Good Pain, Bad Pain: Dancers, Injury, and Listening to the Body

Tarr, J. & Thomas, H.

Dance Research

Good Pain, Bad Pain: Dancers, Injury, and Listening to the Body

Jen Tarr and Helen Thomas

Abstract: While pain is generally considered unpleasant, pain associated with exercise and physical activity is sometimes classed as good. Good pain is usually associated with training, while bad pain is associated with injury. However, the boundary between good and bad pain is a narrow one. We examine this boundary, using interviews with 205 dancers, dance students and related professionals. A cultural phenomenological approach is adopted to understand dancers' embodied experiences and how they describe physical sensations. We highlight the variety of their descriptions of different kinds of pain and its association with injury, as well as how they conceptualise its role within their careers. The three primary dimensions to dancers' distinctions between good and bad pain, also have a moral dimension in relation to the concern to be seen as hard-working and committed. We suggest that the process of distinguishing between good and bad pain is as much a process of *not* to hear as it is of learning to listen to the body.

Keywords: dance, injury, pain, cultural phenomenology, embodiment

Introduction

Pain is generally understood to be a negative phenomenon. Indeed, the International Association for the Study of Pain (IASP) defines pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage'[1] Its unpleasantness is key: the IASP notes that sensations that are not fundamentally unpleasant (for example, pricking) should not be described as pain. As

Newmahr (2010) has argued, most academic literature frames pain as exclusively negative. The idea that some pains can be good— culturally, socially, or experientially —is less often accounted for. Yet it is well known among those who exercise regularly, as well as among professional athletes and dancers, that some types of pain can be considered positive. This understanding of pain has filtered into popular consciousness: Aldrich and Eccleston's (2000) analysis of understandings of 'everyday pain' gathered statements from medical, psychological and academic texts, popular and professional media, and focus groups, and then had participants rank these statements in terms of agreement and disagreement. Their results indicated a general understanding that certain types of pain were acceptable, such as those associated with childbirth or running a marathon. While biomedical definitions of pain may suggest that pain is 'good' if it is providing a warning sign of injury or ill health and 'bad' when it goes awry and the pain persists in the absence of or out of proportion to underlying pathology (Watkins and Maier, 2003), socially, we may also perceive pain as good when it indicates endurance or a triumph of willpower, or when it is associated with a positive event.[2]

While physical training and exertion pain are often seen as positive, the high injury rates amongst both professional and amateur dancers and athletes highlight that not all pain experienced in these contexts is good. It is widely recognised that dancers, athletes, and other professionals who work with their bodies on a daily basis often work when injured or in pain (Aalten, 2004, 2005, 2007; Curry and Strauss, 1994; Hammond et al, 2014; Howe, 2004; Kotarba, 1983; Laws, 2005; McEwen and Young, 2011; Nixon, 1993; Roderick, 2006; Tynan and McEvilly, 2017; Turner and Wainwright, 2003; Wainwright and Turner, 2004, 2006; Wainwright et al, 2005; Young et al, 1994). Most make a distinction between 'good pain' and 'bad pain' (Roessler, 2006), where pains associated with training and a hard workout are

seen as positive, while those associated with injury are seen as negative. Yet while much of this work references to a 'culture of pain and injury' (Wulff, 1998) or a 'culture of risk' (McEwen and Young, 2011; Nixon, 1993) less attention has been paid to the phenomenological process through which these professionals distinguish between good and bad pain. What does good pain *feel* like? In what ways is it different?

In this article, we undertake a critical examination of the meanings of 'good pain' and 'bad pain' for dancers, using data from our research on how dancers make sense of their experiences of pain and injury. We undertook semi-structured interviews with 205 dancers, dance students and related individuals including retired dancers, teachers, and dance health specialists.[3] We targeted modern /contemporary dancers as research in this area was under-represented, although there were some studies in this area which were often based on small samples and student groups (Thomas and Tarr, 2009: 51) The majority of the dancers (77.6%) in our study were trained in modern/ contemporary dance forms and/or ballet, and 93.8 % of participants indicated that they had used some form of somatic or body techniques. We adopt a cultural phenomenological approach, drawing on dancers' 'somatic modes of attention' (Csordas, 2002). We foreground the embodied practice of dance by asking participants to reflect on bodily experience and sensations, while situating these experiences within a sociocultural framework. Cultural phenomenology recognises that embodied experiences are intersubjective, rather than unique to the individual, and that paying attention to such experiences must always include attention not only to one's own body but also to the embodied presence of others as well as the cultural context in which it occurs. Our analysis also explores how different types of sensations are differently interpreted. Context is important, but it is not the only distinction between good pain and bad.

There are two primary reasons why dancers are a particularly good case study for understanding the distinctions between good pain and bad pain. First, dancers are injured at a rate of approximately 80% per year (Laws, 2005) and 60-75% of dance injuries are chronic rather than acute (Clanin et al, 1984; Bronner et al, 2003) meaning they often cause pain for some time before becoming defined as injuries. Injury rates are therefore very high, but in contrast with sports like football or rugby (Roderick, 2006; Howe, 2004) most dance injuries are not sudden. Awareness of pain and the boundary between pain and injury is therefore a mainstay of dance experience. Second, most dancers, indeed nearly all in our study (Thomas and Tarr, 2009), had danced while in pain. At the same time, most dancers' careers end in their mid-thirties, and the ability to distinguish between 'good' (training) and 'bad' (injury) pains can be fundamental to career preservation.[4] Dancers therefore have a strong vested interest in learning to distinguish between good and bad pains. Moreover, in contrast to other physical practices, dancers in many modern/contemporary dance training programmes are asked to spend a large amount of time reflecting explicitly on their bodies and bodily experience, considering the nuances of how one way of performing a movement feels different to another. In our study, it is possible that this enables them to better elaborate on other types of bodily experience, such as the distinction between types of pain.

