

BE ACTIVE – BE HAPPY

DOES REGULAR PHYSICAL ACTIVITY IMPROVE HAPPINESS IN ADOLESCENTS?

Will Swaithe [afPE member]

BACKGROUND

“Children in the UK are the least happy they have been in a decade.”
(Weaver, 2019)

In the UK, there has been a significant decline in happiness amongst children and young people since 2009. More than 219,000 children report low wellbeing (The Children’s Society, 2019) and we are also becoming increasingly inactive as a nation. Less than 50 per cent of children and young people meet Chief Medical Officer (CMO) guidelines of an average of 60 minutes of physical activity per day and a staggering 2.1 million do less than an average of 30 minutes a day (Sport England, 2019, p5). Despite evidence suggesting that exercise is beneficial for physical and mental wellbeing, little is known about the links between happiness and ‘dose’ of exercise for adolescents aged 11-16. An additional concern is the increasing focus of schools as ‘exam factories’ (Hutchings, 2015) which may be to the detriment of wider wellbeing and flourishing. The National Curriculum in England (Department for Education, 2014) could be criticised for lacking substantive support for young people’s wellbeing as a formal aspect of their education compared to literacy and numeracy. “Despite the known benefits of good wellbeing provision, at present the education system is unbalanced. There is too much emphasis on academic attainment and not enough focus on promoting the wellbeing of students.” (Minds, 2017, p4)

Whilst there is research supporting the use of daily physical activity (DPA) to improve ill-health, for example those with cerebral palsy (Maher *et al.*, 2016) and in other countries, such as Norway (Moljord *et al.*, 2011 and Vedøy *et al.*, 2020), Canada (Bremer *et al.*, 2018) and Turkey (Cekin, R., 2015), very little exists on young people in England from a general population, hence that is the focus here rather than an intervention with those who already have health concerns.

I consider these two factors of happiness and physical activity habits to be inextricably linked. This research seeks to build upon existing literature prioritising happiness and how that correlates to physical activity habits and explores the relationship between happiness and physical activity in adolescents in England, to influence both policy and practice. This feels particularly timely as, whilst most of education and everyday life have been put on hold during the Covid-19 pandemic, the UK government (Johnson, 2020 and Public Health England, 2020a) and National Health Service (NHS, 2020) have continued to endorse DPA. That said, curriculum time will be at a premium over the next academic year and beyond, with reports of schools and, possibly, government policy encouraging a narrowing of focus towards the core subjects of English, mathematics and science (Gibbons, 2020). This evidence could help to inform debate and the lobbying potential of physical educators, students and parents advocating consideration of more holistic aspects of school provision.

Research suggests a positive and symbiotic relationship exists between DPA and happiness, where those who do little or no physical activity per week also represent some of the least happy adolescents in the sample population. Any relationship between DPA and happiness is complex; whilst increased exercise habits improve mood, it is recognised that higher self-reported happiness is also likely to result in increased DPA and wellbeing habits – a virtuous cycle (Zhang and Chen, 2019). The data does not attempt to suggest direction of causation but merely that a significant relationship exists and that, perhaps, there is a tipping point¹ of the number of days of physical activity required per week to maintain a positive effect on happiness. For example, perhaps four or more days per week of physical activity correlates with significantly higher self-reported happiness.

RESEARCH QUESTIONS

1. Is there a relationship between physical activity and happiness?
2. Is there a tipping point for the number of days of 30 minutes or more physical activity per week and positive impact on happiness?
3. How could schools ensure more 11-16-year-olds meet CMO guidelines?

A thorough literature review was conducted as a part of this Masters level dissertation and can be accessed here (<http://gg.gg/BeActiveBeHappy>). Brooks (2014, p4) summarised evidence to suggest that “pupils with better health and wellbeing are likely to achieve better academically” whilst “evidence suggests that participation in physical activity may support young people’s current and future mental health” (Rodriguez *et al.*, 2019) and “two thirds of parents believe the wellbeing of pupils is more important than academic success” (Wilson, 2020) yet school policy and accountability measures in England continue to largely ignore student happiness. Surely it is time for change? Why don’t we prioritise DPA as an essential element of education to support human flourishing?

METHODS

Quantitative data was collected via an online survey that was distributed to teachers in 21 Nottinghamshire schools to complete with a sample of their students in Years 7-11; this yielded 6,276 responses. The survey formed part of the surveillance tool utilised by the Sport England-funded Secondary Teacher Training Programme, which these schools are a part of. Sheffield Hallam University, as the independent evaluator, designed the survey to capture insight on a wider range of attitudes, habits and behaviours towards physical education, school sport, physical activity and wellbeing more broadly.

¹ For the purpose of this study, ‘tipping point’ is defined as the point at which a small change in DPA is associated with a marked change in happiness.

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THE PROBLEM

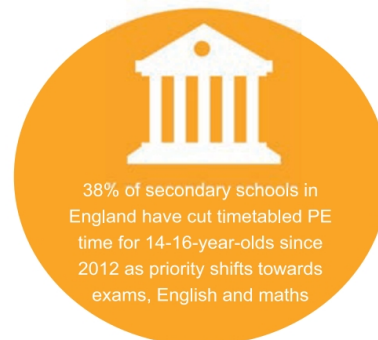
EXACERBATED DURING LOCKDOWN



Barnardo's, 2020



Sport England, 2020



Youth Sport Trust, 2018

DATA COLLECTED

We surveyed **6,276** young people aged 11-16 (adolescents) from **21** secondary schools across Nottinghamshire about their **happiness** and **daily physical activity** habits.

