



New Measures of Adolescent Development: Research workshop, Oxford, December 2017 Workshop Report

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1. Introduction

This workshop brought together leading researchers consider priorities for evidence on the development and well-being of adolescents (around 10-19 years) in low and middle income countries. It was generously supported by the Canadian Institute for Advanced Research (www.cifar.ca) through the Research Workshop Program. It was hosted by Professor Jo Boyden (University of Oxford University), alongside co-convenors Dr Marc H. Bornstein (National Institute of Child Health and Human Development), and Professor Kate C. Tilleczek (University of Prince Edward Island). Professor Robert W. Blum (Johns Hopkins University) played a key role in developing the workshop, although was not able to attend.

Adolescence – the period between 10 and 19 years old - is increasingly recognized as a sensitive period for human development, but remains a poorly understood stage in the life course. Nearly 9 in 10 of the world's 1.2 billion adolescents live in low- and middle-income countries, where many face multiple threats to their wellbeing and development. Yet most of what we know about this life phase, including the most effective means of supporting adolescent development and wellbeing, comes from research and evaluations in high-income countries.

Recent work by Azzopardi et al (2017) summarizes current measures and highlights the need for development of new, validated measures of key dimensions of adolescent health and well-being. Promising measures have been developed in countries from Peru and Bolivia to South Asia and sub-Saharan Africa, focused largely on transitions from childhood into adolescence. However, many of the research approaches and instruments used to build an evidence base on adolescence in higher income

contexts are unproven in the very different, changing and diverse contexts in which adolescents are growing up in low and middle income countries.

2. Workshop Scope and Expected Outcomes

The workshop brought together specialists with expertise in economics, sociology, anthropology, psychology, social work, education, gender studies, international development, and youth studies, and experience across low, middle and high income countries.

The agenda was structured to allow participants to learn from different disciplinary perspectives and consider their contributions to research into adolescence, and to enable different participants to frame an emerging adolescent research agenda.

- Day One was designed to enable specialists to share how adolescent development and wellbeing were conceptualized in different disciplines, to identify the challenges and opportunities for adolescents resulting from changing social, economic and political contexts in LMICs, and priorities for evidence.
- During *Day Two*, participants brought their different expertise to bear on specific dimensions of adolescent well-being and how they are measured.
- Day Three focused on ideas for a future research agenda and addressing the challenges of multidisciplinary working going forward.

The workshop was timely both because the current generation of adolescents is the largest ever in the world, and key to achieving the Sustainable Development Goals and future economic and social sustainability, and because of the growing focus on outcomes and trajectories for adolescents in LMICs. Adolescence has been conceptualised: by development economists as a vital window for investment in young people's human capital; by health specialists and psychologists as a distinct developmental phase characterized by rapid physical and neurological changes and presenting specific risks; by social scientists and activists, as a time when discriminatory gender norms become solidified; and children, particularly girls, are vulnerable to human rights abuses; and by practitioners, advocates and policy makers variously as either a resource for, or risk to, societal development.

3. Executive Summary

The lives of the world's largest-ever population of adolescents are bound into the changing local and global contexts in which they live. Changing environments, technology, urbanization and labour markets (to name a few) are having a profound effect on adolescent futures. Adolescence itself is a time of change and transition, with girls and boys undergoing and initiating rapid physical, cognitive and social transitions. These behaviours and transitions can be the same or different in different contexts, are deeply gendered, and their *meaning* may also vary across cultures.

With 90% of adolescents living in low and middle income contexts, it is vital for the achievement of the Sustainable Development Goals and for the social and economic future of societies, that action is taken now to support adolescent and young people to thrive. However, the evidence base for intervention is weak, with much of the available research – and the validated instruments used in research – focused on higher income countries. The lives of adolescents in poverty contexts are often characterized by multiple responsibilities – for work and income generation, schooling, and supporting and sustaining intergenerational and social relationships.

Collaborative work by researchers from different disciplinary backgrounds has a key role to play in understanding and transforming adolescents' lives. By integrating different insights into adolescents' multiple roles and responsibilities, and an understanding of how their wellbeing is shaped by daily experiences, poverty and by early-life circumstances, researchers can identify the right time and entry points for intervention and support at individual and societal levels. But challenges abound: developing a consensus on domains, constructs and measures of adolescent wellbeing that matter across contexts; allowing for variability in models of wellbeing that are derived in each country/context; accounting for the influence of distal and social factors on individual wellbeing; ensuring that adolescents' own perspectives on wellbeing, autonomy and aspirations are centre-stage; and balancing the depth of qualitative insights with the comparability provided by quantitative data were just some of the issues raised during the workshop. The complexity of adolescent lives and the adversity they face poses ethical, methodological and practical challenges for the research community. But, the concern is pressing given the sheer relative size of the youth bulge today (25% of the world's population) On the concluding day of the workshop, participants outlined three lines of inquiry around a central question: "Do the current challenges and opportunities confronted by adolescents compromise or promote their futures?" They are

- (i) Historical change and adolescents: focused on the co-occurrences of perturbations such as technological change, climate change, famine, political upheaval, urbanization and their impact on young people
- (ii) Gender, participation, empowerment and decision-making: focused on developing and applying better measures of empowerment in adolescents' lives and in using the research process itself to leverage youth participation and empowerment.
- (iii) Understanding and measuring wellbeing and mental health: developing and applying a positive approach to wellbeing and across diverse contexts including collecting measures and models of wellbeing from the global south to guide further research into the domains regarded as most important.