Our analysis identifies the language used to describe good and bad pains; the elements of quantity, quality and control that distinguish between them, and the contexts of age and experience that lead dancers to refine their understandings of pain. We also examine the moral dimension of working with and through pain. The resulting analysis will, we hope, be useful to those working in sport and exercise as well as dance, and for a broader cultural understanding of pain experience.

Working with Pain and Injury

Workplace pain and injury are particularly common in physical and athletic pursuits (Downey, 2007; Aalten, 2005, 2007; Curry & Strauss, 1994; Howe, 2004; Nixon, 1993; Roderick, 2006; Wainwright and Turner, 2006). A 'culture of pain and injury' (Wulff, 1998) pervades dance, as it does many other athletic professions. In the field of ballet, Wainwright and Turner's research with current and former Royal Ballet dancers in London (Turner and Wainwright 2003; Wainwright and Turner 2004; 2006; Wainwright et al, 2005) revealed the 'normalisation of pain' inscribed in the ballet body and the psychological loss in terms of identity that can occur through injury and/or ageing.

This is not unique to dancers; Tynan and McEvilly note that young gymnasts 'used pain as a benchmark of success, a measure of how triumphant a training session had been. Their coaches, who assured them that feeling this type of pain was "normal", reinforced this' (2017: 478). The gymnasts' ability to distinguish between training pains and injury pains was one that developed early in their careers. For those gymnasts who went on to suffer severe, career-ending injury, the longer-term consequences of training through pain and injury were not considered earlier in their careers. They seemed unaware of the possibility that the cumulative toll of such injuries could impact them for the rest of their lives.

Young et al (1994) identify four responses common to male athletes reflecting on pain: that they hide it, 'disrespect' it, perceive it as unwelcome, or depersonalise it. Of particular relevance here is their note that they did not find their interviewees were able to convert 'pain' to 'pleasure' and that the interviewees did not see routine, chronic injuries as significant, but rather 'disrespected' them (1994:184)[5]. McEwen and Young add 'welcome'

pain to the above categorisation, noting the dancers in their study welcomed pain when it was seen as a message that they were working too hard or executing a step improperly, or when they saw it as enhancing performance and pushing their pain threshold (2011: 160-1). Welcome pain is a form of 'good' pain, pain associated with training.

Like other athletes, professional dancers have been found to have higher pain thresholds than the general population (Tajet-Foxell and Rose, 1995). Howe observes that positive pain is a key element in the training of elite distance runners, whose careers hang 'on a knife edge' where 'Positive pain that is associated with heavy training can turn into negative pain if the body is in a state of fatigue before the positive pain training is introduced' (2004: 154). Distinguishing the difference between positive and negative pain is no easy task, however. Howe suggests, 'it is important… for athletes to "listen" to their bodies, because the frequency with which significant and serious injuries first come to their attention as discomfort of a vague and initially mild nature is rather alarming (2004:101).

Similarly, Aalten (2007) provides a nuanced discussion of the role of listening in relation to pain and injury in dancers' lives. In her ethnography of a Dutch ballet company, conducted over seven years, Aalten discusses how dancers learn to cope with pain and injury. In contrast to Leder's (1990) account of the body which 'disappears' from phenomenological awareness of the self until it 'dys-appears' through pain or illness which exerts a demand to which the sufferer must attend.[6] Aalten however, contrary to Leder's viewpoint, argues that 'Pain and injuries are not viewed as signs of the materiality of the body and the necessity to listen to its needs, but as boundaries that have to be crossed' (2007 : 122). Dancers operate with two versions of the body, their own, perhaps difficult or recalcitrant body and the ideal balletic

body, which they strive to obtain by pushing their body to its limits and beyond to reach the ideal (Aalten, 2005). Here, pushing through the pain barrier is about improvement. Dancers recognise that if they want to be good at their profession, they must suffer; there is a sense of determination associated with their endurance of pain. However, not all types of pain are treated equally. While some pains are signs of improvement, others are signs of injury, as we discuss below. Aalten (2007) argues that injuries can confront dancers with the material limits of their bodies, leading them to 'listen' better in future to the warning sign of injury.

Downey also describes this process of learning to listen amongst no-holds-barred fighters: '[they] must "learn to be affected by hitherto unregistrable differences", to respond differently to subtle gradations in what once appeared to be a single perceptual phenomenon' (2007: 218) in order to discern the difference between pain which is 'only pain' and that which signals impending injury. What is not clear is what exactly is being *heard* by dancers and athletes as they learn to listen to their bodies. This paper seeks to address that gap.

Research Methods and Study Demographics

The research was guided by three research questions which examined the socio-cultural contexts of dance injuries amongst contemporary dancers:

1. How do dancers distinguish between 'pain' and 'injury', and what insights might this provide for a cultural understanding of pain? [7]

2. How does the visual representation of pain and injury through body scanning and mapping contribute to understanding and interpreting these injuries?

3. What effect does movement style, in terms of modern dance technique and/or use of body re-education, have on dancers' bodies and subsequently on pain and injury?

In this article we focus primarily on the first question, having explored the second and third questions elsewhere (Thomas and Tarr, 2009; Tarr and Thomas 2011).

Two hundred and five participants were involved in the study over seventeen months. Participants were met at the research site and scanned using a 3D white light body scanner which had previously been used in fashion sizing research projects such as SizeUK (Bougourd, 2004). They then filled in a short questionnaire which collected demographic information and asked about the styles of dance in which they had studied and worked; present and past pains and injuries, whether they were currently seeing any health professionals and whether they carried supplementary health insurance. The questionnaire was used as a springboard for semi-structured interviews, which explored the narratives dancers told about their injuries, how they distinguished between pain and injury and how they made decisions about treatment. Transcribed interviews were analysed in NVivo using a qualitative thematic analysis approach (Braun & Clarke, 2006).

