Institution: University of Hertfordshire

Unit of Assessment: 3

Title of case study: The Health Behaviour in School-aged Children study: informing policy and practice on young people's health and education

Period when the underpinning research was undertaken: 2008 - 2020

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	Role(s) (e.g. job title):	Periods employed by submitting HEI:
Fiona Brooks	Professor of Health Service Research	2002-2020
Ellen Klemera	Senior Research Fellow	2005-2020
Neil Spencer	Professor of Applied Statistics	1997-present
Josefine Magnusson	Research Fellow	2001-2018
Irene Garcia-Moya	Marie Curie Research Fellow	2016-2018
Kayleigh Chester	Senior Research Assistant	2012-2020

Period when the claimed impact occurred: 2014 - 2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact (indicative maximum 100 words)

The World Health Organization (WHO) collaborative Health Behaviour in School-aged Children (HBSC) study has played a significant role in shaping policy for the health and well-being of young people in the UK. Conducted in England by researchers at the University of Hertfordshire since 2008, this established study has had impact in a wide variety of areas, including: it contributed to parliamentary debate on Personal, Social, Health and Economic (PSHE) education, culminating in statutory status of health education and sex and relationship education in schools nationwide; the study's unique data on energy drinks directly informed government consultation on ending the sale of energy drinks to young people; the report data, along with additional commissioned analyses, have been used by several UK Government departments, charities and international agencies; practice in individual schools has been influenced and a significant contribution to public debate through widespread media coverage has been made.

2. Underpinning research (indicative maximum 500 words)

Around 7.4 million young people (10-19 years) live in the UK, equating to 12% of the population. The second decade of life is critical for future health across the life course. Health behaviours such as dietary habits often track into adulthood and half of all mental health problems are thought to occur before the age of 14. Further, poor well-being can influence young people's future chances including educational attainment. Consequently, the health of young people is a key public health priority.

Health Behaviour in School-aged Children (HBSC) is the longest-running international study examining the health behaviours, well-being and social context of young people aged 11-15 years. This established study, initiated in 1982 and conducted in collaboration with the World Health Organization (WHO), involves 50 countries and regions across Europe and North America. A survey methodology, administered in schools, gathers cross-nationally comparable data on a range of health, behavioural and social indicators. Data is collected every four years, allowing for the study of temporal trends.

In 2008, the University of Hertfordshire became the host institution for the HBSC study in England, led by Professor Fiona Brooks (PI) and Dr Ellen Klemera (deputy PI) from the School of Health and Social Work. Subsequently this team has managed the study for three consecutive survey cycles: 2010, 2014 and 2018. Team members have been active in the HBSC international network, including the scientific development committee which defines the content of the international survey. This research has captured longitudinal data spanning over fifteen years. Key research findings include:

Traditional risk behaviours have declined [**3.1, 3.2**]. Significant reductions have been noted in tobacco smoking, alcohol consumption, sexual intercourse and fighting [**3.3**].

Positive health behaviours have stabilised. Physical activity and healthy eating have remained fairly unchanged since 2002. In 2018, a minority (15%) of young people met WHO guidelines of at least one hour of physical activity a day, and less than half (44%) met national recommendations of five portions of fruit and vegetables a day [**3.2**].

Poor mental health and well-being are rising. The proportion of 15-year olds who report feeling low every week has increased from 2002 (34% of boys and 44% of girls) to 2018 (38% of boys and 62% of girls). The 2014 and 2018 studies captured self-harm prevalence, with a quarter of 15-year olds having self-harmed in the 2018 survey [**3.2**]. In 2014 and 2018 over twice as many girls as boys reported self-harming; poor mental health and well-being have been particularly identified among girls [**3.2, 3.4, 3.5**].

Recognising emerging health risk behaviours. Energy drinks have been subject to debate; HBSC identified around 1 in 10 young people consumed energy drinks at least twice a week, and consumption was associated with lower socio-economic status. Girls were twice as likely to be a victim of cyberbullying, and unlike traditional bullying behaviours cyberbullying increased with age (13% of 11-year olds vs 23% of 15-year olds) [**3.1, 3.6**]. Sleep is under-researched in relation to young people's health; HBSC data highlights this as a cause for concern with over a quarter (32% of girls and 23% of boys) of young people in 2018 reporting they are unable to concentrate at school due to a lack of sleep.