4. Summary of Workshop Sessions

Day 1: overview

During **Day One**, participants worked in break-out groups and through presentations to share different disciplinary perspectives on adolescent development and well-being. Taking as its starting point the work of *The Lancet Commission 'Our Future'* and other stakeholders, which identifies adolescents and young people as key to the future, and investment in adolescents as potentially transformative, the group and began to define the scope of the challenge that changing social, economic and political contexts in LMICs present for adolescents, and for measuring adolescent development and well-being.

Diversity. The discussions highlighted some of the challenges of building an evidence-base on adolescence, with multiple ages, multiple levels of enquiry (from culture to individual to micro systems), multiple dimensions of well-being, multiple disciplines (there are different terms even for the same things – in both methods and concepts), and multiple cultures (there is tremendous variation both cross and within culture). An ecological model, and an understanding of how behaviours linked to certain constructs and their cultural meaning can be the same or different across different contexts (see below) can help to provide a framework within which this diversity can be reflected.

Comparability. The diversity of adolescent experiences means comparative research is important, but also difficult: quantitative approaches such as PISA (Programme for International Student Assessment) and TIMSS (Trends in International Mathematics and Science Study) are comparable, but such approaches can miss the contribution of culture. And whilst qualitative research gets at interpretation, nuance, and sensitivity, cross cultural comparison is difficult.

Overlapping areas of research interest. Some areas of adolescent development – including norms, transitions, political economy and power, skills and dimensions of psychosocial well-being – are the focus of multiple disciplines, whilst others tend to be researched by some disciplines and not others. Many practical opportunities for shared learning were identified: for example, in reducing attrition, improving the effectiveness of tracking, and designing instruments which are culturally specific and appropriate for adolescents of different chronological and social ages. There are practical challenges as well as opportunities: for instance, academic publishing's deep investment in certain paradigms and internationally validated instruments mean that interdisciplinary collaboration and the development of new instruments can be difficult.

Missing voices. The views of adolescents and young people about their own lives and their own understanding of well-being and development have to be central to the research agenda, together with an understanding of the way that definitions and social discourses around adolescents shape research and how it is operationalized. Participants also felt that historians and political economists should be part of the discussion.

Responding to the unexpected. Several discussions focused on the methodological and ethical challenges for research when adolescents' experiences vary from what is expected: for example, when out-of-school girls cannot formulate an answer to a question about their aims in life; when levels of violence reported to researchers are much higher than anticipated in ethical approval processes; or in circumstances where it is very difficult to talk about 'agency' – for example where very young adolescents are married with no warning or opportunity to give their views. One theme throughout the workshop was the ethics of uncovering issues if you can't address them: for example, is it ethical to promote empowerment for individual girls if exercising agency or choice is risky for them?

Day 1 presentations

Some lessons learned from longitudinal and cross-cultural (including LMIC) approaches to adolescent concerns – Marc H. Bornstein

In his presentation, Dr. Bornstein emphasized that adolescence has been defined in a variety of ways across time and culture. Distinguishing between concepts, constructs and measures, he argued for a focus on constructs, highlighting constructs which have traditionally been the focus of research into adolescence, and 'out of the box' constructs which we might want to explore in the twenty-first century. He offered a framework for thinking about the way that constructs/behaviors and their cultural meaning may vary across contexts.

		Cultural meaning	
Constructs		Same	Different
(behaviour)	Same	Universals	Plasticity

Different	Contextualisation	Specificity

Adolescents' aspirations, education and poverty. Jo Boyden

Jo Boyden drew on evidence from the Young Lives study and beyond to highlight the importance of increasing responsibilities in adolescents' social transitions in poverty contexts, with work as a central feature of adolescents' experience. Globalizing aspirations and opportunities have lead adolescents and their families to strive for educational success in the face of considerable obstacles, often leading to a sense of shame when poverty and low quality schooling lead to early school-leaving or exam failure.