Participants ranged in age from 17 to over 60, with slightly over half of the sample being in their 20s; 86% (175) were female, 14 % (29) were male; most were white but about 13% (26) were of ethnic minority backgrounds.[8] We made a concerted effort to recruit a diverse body of dancers, in terms of dance techniques used, ethnic backgrounds, and disabilities, to extend the kinds of accounts we might get. Dancers across the UK were recruited through a mixture of snowball sampling, e-mails sent out to companies and to Dance UK's contacts on our behalf, posters in dance schools and professional training organisations in and around

London. We were able to reimburse travel costs, which encouraged several dancers from Scotland, Wales and northern England to attend. [9] However, the majority of our sample was drawn from London and the Southeast, as this is where most of the UK's cultural industries (and therefore dancers) are based.

The research focused largely on the contemporary, independent dance sector rather than ballet, because of the relative lack of research in this area (Clanin et al, 1984; Krasnow and Kabbani, 1999) and the differing employment conditions of contemporary dancers. Successful ballet dancers generally work for one company that offers company classes and provides at least modest resources in terms of supplementary health care, physiotherapy, and understudies for dancers who are injured or ill. However, the majority of contemporary dancers are employed on short-term contracts by companies with little or no provision for health care. When out of work, they must also pay to take classes to keep their bodies in shape. Dancers are generally poorly paid but contemporary or contract dancers suffer career instability to an even greater extent than company ballet dancers. Nevertheless, it is difficult to separate professional dancers on the basis of the techniques they use in their work; most dancers in our study had ballet training even if they did not currently use it. Only a few were, or had been, professional ballet dancers. [10]

Measuring Pain

Since the emergence of pain medicine as a substantive field in the 1940s (Baszanger, 1998), there has been considerable interest in classifying, describing and measuring pain. Beginning from the premise that '"pain" refers to an endless variety of qualities that are characterised under a single linguistic label, not to a specific, single sensation that varies only in intensity' (Melzack, 1975: 278), the McGill Pain Questionnaire (MPQ) is one common standardised

tool for measuring pain experience in a clinical setting. [11] Rather than merely measuring intensity as other scales do, the MPQ measures pain in terms of a range of sensory (temporal, spatial, pressure, thermal), affective (tension, fear, autonomic properties), and evaluative (words describing the overall intensity) characteristics. The tool was developed through reviews of clinical literature and consultations with doctors and patients and a high degree of agreement in using and ranking pain descriptors was observed amongst subjects with different cultural, socio-economic, and educational backgrounds (Melzack, 1975: 279). However, translations into other languages have varied in both strategy and validity (Costa et al, 2009). Qualitative research using unstructured interviews with back pain sufferers (De Souza and Frank, 2000) suggest that for this population, pain descriptors may bear little resemblance to tools such as the MPQ, calling such standardised measures into question. Below, we look at how dancers' spontaneous descriptions of pain map, or fail to map, onto the pain descriptors used in the MPQ.

Dancers Describing Pain

Not all dancers in our study believed in 'good' pain, particularly those with training in dance medicine and science who were aware of the medical/physiological meanings of pain. As participant P102 (F, 30s), who was trained in dance science, put it:

> I don't like using the term good pain… I think it's always an indicator that needs to be listened to…But there are various pains which coincide with being physically active… and I don't know how, I don't know whether that's something innate or whether that's something you need to be taught, to be able to understand those levels of pain and when it is becoming, when it is part and parcel of being active and when it takes that step beyond that boundary and requires assistance or requires you to stop and pull out and read just what you're doing.

Most dancers, however. were quite open about defining some kinds of pain as good and others as bad. The chart below gives an indication as to the kinds of terms they used to describe each type. Frequencies are given in numbers where a response appeared more than once.

Table 1: Pain Descriptors

Good Pain	**Bad Pain**
Achy (8)	Sharp (9)
causing tender muscles (2)	shooting (5)
tired (2) or exhausted	stronger or more extreme or unbearable pain which
tight (2)	'really hurts' (5)
nice pain from having 'worked' or	searing (2)
'pushed a bit too hard'	causing a noise, like popping (2)
causing tension	constant ache (2)
crunchy heat	a dull ache (2)
vibrating muscles	burning or fire (2)
sensation of a 'pin prick' or 'pins and	debilitating
needles' and numbness	nerve pain (2)
throbbing	pain like a toothache (2),
stiff	injury pain (2)
giving the sensation of 'ants walking on	tension (2)
you'	debilitating or disabling (2)

cramp shaking comfortable tolerable nagging niggling sore never burning something you ‘do to yourself’ from stretching or training ‘different to an ache ‘where you should get it sorted out’. never burning something you ‘do to yourself’ from stretching or training	jagged unexpected like a knife centred in bones, joints or ligaments rather than muscles needing tablets or creams for treatment distracting from performance can’t get out of bed causing further damage pinching acute chronic

While some of these descriptors, such as aching, throbbing, shooting/sharp, pinching, cramping, hot, searing, dull, sore, aching, tender, tiring, exhausting, numb and nagging appear on the MPQ, others do not. The MPQ is used in clinical encounters, which almost by definition refer to bad pain. ‘Good pain’ descriptors absent from the MPQ include tension; stiffness; shaking; niggling; and comfortable/tolerable, while ‘bad pain’ descriptors include noisy (popping); burning/like fire (although MPQ does contain numerous thermal descriptors such as hot/boring/scalding/searing); debilitating, jagged, unexpected, and knife-like (although this could be covered by ‘stabbing’). It is noteworthy that what MPQ considers to

be ‘mild’ descriptors and what dancers consider to be ‘good’ pains do not match either: in particular, throbbing and aching get high pain scores on MPQ but are considered part of ‘good pain’ for some dancers, while sharp, pinching and dull pains are described as ‘bad’ but score low on the MPQ. This is not to question the MPQ’s clinical value, but to point out that the kinds and cultural values and associations with different types of pain are far from universal and that what dancers describe as ‘good’ pain is not necessarily innocuous in a broader context.

