



## Improving the Methodological Quality of Research in Adolescent Well-being

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### Innocenti Research Briefs - Methods

Produced by the UNICEF Office of Research, this series of briefs on research methods is intended to share contemporary research practice, methods, designs, and recommendations from renowned researchers and evaluators. The primary audience are professionals, including UNICEF staff, who conduct, commission or interpret research and evaluation findings in development contexts to make decisions about programming, policy and advocacy.

This brief is one of seven on research methodologies designed to expand and improve the conduct and interpretation of research on adolescent health and well-being in low- and middle-income countries (LMICs). Building on the recent [Lancet Commission on Adolescent Health and Wellbeing](#), these briefs provide an overview of the methodological quality of research on adolescents. They cover topics including: indicators and data sources; research ethics; research with disadvantaged, vulnerable and/or marginalized populations; participatory research; measuring enabling and protective systems for adolescent health; and economic strengthening interventions for improving adolescent well-being.

The briefs are written by leading experts in adolescent health and well-being. To read other briefs in this series, visit <https://www.unicef-irc.org/adolescent-research-methods/>

*Series editors: John Santelli and Nikola Balvin*

### INTRODUCTION

The world is home to 1.2 billion adolescents – the largest cohort in history. Adolescence is a critical period of cognitive, emotional, physical and sexual development with consequences across the life course of the individual and a strong influence on whether the next generation has a healthy start to life.

The significance of this period of rapid development has gained prominence in the international arena with the Sustainable Development Goals (SDGs) and the new Global Strategy on Women’s, Children’s and Adolescents’ Health, bringing a greater focus on adolescents as both recipients of interventions to improve their well-being and as decision-makers and implementation partners in their own lives. Despite this increasing focus on adolescents, when compared to children under 5 years old and adults, there is a lack of comprehensive data collection systems and a limited evidence base for effective interventions. This is particularly true for younger adolescents and those who are disadvantaged, vulnerable and/or marginalized. The relative absence of comprehensive data collection systems and research means that in most countries there is insufficient understanding of adolescent health and well-being, and inadequate local research to fully inform programme and policy responses, including those related to adolescent rights and responsibilities. This is even more the case in low- and middle-income countries, which are home to 90 per cent of the

world's adolescents,<sup>1</sup> and where research into issues of adolescent health and well-being – including sexual and reproductive health and HIV, nutrition, psychological well-being, injuries, social protection, child marriage, education and the transition to the labour force – is particularly vital.

In order to conduct quality research, an understanding of best practice approaches to working with adolescents is necessary. This brief is the first of seven in a series titled 'Conducting Research with Adolescents in Low- and Middle-Income Countries'. The overarching aim of the series was to summarize what is unique about research with adolescents and contribute to collecting rigorous evidence for programmes and policies on adolescent health and well-being in LMICs.

### Box 1. Definitions of adolescence\*

An 'Adolescent' is defined by UNICEF and the World Health Organization as a person aged between 10 and 19. 'Youth' refers to the 15-24 age group. 'Adolescents and young adults' is commonly used to refer to the 10-24 age group, as is the term 'young people'. When reporting age-disaggregated data, the 10–24 age range is increasingly divided into five-year age categories: early adolescence refers to 10-14 years, late adolescence to 15-19 years and young adulthood to 20–24 years. It is important to consider age differences when reporting disaggregated data or considering the impact - or potential impact - of interventions, since what may be appropriate for younger adolescents may be less so for older adolescents or young adults.

The Convention on the Rights of the Child (1989) defines a child as a person below the age of 18 years unless, under the laws applicable to the child, majority is attained earlier. The legal age of majority - the point at which an individual is considered an adult - is 18 years in most countries. However, in law there is no single definition of adulthood, but rather a collection of laws that at differing ages bestow the status of adulthood for different activities. These include laws related to the age of consent, the minimum age that young people can legally work, leave school, drive, buy alcohol, marry and be held accountable for criminal action, and the age that young people are deemed capable to make medical decisions.

\* Sawyer, S. M. et al., 'Adolescence: A foundation for future health', *Lancet*, vol. 379, no. 9826, 28 April 2012, pp. 1630–1640.

### Objective of the series

UNICEF and other development agencies have an important role to play in fostering research to improve adolescent health and well-being in LMICs. As well as conducting research with and about adolescents,<sup>2</sup> UNICEF facilitates the development of methodologies<sup>3</sup> and methodological tools - such as these briefs - to contribute to the research evidence base for investing in adolescent health and well-being. Working with experts from the Lancet Commission on Adolescent Health and Wellbeing, the objectives of this series of seven briefs on research methods were to:

- improve understanding of how to conduct research with adolescents and measure adolescent health and well-being
- provide an overview of different methodological approaches used in research with adolescents, summarizing their strengths and weaknesses and applicability in different development contexts and sectors
- identify what is unique about research with adolescents living in LMICs from a methodological perspective
- outline principles and standards of ethical research involving adolescents in LMICs, including those who are disadvantaged, vulnerable and/or marginalized
- guide practitioners and decision-makers through established practices and key gaps in knowledge using accessible language and format.

Responding to these objectives, the seven briefs in this series cover the following topics:

- the importance of adolescent health and well-being, research promoting adolescent health and well-being and research methodologies (Brief 1)
- examples of indicators for adolescent health and social development and an outline of global sources of data to monitor adolescent well-being in LMICs in the SDG era (Brief 2)
- ethical principles for involving adolescent minors in research that empower adolescents while

2 For example, see Banati, P., 'Initial Research Findings on Adolescent Well-being from the Office of Research – Innocenti', Innocenti Research Brief 2016-09, 2016, <<https://www.unicef-irc.org/publications/853/>>, accessed 22 March 2017.