'Digital media and young lives over time and place: How does the Digital Age matter for youth development and well-being?' Kate C. Tilleczek

Kate Tilleczek drew on her experience researching young people's wellbeing and the use of digital media to highlight the contribution that sociological research can make to understanding adolescence. She demonstrated that what is important to young people themselves (such as their pets) is often missed in research and models of wellbeing — a gap presently being taken up by UNICEF Canada. She used the example of her work with young people from Canada's First Nations to emphasize the importance of understanding endogenous understandings of wellbeing and suggest that the global south might similarly be engaged in development of models of measures of youth wellbeing that could guide research and practice. New participatory and arts-infused research methods such as young people's own digital biographies and vlogs can make an important contribution in building evidence about what actually matters to young people. It suggests the possibility of leveraging youth empowerment through research processes that also provide solid evidence.

Reflections from UNICEF: what dimensions and measures of adolescent development and well-being would help to inform policy and programming work. Prerna Banati

Prerna Banati joined the meeting through a video presentation, drawing on UNICEF's growing focus on adolescence and her own work leading the UNICEF's Office of Research (Innocenti) project Social and Structural Determinants of Adolescent Wellbeing to call for improved measures of adolescent participation, an understanding of the determinants of boys' as well as girls' needs and well-being, research which explores the balance between adolescents' growing capacities and need for autonomy and their continued need for protection, the need for an evidence base which reflects the differences between adolescents of different ages and which identifies how and when adolescence can be a window of opportunity for intervention, building on longitudinal data.

Viet Nam early adolescents in GEAS: Implications for research methods to work with children. Vu Manh Loi

Vu Manh Loi reflected on his experience using different instruments and approaches in Hanoi to explore gender roles and norms. He highlighted the importance of keeping surveys short and tailoring language and approaches to different age groups, reporting that 10-12 year olds responded very differently to 13-14 year olds, enjoying participatory methods (such as vignettes and role-playing) and sometimes finding it difficult to answer questions about other people's perspectives, about hypothetical situations, or about aspects of puberty that they had not experienced directly. The use of tablets (CASI) was effective, except for those with an audio component (ACASI).

Adolescent relationships and digital lives in Canada. Debra Pepler

In her presentation, Debra Pepler reflected on her community and action-research on bullying, addiction and cyberbullying to explore the value-added from different methods: for example, exploring social relationships as an important ingredient in young people's well-being; adapting quantitative instruments used to research bullying and combining with qualitative measures in order to build an evidence base on cyberbullying; and using qualitative data to understand *how* residential treatment programmes for addiction lead to change in young people's lives. She reflected on ethical issues about when to publish findings (on peer victimization with First Nation young people in Canada), the importance of researchers regarding adolescents as experts in their own lives, and the importance and costs of longitudinal research into adolescents' evolving relationships with other important people in their lives.

Youth development indicators for youth development in Caribbean societies. Godfrey St Bernard

Drawing on the experience of the Youth Development Index, Godfrey St Bernard, explored how different datasets could be used as part of a process of bringing about positive change in the lives of adolescents and young people. He emphasized the need to address equity, gather information on social media and internet usage, health, and nutrition, and make good use of administrative data and existing surveys, particularly in contexts where the capacity and resources to undertake longitudinal studies is currently limited.

Scales and tools from PAnKH (Promoting Adolescents Engagement, Knowledge and Health). Hemlata Verma

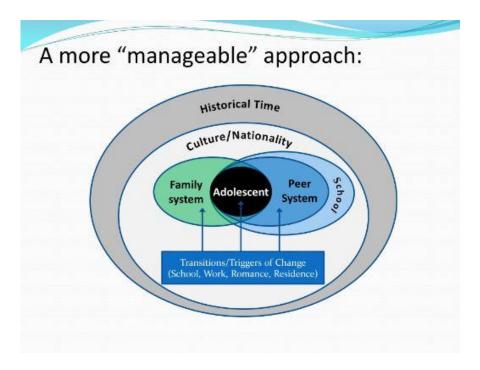
Hemlata Verma focused on measures of patriarchal gender attitudes and self-efficacy in an evaluation of an intervention focused on adolescent girls in a rural area of Rajasthan characterized by high levels of gender and caste based inequality and where non-school going girls were unfamiliar with some of the concepts in widely used measures of psychosocial wellbeing. She described how caste background appeared to shape gender attitudes, and considered whether this reflected higher caste girls' grasp of 'socially desirable' responses. Out of school girls were often unfamiliar with many of the concepts within the 'self-efficacy' scale.

Day 2: overview

During *Day Two*, participants brought their different expertise to bear on specific dimensions of adolescent well-being and how they are measured, with three participants presenting and leading discussions, followed by group discussions on the framework proposed by Justin Jager in his presentation.

Bringing evidence together. There was continued discussion on the importance of an integrated approach and frameworks that could capture adolescents' own perspectives and bring together insights from different disciplines and projects, capture both the material and ideational aspects of adolescents' well-being, and bridge insights into adolescents' individual well-being with an understanding of wider structural drivers on individual development.