The above table also shows that dancers may have conflicting descriptions of good pain and bad pain. Aching and tension in particular are types of pain which cut across both categories. Where there is overlap, it seems that pain has three dimensions which distinguish between good and bad: a quantitative dimension (‘tolerable’ pain versus that which ‘really hurts’); a qualitative dimension (‘cramp’ or ‘soreness’ versus ‘burning’ or ‘sharp’ pains for example); and a dimension of control (something you ‘do to yourself’ as opposed to one which ‘distracts from performance’). Below, we examine each of these dimensions in more detail.

Quantity

In differentiating types of pain, dancers often made a quantitative distinction: there are pains where one can keep dancing and pains where one has to stop immediately. There are obvious injuries and subtle ones, acute injuries where a dancer knows immediately that something is wrong and those which give chronic nagging or niggling pain. As one participant (P019, M, 40s) noted, ‘there’s pain and then there’s muscle use where you feel muscles working, but sometimes one can tip so easily into the other just by doing one movement’.

Context is also important in reference to the amount of pain: P007 (M, late 20s) commented

> I suppose if you're in the throes of dance and you've got all the adrenalin going which is actually masking things, if you do feel something in that circumstance then the chances are it's quite serious.

P045 (F, early 20s) echoed this when she noted that pain often disappears as dancers warm up in rehearsal; pain that does not disappear is indicative of injury.

Dancers referred repeatedly to the effects of adrenaline during performances and the fact that they could dance through virtually everything in these circumstances. Very few recalled stopping during a performance, as P148 (F, mid 30s) had done when she dislocated her shoulder on stage— a repeat injury which she recognised immediately from a previous shoulder dislocation over a decade earlier:

> I just immediately knew what had happened, and apparently I just looked at [my dance partner] and shook my head on stage… apparently I was just going no, no, no. And then I knew, I just knew I couldn't carry on with this one, I knew it was out. So I went off stage and I was trying to, I was like, okay, I've got to get to hospital, they've got to put it back in, I kind of knew what needed to be happening. It was really odd, I was on, I think I had so much adrenalin in my system because I was on stage.

Although we did not ask participants to rate pain severity, several volunteered that pain needed to reach between a six and an eight out of ten before it indicated an injury. Another quantitative dimension was the length of time the pain lasted. In this there was wide

variation. For some dancers, a pain which went on for more than a day or two was indicative of injury while for others the pain needed to last for weeks or even months. Other dancers suffered chronic pains for years and never defined them as injuries. This seemed to vary according to location and was particularly common with back pain. Two participants (P014, F, and P095, F, both early 20s) described recurrent, sometimes disabling back pain which had never been diagnosed and did not stop them from dancing and was therefore not considered an injury as such:

P095: I would be able to dance as many dance classes as I could during the day and then I would lie down, I wouldn't be able move until the next dance class. … I wouldn't be able to move and people would look at me and it was like are you okay, and I'm like yeah, I just can't move, my back is flat. But we've just seen you dancing all over the place five minutes ago, and I'd be like well, you know, *there's dancing and there's living, walking or functioning, and I can do the dancing but then I can't function afterwards* (italics ours). [12]

Quality

Location was also an issue in terms of the quality of pain. Dancers generally felt that they could distinguish between joint pain and muscle pain, and that most types of muscle pain were good pain because they indicated hard work. The following discussion between three contemporary company dancers who were interviewed together (P037, F; P038, M; P039, F; 38 with 37 in mid-30s and 38 and 39 in mid-20s) nicely summarises the typical qualities of bad pain as opposed to good pain:

P038: Do you think as well there's as issue of the quality of the pain, because dancers are so kind of fond of talking about good pain and bad pain and that pain is a signal to the brain, pleasure as well, and you're rewarded quite quickly by sensation in the body, you know, it's how you learn how to move...

P037: I'd say sharp, it has to be sharp shooting pain. (…)

Interviewer: It has to be sharp, shooting pain?

P037: Yeah, and then that's, okay, you have to stop now. For me, I'm sure everyone's different.

P039: Like we were saying, maybe like burning sensation. Which, I don't know, it's hard to describe but which is not the same as a muscle being worked.

P037: Yeah.

P038: I think numbness is an indicator as well. Because sometimes like your body will respond to trauma with often quite confused or suppressed or depressed signals, and it might even be that you can't feel anything but you're sweating, and actually your brain's just shut off the pain from that part because you can't deal with it.

Sharp pain in particular came up repeatedly as an indicator of injury rather than training. Sharp pain tends to be acute rather than chronic, and this points again to the fact that dancers

have trouble defining chronic pain as being related to injury. For P077 (F, late teens) the qualitative factors took precedence over duration:

P077: If it's a dull pain I'm not too worried, if it's a sharp pain then that's not so good.

Interviewer: What if you had a dull pain that went on for quite a while?

P077: Like my lower back? I don't know, because I don't consider it an injury because it will go away soon, it's just being a little annoying that's all. It's not been problematic at the moment because I can still stretch, it just takes a little bit longer to stretch.

What emerges here is that chronic pain is not seen as injury if it is muscular, and particularly if it gets better over time. This is despite the fact that they very often defined injury as anything that limited their ability to dance (Thomas and Tar, 2009). There was a reluctance to call any chronic pain an injury. Many dancers instead blamed quirks of posture or bodily alignment for the problems they experienced. As P013 (F, 20s) put it,

> …if you have a bad pain in your back or your leg, say generally it's because of muscle fatigue and movement patterns and just excess tension and you could say that the muscles are damaged but it's not what you would call an injury particularly, you just say your ankle's swelling.

Dancers were relatively consistent in defining muscle pain as less problematic than joint pain, and dull pain as less problematic than sharp pain. Sudden pains and nerve pains were also

bad, although a bit of numbness was seen as acceptable in some contexts.