3 Amin, S., et al., *Adolescent Girls Vulnerability Index: Guiding strategic investment in Uganda*, Population Council, New York, 2013, <[https://www.unicef.org/uganda/PGY.AGI\\_Uganda\\_2013.pdf](https://www.unicef.org/uganda/PGY.AGI_Uganda_2013.pdf)>, accessed 22 March 2017; Banati, P., and Diers, J., 'Measuring Adolescent Well-being: National adolescent assessment cards (NAACs)', Innocenti Research Brief 2016-10, <<https://www.unicef-irc.org/publications/855/>>, accessed 22 March 2017.

1 United Nations Children's Fund, *Progress for Children: A report card on adolescents*, UNICEF, New York, 2012, <[www.unicef.org/media/files/PFC2012\\_A\\_report\\_card\\_on\\_adolescents.pdf](http://www.unicef.org/media/files/PFC2012_A_report_card_on_adolescents.pdf)>, accessed 22 March 2017.

- respecting parents (Brief 3)
- how to conduct research with disadvantaged, vulnerable and/or marginalized adolescents (Brief 4)
- how to facilitate meaningful and ethical participation of adolescents in research (Brief 5)
- how to conduct research into enabling and protective systems for adolescents and understand research at the intersection of social and structural determinants and critical social transitions (Brief 6)
- how to measure economic strengthening programmes for adolescents to reduce disparities in social and structural determinants and enhance adolescent health and well-being (Brief 7).

The topics of the briefs were identified through consultations between researchers and practitioners from different disciplinary backgrounds, identifying key challenges faced by researchers working with adolescents, and on the basis of knowledge gaps encountered by practitioners involved in programme design and policy advocacy.

The consultations also tried to untangle what is unique about conducting research with adolescents, as opposed to other age groups. The maturing brain brings new opportunities for adolescents to be more involved in decision making and provide informed consent to participate in research (for details, see Brief 3, in this series, 'Inclusion with Protection: A framework for ethical research with adolescents'), and even to be involved in designing and implementing studies and analysing results (see Brief 5 in this series, 'Adolescent Participation in Research: Innovation, rationale and next steps'). However, adolescents are also exposed to new risks – such as HIV/AIDS, peer and intimate partner violence, substance use, bullying and child marriage – expectations, and social contexts, requiring researchers to be sensitive and highly aware of how to work with this age group ethically. New vulnerabilities emerge during adolescence, requiring more sensitive methodologies (see Brief 4 in this series, 'Research with Disadvantaged, Vulnerable and/or Marginalized Adolescents'), targeted data collection approaches, a wider set of outcomes and a stronger focus on the social and structural determinants of well-being (see Brief 2 in this series, 'Data and Indicators to Measure Adolescents Health, Social Development and Well-being') to ensure everyone is counted and their experiences are accurately captured. The rising prominence of economic strengthening programmes

which focus on adolescents<sup>4</sup> requires that effective methods to evaluate them are widely understood and practised (see Brief 7 in this series, 'Methodologies to Capture the Multidimensional Effects of Economic Strengthening Interventions'). Finally, while the need to incorporate a structural approach into programme design is gaining support, few studies employ multi-level methodologies to study the linkages between health and well-being determinants at the social and structural level and those at community and individual levels (see Brief 6 in this series, 'How to Measure Enabling and Protective Systems for Adolescent Health'). The briefs highlight these and other issues to facilitate a more focused approach to conducting research with adolescents living in LMICs.

The series made an effort to provide methodological approaches and examples from different disciplines and sectors. However, because much of the research on adolescents is situated in health, examples from this area are more frequent than those from elsewhere. The growing evidence base for effective interventions in adolescence along with continually improving data collection systems offer opportunities for ongoing refinement of research and practice, and the development of innovative approaches across disciplines.

### Objective of this brief

This introductory brief sets the stage for the other briefs in this series by outlining key themes and methodological issues in research on adolescent health and well-being. It draws on the evidence and recommendations of the recent Lancet report entitled 'Our Future: A Lancet commission on adolescent health and wellbeing',<sup>5</sup> but does not go into depth in any one area, instead directing readers to other briefs which cover the relevant topics in more detail and provide practical suggestions for conducting research.

4 For example, see Watson, C., and Palermo, T., *Options for a 'Cash Plus' Intervention to Enhance Adolescent Well-being in Tanzania: An introduction and review of the evidence from different programme models in Eastern and Southern Africa*, UNICEF Office of Research – Innocenti, Florence, 2016, <[https://www.unicef-irc.org/files/documents/d-3885-Social\\_Protection\\_Plus\\_Workshop\\_Background\\_Paper.pdf](https://www.unicef-irc.org/files/documents/d-3885-Social_Protection_Plus_Workshop_Background_Paper.pdf)>, accessed 22 March 2017.

5 Patton et al., 'Our Future'.

## BACKGROUND: THE NEED FOR RESEARCH IN ADOLESCENT HEALTH AND WELL-BEING

An adolescent's capabilities are enhanced by having access to resources and opportunities to participate. For example, adolescents who have a school nearby and a family with enough financial resources to allow them to attend, are likely to accrue greater capabilities and resources for health and well-being than adolescents who marry early, have little education and early exposure to economic and social adversity. For socially marginalized adolescents, access to second chances during adolescence, such as the opportunity to re-enter education or gain technical skills, can play a key role in fostering well-being.