A framework for future research



Much of the afternoon's group discussions were devoted to exploring the socio-ecological model proposed by Justin Jager (above) as a framework for bringing together different research insights and for understanding the impact of historical change on adolescents' lives. The discussions were wide-ranging and included:

- Adding to the contextual factors shaping adolescent experiences: politics, economic factors, safety, law enforcement, role of religious groups, other regulatory systems of control, CSOs, (control versus autonomy), socio economic conditions, gender norms, physical and built environment.
- Understanding the central role that poverty, inequality and shocks play in adolescent outcomes.
- Developing a more nuanced understanding of adolescents' experiences at school including facilities, pressures, and the quality of learning – and where peers are and are not part of the adolescent's school environment.
- Reflecting how variable different contexts can be even in ways that are hard to measure: such as whether contexts are sociocentric or egocentric.
- The importance of norms exploring how norms operate at several levels of organization
- Capturing how adolescents themselves experience change and development and do and don't exercise agency, within a historical context which is itself changing, and with complex, bidirectional relationships between adolescents, their families, peers and the wider community.
- Ensuring that the digital sphere and impact of economic shocks can be adequately represented by the model, and making sure that work and care are adequately represented.

Depth vs. coverage was a common theme during Day 2, with many existing datasets on adolescents and young people offering one but not the other. Jennifer Lansford argued that a simple measure of happiness had been vital to getting subjective well-being on policy agendas, and Rebecca Pearson

highlighted the value of simple repeated measures over one-off in-depth surveys in predicting common mental health disorders.

Using instruments in low income contexts. Presenters were positive about the potential to use (suitably adapted) instruments in low income contexts, with Rebecca Pearson highlighting the value of instruments in exploring mental health disorders in South Africa and Brazil, and Jennifer Lansford explaining that a variety of measures of parent – child relationships had worked well across the very different countries involved in the Parenting Across Cultures research programme. In her closing remarks to the day, Jo Boyden suggested a more intense focus on what researchers can feasibly, ethically, and practically do in LMICs, and how novel measures from high income contexts can be implemented in or adapted for LMICs.

Historical change. Justin Jager began a discussion about the way that wider economic, social and political changes shape adolescents' well-being and the triggers and outcomes of transitions which continued throughout day 2 and into day 3.

Day 2 Presentations

Mental health and social/emotional well-being. Rebecca Pearson

Rebecca Pearson whose work spans the UK, South Africa and Brazil, led a presentation and discussion on the challenges of adapting instruments for measuring common mental health disorders (a leading cause of disability worldwide and potentially both preventable and treatable), highlighting the value of repeated measurement, finding the right language, and taking account of resources, time and acceptability for different tools, including passive and technology-based methods. She highlighted the power of repeated measures, the value of physical markers to measure mood, the need to consider carefully which informants to use, and considering cognitive processes that cause difficulties (including decision-making, inhibition, and working memory). She shared specific experiences of using cross-lagged models; trajectories of depressive symptoms to find rates of change, baseline, and maximum points; daily collection of repeated measures using apps; using bifactor models (measuring the same issue with two different informants at the same time); and observation through vocal change.

Capturing the adolescent within context. Justin Jager

Justin Jager argued for historical change to be central to ways of thinking about and researching adolescence, proposing a version of Bronfenbrenner's social ecological model as a way of understanding dynamic adolescent and young adult transitions, and how these transitions (for example, in school, work, residence, and romance) often co-occur and lead to changes in young people's contexts. He suggested that datasets can be considered in terms of their coverage, and their sophistication (depth and number of questions): datasets such as Ad Health which have wide coverage and high sophistication are rare, and the most common choice tends to be between high coverage/low sophistication, and low coverage/high sophistication studies.

Social connections and relationships. Jennifer E. Lansford

Jennifer Lansford argued that measures of subjective well-being currently used as part of the Sustainable Development Goal framework are very limited, and that new measures – such as the single measure used as the basis for the World Happiness Report – can make a real contribution to understanding and concern about an issue such as well-being. Her presentation drew on her experience with the Parenting Across Cultures project to explore how well-being and social connections can be

studied across very different countries, understanding changing parent-child relationships over childhood as part of a system of relationships. Starting with Lerner's '5 C's' - competence, confidence, connection, character, and caring/compassion – the project has worked to take a global perspective on positive youth development, collecting data on adolescents and their parents for nine years. Lessons learned include: being responsive to local contexts (avoiding questions about the drug use in the Philippines, and routing Swedish parents' responses on corporal punishment to an address outside Sweden); avoiding deficit perspectives in order to recognize the different ways that some parental values are expressed across culture (eg. the study has found that parental warmth and control are often expressed in different ways); and recognizing the influence of children/children's behaviour on parents and parenting. She finished by exploring a range of issued involved in a shared research agenda, including balancing emic vs. etic approaches, the use of rating scales, measurement invariance and biases, defining child abuse, defining child neglect, and balancing standardization and Flexibility. Finally, she raised the opportunities presented by a few new measures, including: Ecological Momentary Assessments (EMA); Family Obligations (Fuligni et al.); Friendship Quality (Bukowski et al.); Hostile Attributions (Dodge et al.).