Control

Perhaps the most crucial element in deciding whether pain was good or bad was control. A pain that dancers bring on themselves through heavy training or feel they understand the causes of is a good pain, while a pain which comes on suddenly, without warning, is a bad one. Dancers learn to listen to pains which are unexpected and to attend to these, while learning *not to listen* to other pain, as P067 (F, 30s) observed:

> A bad pain is going to be something unexpected. A bad pain will occur I think after you've done a movement which is really quite extreme for you, or you do an extreme movement when your body isn't properly warmed up. But most of the pain that I experience is as I'm warming up and the muscles are starting to stretch out…And that is all very good pain, as far as I'm concerned.

Training pains are therefore not taken seriously; they may not even be pains, as one dancer (P151, F, 20s) notes: 'I don't know if I'd even use the word pain, you know that you're doing it, you're directing it, if it's a stretch or something like that.' Good pains are pains that are tolerable; they do not stop dancers from dancing. For younger dancers, all tolerable pains are often seen as good, or at least unproblematic. As dancers become more experienced, it was notable that more nuanced views of pain emerged, identifying the significance of certain qualities and locations.

Two other aspects of the control of pain that emerged in the interviews had to do with whether the pain needed external intervention of some kind, either via medical diagnosis or treatment, or via external splints and braces, painkillers, or creams. On the other hand, for some dancers something you could remedy yourself 'with ice and heat' (P012) was not an injury. While these are also a form of external intervention, they nonetheless reflect another aspect of control, in that they are something which can be applied by the dancer themselves and would tend to indicate a relatively minor pain/injury if they recede with this intervention.

Age and Experience

Generally, dancers with more experience were better at identifying chronic pains as potential injuries than those with less experience. Age, too, played a role, even amongst dancers who started their careers relatively late. Aalten (2007) notes that serious injuries often point the dancer to the limits of his/her body, beyond which it is no longer malleable. Age and experience both increase the likelihood of dancers having experienced a major injury: no dancer in our study over the age of 35 was injury free, and no dancer with more than 20 years' experience was without an injury. Many dancers start dancing as very young children, so 20 years of experience may only put them into their mid-twenties. Most professional dance careers also end by the time dancers are in their mid- to late thirties; although like runners (Tulle, 2007) a small number continue past that point. In our study they tended not to be competing against younger dancers for jobs but were freelancing with choreographers they knew personally or those who welcomed older dancers. This may also have affected their greater willingness to seek treatment for injuries and to identify chronic pains as injuries: they were generally less invested in seeing these pains as part of everyday 'wear and tear'.

It is partly through greater experience of injury that older and/or more experienced dancers become better at distinguishing between different types of pain and in turn, become proactive about treatment and management. The process of learning to listen is often one of trial and error, as the following dancer (P059, F, late 50s), a teacher who stopped dancing professionally about ten years earlier, concludes:

Interviewer: Okay, and have you always had that instinct, or is that developed?

P059: Probably not, which is probably why I've had so much damage. No, I think it's trial and error, yeah, but I try to kind of listen out for - in fact, the last big knee injury happened when I was doing this thing […]I felt a tiny little twinge in one of my knees, I think it was this one, and I went oh, what's that, but it didn't seem like a pain... I thought oh, stop being lazy, keep dancing, and we all went down for that evening, we all had dinner, everything was fine, I went to bed, the next morning completely as big as a football…And I think that was because it was giving me a signal and I was ignoring it, so I'm much better at listening these days, because that took a very, very long time to heal.

This dancer recounts learning to deal with pain and injury at a relatively late stage, when she was close to retirement. Like Aalten (2007) and Howe (2004), she uses the language of learning to listen to her body, of hearing the messages it gives her about pain and injury. While her account is about listening to pain as a way of learning to stop, for others it was about listening to pain in order to keep going. For these two male dancers (both mid-20s), interviewed together, experience taught them which pains were serious and which could be safely ignored:

P173: Because it is, you just - at the end of the day we've been in our bodies our whole life so you can just, it's just a different feeling, and you know the feeling that that pain from an injury than to something that's just from stretching or overworking.

P193: Overworking, yeah.

Interviewer: Okay, and do you think you always knew that, or has that come with experience?

P173: Experience.

P193: Yeah, experience.

P173: Definitely. Like if I think back to when I was at college and I'd do something, I'm like oh my God, that's it, I'm out for a week, and then the next day you're fine.

The process of learning to listen to pain and injury might then be depicted as one with ebbs and flows: many dancers described the process of being socialised to pain early in their careers, when they might see some kinds of pain as more serious than they actually were. Over time, usually in the later phases of their training and almost certainly while working professionally, listening to the body might mean filtering out the noise of pains which, by their characteristics, seem not to be serious. As careers progress, however, their bodies begin to feel the effects of ageing and they suffer the consequences of working through minor chronic pain/injury over a period of time. As a result, some older or more experienced

dancers began to redefine injury and pain once more and to listen more carefully to chronic, 'nagging' or 'niggling' pains that continued for some time.

We asked some participants whether they thought about the long-term consequences of dancing when injured or in pain. 'More so as I get older or since I got injured' was the most common response to this question (12 responses), followed closely by 'yes, but it doesn't stop me' (10 responses). For many, the future seemed far away, and they commented that they were 'going to hurt anyway as a dancer'; that a dance career was worth the price; or that they would simply progress to another career, for example in singing or choreography, when that time came. This echoes Tynan and McEvilly's findings among young gymnasts discussed above. Roderick (2006) notes that in professional football, pain is not masked but rather normalised by the professional culture and the same is true in dance, as McEwen and Young (2011) also show. Dance is not a future-oriented profession, and the challenges of retraining older dancers when they retire have been noted in a recent international study (Jeffri and Throsby, 2006). The process of trial and error by which dancers learn how to distinguish between pain and injury is erratic and highly individualised. Critically, it is not something they are explicitly taught, but a knowledge they come to experientially, with varying degrees of success in application. While there is widespread anecdotal knowledge of the long-term consequences of working through pain, dancers tend to cling to a belief in their own invulnerability, often until it is too late.