Research is needed not only to increase our understanding of adolescent health and well-being and its determinants, but to find effective ways to improve it. The scope of research around adolescent well-being is wide. While it includes research studies with individual adolescents, it also incorporates a wider body of research that is directly relevant to improving the lives of adolescents, even while it might not focus on them as direct participants, e.g. interventions to improve teaching quality in schools or the quality of parenting, or measures that aim to reduce road traffic injuries to pedestrians.

With the exception of sexual and reproductive health, available evidence at the systematic review level is mostly from high-income countries, particularly the USA. Different cultures, beliefs and knowledge, as well as resources and systems-level factors (e.g. transparency, accountability), affect implementation and effectiveness of policies and programmes in different settings. Building the evidence base in LMICs is critical to improving adolescent health and well-being, especially given the disproportionate burden experienced by adolescents in these countries. An additional priority is to undertake research that will inform how best to scale up effective interventions in order to make a difference at a population level.

The costs of interventions vary markedly between countries with different salary structures, health and education systems, unit costs, and methods of implementation. More research on costs and cost-effectiveness of interventions targeted to adolescents in any setting, is needed. The absence of such data

acts as a barrier to dissemination and scale-up of effective interventions.

### Box 2. Summary of key points

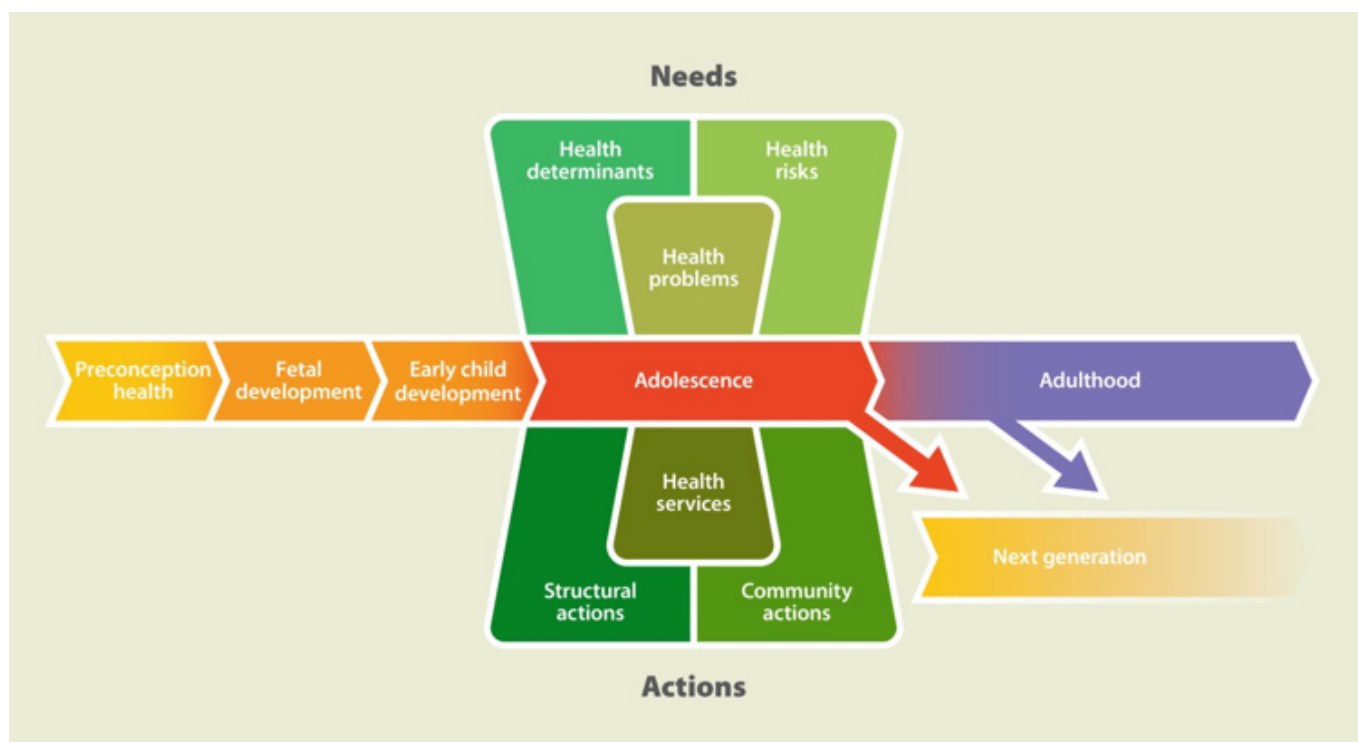
- Adolescence is a critical phase within the life course.
- Adolescence is a period of biological and social transition that is itself undergoing change.
- New understandings from neuroscience have important implications for programming.
- Addressing social and structural determinants is crucial to improving adolescent well-being.
- Inter-sectoral and comprehensive multi-component action is required, as is matching action to need.
- Gender and equity should always be considered.

## ADOLESCENCE AND HEALTH WITHIN THE LIFE COURSE

Health and well-being is central to the developmental tasks of adolescents, including the acquisition of the emotional and cognitive capabilities for independence, completion of education and transition to employment, civic engagement and formation of lifelong relationships.

The adolescent years are those in which the foundations for adult health and well-being are laid. Adolescents with higher levels of fitness, cognitive capabilities, education, social and financial support, protection, etc., are more likely to maintain higher levels of well-being throughout adulthood, while adolescents with lower levels of well-being fare less well. For example, health problems and health risks diminish life-time health and well-being (see Figure 1). This is especially important in the context of the reducing burden of infectious diseases in younger children and the increasing burden of non-communicable diseases in older adults (particularly those caused by tobacco and alcohol consumption).