Day 3: Overview

Day Three explored the challenges of multidisciplinary working going forward, and began the process of developing ideas for a future research agenda (see below). Many of the discussions extended the themes from the previous day: including –

- The need to understand how adolescents' lives are embedded in and affected by both local and global processes, and to be forward thinking about the changes that will affect adolescents' lives over the course of the 21st century.
- The practical challenges of building a common language between qualitative and quantitative researchers, and finding more and better ways to use high quality research methods and measures in LMICs ensuring that research can contribute to transformation.
- The need to understand how wellbeing is understood by adolescents and young people themselves in very different contexts, but also of making interpretations and construals that are understandable and comparable across places.

Day 3: Presentations

Methods, ethics, reflections sharing "Young lives; methodology, challenges, and findings from a comparative longitudinal study of young people growing up in poverty". Gina Crivello and Marta Favara

Marta Favara and Gina Crivello drew on the experience of Young Lives, a fifteen year longitudinal study of childhood poverty to share different approaches to integrating quantitative and qualitative perspectives on poverty, aspirations, gender and adolescent trajectories, highlighting how they had addressed the challenges of different disciplinary frameworks and language, had worked with research partners in the study country over a long period, and had used insights from different methods to add value and depth to each others' work.

5. Summary of Outcomes

The workshop identified a central question to shape the development of a future research agenda:

How do the current challenges and opportunities confronted by adolescents compromise or promote their futures?

Within this, three lines of inquiry were explored in discussions on the final day of the workshop:

Historical change and adolescents:

This line of inquiry would focus on the co-occurrences of perturbations such as those brought by the digital age, environmental challenges and political upheaval and their impact on young people; with a focus on sharing insights not only to understand lives but also to improve them, and understanding in a practical and responsive way which levels of organization are best placed to intervene and support improvements in adolescents' lives. Here the suggestion of Jo Boyden, UNICEF and the Lancet Commission regarding the pressing need to develop and leverage secondary schooling in the global south was discussed.

Gender, participation and empowerment and decision-making

This line of inquiry would focus on developing and applying better measures and means of youth empowerment in a way which is relevant to adolescents' real lives and reflects gender and other inequalities. A starting point for this work could be Sen's view of empowerment as a capacity to make a choice towards a valued functioning, shaping many potential outcomes. Proxy measures to be explored include: decision-making; relevance of the decision; who has the last word; who had veto power; does a person have the freedom not to decide; aspiration; self efficacy in decision making; and getting to the desired outcome. The notion of participatory research process with and for youth was discussed as one potential for leveraging research dollars and processes that themselves assist marginal and vulnerable youth empowerment.

Understanding and measuring wellbeing and mental health

This line of inquiry would develop and apply a positive approach to the measurement of wellbeing, starting with broad understandings of well-being that are widely applicable but also reflecting the different ways that wellbeing is manifested in different contexts, and incorporating measures of mental health, in order to build an evidence base and develop opportunities for positive interventions linked to the SDGs. A range of measures that could be used, with Rich Lerner's approach to positive youth development providing a starting point, and exploring the possibility of building a richer understanding of wellbeing through thick data (qualitative), and deep data (longitudinal) and big data (passive).

