

Full Length Research Paper

Dancers' perceptions of injuries

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Dance socioculture encourages dancers to perform through pain and injury and influences whether dancers will take time off in the event of an injury. The purpose of this study was to examine the impact dancers' mind-set and enculturation had on their decision to continue to train and perform through injury. Fifteen trained dancers (5 males and 10 females), age 27.7±14.25 years, completed a survey to determine the dancers' perceptions of injury and rehabilitation decisions post-injury. Findings indicate that enculturated perceptions may play a significant role in dancers' response to injury.

Key words: Dancers, injury, perceptions, enculturation, rehabilitation.

INTRODUCTION

Professional and competitive dancing requires proficiency in executing difficult techniques and places extreme physical demands on the body. As a consequence, dancers are at risk for incurring a variety of overuse, stress, impact, and repetitive motion injuries (Anderson and Hanrahan, 2008). While this may cause pain or discomfort, these injuries tend to be ignored by dancers as they continue their usual training, even to their own detriment (Anderson and Hanrahan, 2008). Injury rates for dancers can be as high as 97% (Krasnow et al., 1994), with professional dancers accruing 1.7 to 6.7 injuries per contract year (Miller, 2006), and 60 to 75% of dance injuries resulting from overuse (Thomas and Tarr, 2009). This translates into chronic pain, overload, and musculoskeletal disorders (Schon and Weinfeld, 1996). This in turn triggers psychosocial stressors, negative attitudes, and influences performance; therefore contributing to further injury risk (Miller, 2006).

The unwillingness of dancers to admit to being injured reflects both the fear dancers have at being replaced and the dance culture which expects participants to "push through" pain (Thomas and Tarr, 2009; Anderson and Hanrahan, 2008). This indicates that dancers operate under not only personally driven motivations to excel in their craft, but strong external and psychological factors

that bear upon a dancer's decision to work through injuries (Thomas and Tarr, 2009). The expectations that are placed upon a professional or competitive dancer not only create mental and sociocultural pressure, but injuries debilitate livelihood and overstress the body. These factors, coupled with limited or no recovery time, can reduce physical functioning and may contribute to long-term health and physical issues (such as osteoporosis, tendonitis, and a compromised immune system) (Miller, 2006; Schon and Weinfeld, 1996; Koutedakis and Jamurtas, 2004).

Dancers tend to have a strong awareness of their bodies and a high pain tolerance (Zier-Vogel, 2009). This may account for their interpretation of pain and injury and continuing to train despite it. While dancers might recognize the terms as not being mutually exclusive, they also tend to see injury as "that which stops one from dancing and causes pain." They may categorize pain as "good pain" (associated with exerting effort, stretching the body to full capacity, and necessary for performance) and "bad pain" (that which might hurt, but might have to be endured for the sake of training and performance) (Anderson and Hanrahan, 2008; Thomas and Tarr, 2009). The distinction between the two terms may be blurred thus distorting dancers' reasoning or decision-making. This makes it difficult for them to decide whether or not they should perform through routine pain, particularly if it is a serious injury (Anderson and Hanrahan, 2008). This ability to differentiate between performance pain and injury pain is a serious issue

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Table 1. Descriptive characteristics of participants.

Variable	N	Minimum	Maximum	Mean	Standard deviation	Median	Mode
Age	15	15	61	27.07	14.25	19.5	17.21
Years of dance training	15	3	42	13.60	11.728	11.5	4

Table 2. Descriptive characteristics of participants by gender and injury.

Variable	Total		Male		Female	
	N	%	N	%	N	%
Gender	15	100	5	33.3	10	66.7
Current Injury	10	66.7	4	40.0	6	60.0

because dancers modify their behavior in relationship to the interpretation assigned to the pain. For many dancers, the distinction between "good" and "bad" pain tends to be based on quantity of, rather than the level or quality of the pain. Furthermore, many dancers do not seem to be aware that persistent pain could be signs of injury and the injury is not just an acute development (Anderson and Hanrahan, 2008). Research is warranted to better understand the paradox between pain and injury and dancers' perceptions of these factors and resultant actions. Therefore, the purpose of this study was to examine the impact a dancers' mind-set and the dance culture have on their decision to continue to train and perform through injury rather than taking time off to rehabilitate.