Moreover, because parent well-being is important to child health, well-being in adolescence plays a role in determining the outcomes of the next generation. Improving the health and well-being of young people before they become parents critically underpins the well-being of subsequent generations (Figure 1).

**Figure 1. Adolescence and health within the life course**

Source: Reproduced with permission from Patton et al., 'Our Future'

### Transitions in transitions

Adolescence has traditionally been seen as a period of social transition, beginning with puberty and ending with marriage and parenthood. This period of transition is itself undergoing change in many countries that are shifting from high birth and death rates to lower fertility, lower mortality and longer life expectancy. This demographic transition is typically accompanied by an epidemiological transition with reductions in maternal mortality, falling rates of infectious disease, and rising child survival into adolescence. One consequence of these transitions is the survival into adolescence of the largest cohort of adolescents and young adults that the world has ever seen.

### Adolescence is now a longer period in the life course

Another consequence of these changing patterns of childhood infectious disease and improved nutrition has been a fall in the age of onset of puberty in many low income countries. Thus, adolescence begins earlier. Moreover, the later stages of adolescence are less clear than in historical times. Rather than ending with marriage

and parenthood, the transition to adulthood more commonly occurs with the adoption of wider adult roles and responsibilities, including employment and financial independence, as well as the formation of life partnerships. While these events occur at different ages in different parts of the world, the age at which these milestones are achieved has gradually increased and, as a result, in many parts of the world what was previously called adolescence is lasting longer than in past generations. This is one reason why the term 'adolescence and young adulthood' is gaining greater salience. However, local cultural concepts of adolescence vary greatly and typically do not change as quickly as these social phenomena.

As a result, adolescence now takes up a larger proportion of the life course than ever before. This expansion in the number of years it lasts increases the significance of adolescence, as there are more opportunities for disruption of a healthy developmental trajectory, as well as opportunities to intervene in an unhealthy one. The need for research into adolescent health and well-being assumes greater significance than ever before.



### Box 3. Adolescence within the life course: key methodological implications

- The expansion of the adolescent years has led to a greater contrast between younger and older adolescents. Because of this, both doing and translating research in adolescence must attend to the age of the study population. Careful consideration is required about whether and how research in older adolescents might be applied to younger adolescents - and the reverse. There is a pressing need for research to be disaggregated by age.
- Longitudinal studies (e.g. The Young Lives Survey; [www.younglives.org.uk/](http://www.younglives.org.uk/)) and intergenerational studies are needed to explore fully the central role of adolescence in the development of lifelong well-being.
- There is a need to develop reliable, valid and age-appropriate measures, particularly for younger adolescents.
- Data collection may present challenges, especially in the case of self-report instruments, which require particular levels of literacy. Ways of overcoming these challenges include the use of clear and simple explanations, and simplified questionnaires and data collection tools that rely on pictures and graphical representation as much as words. These challenges are particularly notable in marginalized populations (e.g. ethnic minority groups, adolescents in contact with the youth justice system, refugees), who may have lower literacy levels.
- Similar considerations apply when translating research into contexts with different cultural and social norms.
- Extended participation in education results in schools becoming an increasingly important setting for peer relationships as well as learning, hence the importance of research into actions that promote or limit school participation, and explore how schools can foster and hinder adolescent well-being.
- In later adolescence, adolescents enjoy greater autonomy and become relatively more influenced by their peers than when they are younger, even if they still live with their parent(s) or guardian(s). Adolescents are therefore very sensitive to their social standing among peers, which has implications for the way they respond to marketing and advertising.
- Adolescent research may be conducted in a broader range of settings: primary schools for younger adolescents, secondary schools for older adolescents, and even workplaces for adolescents who are no longer in school. Therefore, data collection should be conducted in community and education settings, as necessary.
- Conducting research with and about adolescents presents a number of ethical challenges, particularly relating to decision-making, cognitive capacity, informed consent, privacy and confidentiality. All research with adolescents should be overseen by properly constituted ethics committees. Researchers and ethics committees are required to balance the potential benefits from research that result to individuals and adolescents generally with the potential risks to the adolescent research participant. As with many areas of adolescent well-being, increasing adolescents' involvement in research as they mature has the potential to enhance their growing autonomy and capabilities. Treating adolescents with respect and dignity is central to creating an environment in which protection from harm does not also prevent decision-making. For more information on ethics, see Brief 3 in the series, '[Inclusion with Protection: Obtaining informed consent when conducting research with adolescents](#)'.

### New understandings of neuroscience

In the last 20 years, neuroscience has shed new light on the developing adolescent brain.<sup>6</sup> Growing understanding about the dynamic development that happens during adolescence and into young adulthood has implications for the capabilities that underpin well-being across the life course. Our current understanding of the adolescent brain results from advances in neuro-imaging technologies, particularly magnetic resonance imaging, which can be used to measure the size and shape of brain structures, connections between different parts of the brain and patterns of brain activity.<sup>7</sup>

### Brain development during adolescence

After infancy, adolescence is the most dynamic period of brain development. The rapid rise in the hormones of puberty in childhood and early adolescence affects physical, sexual and brain development. Early adolescence is characterized by identity formation and the development of new interests. During adolescence, the brain's reward system is re-modelled with reduced emotional regulation. In comparison with adults, adolescents have lower resistance to peer influences, lower capacity to think about the future consequences of actions, and lower risk perception, which can result in them engaging in risky behaviours, especially when emotionally aroused.

