



Available online at www.sciencedirect.com





Journal of Sport and Health Science 6 (2017) 52-53

Commentary

Exercise is. . .?: A commentary response

Jennifer Robertson-Wilson^{a,*}, Michelle Fortier^b

^a Department of Kinesiology and Physical Education, Wilfrid Laurier University, Waterloo, ON N2L 3C5, Canada ^b School of Human Kinetics, University of Ottawa, Ottawa, ON K1N 6N5, Canada

> Received 19 May 2016; revised 12 June 2016; accepted 13 June 2016 Available online 24 June 2016

In the recent issue of *Journal of Sport Health and Science*, the question of "Is exercise medicine or what?" was posed. We wish to follow the editors' suggestion to ". . .stimulate further discussion on the topic"¹ by offering additional points of consideration to those discussed by Nesti² in "Exercise for health: Serious fun for the whole person?". We will specifically debate Nesti's² position touting the potential role of sport as an alternative to "Exercise is Medicine" (EIM) by providing a selected critique of sport.

Physical inactivity continues to be an ongoing challenge in many countries. Nesti² correctly pointed out the limitations in our efforts (to date) to increase engagement in physical activity. After arguing that many individuals experience exercise as "uncomfortable", Nesti² raised the potential of sport (by considering aspects of motivation, play, and flow) as the means by which to encourage greater physical activity participation. But is sport the answer to rectify physical inactivity? We would suggest further discussion and some caution is needed before positioning sport in this way.

First, as part of the argument for sport, Nesti² offered that the features of sport have "... made it by far the most practiced form of physical activity and exercise across the world" using as evidence a study of over 500 U.S. children and adolescents where physical activity and sport trajectories were linked.³ Yet this seems insufficient and further examination of sport participation levels is warranted. For example, a report highlighted that for Canadians over the age of 15, only one quarter reported sport participation (considered to be "at least once a week during the season or for a certain period of the year") with higher participation rates observed in certain sub-populations such as men, those of higher economic status, and younger participation rates had fallen and that engagement in sport was the third most common active leisure activity reported "on

Peer review under responsibility of Shanghai University of Sport.

E-mail address: jrobertsonwilson@wlu.ca (J. Robertson-Wilson).

a given day" for 2010 data behind walking/jogging and exercise respectively.⁴ Indeed, non-sport activities (e.g., walking) are often among the several top forms of activity reported by adolescents and adults (e.g., Refs.^{5,6}). While sport participation may be higher in other countries, other trends (e.g., greater participation by males) appear to be more consistent.⁷ If sport is to then be viewed with renewed interest as Nesti² suggested, we must not fail to consider which individual-sport (just like exercise) has traditionally *failed* to cater to and draw in to a physically active lifestyle and how best to change this. We must consider the possibility of play and flow through sport² against an absence of interest (one of many reported reasons for not engaging in sport⁴). Perhaps this is where Nesti's² idea that there is a "... need to look more closely at the value of sport to the community, and its role in creating and sustaining identity" deserves greater explanation.

Second, while Nesti² briefly acknowledged negative outcomes of sport involvement such as "... injuries, burnout, and over-competitiveness", the discussion of negative outcomes was minimized. A recent review by Bean and colleagues⁸ underscored the different adverse outcomes of organized sport participation not only for the young athlete, but also for the family members. Further, many youth experience sport in physical education. The concerns with sport in physical education were well articulated by Ennis9 with several research examples demonstrating how sport focus and associated methods around instruction have in some cases undermined engagement in activity (e.g., Refs.^{10,11}). These (as well as challenges to adult participation in sport) must be adequately considered if sport is to serve as a setting for physical activity for more individuals as advocated by Nesti² and others.⁷ Otherwise, sport will merely stand alongside the problem of "... the potential negatives associated with exercise" that Nesti² identified as a key issue in EIM.

Given the challenges associated with sport participation, it is perhaps more prudent to consider sport as a *piece* of the physical inactivity puzzle. Kahn and colleagues⁷ highlighted that sport is one of several recommended approaches to increasing physical activity.¹² The potential for sport is also echoed in the findings from Kwon and colleagues³ as they concluded that

http://dx.doi.org/10.1016/j.jshs.2016.06.006

^{*} Correspondence author.

^{2095-2546/© 2017} Production and hosting by Elsevier B.V. on behalf of Shanghai University of Sport. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Exercise is. . .