MATERIALS AND METHODS

Study participants were recruited for this descriptive survey study from a private dance school in the Southeastern United States. Inclusion criteria included: self-reported injuries of any kind and/or degree; self-identified as at least one of the following: serious dance student, dancer in training, recreational dancer with classical training, semi-professional dancer, professional dancer, or competitive. Exclusion criteria included: under the age of 15 years and those who considered themselves injury-free. The participants were referred to the study by the lead investigator. The research protocol for this study was approved by the governing Institutional Review Board.

Upon agreeing to participate and confirmation of eligibility, participants completed a survey. The survey consisted of 20 questions. Six questions were related to general dancer characteristics, current injury status, and previous experience with dance-related injury and 14 questions assessed dancers' perceptions of dance-related injury (Table 4) using a 5-point Likert scale. The Likert scale was: always (5), most of the time (4), half of the time (3), rarely (2), and never (1). While each of the questions on the survey was unique, the survey was modeled after a similar Likert scale developed by Macchi and Crossman (1996). Content validity for the questionnaire was established through the assistance of a panel of experts during the developmental process.

Data analysis

Measures of central tendency were calculated for all data.

Dance-related injury perception data was separated into two categories based upon the participants' response to whether or not he or she was currently dancing through an injury. A non-parametric Kruskal Wallis test was used to examine differences in responses between the two categories groups. Alpha was set at $p < 0.05$. All data analysis was completed using SPSS version 19.0.

RESULTS

A total of fifteen participants met the inclusion criteria for the study. The descriptive characteristics of the study participants are summarized in Table 1. Participants were primarily female (66.7%). The average age for dancers was 27.07 ± 14.25 years with a range of 15 to 61 years (18 to 30 years and 15 to 61 years for males and females, respectively). Number of years that participants had spent dance training ranged from 3 to 42 (13.60 ± 11.73). Males reported between 12 and 16 years of dance training while females reported between 3 and 42 years of dance training.

Injury status

Ten dancers indicated they were currently working through dance injuries; four males and six females (Table 2).

Categories of injury

Table 3 summarizes the categories of dance-related injuries. Males indicated mild injuries ($n=3$); moderate injuries ($n=3$). Females reported more mild injuries ($n=7$).

Comparison of injured and non-injured

Table 4 presents the mean ranks for the responses to the 14 dance-related injury perception questions for both the injured and non-injured participants. Statistically significant differences were found for six of the items,

Table 3. Dance injuries experienced.

Variable	Total		Male		Female	
	N	%	N	%	N	%
Mild injury	10	41.67	3	30.0	7	70.0
Moderate injury	9	37.50	3	33.3	6	66.7
Severe injury	5	20.83	2	40.0	3	60.0

Table 4. Comparison between injured and non-injured.

No.	Variable	p	No injury		Yes injury	
			N	Mean rank	N	Mean rank
1	I continue to dance despite pain and injury	0.264	5	6.40	10	6.60
2	My injuries have an effect on the way I train	0.166	5	5.60	10	9.10
3	I hide my injuries from fellow dancers	0.713	4	6.68	10	7.75
4	I work through injuries to advance my career in dance	0.093	5	5.50	10	9.25
5	I work through injuries to get roles or to keep from losing roles	0.019	5	4.40	10	9.80
6	I get injured in the course of taking lessons or participating in rehearsals	0.307	5	9.60	10	7.20
7	Having a dance injury has affected me emotionally; made me angry, sad, anxious, depressed)	0.041	5	4.80	410	9.60
8	I put a lot of time into taking dance/ training each week	0.038	5	4.90	10	9.55
9	As part of my training, I am expected to dance full out, even with injury	0.050	5	4.90	10	9.55
10	Having a dance injury affects my work attitude (makes me resentful or pressured)	.593	5	7.20	10	8.40
11	I seek medical attention or rehabilitation for an injury	1.000	4	7.50	10	7.50
12	I return to dance only after I am fully recovered from injury	0.023	4	11.38	10	5.95
13	Peers or dance directors pressure me to dance through injury, even when I want to take time off to rehabilitate	0.372	5	6.60	10	8.70
14	Dance culture encourages dancers to "push through pain" and return to full dance activity before injuries are healed.	0.003	4	2.50	10	9.50