During late adolescence the brain continues to develop actively, particularly in the prefrontal cortex and in increasing connectivity between brain networks. This leads to continued development of executive and self-regulatory skills (those needed to organize and act on information), which enhance adolescents' abilities to think about the future and improve their ability to weigh up the short-term and long-term implications of decisions. Transition to young adulthood marks the end of the most dynamic period of development, although this continues to a lesser extent into subsequent adult years. This period often corresponds to the adoption of adult roles and responsibilities.

Adolescent brain development has far-reaching implications for the influence of social environments on health and well-being as the relationships, social

networks and roles required of adolescents today, are very different from those of the past. Adolescents need high-quality, secure and stable environments in order to acquire skills in emotional processing and social cognitions (e.g. the capacity to infer the thoughts, intentions and beliefs of others). Brain development is affected by social and nutritional environments, as well as by exposures, for example, to substance use and contexts of high conflict and stress.

Adolescent decision-making processes are different from those of older adults. Adolescents are more sensitive to perceptions of what might enhance or damage their reputations. Notably, the presence of peers affects the processing of social information, and younger adolescents may have a heightened response to the emotional displays of others. This is one reason why adolescents spend more time with peers than they did when younger, and adolescence is the period during which peer influences on health and well-being are greatest.

#### Box 4. New understandings of neuroscience: key methodological implications

- Family and peers are critical social contexts during early adolescence. Adolescent research is more likely to be successful if it takes these relationships into account.
- Research into adolescent well-being should consider the way adolescent decision-making processes change from early to late adolescence. Progressively empowering adolescents in decision-making as they mature also affects their perception of personal agency around well-being.
- Adolescents learn by being engaged and empowered to participate in environments that are emotionally and physically safe. These strategies are particularly important for socially marginalized adolescents - such as adolescent girls - in contexts of gender inequality. It is an important reason why there is value in creating opportunities for adolescents to exercise self-determination through meaningful participation, supported and facilitated by adults, in decision-making that affects their lives and communities. This includes participation in health and well-being research (see Brief 5 in this series, 'Adolescent Participation in Research: Innovation, rationale and next steps').

6 Crone, E. A. and Dahl, R. E., 'Understanding Adolescence as a Period of Social-Affective Engagement and Goal Flexibility', *Nature Reviews Neuroscience*, vol. 13, no. 9, 2012, pp. 636–650.

7 Casey, B. J., Jones, R. M., and Hare, T. A., 'The Adolescent Brain', *Annals of the New York Academy of Sciences*, vol. 1124, 2008, pp. 111–126.

#### **Box 4. New understandings of neuroscience: key methodological implications (cont.)**

- It is important for researchers to understand the ways in which adolescents seek out and are influenced by exciting, arousing and stressful situations when making decisions, as they differ from the ways in which adults do this. Put another way, adolescents differ from adults in their capacity to override 'hot emotions' that arise in emotionally charged situations. This is particularly relevant in the context of sexual activity and one of the reasons why 'cool-headed intentions' fail to predict adolescent behaviour and why, for example, relying on condoms for contraception, tends to fail.
- Developing and testing interventions that either avoid 'hot emotions' or are effective regardless of the emotional context is an important element of adolescent research, as these are more likely to be successful. Evaluations of adolescent programmes need to take the tendency for adolescents to experience 'hot emotions' into account.

### **ADDRESSING THE SOCIAL AND STRUCTURAL DETERMINANTS OF ADOLESCENT HEALTH AND WELL-BEING**

As with any age group, social and structural determinants – defined as the economic and social conditions in which people are born, grow, develop, live, work and age – influence adolescent health and well-being. Within the life course, adolescence is the time of greatest change and diversity in exposure to social and structural determinants, particularly those closest to young people (see Figure 2). Globally, trends in unhealthy lifestyles and commodities (e.g. food rich in salt, sugar and fat), high rates of youth unemployment, less stable families, environmental degradation, armed conflict and mass migration have the potential to pose major threats to adolescent health and well-being.

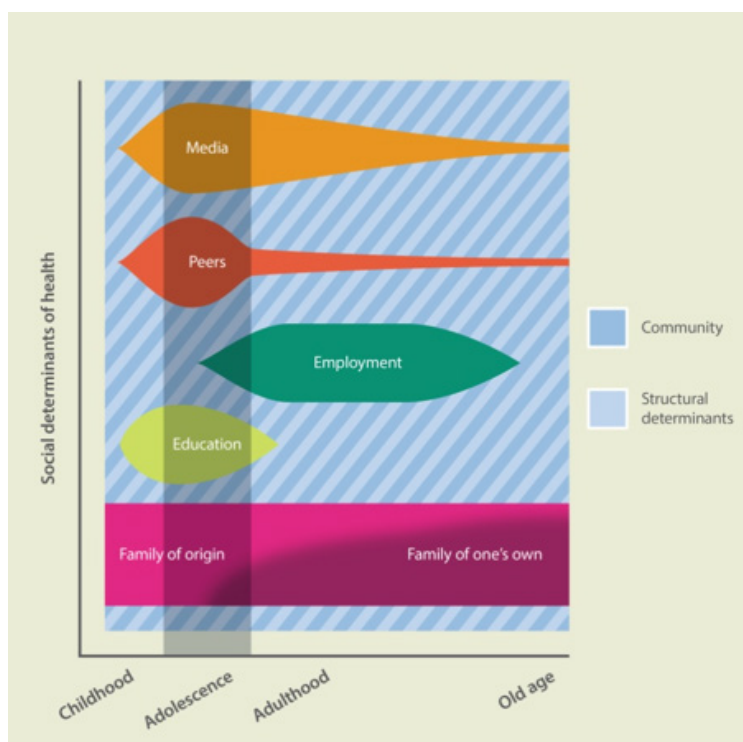
Conversely, social and structural determinants that promote adolescent health and well-being include laws, policies, cultures and environments that support access to education and employment, delay marriage and childbearing, provide universal health coverage,

and create opportunities to enhance young people's autonomy, decision-making capacity and human rights. The settings for actions to promote adolescent well-being extend from health services and schools and education, to families and communities, places of employment, road transport, the media, and structural, legal and policy environments. We return to the discussion of structural interventions on page 11.

