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# Building knowledge on adolescent health: reflections on the contribution of the Health Behaviour in School-aged Children (HBSC) study

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Adolescence as a key stage in the life course has until quite recently been neglected by researchers and policymakers alike. Research on young people has largely focused on the early years of life, especially from pre-conception to age 5, with enormous investment in studying and intervening to improve wellbeing of young children. However, when 'around 1 in 6 persons in the world is an adolescent'[1] it is impossible to neglect this age group. Reports like 'The Lancet' series on adolescent health,[2–11] UNICEF's Progress for Children: a Report Card on Adolescents[12] and WHO's Health for the World's Adolescents report[13] shifted global attention and highlighted the importance of adolescence as a second critical period in development where investment and intervention is needed and valuable since it lays the foundation of good health in adulthood. McDaid et al.[14] have taken this argument a step further and provided the economic case for investment in adolescents. They demonstrate how available interventions during adolescence can generate substantial economic returns because they can mitigate the long-term adverse effects on health and other areas that result from poor wellbeing during childhood.

One study stands out as prescient in its focus on the adolescent years, the Health Behaviour in School-aged Children (HBSC) study, beginning its work 32 years ago to advance our understanding of young people entering the second decade of life. In the early eighties, HBSC researchers identified early through to middle adolescence as a critical period for the development of health and wellbeing, health behaviours and risk behaviours. They also understood, well before the concept became widely adopted, the need to consider these dimensions of health and behaviour as embedded within the fabric of the everyday lives of young people. The term used in the 1980s to describe this conceptual approach was 'lifestyle,' in the 90s 'social context' and in recent years, 'social determinants' has been adopted, but the underlying idea is the same. HBSC was 'ahead of its time' in formulating the perspective that adolescent health is both shaped and constrained by factors stemming from the social spheres of family, peers, school, and the wider economic conditions in which they are growing up.[15]

Since its inception, the HBSC has provided critical insight into the health and wellbeing of young people for a growing number of countries across Europe and North America. The cross-disciplinary nature of its conceptual and theoretical base, which has developed over time and continues to flourish today, has been a valuable source of research innovation in the field of adolescent health. In addition, the use of a common protocol has enabled the collection of comparative cross-national data amongst its participating countries; providing a platform for systematic data collection at the country level and a resource for national research capacity building. This has resulted in a coherent set of indicators that provide a valid representation of young people's health, well-being and risk behaviours; as well as their developmental and social determinants.[16] The long standing nature of this research collaboration has meant that, with successive surveys, trend data can be examined at the national and cross-national level as it is evident in this supplement enabling the identification of both emerging issues and continuing health challenges. Publications like this journal supplement underscore the value of the collected cross-national data in highlighting these issues. A further resource built over the last three decades is of human capital in the form of the HBSC network of researchers who through sustained collaboration have ensured the continuity and relevance of the study in advancing the health of the world's adolescents. As such, the potential for HBSC to impact the lives of the young people it surveys is at a point where it extends beyond Europe and North America for example through the development of HBSC linked projects[17] and sharing of indicators with other global initiatives.[18] It is our hope that the following papers can inform health promotion and health education policy, programmes and practice aimed at young people at both national and international levels.

## Context

The HBSC study has grown exponentially over time both in absolute numbers of countries involved, scope of work, and impact. Initially, HBSC was a small collaboration of three countries and less than a dozen researchers. Today, 44 country teams form a research alliance and network of around 400 researchers across the European Region and North America. According to their expertise, network members align themselves to scientific and developmental groups within the study and this model has been successful in driving forward research innovation in the survey content. Each successive 4-year survey has included new topic areas, while at the same time maintaining core questions to enable tracking of trends in health and behaviour. National level data has been a critical resource for HBSC teams to use to draw attention to the particular health concerns among young people in their countries. This work has helped to build capacity for adolescent health at a country level, stimulating debate and discussion that can lead to strategic developments as well as channelling of funding towards further research. In turn, these processes have led to the building of a critical mass of researchers in the field of adolescent health.