Appendix 1: Participant biographies

Name	Short biography
Alison Andrew Institute for Fiscal Studies	Alison is an economist and works in the Centre for the Evaluation of Development Policies at the Institute for Fiscal Studies in London. Her current work includes evaluating psycho-social programmes aimed at improving early childhood development in both Colombia and India, as well as studying the benefits of micronutrient supplementation in developing countries. She is also working on economic modelling of child nutrition and health in Malawi.
Prerna Banati UNICEF Office of Research – Innocenti	UNICEF Innocenti (video contribution) Prerna trained as an epidemiologist, and is currently Chief of Programmes and Planning at the UNICEF Office of Research – Innocenti, where – amongst other programmes - she leads the Adolescent Research Programme which seeks to define the drivers of well-being outcomes and examines effective policy and programme interventions in adolescence. Prerna participated in a session in day 1 of the workshop remotely.
Robert Wm. Blum Johns Hopkins University	Bob is an adolescent health specialist and the emeritus William H. Gates, Sr. Professor Bloomberg School of Public Health and the Director, Johns Hopkins Urban Health Institute. He directs the Global Early Adolescent Health Study, an international study with the goal of understanding the factors in early adolescence that predispose young people to subsequent sexual health risks and promote healthy sexuality. Bob was not able to attend the workshop but was a co-convenor.
Marc H. Bornstein National Institute of Child Health and Human Development	Marc is Senior Investigator, Head of Child and Family Research, and Head of the Fetal-Maternal Medicine, Imaging, and Behavioral Determinants of Development Affinity Group at the <i>Eunice Kennedy Shriver</i> National Institute of Child Health and Human Development. Marc is President of the Society for Research in Child Development.
Jo Boyden, University of Oxford	Jo is an anthropologist and Professor of International Development and Director of the Young Lives study of childhood poverty at Oxford's Department of International Development. Jo's research has centred on children's education and work and the association with aspirations and social mobility, as well as young people's experiences of and responses to poverty, armed conflict and forced migration, specifically the wellbeing and development outcomes of risk exposure and the factors that contribute to vulnerability and resilience.
Gina Crivello, University of Oxford	Gina is an anthropologist and Senior Research Officer at Young Lives. Leading the theme on Gender, Adolescence and Youth, her current research explores the dynamics of gender inequality in the second decade of life and in transitions to adulthood. Gina leads on qualitative research within Young Lives, and on developing methods and ethical approaches for engaging multiple generations in policy-relevant social research. Gina's research interests include aspirations; migration and mobility; paid and unpaid work; ethics of care; youth transitions; change and continuity in intergenerational relations; and methods and ethics in qualitative longitudinal research.
Marta Favara, University of Oxford	Marta is an economist and Senior Research Officer in Young Lives. Before joining Young Lives, she worked as an economist at the World Bank (Young Professionals Programme) in the Poverty, Inequality and Gender Unit for the Latin America and Caribbean Region and in the Education Unit for the Africa Region. She

	worked in several projects, leading policy relevant research, policy and survey design and impact evaluations.
Justin Jager, Arizona State University	Justin is a developmental psychologist and Assistant Professor within the T. Denny Sanford School of Social and Family Dynamics at Arizona State University. His research pays particular attention to contextual transitions associated with adolescence and young adulthood and their impact on substance use, mental health, and well-being.
Pamela Kanellis Canadian Institute for Advanced Research	Pamela Kanellis is Senior Director, Research & Global Academy at the Canadian Institute for Advanced Research (CIFAR).
Jennifer E. Lansford Duke University	Jennifer is a developmental psychologist and Research Professor in the Sanford School of Public Policy at Duke University. Her research focuses on the development of aggression and other behaviour problems in youth, with an emphasis on how family and peer contexts contribute to or protect against these outcomes.
Jenny Parkes University College London	Jenny is a Reader in Education at UCL's Institute of Education, whose teaching and research focuses on gender, education and international development. Her research explores a range of topics linked to young people and violence, using psycho-social and participatory approaches to explore how young people engage with and resist gender violence and inequality in both rural settings and in urban contexts with high levels of gang violence. She has also been interested in developing innovative research collaborations with policy actors and NGOs on school-related gender-based violence.
Debra J. Pepler York University	Debra is Distinguished Research Professor in the Faculty of Health - Department of Psychology. She is a psychologist with a long-standing interest in bullying, aggression and other forms of violence, especially among marginalized and alienated young people. Together with Dr Wendy Craig, she leads the collaborative and interdisciplinary national network PREVNet – Promoting Relationships and Eliminating Violence Network.
Godfrey St. Bernard, The University of the West Indies	Godfrey is a social demographer/statistician and a Senior Fellow at the Sir Arthur Lewis Institute of Social and Economic Studies, The University of the West Indies, St. Augustine, Trinidad and Tobago. His current research interests focus upon youth and development, Caribbean population policy and the measurement of social phenomena.
Kate C. Tilleczek, University of Prince Edward Island	Kate Tilleczek is the Canada Research Chair (Tier 1) in Young Lives in Global and Local Contexts. She is the founder and Scientific Director of the Young Lives Research Laboratory and currently leading a number of youth-based projects. Her work is currently funded by Social Sciences and Humanities Research Council of Canada (SSHRC), Global Affairs Canada, Canadian Institutes of Health Research (CIHR), Public Health Agency of Canada (PHAC) and Indigenous and Northern Affairs Canada (INAC). Kate is a sociologist of children and youth and has been studying and teaching the social contexts and experiences of young people for 20 years. Her qualitative research is focused upon education, well-being and the influences of inequality and technology on young lives. Kate is especially pleased to be the Co-Lead of the Wekimun School Project in southern Chile and to work with and for Indigenous youth and their communities.
Hemlata Verma	Hemlata is a technical specialist at the International Center for Research on Women in Delhi. With a background in journalism and social work, Hemlata has experience in

International Centre	both qualitative and quantitative research methods for evaluating the impact of
for Research on	interventions to support adolescent girls and boys in India.
Women	
Loi M. Vu	Vu Manh Loi is a demographer and sociologist and Associate Professor and Senior
Vietnam Academy	Researcher at the Institute of Sociology, Vietnam Academy of Social Sciences. Loi's
of Social Sciences	research areas include population and health, adolescent health, reproductive health,
	family and gender, community development, and ethnic minorities.
Frances Winter	Frances is Policy Officer for Gender and Youth at Young Lives. She has worked on
University of Oxford	gender, equality and children's rights internationally and in the UK for more than
	twenty years.