Why is Good Pain Good?

Good pains are not just 'bearable' or 'tolerable' pains that come on as a result of training. They are taken as signs of improvement, as Aalten (2007) indicates. Dancers learn with experience that muscle pain after a workout, known in the sports science literature as DOMS

pain, or Delayed Onset Muscular Soreness (Armstrong, 1984), is good because it builds strength, endurance and flexibility. There is no improvement without some pain of this kind, which was not even necessarily defined as 'pain' by most participants. However, any pain that is bearable or comes on in the course of training may be grouped in with this because dancers are not taught specifically to identify DOMS pain. Rather, they learn through trial and error about the different kinds of pain dance may bring about.

Working through various types of mild to moderate, controllable pains also has a moral dimension, and dancers referred repeatedly to the fear of being labelled 'lazy' if they were not working through pain. In fact, any time off was seen by some as a signal of laziness. As one dancer (F, early 20s) remarked,

P083:…the choreographers I've worked with, they know me as a hard-working person, not the lazy student that I was kind of viewed at college. But then, you know, I started college with an injury so that's how they knew me through my whole college time, you know, I'd just be in pain all the time.

An experienced dance teacher (F, 30s) echoed:

P190: If somebody comes up to me and says I'm really sore, I've got a pink slip, the physio said to rest or dance pain free and you're thinking well, that's what they're told, you know, so that's what they have to believe, you know, and I'll turn my energy to people that are in the class and that want to, that are there, they're trying to do it... I mean this is a bit of a harsh thing to say but a lot of it's down to maybe just being a

> bit lazy. You know, if you're working hard all the time and really make sure that you're very consistent with your work, then your injury, any injuries should be less.

The pedagogic practices of dance reinforce for dancers that they must keep going despite injury, and this continues in a performance context (Wainwright et al, 2005). Sitting out of classes or rehearsals is stigmatised. Dancers fear reprisal from teachers, and particularly from choreographers and company directors, if they become known as injury-prone— which, as the teacher above notes, is often akin to being seen as lazy. Injury rates are higher amongst dancers who train sporadically rather than consistently, but it is also the case that most injuries are caused by fatigue and overuse (Bowling 1989). This means that dancers who sit out when they are feeling fatigued and in particular kinds of pain are probably making the correct choices for their bodies. However, few do so because of the stigma involved. Roderick shows that the fear of being stigmatised as a 'malingerer' or 'injury-prone' is also prevalent in professional football (2006: 79). Our research focused on the consequences of working through pain and injury for dancers' bodies and careers, but dancers themselves are far more worried about the consequences of *not* working through pain and injury.

This stigma is perpetuated by dance teachers who continue to dance when injured, despite telling their students not to do so, as many in our study did. Since the process of distinguishing between pain and injury is one of trial and error, teachers themselves may be uncertain as to how to direct students or give them contradictory or no direction on how to deal with pain and injury. When dancers start dancing at a young age at local community schools with teachers who may have little awareness of best practice in dance science around pain and injury, they internalise this culture early. As one dancer (F, early 20s) noted:

P025: The earliest [experience of pain in dance] was probably my sprained ankle. That's it really, the earliest that I can remember. Apart from my first dance lesson when I was very little, I sat on a table and fell off and cried, and I was three, and the teacher told me off for crying in class.

Interviewer: Oh no, really?

P025: Don't cry in class. No fight, get up and carry on.

While the dancer is no doubt correct that this incident is not the cause of her attitudes to pain and injury, it is none the less a striking example of early inculcation into the idea that dance class is a space in which one is expected to 'get up and carry on'.

Conclusion: Hearing and Listening to Pain

At first glance, dancers' pain narratives seem to contain striking contradictions: injuries are painful, yet some do not cause pain; tingling pains or dull aches indicate good pain, but can also be a sign of bad pain; pain should be listened to, but it must also be worked through. Contradictions do exist, both within and between individual dancers' accounts of the distinction between good pain and bad pain. Such contradictions point to the fact that chronic injuries are hard to identify, and the line between good pain and bad pain is often blurred. While age and experience may teach dancers *how* to listen to the body, they are not always clear on how to interpret *what* they hear.

Dancers learn to understand pain through trial and error, rather than any formal training, although some vocational dance programmes do now offer training through courses in dance medicine and science. Such training may also challenge the dancers' lived experience of being able to work through pain and minor injuries, which often comes after many years of socialisation to the contrary; thus, conflicting with what they already 'know'. Many therefore continue to dance through injury regardless. As dance science training becomes more widespread, along with the interest in alternative body techniques such as somatics, it may be that future dance teachers will have a better understanding of pain and injury and how to encourage dancers to train safely[13].

Dancers learning to distinguish between good and bad pain are listening for particular messages: they listen to quantity, and to particular characteristics such as sharp or burning pains. Yet there is also a sense in which injury pain is that which exceeds their control. Thus, the filtering process by which they learn to hear pain admits only that which is outside their normal range of experience, allowing chronic, less serious injuries to go unheeded. These are precisely the injuries that research has shown are most common amongst dancers, probably in large part because dancers have learned not to hear them until the pain reaches a level or type that cannot be ignored.

The issue of control as defining positive or negative pain experience is salient outside dance and athletics as well. Chandler (2013; 2012) notes that control was also a key element in accounts of people who self-injure. For instance, one participant 'noted that when he hurt himself accidentally he often felt sick and did not cope well' while 'self-injury hurt less because it was expected, and he was in control of it' (2013:6). Risdon et al (2003)'s study on coping with chronic pain found that either feeling the need to control, or conversely needing

to relinquish control was critical to understandings of how one coped with ongoing pain. In Kugelmann's (1999) phenomenological research with people with chronic pain, control was once again key: for one participant 'pain, as a boundary of the possible, was something she could influence and modulate. Pain was not simply an overwhelming force external to herself' (1999: 1666).