#### **Box 5. Addressing the social and structural determinants of adolescent well-being: key methodological implications**

- The measurement of the social and structural determinants of adolescent well-being encompasses data from multiple sectors, including health, education, employment, transport, justice and community environments (see Brief 6 in this series, 'How to Measure Enabling and Supportive Systems for Adolescent Health').
- Undertaking and translating research about social and structural determinants requires data that are timely, developmentally relevant, sex disaggregated, age disaggregated (younger adolescents aged 10–14 vs. older adolescents aged 15–19) and defined to a local level.
- Diverse collaborators may therefore be required to partner and facilitate research within many of these social and structural determinants.



**Figure 2. Changing social and structural determinants of health across the life course**

Source: Reproduced with permission from Patton et al., 'Our Future'

## OVERARCHING ISSUES AND THEIR METHODOLOGICAL IMPLICATIONS

The previous section reviewed key and emerging areas of research on adolescents, highlighting the methodological implications that researchers examining those topics need to take into account. In addition to these methodological issues and implications, there are several cross-cutting issues and actions that should be considered in any research on adolescent health and well-being, regardless of the topic.

### Matching actions to need to improve adolescent health and well-being

Health and well-being profiles vary between and within countries, largely reflecting progress through the epidemiological transition that follows economic development and the demographic transition, and the effect of national and local social and structural determinants.<sup>8</sup> Matching actions to need is critical to translating research around adolescent health and well-being into policy and practice effectively. For example, improving adolescent health is likely to require action on three levels:

- current health and well-being problems and causes of adolescent deaths (e.g., under-nutrition, injury,

violence, infectious and vaccine-preventable diseases)

- the risks for health problems and well-being in adolescence, adulthood or the next generation (e.g., tobacco use, alcohol misuse)
- important social and structural determinants of well-being during the adolescent years (e.g. education, socioeconomic status of the family, early marriage, participation in the workforce).

### Box 6. Matching actions to need to improve adolescent well-being: key methodological implications

- Improving the measurement of adolescent well-being requires finer-grained geographic information that makes it possible to monitor progress and capture inequalities at national and sub-national levels.
- Understanding the representativeness of populations is a key consideration for research, as is paying attention to disadvantaged groups (see Brief 2 in this series, '[Data and Indicators to Measure Adolescent Development and Well-being Globally](#)').

8 Ibid.

**Inter-sectoral and multi-component actions**

Usually the most effective actions for adolescent health and well-being are inter-sectoral and multi-component, tailored to local needs and capacities. Achieving impact requires the active involvement of the different sectors and ministries that influence adolescent well-being (e.g. family welfare, health, education, gender, employment, social protection, transport, justice and the private sector) as well as a greater focus on gathering data that can be integrated at a national level.

**Box 7. Inter-sectoral and multi-component actions: key methodological implications**

These include:

- data collection in multiple settings and the complexity of linking interventions with outcomes\*
- standardizing the design and delivery of interventions
- sensitivity to the local context
- difficulties in applying experimental methods to service or policy changes
- disaggregating results by age, which may have implications for sample size calculations.

\* Medical Research Council, Developing and Evaluating Complex Interventions: New guidance, Medical Research Council, London, 2008.

**Focusing on gender and equity**

Improving adolescent well-being requires a focus on gender since strategies that are effective and appropriate for girls may be less effective for boys, and vice versa. Adolescent researchers must collect data that are relevant to disadvantaged populations and consider the impact of interventions on equity. For example, school-based interventions may inadvertently increase inequity, as they do not reach the most disadvantaged adolescents who are not in school. Addressing gender disparities in access and targeting more resources to disadvantaged adolescents – including ethnic minorities; lesbian, gay, bisexual or transgender adolescents; those with chronic health conditions and disabilities; adolescents in youth detention; and those who are homeless or displaced - is critical to closing equity gaps. For more information on how to conduct research with hard to

reach populations of adolescents, see Brief 4 in this series, 'Research with Disadvantaged, Vulnerable and/or Marginalized Adolescents'.

**Box 8. Gender and equity: key methodological implications**

- Consider how research can be conducted into both marginalized and mainstream adolescents, as marginalized adolescents have the poorest levels of well-being.
- Conduct research in settings that are most appropriate to reach marginalized populations. For example, for some interventions, community-based actions may be more appropriate than school-based interventions in order not to exclude out-of-school adolescents.
- In some areas of adolescent health research, challenges arise because certain populations (e.g. transgender people) are stigmatized or behaviours (e.g. homosexuality, substance use) are considered illegal. While these issues also arise in research with adult populations, they may be even more acute in adolescents. Every effort must be made not to further stigmatize or increase any risk to these populations through paying careful attention to issues of privacy and confidentiality and by ensuring that participants are fully informed about what they are consenting to (see Brief 3, 'Inclusion with Protection: Obtaining informed consent when conducting research with adolescents').

**Types of outcome measures**

An important issue to consider when planning or reviewing research studies conducted on adolescents relates to the types of outcome measures used. While there is most interest in measuring behavioural or biological outcomes, these are generally more difficult to assess than knowledge and attitudes. For some areas of adolescent health, such as sexual behaviour or substance use, there may be additional challenges in using behavioural or biological measures, including ethical considerations.