Appendix 2: Workshop agenda

During Day One, participants will share expertise and define the scope of the challenge that changing social, economic and political contexts in LMICs present for adolescents, and for measuring adolescent development and well-being.			
9.30	Welcome and objectives Building a research agenda for adolescent well-being and development: implementing the Global Goals in a changing world	Jo Boyden, Director, Young Lives	
9.45	Introduction to the Canadian Institute for Advanced Research (CIFAR) and its programme of Research Workshops.	Pamela Kanellis, Senior Director of Research, CIFAR	
10.00	Through a series of four short talks (15 minutes each plus 10 minutes discussion), the four co-convenors will kick off the discussions with a reflection on their own research findings and the challenges for measuring adolescent development and well-being in LMICs.	Chair: Pamela Kanellis	
	'Gender and the city: Gender, health, and early adolescence in an urbanising world'.	Robert Wm. Blum	
	Some lessons learned from longitudinal and cross-cultural (including LMIC) approaches to adolescent concerns.	Marc H. Bornstein	
	Adolescents' aspirations, education and poverty.	Jo Boyden	
	'Digital media and young lives over time and place: How does the Digital Age matter for youth development and well-being?'	Kate C. Tilleczek	
11.15	Short break		
11.30	Interdisciplinary dialogue. Why are we here and who are we? Disciplinary perspectives on measuring adolescent well-being and development. Group discussions: two groups – with tea, coffee and biscuits	Each group has chair/rapporteur.	
	Participants in each group to discuss how development and well-being are thought of in the disciplines and different contexts in which they work, set out the domains of adolescent well-being and development of particular interest to their discipline, recent achievements and challenges in measurement of adolescent well-being.		
12.45	Light lunch		
14.00	Feedback from group discussions What do different disciplinary perspectives bring to bear in researching adolescent development and well-being?	Chair: Bob Blum	

	Plenary discussion	
14.45	Short break	
15.00	Reflections from UNICEF: what dimensions and measures of adolescent development and well-being would help to inform policy and programming work	
	Prerna Banati, Chief of Programmes and Planning at the UNICEF Office of Research – Innocenti (by video input)	
15.15	Experience from different disciplines. Applying instruments in specific context – learning, opportunities and challenges for measurement of adolescent well-being	Chairs: Kate and Marc
	Vu Manh Loi: Adolescence and the internet, a view from Vietnam Debra Pepler: Adolescent relationships and digital lives in Canada Others tbc	
16.30	2 Breakout groups – What's the challenge?	
	In the context of rapid change in LMICs and given the ambition of the UN Global Goals, what aspects of adolescent development and well-being do we need to get better at measuring, and what are the challenges and opportunities involved in doing so.	
17.30	Close	
	sday 13 th December: New Measures of adolescent development and well-being – g options	
09.30	Plenary	
	Kate and Marc: Clarifying the challenge for measurement of adolescent development and well-being: what are the real world problems we want to address?	
10.30	Plenary Discussions	Jo to chair
	Expert inputs: measures and tools for adolescent development and well-being	
	Expert inputs. Incusures and tools for adolescent development and wen-being	
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10.45	In each of these sessions we will start off with a presentation and explore - what is it we want to measure? Why are these difficult to measure? What are the best measures available? What are the issues in applying them to LMIC country contexts? What impact could contextual changes bring in adolescents' experiences, and how to measure them? These talks combine presentation, discussion and debate about future avenues to pursue.	

12.45	Light lunch	
44.00	Control of the contro	
14.00	Social connections and relationships – Jennifer E. Lansford	
15.15	Short break	
15.30	Issue wall – Open discussion of issues arising and gaps	Chair Jenny Parkes
	Participants – identify challenges, questions and issues they want to address	
	around each topic. Key academic and policy stakeholders in relation to each topic.	
	Plus – opportunities to identify additional areas of adolescent development and	
	measures to be explored.	
17.00	Close	
Thursda	y 14 th December: Adolescents and change: Working sessions - Developing a	
future i	esearch agenda	
0.00		01 : 5
9.30	Recap and getting to a future research agenda	Chair: Frances Winter
10.00	Bringing disciplines and frameworks together: conceptual, methodological and ethical reflections from the workshop	Chair: Kate
	How do we embed interdisciplinary working into conceptual framing and	
	methodological work in this new agenda.	
11.15	Walk and talk	
	New groups of three participants walk round LMH gardens reflecting on	
	proposed ways forward: suggestions, comments and challenge on a future	
	research agenda. Weather permitting. Followed by feedback.	
12.30	Light lunch	
13.30	Research agenda: drafting in working groups.	
	Conceptual framework; methodology; practical and logistical issues.	
15.30	Wrap up	Jo and Pamela
16.00	Close	