Dancers learn to read some kinds of pain as intrinsically good, when these pains are indicative of progress. Other pains are extrinsically good: they are to be endured for the sake of one's career, in order to avoid being labelled lazy or injury-prone.[14] Thus, they provide a moral impetus, enabling dancers to see themselves as hardworking individuals committed to their careers and their colleagues. Dancers may acknowledge and welcome the first type of (primarily muscular) pain and ignore the second. In response to Aalten (2007) and Howe (2004), we can conclude that dancing with pain is as much a case of learning *not to hear* as it is a process of learning to *listen*.

Helen Thomas
Trinity Laban Conservatoire of Music and Dance

Jen Tarr
University of Newcastle

Notes

[1] https://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698.

[2] Good or positive pain is sometimes referred to as 'Zatopekian pain' after a Czech runner famed for his ability to endure pain (Howe, 2004; McEwen and Young, 2011).

[3] We were particularly interested in recruiting modern/contemporary dancers for our study. As the initial "Summary of Research Findings" (Thomas and Tarr 2007) shows, the majority of participants were professional dancers (41.7 %) or students (40.2 %), 18 % were teachers, choreographers, or former dancers. See also further details in Thomas and Tarr (2009)

[4] See for example, Rierveld's (2000) discussion of dance injuries in older dancers compared with younger dancers. Koutedakis and Jamurtas' (2004: 658) note that while the aesthetics of dance are important for dancers and dance, they emphasise that "dancers remain subject to the same unyielding physical laws of athletes'. They point out that positive fitness adaptions are often limited in dance training, where greater flexibility is deemed to be more important. However, they point out that research has shown that additional exercise training can contribute to a reduction in dance injuries, without disturbing the aesthetic demands of dance. The authors' discussion refers to ballet dancers and they note that little has been published in regard to modern dancers.

[5] These categories emerge from the research of Young et al (1994) and McEwen and Young (2011).

[6] The Greek prefix 'dys' refers to difficulty, pain or trouble.

[7] The 'what' issue mentioned above, arose out of the detailed analysis of the interview data. It was not factored into the initial research question.

[8] The project sought to build on current research on dance injuries, particularly *Fit to Dance 2: Report of the Second National Inquiry into Dancers' Health and Injury in the UK* (Law 2005) and other research in the area of dance science.

[9] The project was funded by the Arts and Humanities Research Council, which made possible reaching out to potential participants to all parts of the UK. For details of the support which made the project possible, see Thomas and Tarr (2007, 6). This initial report also provides details of the research aims, research questions, research methods and demographic analysis.

[10] The research was approved by the University's research ethics sub-committee before it began. All participants were given an information sheet about the project and signed a consent form informing them of their right to withdraw at any time. Transcripts and body scan images were anonymised and stored with numeric identifications only.

[11] The McGill (MPQ) was first published in 1975 by Ronald Melzack who was based at McGill University in Canada.

[12] For this dancer, and she is not alone in this, the other life is the everyday one, rather than the dance life which appears to constitute the most important aspect of life, which in turn offers up a sense of dance as a vocation. We are grateful to the reviewer who raised this as a question, along with other helpful comments and questions.

[13] See for example, Redding's forward-looking discussion on 'The expanding possibilities of dance science' (2020, 56-67).

[14] A recent survey by Vassallo et al (2019) shows that regardless of the fact that dance science is beginning to grow along with the supposition that dance injuries are seen to be more tolerable in the dance industry, more than half the professional dancers in this study feared the consequences and the stigma associated with dance-related injuries, and were disinclined to tell their employers about their injuries. The authors note that many dancers also indicated that they would dance through their injury, revealing that the fear of reporting injuries is not yet going away.

References

Aalten A (2004) The beliefs we work with: Health, occupation and culture in Dutch ballet. In: van der Linden A. (ed) *Not Just any Body and Soul.* Amsterdam: Uitgeverij International Theater and Film Books.

Aalten A. (2005) In the presence of the body: Theorizing training, injuries and pain in ballet. *Dance Research Journal* 37(1): 55-72.

Aalten A (2007) Listening to the dancer's body. *Sociological Review* 55(1): 109-125.

Aldrich S and Eccleston, C (2000) Making sense of everyday pain. *Social Science & Medicine* 50(10): 1631-41.

Armstrong R B (1984) Mechanism of exercise-induced delayed onset muscular soreness: A brief overview. *Medicine and Science in Sports Exercise Journa*l 16(6): 529-38.

Baszanger I (1998) *Inventing Pain Medicine: From the Laboratory to the Clinic*. New Brunswick, NJ: Rutgers University Press.

Bougourd J (2004) SizeUK. In: Fusco M (ed) *Wonderful: Visions of the Near Future*. London: BKD Special Projects.19-22.

Bowling A (1989) Injuries to dancers: Prevalence, treatment, and perceptions of causes. *British Medical Journal* 298(6675): 731-4.

Braun, V and Clarke, V 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2): 77-101.

Bronner S, Ojofeitimi S and Rose, D (2003) Injuries in a modern dance company: Effect of comprehensive management on injury incidence and time loss. *American Journal of Sports Medicine* 31(3): 365-73.

Chandler A (2013) Inviting pain? Pain, dualism and embodiment in narratives of self-injury. *Sociology of Health & Illness* 35(5): 716-730.

Chandler A (2012) Self-injury as embodied emotion work: Managing rationality, emotions and bodies. *Sociology* 46(3): 442-457.

Clanin DR, Davison, DM and Plastino, JG (1984) Injury patterns in university dance students. In: Shell CG *The Dancer as Athlete*. Champaign, IL: Human Kinetics Publishers**.** 195-199.