However, changes in knowledge and attitude do not necessarily result in behaviour change. For example, assessing changes in HIV status or condom use in younger adolescents participating in an evaluation of a sexuality education programme, can present

methodological and ethical challenges. Therefore many studies focus on knowledge and attitudes as outcome measures, assuming that changes in attitudes will lead to changes in behaviour. However, these links are not always straightforward. Studies that show actual changes in behaviour or biological outcomes are considered to make a greater contribution to the evidence base than those which only show changes in knowledge and attitudes. For example, a randomized controlled trial assessing an HIV-prevention intervention that used blood tests to show that adolescents in the intervention group are less likely to become HIV positive after the intervention, is far more convincing than one that shows changes in attitudes towards using condoms.

## PLATFORMS THAT DELIVER ACTIONS FOR ADOLESCENT WELL-BEING: KEY METHODOLOGICAL ISSUES

Action across a broad range of platforms is necessary to promote adolescent health and well-being. Evaluating the impact of interventions within each of these platforms raises particular methodological challenges.

### Structural interventions

Legislation, taxation and implementation of policies bringing investments in families, communities, schools and health services are essential for promoting adolescent well-being. Policy responses are often a critical element of multi-component interventions, such as Malawi's ban on child marriage (via the Marriage, Divorce and Family Relations Bill). The principle of progressive empowerment of adolescents in decision-making is also key to making effective policy responses. This may be supported through graduated legal and policy frameworks that balance protection and autonomy, e.g. graduated driving licences, which restrict alcohol consumption and the number of passengers that can be carried.

### Box 9. Methods for assessing impact of structural interventions

These include:

- time series studies, evaluating practices or outcomes before and after a change of policy
- 'natural experiment' study designs, in which an intervention is implemented in one region or country, but not another, and the outcomes of interest are compared.

### Media and social marketing interventions

In the digital age, social marketing and mass media approaches that target the attitudes and values of adolescents and their families and broader communities are likely to be vital to improving adolescent well-being. Online spaces have changed adolescent developmental tasks such as relationship and identity building, which previously mostly involved face-to-face engagement with peers. For many adolescents, identity formation incorporates local cultural influences with new elements derived from global cultures, particularly youth cultures. Sensitivity to peers in decision-making is often targeted by teen-oriented commercial entertainment, marketing and media, which can render adolescents vulnerable.

### Box 10. Key methodological issues in assessing the impact of media and social marketing

These include:

- building partnerships with civil society and media professionals, as these are likely to be essential as researchers seek to exploit the potential of these platforms for interventions and in protecting adolescents from potential harm that comes from marketing of unhealthy products (e.g. tobacco, sugary drinks) and attitudes (e.g. those related to gender-based violence)
- investigating new understandings of brain development and how they relate to peer influence in decision-making.

## Online interventions

Adolescents are among the earliest adopters of information and communication technologies, such as the internet, mobile phones, instant messaging and social media; a pattern seen in LMICs as well as high-income countries. These platforms offer great potential to researchers aiming to promote adolescent well-being by transforming knowledge and delivery systems around the globe. Online interventions are increasingly playing a role in multi-component interventions. They offer the possibility of addressing issues relating to equity and gender through the ability to reach diverse groups, including geographically and socially marginalized adolescents.

### Box 11. Key methodological issues in assessing online interventions

These include:

- social media and online questionnaires, which offer new ways of collecting data, and are increasingly used in research with adolescents
- novel research methods to assist with data collection, e.g. U-report - UNICEF's social messaging tool - which allows people to report on issues relevant to their communities,\* in order to assess the impact of interventions in this fast-moving area
- digital platforms, which offer significant opportunities for data collection and matching action to need; however, evidence of the effectiveness of online interventions for adolescents is limited and further research is needed
- novel methods of data collection, such as real-time assessment of mood states or quality of life,\*\* are appropriate in this fast-moving field.

\* United Nations Children Fund, *The State of the World's Children 2016: A fair chance for every child*, UNICEF, New York, 2016.

\*\* Bos F. M., Schoevers R. A., and aan het Rot, M., 'Experience Sampling and Ecological Momentary Assessment Studies in Psychopharmacology: A systematic review', *European Neuropsychopharmacology*, vol. 25, no. 11, 2015, pp. 1853–1864.

## Health service interventions

Adolescents value patient-centred care with an emphasis on respect, coordination of care, appropriate provision of information, high-quality communication, and the ability of health care providers to listen to their needs.<sup>9</sup> Progressively empowering adolescents to manage and make decisions about their healthcare is important. Together with continuity of care, this underpins maintenance of treatment adherence in those with chronic health conditions, such as HIV, diabetes and asthma.

Because health service interventions depend on adolescent help-seeking, they are also often more effective if implemented as part of multi-component interventions to improve health literacy and increase the demand for services. Such interventions may include broad dissemination of information via the community, schools and mass media, together with engagement of community leaders.

### Box 12. Key methodological issues in assessing health service interventions

These include:

- assessing provider competencies, quality of facilities and equity considerations (e.g. cost) when researching the impact of health services on adolescent well-being
- collecting data for quality improvement and to match actions (e.g. provider training) to adolescent needs (e.g. mental health) in order to demonstrate effectiveness of interventions
- beyond mainstream health facilities (e.g. clinics, hospitals), further researching the role of school-based health services to deliver health services to adolescents, including immunization (e.g. human papilloma virus or HPV), anti-worming medication and interventions to improve nutrition (e.g. iron and folate supplementation)
- further researching the role of traditional healers and how many adolescents in LMICs buy medication from street vendors and other unlicensed operators.

