dancer makes the health decision, but because of close culture bred by collegiate and pre-professional programming, the interpersonal level holds more of an influence in the building of these foundational values and decision-making.

Social Cognitive Theory

The theory that is especially relevant to this issue and ultimately the theory that an intervention would be based off of is the Social Cognitive Theory. This interpersonal theory speaks to the idea that a number of factors are interrelated, and by changing one, all are influenced. As defined by *Introduction to Health Behavior Theory* (2014), the idea of the model is that "behavior, personal factors, and environmental factors interact with each other, and

changing one changes them all" (Hayden, 2014, p. 295). Components of this model include self-efficacy, expectations of outcome, observational learning, reinforcement, locus of control, self-regulation, behavioral capability, and emotional arousal (Hayden, 2014, p. 295).

Constructs and Application

Self-efficacy is named as being the "single most important determinant of behavior" (Hayden, 2014, p. 176). It is the belief of an individual to perform and carry out a task that allows and encourages them to actually take part in the task at hand. With relation to the goal of intervention, the self-efficacy of dancers with relation to their injuries must be modified to support the belief that they can and will receive the treatment necessary for their success if they make the effort to seek out health care.

This comes with the modification of outcome expectations. "This construct suggests that people behave in certain ways because of the results they expect" (Hayden, 2014, p. 176). Based on this definition and the culmination of reviews of research in preparation of this project, the outcome expectations of dancers with regards to injuries can be assumed that they do not see a benefit or constructive outcome to receiving health care from a physician or doctor. In a recent study conducted on dancers in collegiate dance programs, there was an identified trend of thought "that doctors do not provide practical and feasible treatment or prevention plans for their dance injuries" (Air, et al., 2014, p. 248).

This belief is often heavily influenced by the opinions and experiences of others, relating weaving directly into the construct of observational learning. Also referred to as "modeling", this is the factor by which an individual learns by watching others and ultimately copying their behavior – knowingly or unknowingly (Hayden, 2014, p. 177). Within this construct, the strength of this depends largely on the strength of relationship and attention that is paid to the individual

that is modeling behavior (Hayden, 2014, p. 178). In the same study conducted on collegiate dance programs, the first contact of treatment advice was the students' dance teachers, as shown by self-questionnaires of 47.5% of the participants in the survey (Air, et al., 2014, p. 241). Dance colleagues ranked only 2% lower than physicians, with colleagues being voted as first-line of intervention at 10% and physicians at 12% (Air, et al., 2014, p. 241). This study demonstrates the high influence that observational learning holds over the behaviors of individual dancers and their choices in their careers and care for their bodies. The perceptions of dance teachers' opinions of the individual and of the method of health care they are choosing is quite important to the dancer and ultimately holds great influence over the way in which the dancer is treated.

Observational learning goes hand-in-hand with the Social Cognitive Theory's construct of reinforcement. Reinforcement also strongly correlates with an individual's self-efficacy and expectancies with regards to specific outcomes. Reinforcement is generally defined as "a system of rewards and punishment in response to behavior" (Hayden, 2014, p. 179). This system may be intrinsic or extrinsic and heavily influences behavior because people either want to reap the benefits of a reward or hope to avoid punishment to a certain degree (Hayden, 2014, p. 179). Dancers are constantly receiving feedback – either verbally from their instructors and peers or visually from the mirror and videos. This constant reception of feedback turns into positive or negative reinforcement of action. With regards to injuries, the treatment of injuries may be rewarded by some instructors by positive comments and support of taking care of oneself, whereas other instructors may not support it, asking the dancers to push through rehearsals or classes. Ultimately, this reinforcement comes from an outside resource, and holds a strong influence over the self-efficacy, confidence, psyche, and behavior of the dancer.

Spawning off of this is the construct of the locus of control. This aspect of the theory seeks to explain the idea that people vary in their degree of belief that they are in control of everything that happens to them (Hayden, 2014, p. 181). This construct "works on a continuum from internal to external" (Hayden, 2014, p. 181). Those focused on an internal locus of control believe that their decisions and behaviors influence everything that happens to them, whereas externally focused people believe that situations in their life are ultimately caused by things outside of their control (Hayden, 2014, p. 181). For the most part, dance injuries are chronic and develop over long periods of time of incorrect, hard, or hurtful training. With this, many dancers hold the belief that they are ultimately in control of a situation, holding a pretty internal locus of control. Dance is a matter of overcoming psychological barriers to perform tasks that may otherwise not be viewed as humanly possible or realistic to a pedestrian. This makes it difficult for health care providers to influence the decision-making and the point of view of the dancers.