"although consistent sports participation is insufficient to maintain healthy moderate-to-vigorous physical activity behavior, joining organized youth sports (despite eventually dropping out) could be important to avoid a consistently inactive lifestyle". Sport (as well as running) participation across adolescence has also been found to predict activity levels in early adulthood.¹³ These studies notwithstanding, there is also a need for additional evidence to support sport-based interventions. For example, greater inquiry is needed for the effectiveness of sport specific interventions (across the lifespan) to raise physical activity levels as in 1 case Priest et al.¹⁴ specifically found "...an absence of high quality evidence to support interventions designed and delivered by sporting organizations to increase participation in sport".

In sum, if inactivity trends are to be remedied and physical activity, including exercise or sport,⁷ is to be *anything* and taken up by a greater percentage of the population, it will take efforts to work across disciplines, settings, and types of activities,⁷ something we see in Smith's concept of "exercise is recreation".¹⁵ This is consistent with ecological models of health (and exercise) promotion.¹⁶ MacAuley and colleagues¹⁷ rightly pointed out the need to consider broader social, environmental, and political drivers of activity levels in order to see greater success in increasing physical activity through EIM and/or sport. Does (as Nesti² proposed) sport have a role to play—Yes. But not before being subjected to the same type of critical reflection that was applied to exercise (as medicine).

Authors' contributions

JRW conceived of and drafted the initial version of this commentary. MF significantly edited the paper and provided additional content information. Both authors have read and approved the final version of the manuscript, and agree with the order of presentation of the authors.

Competing interests

Neither of the authors declare competing financial interests.

References

 Cheng S, Mao L. Physical activity continuum throughout the lifespan: is exercise medicine or what? J Sport Health Sci 2016;5:127–8.

- Nesti M. Exercise for health: serious fun for the whole person? J Sport Health Sci 2016;5:135–8.
- Kwon S, Janz KF, Letuchy EM, Bruns TL, Levy SM. Developmental trajectories of physical activity, sports, and television viewing during childhood to young adulthood: Iowa Bone Development study. JAMA Pediatr 2015;169:666–72.
- Canadian Heritage. Sport participation 2010: research paper. Catalogue No. CH24-1/2012E-PDF. Available at: http://publications.gc.ca/collections/ collection_2013/pc-ch/CH24-1-2012-eng.pdf; 2013 [accessed 27.04. 2016].
- Song M, Carroll DD, Lee SM, Fulton JE. Physical activities of U.S. high school students—2010 National Youth Physical Activity and Nutrition Survey. J Phys Act Health 2015;12(Suppl. 1):S11–7.
- Watson KB, Frederick GM, Harris CD, Carlson SA, Fulton JE. U.S. adult's participation in specific activities: behavioral risk factor surveillance system—2011. J Phys Act Health 2015;12(Suppl. 1):S3–10.
- Kahn KM, Thompson AM, Blair SN, Sallis JF, Powell KE, Bull KC, et al. Sport and exercise as contributors to the health or nations. *Lancet* 2012;**380**:59–64.
- 8. Bean CN, Fortier M, Post C, Chima K. Understanding how organized youth sport maybe harming individual players within the family unit: a literature review. *Int J Environ Res Public Health* 2014;**11**:10266–8.
- 9. Ennis C. Students' experiences in sport-based physical education: [More than] apologies are necessary. *Quest* 1996;48:453–6.
- Strean WB. Remembering instructors: play, pain and pedagogy. *Qual Res* Sport Exerc 2009;1:210–20.
- Cardinal BJ, Yan Z, Cardinal MK. Negative experiences in physical education and sport. How much do they affect physical activity participation later in life? *J Phys Educ Recreat Dance* 2013;84:49– 53.
- 12. Global Advocacy for Physical Activity (GAPA) and the International Society for Physical Activity and Health (ISPAH). NCD prevention: investments that work for physical activity. *Br J Sports Med* 2012;**46**: 709–12.
- 13. Bélanger M, Sabiston CM, Barnett TA, O'Loughlin E, Ward S, Contreras G, et al. Number of years of participation in some, but not all, types of physical activity during adolescence predicts level of physical activity in adulthood: results from a 13-year study. *Int J Behav Nutr Phys Act* 2015;12:76. doi:10.1186/s12966-015-0237-x
- Priest N, Armstrong R, Doyle J, Waters E. Interventions implemented through sporting organisations for increasing participation in sport. *Cochrane Database Syst Rev* 2008;(3):CD004812. doi:10.1002/14651858. CD004812.pub3
- Smith A. Exercise is recreation not medicine. J Sport Health Sci 2016;5:129–34.
- Sallis JF, Cervero RB, Ascher W, Henderson KA, Kraft MK, Kerr J. An ecological approach to creating active living communities. *Annu Rev Public Health* 2006;27:297–322.
- MacAuley D, Bauman A, Frémont P. Exercise: not a miracle cure, just good medicine. *BMJ* 2015;350:h1416. doi:10.1136/bmj.h1416