“No pain no gain”—or to avoid pain don’t do any exercise!

Journal Article Review

Keith McGregor and Clive Palmer
(Sports Coaching, University of Central Lancashire)

Article:


Acronym:

DOMS: delayed-onset muscle soreness

Why review this article? From its lengthy title it was considered that it might inform the author’s training practice and general coaching knowledge about recovery periods and pain thresholds within a training programme. A qualitative article on this area was being sought when this paper was discovered during a literature search. Whilst suffering with “DOMS” at the time after a vigorous workout at the gym and climbing wall, it was thought that adhering to the article’s advice would not only help to relieve the aches and pains being felt, but also to give some insight into coaching methods for my athletes, for them to avoid similar kinds of discomfort from their training. It was also presumed that the pain assessment aspect of the research would use a qualitative research method, but it transpired that the authors used a quantitative method of measuring a degree of pain. This prompted a deeper curiosity to find out how a researcher might “scientifically” measure another person’s pain, there being no SI Units for pain of any kind and that the human condition may render us incapable, thankfully, of feeling another person’s pain. In the case of this experiment, the aim might have been for the researchers to share reliably an understanding of degrees of pain or discomfort from DOMS which a person may be experiencing. So how did they do it?

In general the article is easy to read and there are only a few words that needed verification. This did not distract from the flow of the article and the text was accessible with helpful subtitles to guide the reader through the article.

The abstract is clear and well structured giving a brief explanation about the testing methods and results. The title outlines the hypothesis of the research and the abstract
offers a hint of a conclusion to their study. Therefore the abstract seems to do its job as an abstract, but somehow fails to draw the reader further into the paper. The authors seemingly may wish to end it there rather than invite the reader to discover or question how they came to their conclusions. Within the abstract it was pointed out that the authors tested not only the rates of recovery from DOMS but other results that the coach may find useful in designing fitness programmes and sessions. However these proved to be more generalisations from their findings rather than specific pointers to the coach to manage DOMS sufferers and may therefore be of limited use in practice.

The introduction explains that the authors reviewed other research on DOMS and that they had discovered a gap in the findings and that they are testing this gap in the research. However the real gap in their research seems to concern the reporting of pain associated with exercise which may require a different investigative approach than the one offered here. The introduction also explains what DOMS is and how it might arise from physical exertion. However more could be said at this stage about the qualitative assessment of pain or discomfort through muscle soreness, as the whole paper seems to hinge upon this kind of assessment rather than just establishing that muscles ache after exercise.

The different quantitative tests that were reportedly carried out seem in some cases irrelevant to the hypothesis re: perceptions of soreness, but did give some other insight into training methods as well as raising some other questions, such as, what is the relevance of the growth in arm circumference and increases in strength to the reporting of pain? The graphs and tables again are fairly easy to understand but the vocabulary did need some verification at this point to interpret their meaning – from a student’s point of view. However, by not incorporating a qualitative research design for assessing the main theme of this paper; how sore the muscles felt after exercise and recovery from their discomfort, it may have produced a skewed or very incomplete picture of results. Pain assessment is a large area of research in itself which the authors seem not to have been aware of, where they might have discovered a useful and practical range of alternatives for assessing pain which have been explored by many practitioners (e.g. Clark, Kashani, and Clark, 1997; Duarte, 1997; Regnard and Tempest, 1992; Thomas and Kahan, 1997; Woodruff, 1997). Whatever exercise may have been undertaken in their experiments an assessment of one person’s pain, is seemingly exactly that. It is one person’s interpretation of their sensation of soreness that they may report back in many different ways. Whatever may be reported back might also depend upon gains in specific fitness, pain thresholds, and interpretations of pain or even perhaps how tired or energetic they felt at the time of exercising, but this does not seem to have been accounted for by the researchers. Additionally, the reported pain or discomfort may only have any relevance to that one person, perhaps
in the form of a before-and-after self-assessment. Either way, only dubious progress might be made from comparing individual pain reports which the authors seem to have done here. In the first instance, they seem to have used a very narrow protocol for eliciting pain/discomfort reports (Zainuddin, et al 2006: 128) which may have been a major oversight. But then, in ‘progressing’ from this stage to have generalised the results, averaged them in some way and then mixed up reports from fourteen different subjects resulting from a battery of exercise tests to which they were submitted seems only to make rather a mess of that aspect of the experiment and may nullify any claims which might be made from it.

As a general reflection about language and access to the paper, there is seemingly a high level of physiological and medical-type jargon used to describe what amounts to doing rather simply, a number of bicep curls until the arm muscles ache. This use of technical language seems to divert the reader from the central question raised by the researchers, that being, how the researchers might interpret the degree of discomfort that may be felt by “a subject” as a result of doing such exercise. Was this a deceptive ploy? Was it an unintentional oversight? It does not seem to be however, an aspect of their study which they highlight for further and deeper investigation, perhaps by qualitative methods.

The conclusion is brief and clearly written in that it seems fairly inconclusive and maybe, predictable. They claim that light exercise after heavy exertion has a brief analgesic effect on the muscles. Although it perhaps comes as no surprise that they claim there are “…no beneficial effects on alleviating DOMS and enhancing recovery of muscle function were found” (Zainuddin, et al 2006: 133). The other findings again were inconclusive but the article does produce some tentative suggestions that the coach and subject/athlete might take away and use in their training. Right, I’m off now to do some light concentric exercise to relieve the soreness although a hot bath and a good night’s sleep may be just as good as a “prophylactic modality”!

References

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**JQRSS: Acknowledgement Footnote**

1. First of I would like to thank Clive Palmer, not only for his help and input to this review, but also for enabling me to branch out and try my hand at a new and important skill of academic writing for public consumption. All new and valuable experiences for me. The mentoring process has given me much greater confidence to be critical in my future writing and importantly, shown me some skills about how to go about this.

2. Keith McGregor is a second year Sports Coaching BSc. Student at the University of Central Lancashire. He is a mature student (45) who sports background is in rock climbing and triathlon. Keith intends to go on to a Masters degree to research strength and conditioning as he finds these aspects of sports coaching very interesting in both the practical setting and research situation.

3. Dear reader, if this article has stimulated your thoughts and you wish to find out more about this topic the authors can be contacted on: Keith McGregor: KIMcgregor@uclan.ac.uk, Clive Palmer: capalmer@uclan.ac.uk.