One construct of the Social Cognitive Theory that health care practitioners may have more influence over with regards to the treatment of dancer's injuries is the idea of self-regulation. Self-regulation blend the constructs of self-efficacy and outcome expectations, occurring when people create beliefs about what they can do and have plans for actions, goals to remain motivated, and an overall course of action (Hayden, 2014, p. 177). While this is ultimately a self-developed construct, health care practitioners such as physiatrists can have a major role in giving dancers the confidence to develop their own training program – playing into the internal locus of control that many dancers possess (Air, et al., 2014, p. 248). For this reason physiatry training is highly attractive to dance students because it "includes an emphasis on return of function, individualized therapy prescriptions, and multidisciplinary rehabilitation plans" (Air, et al., 2014, p. 248). If dancers have the individualized experience that is easy for

them to implement in their individual workout regimens and routines, and proves to be successful to a degree, then they are far more likely to return for further treatment of future injuries.

This comes directly from the construct of behavioral capability. If a dancer does not have the knowledge of a health care practitioner to provide this kind of treatment, then they will not possess the knowledge to perform these healing treatments by definition of this construct (Hayden, 2014, p. 179). This is why in many respects, until a relationship with a doctor or physiatrist is established, dancers ask those that are easily accessible more knowledgeable than themselves about a situation – dance teachers and colleagues. Before receiving a diagnosis and treatment, one must know were to go and how to go about receiving the best care possible (Hayden, 2014, p. 179).

Last but not least of the constructs of the Social Cognitive Theory is emotional arousal. Dance is an art form and by nature, art is emotional. "Dancing and the role of the dancer are such a core part of the dancer's identity, permanent or temporary loss of dancing ability can be calamitous" in the eyes of a dancer, especially a dancer training at such a high/intense level (Air, et al., 2014, p. 241). This construct "suggests that in certain situations people become fearful and, when this happens, their behavior becomes defensive in an effort to reduce the fear" (Hayden, 2014, p. 179). This is probably the strongest influence over the issue of dancers not being treated for their injuries. The fear of having a negative diagnosis drives dancers away from seeing a physician, and dancing through this pain for as long as they can in hopes that it will 'just go away'. In a study conducted on professional Dutch dancers, over one-third of dancers did not seek any treatment at any time for their injuries because they "expected their medical program to go away on its own" (Air, 2009). Recent studies have also shown that the "psychological distress

among outpatient dancers seeking medical treatment for musculoskeletal injuries was found to be very high" (Air, et al., 2014, p. 248). Emotions of dancers caused by fear of injuries is escalated by the fear of their condition and training not being understood by practitioners. If the doctor has some dance training/experience or can at the very lease speak the language of dance, major amounts of anxieties are calmed and more trust is placed in the doctor by calming the effect of the influence of emotional arousal (Air, et al., 2014, p. 248).

Conclusion

With consideration of the Social Cognitive Theory and studies that have already been conducted on dancers in relation to pain and injury, the intervention to encourage a change in injury treatment adherence would be difficult to successfully carry out with desirable results. These factors are highly engrained in the culture of the dance world. However, dance medicine and science is still a relatively new field that holds the promise of a new future for dancers and their health. If an intervention program were to be set up at a college with regards to injury treatment and plan adherence, it would have to attempt to touch on all aspects of the Social Cognitive Theory as previously discussed.

Example Intervention Program: Wayne State University

For example, if this intervention program were to be implemented at Wayne State University, significant modifications would have to be made to the existing methodology of injury intervention. There is already a strong relationship with an osteopath specializing in performing arts medicine, specifically treatment of dancers, however, more efforts would need to be made to make him more readily accessible to students. He comes in on his off-days to work on students, however he has a full-time job at a sports medicine clinic about 30 minutes away from campus. A program implemented in the Netherlands required that students pay a fee as a

part of their tuition and this ultimately covered any and all physical therapy treatments needed throughout the course of the semester (Air, et al., 2014, p. 248). This may encourage the use of these treatments as students would firstly, not have to worry about payment onsite and secondly, it would motivate students to get their investment's worth.