Appendix 3: Young Lives News Item

Adolescence – the period between 10 and 19 years old - is increasingly recognised as a sensitive phase for human development and a time of change, creativity and also risk. Nevertheless, adolescence remains a poorly understood stage in the life course. Nearly 9 in 10 of the world's 1.2 billion adolescents live in low- and middle-income countries, often taking on multiple responsibilities in the face of poverty and jeopardy. Yet most available evidence about this life phase comes from high-income countries. A workshop hosted by Young Lives in Oxford from December 12th to 14th with support from the Canadian Institute for Advanced Research brought together researchers from different disciplines and countries to discuss what can be done to ensure that the urgent task of supporting adolescents to thrive is underpinned by robust evidence and research instruments which are fit for purpose.

Context matters. In a new article, workshop co-convenor Marc Bornstein and his co-authors explore evidence from eleven societies. For adolescents, described by the Lancet Commission report Our Future as 'developmentally primed for engagement beyond their families', the influence of their wider society and economies is profound. Duke University's Jennifer Lansford explained how the Parenting Across Cultures project explores biological, familial, and cultural processes in the development of self-regulation and risk-taking across adolescence in nine very different countries: using instruments which offer comparability whilst adapting data collection in a way that is sensitive to local contexts. Hemlata Verma, from the International Center for Research on Women, focused on measures of patriarchal gender attitudes and self-efficacy in describing the challenges she faced as part of a team with Alison Andrew from the Institute for Fiscal Studies and others in adapting instruments for an evaluation of the PAnKH Adolescent Girls Intervention in a rural area of Rajasthan. She highlighted how the area is characterised by high levels of gender and caste-based inequality and non-school going girls were unfamiliar with some of the key concepts in widely used measures of psychosocial wellbeing.

Contexts change. Arizona State University's Justin Jager has tracked how both big societal changes and changes in adolescents' families and circumstances combine to affect adolescent wellbeing and development - for example, in changing patterns of young adult binge drinking — and argued for historical transformation to be central to ways of thinking about and researching adolescence. There is a growing policy focus on adolescent mental health in poverty contexts, but the vast majority of published academic work focuses on mental health in high income countries. Rebecca Pearson from the University of Bristol, who has explored the link between mothers' mental health and children's outcomes, and whose work spans the UK, South Africa and Brazil, led a discussion on the challenges of adapting instruments in low-income countries, highlighting the value of repeated measurement, finding the right language, and taking account of resources, time and acceptability for different tools, including passive and technology-based methods.

Adolescence itself is a period of rapid change and multiple transitions. Vu Manh Loi from Vietnam's Academy of Social Sciences described how differently girls and boys, and 10-12 and 13-14 year-olds on the outskirts of Hanoi responded to different questions and instruments in the Global Early Adolescent Study, with the younger adolescents enjoying vignettes and role-playing and sometimes finding it difficult to answer questions about other people's perspectives, about hypothetical situations, or about aspects of puberty that they had not experienced directly. Marta Favara and Gina Crivello described their quantitative and qualitative perspectives on Ethiopian adolescents' changing aspirations and trajectories as part of a broader presentation about the opportunities and tensions in interdisciplinary research in Young Lives.

Prerna Banati, from UNICEF's Office of Research – Innocenti – called for greater attention to measures of adolescents' participation, as well as use of longitudinal data to understand the early predictors of adolescent outcomes. Many researchers are putting participation at the heart of their research with adolescents, from co-convenor Kate Tilleczek at the University of Prince Edward Island who is exploring adolescents' digital lives through a <u>Digital Storytelling project</u>, to Debra Pepler from York University whose community-based and action-oriented research combines quantitative, qualitative and observational methods, involving young people and their families in identifying positive strategies to tacking <u>bullying</u>, addiction and cyberbullying. Jenny Parkes from University College London drew attention to the need for policy research to understand why progressive laws and policies do not always translate into tangible change for adolescents, as in the case of <u>gender violence in schools</u>. Godfrey St Bernard from the University of the West Indies focused on the role of the Commonwealth's <u>Youth Development Index</u> in bringing together different datasets to make a positive change in the lives of adolescents and young people.

So too, Jo Boyden, Director of Young Lives, argued that research on adolescence has been shaped by dominant assumptions arising out of disciplines such as developmental psychology and the medical sciences, and called for a reconceptualisation of this life phase that **aligns more closely with the lived realities** of young people in low and middle-income countries today.