Identifying protective factors. HBSC examines a young person's social context including family, school and community life. Positive family relationships and school connectedness have been identified as two key factors for young people's health and well-being, reducing the odds of self-harming [**3.4**] and cyber-bullying [**3.6**]. Since 2010 data on Personal, Social, Health and Economic (PSHE) education has been gathered, identifying that young people are less satisfied with the provision of sex and relationship education compared with other PSHE topics. Further analysis established PSHE to be associated with increased spirituality and reduced bullying perpetration and fighting [**3.7**].

The HBSC study is unique in that it moves beyond only monitoring the prevalence of health behaviours among young people, to the identification of risk and protective factors which are highly valuable to policy makers in prevention and intervention efforts.

3. References to the research (indicative maximum of six references)

Findings from the HBSC England study have been published in multiple national and international peer-reviewed journal articles and reports, including:

Main reports

3.1 Brooks F, Magnusson J, Klemera E, Chester K, Spencer N, Smeeton N. HBSC England National Report [2014]: Health Behaviour in School-aged Children (HBSC): World Health Organization Collaborative Cross National Study. Hatfield: University of Hertfordshire, 2015. 113 p.

3.2 Brooks F, Klemera E, Chester K, Magnusson J, Spencer N. HBSC England National Report [2018]: Health Behaviour in School-aged Children (HBSC): World Health Organization Collaborative Cross National Study. Hatfield: University of Hertfordshire, 2020. 98 p.

Journal articles

3.3 Pickett W, Molcho M, Elgar FJ, **Brooks F**, de Looze M, Rathmann K, ter Bogt TF, Nic Gabhainn S, Sigmundová D, Gaspar de Matos M, Craig W, Walsh SD, Harel-Fisch Y, Currie C. Trends and socioeconomic correlates of adolescent physical fighting in 30 countries. Pediatrics. 2013 Jan;131(1):e18-26. https://doi.org/10.1542/peds.2012-1614.

3.4 Klemera E, Brooks FM, Chester KL, Magnusson J, Spencer N. Self-harm in adolescence: protective health assets in the family, school and community. Int J Public Health. 2017 Jul;62(6):631-638. https://doi.org/10.1007/s00038-016-0900-2.

3.5 Brooks F, Chester K, Klemera E, Magnusson J. Wellbeing of adolescent girls: An analysis of data from the Health Behaviour in School-aged Children (HBSC) survey for England, 2014. Public Health England, 2017. 31 p. https://www.gov.uk/government/publications/health-behaviour-in-school-age-children-hbsc-data-analysis

3.6 Chester K, Magnusson J, Klemera E, Spencer N, Brooks F. The Mitigating Role of Ecological Health Assets in Adolescent Cyberbullying Victimization. Youth & Society. 2019;51(3):291-317. https://doi.org/10.1177/0044118X16673281.

3.7 Chester K, Klemera E, Magnusson J, Spencer N, Brooks F. The role of school-based health education in adolescent spiritual moral, social and cultural development. Health Education Journal. 2019;78(5):582-594. https://doi.org/10.1177/0017896919832341.

The study has received government funding since 2009, signalling its commitment to employ the England data to inform and influence health policy and practice for young people in the UK.

Year	Project	Funder	Amount
2009-12	The 2010 HBSC England study	Department of Health	£402,917
2012-15	The 2014 HBSC England study	Department of Health	£447,256
2016	Commissioned reports based on HBSC England data	Public Health England	£20,000
2016-20	The 2018 HBSC England study	Department of Health and Social Care; Department for Education	£270,000

4. Details of the impact (indicative maximum 750 words)

Through ongoing collaboration with the Department of Health and Social Care (DHSC) and Public Health England (PHE), data from the HBSC England study has directly contributed to UK parliamentary debate and policy making decisions. Policy makers have used the reports directly, plus both DHSC and PHE have commissioned the team to undertake further analysis of the data on key topics of interest. Jane Ellison, Public Health Minister, welcomed the 2014 HBSC National Report as a tool to better understand young people's health and well-being and identify areas which require further policy attention. The following are examples of key areas of impact arising from the research:

Directly influenced policy debate on young people's soft drink consumption. Data on the consumption of sugar-sweetened beverages from the 2010 study was cited in the Government policy document "Childhood obesity: A plan for action" which proposed a soft drinks industry levy as a step towards combating childhood obesity [**5.1**]. In 2015, the Government commissioned Brooks and her team to further analyse the HBSC data relating to the consumption of energy drinks. In their analysis they found that children in receipt of free school meals disproportionately consumed energy drinks. This data informed the decision to open a consultation to investigate how to reduce the consumption of energy drinks among young people [**5.2**]. The final report from the House of Commons Science and Technology Committee was published in 2018 and cited our research which established that energy drink consumption was associated with both free school meal eligibility and poorer sleep [**5.3**]. The report featured as a Parliamentary news item "MPs support action to reduce energy drink consumption among children" (04/12/2018), referencing HBSC England findings establishing disproportionate energy drink consumption among young people receiving free school meals.

Contributed to the evidence base resulting in statutory status of health education, and sex and relationship education in schools across England. The Deputy Director for Health and Wellbeing at PHE referred to our 2014 findings which captured young people's perception of PSHE Education when providing oral evidence to the House of Commons Education Committee inquiry into "PSHE Education and Sex and Relationship Education (SRE) in Schools" [**5.4**]. PHE also provided written evidence which referenced our research findings on "protective lifestyle behaviours such as regular physical activity and healthy eating" as key health behaviour outcomes [**5.5**]. The committee then requested further information to supplement both the oral

and written evidence. PHE supplied written evidence in response, presenting a summary of key findings relating to PHSE from the 2014 HBSC survey [**5.6**]

Subsequently the team's data on young people's perspective and experience of PSHE and SRE featured in the House of Commons Education Committee final report "Life Lessons: PSHE and SRE in Schools" [**5.7**]. HBSC data contributed to the sections titled "Outcomes-based arguments: does SRE work?" and "Student perceptions of quality". The report concluded that PSHE warrants statutory status, and as a result, health education in all schools, relationships education in primary schools and SRE in secondary schools was made compulsory from 2020.

The PSHE Association report that they have used HBSC data in two main contexts: when delivering training to PSHE practitioners, and in making the case for the value of PSHE education in schools; they describe it as *"extremely useful to have an overview of key trends in young people's health and wellbeing… it's vital to get an idea of what the priorities are and the HBSC survey makes a vital contribution building this picture*" [**5.8**]. A PSHE Association Subject Specialist who has used HBSC data in the context of delivering training described the national report as "*an incredibly useful tool*" which can *"help inform discussions with teachers*". In 2015 they commissioned additional analysis from the team, examining the relationship between PSHE provision and young people's well-being [**5.9**].

Informed guidance on young people's mental health and well-being. The team's findings on the prevalence of cyber-bullying were cited by PHE and jointly by DHSC and the Department for Education (DfE) when they provided written evidence to the House of Commons Education and Health Select Committee inquiry "Children and young people's mental health – the role of education". Consequently, the team's cyber-bullying prevalence data was included in the final committee report [**5.10**]. The resulting DHSC and DfE green paper "Transforming children and young people's mental health provision" also reported the team's data on cyber-bullying in Chapter 1, which "sets out the key evidence that has informed the development of the proposals in this green paper"; the green paper proposed that every school has a designated mental health lead [**5.11**].

PHE commissioned three reports from the HBSC research team on self-harm, cyber-bullying and girls' well-being. These were intended for "a range of audiences interested in promoting children and young people's mental wellbeing" including "local public health specialists, school nurses, head teachers and college principals" [**5.12**]. PHE also cited the team's self-harm data in their resource outlining key actions head-teachers can take to improve young people's well-being [**5.13**]. The All Party Parliamentary Group on Bullying requested a presentation of the 2014 HBSC England cyber-bullying data (delivered on 11/07/2017). Further, the children's mental health charity YoungMinds requested evidence directly from the research team for an inquiry into cyber-bullying in 2017. YoungMinds' final report referenced the team's data on gender differences in cyber-bullying and increased rates of sleeping difficulties among victims of cyber-bullying, with the report setting out recommendations for both government and social media companies [**5.14**].