The psyche of the program with regards to injuries would also have to be modified, as described by the Social Cognitive Theory. Changing the system of reinforcement to reward students that take care of their bodies and making accommodations to schedules/syllabi that support these dancers taking care of the longevity of their careers would ultimately be successful in supporting the care that dancers took to be properly and effectively treated.

Before implementing this, a study should be conducted on these students to question which actually have the self-efficacy of health care and the logistical barriers that each student sees as standing in the way of their successful treatment. Additionally, a success of a study conducted on college students was the frequency of check-ins and the way in which they were administered. This study used anonymous online surveys biweekly to track the students' progress (Air, et al., 2014, p. 241). This took away the fear of higher-ups knowing about injuries and thus limiting the exposure these students had to opportunities, as well as encouraged honesty in response. It was also easy for the students to complete and the frequency minimized the influence of "recall bias" (Air, et al., 2014, p. 248).

Using these structures of this programming, this new intervention program would also pull on influences of athletic training programs that are already established throughout the nation by college athletics programs. The facility currently used to treat athletes would be accessible to dancers and there would be dance medicine specialists brought in to run the program. There are

some in the surrounding suburbs of the city, but they aren't always accessible to students based on scheduling and travel.

The first check-in of the program would be the study on students for their self-efficacy in seeking out treatment provided that dance medicine specialists and a treatment facility were available to them on campus, not to mention that the cost was covered by a portion of tuition.

The second check-in would be a survey of current injuries/ailments of all students in the dance program. This would be a self-conducted survey, concluding with a question along the lines of "Would you like to seek out treatment?". This survey would be anonymous for research purposes and for official records for the department/university – until the student decided to seek treatment.

Following this, a more official schedule would be created to fit in the students that were looking for help as well as to have "open" hours available for students that recently acquired an injury or had a question for the practitioners. Each visit would be book-ended by check-ins and check-outs electronically and anonymously (the doctors would have access, but not directors) and each week all dancers in the department would fill out an anonymous survey about the program as a whole – how many times they visited, if they currently have an injury, if they are currently and actively seeking treatment, what should be changed, etc.

The program would run for a full semester. At the conclusion of the semester, results would be gathered and modifications would be made, but this information would be immensely powerful and useful. There are very few programs in the history of collegiate dance that have this kind of integrated access to medical treatment. If successful, this may be further developed, adopted, in hopes of being supported at a more national and international level by the International Association for Dance Medicine & Science (Weiss, 2018).

References

Air, Mamie. Health Care Seeking Behavior and Perceptions of the Medical Profession Among Pre- and Post- Retirement Age Dutch Dancers. *Journal of Dance Medicine & Science*, vol. 13, no. 2, June 2009, pp. 42-50.

Air, M. E., MD, Grierson, M. J., MD, Davenport, K. L., MD, & Krabak, B. J., MD. (2014). Dissecting the Dancer-Doctor Relationship: Health Care Decision Making Among American Collegiate Dancers. *Physical Medicine and Rehabilitation, 6*(3), 241-249. Doi: http://doi.org/10.1016/j.pmrj.2013.09.001

Hayden, J. (2014). *Introduction of Health Behavior Theory*. (2nd ed.). Burlington, MA: Jones & Barlett Learning.

Pollard-Smith T., Thomson O.P. (2017). Professional ballet dancers' experience of injury and osteopathic treatment in the UK: A qualitative study. *Journal of Bodywork and Movement Therapies, 21*(1), 148-156. Retrieved from http://dx.doi.org/10.1016/j.jbmt.2016.06.009

Russell, J. A. (2013). Preventing dance injuries: current perspectives. *Open access journal of sports medicine*, *4*, 199. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3871955/

Steinberg, Nili, et. al. Injuries in Female Dancers Aged 8 to 16 Years. *Journal of Athletic Training* 48.1 (2013): 118-123. *PMC*. Web. 6 Dec 2016.

Trinity Health. (2016). About Steven J. Karageanes, DO, FAOASM. *Mercy Elite Sports Performance*. Retrieved from http://www.mercyelite.org/steven-karageanes

Weiss, D. M., MD. (n.d.). About IADMS. Retrieved March 27, 2018, from https://www.iadms.org/?page=A8