## Knowledge exchange

Early publications were largely limited to national reports and journal articles which were descriptive in approach. For example, initial papers were national and focused on national prevalence of behaviours such as smoking[19] followed by papers making cross-national comparisons[20,21] using HBSC data. When they were published, this work made an important contribution to

adolescent public health science since very little data had been previously collected or published on the health of this population group in countries across Europe. It was some years before papers began to examine associations between behaviours[22,23] or between social factors and health outcomes.[24] In the last decade or so, the analyses presented in papers and reports have become more sophisticated and using macro-level measures at country-level we have had the opportunity for multi-level modelling and answering more complex research questions.[25–28] For example, how features of the country, such as economic, cultural and policy factors[29–32] provide explanations for country differences and patterns of change across time in young people's health. In 2009, the first Supplement on the HBSC study was published and it provided a complete description of the study's origins, history, conceptual framework and methodology.[33]

While HBSC has had as a primary aim since its initiation to influence policy and practice, over time there has been increasing effort among researchers and greater sophistication in products and activities to achieve these goals. Again the language has also changed; now we talk of the need for research impact tracked through measureable change in discourse or practice among decision makers. In the early years of HBSC the goal was to find ways to disseminate information to end users without a great deal of concern about the outcome of this information sharing to ascertain its effectiveness in changing policy agendas. However, the need for academics to demonstrate their commitment to serve the public good is now widely accepted, and furthermore attached to research funding, which has increased the imperative to take this work seriously and to commit time and consideration to doing it effectively. This has been a driver for HBSC to develop new ways to share its research findings with wide and differentiated stakeholder groups. Working hand in hand with its partner, WHO, there has been an effort to create attractive and accessible designs for reports, briefings, fact sheets[16,34–37] and events such as the WHO-HBSC Forums[38–40] which provided an information exchange platform to discuss and learn about how scientific evidence can impact practice, programmes and policy to improve young people's health. A new WHO Collaborating Centre for International Child and Adolescent Health Policy has also recently been established at the University of St Andrews[41] and one of its aims is to assist HBSC in bridging the gap between research and policy, which will include developing novel approaches to engaging with stakeholder groups. New technology is also being used by HBSC through developing interactive data visualisations[42] to display our findings in more engaging ways and attract users to manipulate the data to create their own 'stories' to convince decision makers of the need for action.

The HBSC study has been instrumental in increasing the production of data on adolescents and making it available for researchers and policy makers, with a new data portal soon to be launched. The breadth of its topics and cross-national nature offer a convenient snapshot into the factors that contribute to creating the best conditions for young people to grow up in different country contexts and how they fare against others. But data alone will not create change, especially if it does not get into the hands of decision makers who determine funding levels and government priorities. Through a wide range of knowledge exchange activities, HBSC teams have engaged with stakeholders to help identify priorities for government action. One such example has been the work with organisations such as UNICEF using evidence from HBSC to raise awareness of specific issues such as the damaging effects of poverty and economic inequalities on children's health.[43–44] This supplement is another opportunity to make HBSC trend data and analysis accessible and informative to ensure that it can positively affect policies and programmes that aim to realise young people's potential for health, development and wellbeing.

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*Conflicts of Interest:* None declared.

## Key points

- HBSC researchers identified early through to middle adolescence as a critical period for the development of health and wellbeing, health behaviours and risk behaviours well before it was widely accepted.
- The use of a common protocol has enabled the collection of comparative cross-national data amongst its participating countries, providing a platform for systematic data collection at the country level.
- The long-standing collaboration has enabled a flourishing network of adolescent health experts and a rich resource for national research capacity building.
- HBSC has a primary aim to influence policy and practice; over time there has been increasing effort among researchers and greater sophistication in products and activities to achieve this goal.

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