Directly influenced school practice and policy. Schools participating in the research are provided with a report comparing them, across a range of indicators, with the national average obtained in the HBSC England study. An online survey and follow-up interviews were carried out to assess how participating schools had utilised the reports. The reports influenced a number of practices in schools including lessons, student involvement and school policy. For example, one teacher described the report as "*a catalyst*", and explained that they had consequently established "*a whole school survey, an action for change student group and created anti-bullying ambassadors*". Similarly, another teacher stated that the report *"directed our thinking around curriculum";* young people's perceptions of SRE resulted in the school dedicating a whole day to the topic, delivered by external providers [**5.15**].

HBSC England data widely cited in international reports. Every four years WHO publishes cross-national comparisons from the HBSC study. Members of the HBSC England team co-authored

specific chapters of the 2012, 2016 and 2020 international reports. WHO Europe state that "HBSC data have been used to underpin the WHO European strategy for child and adolescent health" [**5.16**]. For example, the data was used in the European Health Report for 2018 [**5.17**]. The data has also been employed by other international agencies, including UNICEF who have used it in their Innocenti Report Cards which aim to monitor and compare progress and 'best practice' for children in the world's advanced industrial economies [**5.18**].

Contributed to public debate. HBSC findings have been widely reported on, including by the Daily Mail, Telegraph, the British Psychological Society and Medical Xpress. Data on bullying was publicly disseminated via a university press release during Anti-Bullying Week in 2017, resulting in articles on BBC News, Schools Week (an education sector website) and the Conversation. HBSC findings relating to self-harm have received significant media coverage, including articles in the Guardian and Independent, and resulted in Professor Fiona Brooks being interviewed on BBC Newsnight [**5.19**].

5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Department of Health. (2016). Childhood obesity: A plan for action https://bit.ly/2bDslKK (p.4)
5.2 Department of Health & Social Care. (2016) Consultation on proposal to end the sale of energy drinks to children. https://bit.ly/2KvxrYI (p.5 cites the analysis by the team, unpublished manuscript Brooks et al 2015)
5.3 House of Commons Science and Technology Committee. (2018). Energy drinks and children. Thirteenth report of session 2017-19 https://bit.ly/2QfEIBE (cites the research and shows the link from the commissioned report to the policy makers p.6 and p.11)
5.4 House of Common Education Committee, 4 November 2014. Transcript available here: https://bit.ly/3qNBSS2
5.5 Public Health England (2014). Evidence submitted to House of Commons Education Committee inquiry into "PSHE education and Sex and Relationship Education" https://bit.ly/2o8oBsr (sections 3 and 4, referencing all three surveys)
5.6 Public Health England (2014). Additional evidence submitted to House of Commons Education Committee inquiry into "PSHE education and Sex and Relationship Education" https://bit.ly/2o8JrYJ
5.7 House of Commons Education Committee. (2015). Life lessons: PSHE and SRE in schools. Fifth report of session 2014-15 https://bit.ly/2FdyNmr
5.8 Email from PSHE Association, 18 April 2019
5.9 PSHE Association and HBSC England (2016). *PSHE education, pupil wellbeing and safety at school* https://bit.ly/2ZF0ejO
5.10 House of Commons Education and Health Committees. (2017). *Children and young people's mental health – the role of education. First joint Report of the Education and Health Committees of Session 2016/17* https://bit.ly/2p5tWvh (p.13)
5.11 Department of Health and Department for Education. (2017). *Transforming children and young people's mental health provision: A green paper* https://bit.ly/2H51qGU (p.6 and 7)
5.12 Public Health England. (2017). Commissioned reports on HBSC data. https://bit.ly/2rFJuI7
5.13 Public Health England. (2015). *Promoting children and young people's emotional health and wellbeing: A whole school and college approach* https://bit.ly/2NO9pNM (p.5)
5.14 Young Minds. (2018). Safety Net: Cyberbullying's impact on young people's mental health. Inquiry report. https://bit.ly/2CV8hge (p.37 and 41)
5.15 Survey conducted by the HBSC team – copy of interview data.
5.16 WHO Regional Office for Europe webpage "About HBSC" https://bit.ly/2o7ey78
5.17 WHO. (2018). *European health report 2018: More than numbers – evidence for all.* https://bit.ly/37FjgN8
5.18 For example, in Report Cards 13 (Fairness for Children. A league table of inequality in child well-being in rich countries) and 16 (Worlds of Influence: Understanding What Shapes Child Well-being in Rich Countries). https://www.unicef-irc.org/publications/series/report-card/
5.19 Compilation of media coverage.