MAIN FINDINGS

THE LEAST ACTIVE ARE THE LEAST HAPPY

Over a quarter (27%) of adolescents reporting zero days of physical activity in the previous week also scored themselves at the lowest levels for self-reported happiness (1 or 2 out of 10) whereas 50% of those who were active on five or more days reported higher levels of happiness (8-10).

01

MORE IS BETTER

There appears to be a marked increase in median happiness if two days of physical activity are achieved and a further step change at five days of physical activity.

02

GIRLS NEED MORE

The tipping point for median happiness for girls occurs at three days of physical activity within the previous week. For boys this occurred at two days.

03

THE FIVE DAY OFFER

Fewer adolescents reported the lowest happiness scores (1-4 out of 10) if they were physically active on five or more days within a week.

04

SUMMARY



IMPLICATIONS

How can these research findings help?

POLICY MAKERS

- Greater prioritisation of wellbeing and structured daily physical activity opportunities (including physical education) is necessary.

SCHOOL LEADERS

- Increased provision for physical education and daily physical activity is needed for all students (and staff).

FAMILIES AND INDIVIDUALS

- Promote happiness and daily physical activity habits by being active together and demand more opportunities in school.

Will Swaithes, July 2020

The specific student questions that enabled statistical analysis and reasoning for their inclusion are as follows:

- In the past week, on how many days have you done a total of 30 minutes or more physical activity, which is enough to raise your breathing rate? This may include sport, exercise and brisk walking or cycling for recreation or to get to and from places.

By providing clarity of what counts as physical activity and capturing student recollection of behaviours over the previous week, the reliability of response is sufficient. Radial box options of 0-7 days allow simple capture.

- Overall, how happy did you feel yesterday?
- Is this how you usually feel?

Asking students to rate their happiness yesterday recognises the 'state' nature of this construct; providing a 10-point Likert Scale response (0 representing not happy at all, 10 representing completely happy) complies with the most popular rating methodology as identified by Zhang and Chen (2019, p.1309). The additional question capturing how the individual feels 'usually' controlled for normal feeling, enabling researchers to reject data that suggests out-of-character or abnormal responses (for example, recognising that current state of happiness could be adversely affected by family issues or school problems).

RESULTS

Findings demonstrated similar trends to national data around both DPA and happiness declining with age, especially for girls. In addition, the following results were shown.

1. Over a quarter (27 per cent) of individuals reporting zero days of physical activity in the last week also scored themselves at the lowest levels for self-reported happiness (1 and 2 out of 10 on a Likert scale) whereas over 50 per cent of those who were active on five or more days reported much higher happiness ratings of 8-10.
2. There appears to be a marked increase in median happiness if two days of physical activity are achieved and a further step change at five days of physical activity.
3. The tipping point of median happiness for girls appears to happen at three days rather than the two for boys. This supports an argument for three periods of physical education per week, especially for older girls, many of whom report doing no structured exercise or sport beyond that on the curriculum (YST Girls Active, 2019, p3).
4. Being physically active on five days a week results in the least adolescents reporting the lowest happiness scores (1-4 out of 10) but being active every day could be associated with lower self-reported happiness (especially for girls).

CONCLUSION

Physical activity has an axiomatic impact on adolescent wellbeing, but how often is it utilised to have a marked impact on happiness and does the absence of empirical evidence within a specific school prevent school leaders from acting on the generic research? This study aimed to uncover the relationship between frequency of DPA and happiness in 21 Nottinghamshire schools to influence those young people and school leaders to support change whilst also adding to the body of credible evidence that will help the campaign for system-wide change and promotion of physical activity for wider wellbeing.

Findings suggest that happier people tend to be more active and, crucially, more active people tend to be happier, thus supporting the study hypothesis. To this end, being physically active at least two times (three for girls) and ideally five times a week appears to have the biggest positive effect. Implications for practice relate to the need for more structured opportunities to embed DPA within the school curriculum. This is especially important for older students and girls, where there are particular challenges around meeting CMO guidelines, their happiness and marginalised physical education time (YST, 2018) in many schools. Adjusting





the curriculum to ensure more physical education is provided would be a sensible recommendation. Certainly, the previous Labour government's 'five-hour offer' as part of its Physical Education, School Sport and Club Links Strategy appears to hold significant merit (School Sport Partnerships Briefing Paper, 2015).

RECOMMENDATIONS FOR PRACTICE AND FUTURE RESEARCH

Identification of a tipping point of happiness based on minimal DPA could be a game-changer in terms of provision within education. This study suggests the amount of weekly physical activity required by girls to achieve a median happiness rating of 7 out of 10 is three days a week. Moreover, physical activity on five or more days a week elicits an average happiness rating of 8 out of 10. Further research is needed to ratify this claim and, crucially, some intervention work to change DPA habits with the ambition of raising happiness for adolescents within secondary education would be extremely insightful. This could provide the impetus needed by school leaders and policy makers to change expectations on provision within school.

Many important issues have been raised by this work and warrant further research. Firstly, better understanding is needed with regards to the confounding factors that may be associated with a wider spread of happiness scores for those adolescents who undertake physical activity every day. Factors such as exercise addiction, fatigue and pressure from sports clubs may contribute to some students reporting lower levels of happiness even when physically active every day but this could not be ascertained in this study. Secondly, further research is needed which explores happiness and physical activity for Black, Asian and minority ethnic (BAME) students, those with special educational needs and disabilities (SEND) and those with different socio-economic states. Finally, an intervention study to change DPA habits and explore the relative impact on happiness would be extremely valuable, although the literature review revealed significant challenges around the use of random controlled trials. ■

Will Swaithe is an education consultant, specialist leader of education and founder of www.TheLearningLocker.com who recently completed his Masters in Educational Leadership with the University of Exeter.

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