(5, 7, 8, 9, 12, and 14).

DISCUSSION

The idea of dancing through pain and injury is enculturated into the dance community. This attitude coupled with a dancer's inner drive will push them to perform rather than to rest injuries (Thomas and Tarr, 2009). In fact, the dancers' survey responses indicated that they felt pressured to return to dance before injuries

were healed; believed since they invested a lot of time into dance that they must perform through injury, and that due to physical pain from injury and the pressures placed on them by fellow dancers that these factors had triggered the respondents' emotional pain. These perceptions suggest that the dancers' appraised their injuries in the same manner no matter whether it was a rehearsal environment (taking classes and training) or performance preparation; they would push past the pain or level of comfortability in order to complete the activity. These findings are similar to studies conducted by

Macchi and Crossman (1996) and Mainwaring et al. (2001).

While all respondents in the study had experienced some type of dance injuries at one time or another and to a varying degree of severity, not all dancers were working through current injury. Though this may seem contrary to cultured perceptions, this occurrence may have more to do with lapse time in between performances. In fact, the study participants were coming off of performance and awaiting the upcoming schedule; therefore, they had more time to convalesce, which may account for some of the dancers not currently working through injury. Dancers' perceptions about injury are generally more static and dancers tend to work through or ignore pain rather than rest. Therefore, these unique circumstances, while perhaps coincidental, do present an opportunity for further study.

Conclusion

Perceptions about how dancers are expected to work through pain play a significant role in whether they will choose to rehabilitate. The results of the study would indicate that enculturated perceptions runs deep and are likely upheld in most dance environments. This warrants future research to determine if sociocultural perceptions can be influenced in order to increase likelihood of rehabilitation for injury. Ultimately, changes in prevailing dance attitudes could result in long term payoffs to prevent chronic injury.

Implications

While most dancers realize it is not healthy to push past their limits, expectations in the dance world runs high and many dancers do not heed reason when roles are at stake (Krasnow et al., 1994). For some dancers, coping strategies may include medicating to cover pain or simply masking pain and injuries from others. Though self-medicating and masking pain and injury from others takes care of the immediate issue by hiding the problem, it creates long term risks and could develop into chronic pain. Pain education can be used to enable dancers to understand their level of ability to cope or manage pain and develop future prevention strategies rather than relying on hiding and working through injury (Anderson and Hanrahan, 2008).

Limitations

A limitation of this study is the small sample size. Although, initially the majority of students and performers at the dance academy agreed to participate in this study (original response rate indicated that between 10 and 45

participants were interested in being included in the study), only a few actually appeared in person to take part in the survey. Since this was a paper survey, this might have also limited the number of participants in that they had to commit to an on site questionnaire. An online or telephone survey may have increased the number of participants. An additional limitation was that all participants were from the same geographical location and dance studio, therefore reducing generalizability.

Recommendations for future research

Future studies should be conducted to determine if in the dance industry there was more acceptance for taking time off or cutting back training during injury, would this sufficiently change dancers' sociocultural makeup and encourage them to seek medical or rehabilitative relief for pain and injury. Further research into the long-term payoff for dancers to recognize injury pain and become proactive by suspending dancing until full recovery is achieved when injured may prove beneficial and may educate dance professionals, dance teachers, and industry insiders.

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