<sup>9</sup> World Health Organization, *Making Health Services Adolescent Friendly: Developing national quality standards for adolescent friendly health services*, WHO, Geneva, 2012.

### Community-based interventions

Community interventions usually involve local government, families, youth-focused and religious organizations, and schools. Community-based interventions are often key elements of multi-component interventions, for example, in gaining support for age of marriage legislation or against female genital mutilation/cutting (FGM/C). Uganda's National Strategy on Child Marriage incorporates a national plan, education and health system programmes, as well as community-level engagement with civil society and faith-based organizations.<sup>10</sup> Another example of a multi-component programme dealing with adolescent well-being is Tostan ([www.tostan.org](http://www.tostan.org)), which aims to reduce FGM/C. Tostan incorporates activities at multiple levels and has fostered partnerships with numerous stakeholders, including national and local governments, community-based organizations, religious authorities and local religious leaders, non-governmental organizations, networks, associations, academic institutions and the media.<sup>11</sup> Those researching the impact of community-based interventions need to consider the extent to which they match action to need, build on available community structures, focus on gender and equity, and monitor progress.

### School-based interventions

Growth in secondary school attendance has great potential to increase adolescent well-being. For children who attend, schools may be the site of the most important relationships outside the family (with teachers and peers), although bullying and interpersonal violence may impact adversely on well-being.

### Box 13. Key methodological issues in assessing school-based interventions

These include:

- school-based researchers using multiple research methods to evaluate interventions that are multi-component and comprise curriculum elements, a focus on a school's social and physical environment, together with engagement of families and/or the community; these types of interventions show consistently positive outcomes for adolescent sexual health, violence and tobacco smoking and may be beneficial for other health risks\*
- considering the measurement of educational and health sets of outcomes following interventions in schools to promote health and well-being, such as comprehensive sexuality education, gender equality training or school-based meals
- assessing school-based interventions where possible through high-quality research designs such as randomized-controlled trials; these should include behavioural measures where possible.

\* Shackleton, N. et al., 'School-Based Interventions Going Beyond Health Education to Promote Adolescent Health: Systematic review of reviews', *Journal of Adolescent Health*, 2016, vol. 58, no. 4, pp. 382–396.

### Family-based interventions

Families play a critical role in promoting adolescent health and well-being. They have considerable potential to support healthy growth and development, but may also do harm. Social policy can support family function, such as cash transfers to promote adolescent school attendance and prevent early pregnancy. Improving parent–adolescent communication may be linked to improved sexual and reproductive health outcomes, better social functioning and fewer mental health problems. Future research should build on these findings.

10 United Nations Children Fund, *The National Strategy to End Child Marriage and Teenage Pregnancy*, UNICEF, Kampala, 2015.

11 United Nations Population Fund and United Nations Children Fund, *Evaluation of the UNFPA–UNICEF Joint Programme on Female Genital Mutilation/Cutting (FGM/C): Accelerating change*, UNFPA and UNICEF, 2012, <[www.unicef.org/evaluation/files/TOR\\_FGMC\\_Final.pdf](http://www.unicef.org/evaluation/files/TOR_FGMC_Final.pdf)>, accessed 21 December 2016.



## CONCLUSION

This brief makes the case for more and better quality research focusing on the critical phase of adolescence and the developmental changes and social transitions that unfold during its course. The relative absence of comprehensive data collection systems and research in most countries points to a critical gap in knowledge to inform programming and policy for what is the largest cohort of adolescents in history. Given the

importance of adolescent well-being and the growing policy attention to adolescents across the world, the six subsequent briefs in this series aim to facilitate high-quality adolescent research. Each provides guidance on specific methodological approaches and issues for conducting research with adolescents to maximize their potential during this pivotal period in the life cycle.

## GLOSSARY

<u>Adolescent</u>	An adolescent is a person between the ages of 10 and 19 years – as defined by the World Health Organization and UNICEF.
<u>Behavioural measures</u>	Tests and methods used to gain information about a study participant through the observation and recording of their behaviour by observers, such as recording the type or counting the number of behavioural responses. The reliability of behavioural measures is increased by having more than one observer or rater.
<u>Hot emotions</u>	Intense and energized states that are experienced with a high level of arousal related to high levels of interest and activity. Examples of hot emotions include anger, romantic love, desire and rage.
<u>Longitudinal study</u>	An observational research method in which data are gathered about the same participants or units of analysis repeatedly, over a period of time.
<u>Magnetic resonance imaging</u>	Magnetic resonance imaging is a technique that uses a magnetic field and radio waves to create detailed images of the interiors of objects, such as the human body. The machine is usually a large, tube-shaped magnet and produces real-time, three-dimensional views of the body, including the brain.
<u>Randomized controlled trial</u>	A randomized-controlled trial is a research or evaluation design with two or more randomly selected groups (treatment and control groups) in which the researcher controls or introduces an intervention and measures its impact on the dependent variable at a minimum of two time points. Considered the 'gold standard' for research designs.
<u>Self-report instrument</u>	A survey, questionnaire, poll or any other instrument which relies on the participant to respond to a question by themselves without researcher interference. Participants report their own behaviours, attitudes, beliefs, emotions, knowledge etc. The results may be subject to a self-report bias.
<u>Structural determinants</u>	Structural determinants are fundamental structures of a society or nation which generate social stratification, such as global and national economic systems and a country's political, social welfare systems and education systems. They can result in differing levels of power, wealth, rights, empowerment, education etc. between individuals, and be the ultimate drivers of differences in health and well-being.

## READINGS FOR FURTHER EXPLORATION

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