Costa da Cunha LM, Maher CG, McAuley JH and Pena Costa, LH (2009) Systematic review of cross-cultural adaptations of McGill Pain Questionnaire reveals a paucity of clinimetric testing. *Journal of Clinical Epidemiology* 62(9): 934-43.

Csordas TJ (2002) *Body/Meaning/Healing*. Houndmills, Basingstoke: Palgrave MacMillan.

Curry T and Strauss R (1994) A little pain never hurt anybody: A photo-essay on the normalisation of sport injuries. *Sociology of Sport Journal* 11(2): 195-208.

De Souza L and Frank AO (2000) Subjective pain experience of people with chronic back pain. *Physiotherapy Research International* 5(4): 207-19.

Downey G (2007) Producing pain: Techniques and technologies in no-holds-barred fighting. *Social Studies of Science* 37(2): 201-226.

Hammond L.E, Lilley J.M, Pope G.D, Ribbans, WJ and Walker, NC 2014. 'We've just learnt to put up with it': an exploration of attitudes and decision-making surrounding playing with injury in English professional football. *Qualitative Research in Sport, Exercise and Health 6*(2): 161-181.

Howe PD (2004) *Sport, Professionalism and Pain: Ethnographies of Injury and Risk*. London: Routledge.

International Association for the Study of Pain (1979) IASP Taxonomy, http://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698&navItemNumber=576#Pain. (accessed 12.07.2020).

Jeffri J and Throsby D (2006) Life after dance: Career transition of professional dancers. *International Journal of Arts Management* 8(3): 54-63.

Kotarba J (1983) *Chronic Pain: Its Social Dimensions*. London: Sage.

Koutedakis Y and Jamurtas A (2004) The dancer as a performing athlete: Physiological considerations. *Sports Medicine* 34(10: 651-661.

Krasnow D and Kabbani M (1999) Dance science research and the modern dancer. *Medical Problems of Performing Artists* 14(1): 6-20.

Kugelmann R (1999) Complaining about chronic pain. *Social Science & Medicine* 49(12): 1663-76.

Laws, H (2005) *Fit to Dance 2: Report of the Second National Inquiry into Dancers' Health and Injury in the UK*. London: Dance UK.

Leder D 1990. *The Absent Body*. Chicago: University of Chicago Press.

McEwen K and Young K 2011. Ballet and pain: reflections on a risk-dance culture. *Qualitative Research in Sport, Exercise and Health 3*(2): 152-173.

Melzack R (1975). The McGill pain questionnaire: Major properties and scoring methods. *Pain* 1(3): 277-99.

Newmahr S (2010) Power struggles: Pain and authenticity in SM play. *Symbolic Interaction* 33(3): 389-411.

Nixon H L (1993). Accepting the risks of pain and injury in sport: Mediated cultural influences on playing hurt. *Sociology of Sport Journal* 10(2):183-96.

Redding, Emma (2020) The expanding possibilities of dance science. In Thomas and Prickett (ed) *The Routledge Companion to Dance Studies.* Abingdon: Oxon. 56-67.

Risdon A, Eccleston C, Crombez G and McCracken L (2003) How can we learn to live with pain? A Q-methodological analysis of the diverse understandings of acceptance of chronic pain. *Social Science & Medicine* 56(2): 375-386.

Roderick M (2006) Adding insult to injury: Workplace injury in English professional football. *Sociology of Health and Illness* 28(1): 76-97.

Roessler KK (2006) Sport and the Psychology of Pain. In: Loland S, Skirstad B and Waddington I (eds) *Pain and Injury in Sport: Social and Ethical Analysis*. London: Routledge.

Tajet-Foxell B and Rose F D (1995) Pain and pain tolerance in professional ballet dancers. *British Journal of Sports Medicine* 29(1): 31-4.

Tarr J and Thomas H (2011) Mapping embodiment: methodologies for representing pain and injury. *Qualitative Research* 11(2) 141-157.

Thomas H and Tarr J (2007) Pain and Injury in a Cultural Context: Dancers Embodied Understanding and Visual Mapping: Summary of Research Findings, London College of Fashion, University of the Arts London.

Thomas H and Tarr J (2009) Dancers' perceptions of pain and injury: positive and negative effects. *Journal of Dance Medicine and Science* 13(2): 55-59

Tulle E (2007) Running to run: Embodiment and agency amongst veteran elite runners. *Sociology* 41(2): 329-346.

Turner BS and Wainwright S (2003) Corps de ballet: The case of the injured ballet dancer. *Sociology of Health & Illness* 25(4): 269-88.

Tynan R and McEvilly N (2017) 'No pain, no gain': former elite female gymnasts'

engagements with pain and injury discourses, Qualitative Research in Sport, Exercise and Health 9(4): 469-484

Watkins LR and Maier SF (2003) When good pain turns bad. *Current Directions in Psychological Science* 12(6): 232-6.

Wainwright SP and Turner BS (2004) Epiphanies of embodiment: Injury, identity and the balletic body. *Qualitative Research* 4(10): 311-37.

Wainwright SP, Williams C and Turner BS (2005) Fractured identities: Injury and the balletic body. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine*. 9(1): 49-66.

Wainwright SP and Turner BS (2006) Just crumbling to bits? An exploration of the body, ageing, injury and career in classical ballet dancers. *Sociology* 40(2): 237-55.

Wulff H (1998) *Ballet across Borders: Career and Culture in the World of Dancers*. Oxford: Berg.

Young K, White, P and McTeer W (1994) Body talk: Male athletes reflect on sport, injury, and pain. *Sociology of Sport Journal* 11(2):175-194.

Vassallo AJ, Pappas E, Stamatakis and Hiller CE (2019) Injury, fear, stigma and reporting professional dancers. *Safety and Health at Work* 10: 260-694.