

INVESTING WHEN IT COUNTS

Reviewing the evidence
and charting a course
of research and action for
very young adolescents



**POPULATION
COUNCIL**

Ideas. Evidence. Impact.

INVESTING WHEN IT COUNTS

Reviewing the evidence
and charting a course
of research and action for
very young adolescents

KATHARINE MCCARTHY
MARTHA BRADY
KELLY HALLMAN



The Population Council confronts critical health and development issues—from stopping the spread of HIV to improving reproductive health and ensuring that young people lead full and productive lives. Through biomedical, social science, and public health research in 50 countries, we work with our partners to deliver solutions that lead to more effective policies, programs, and technologies that improve lives around the world. Established in 1952 and headquartered in New York, the Council is a nongovernmental, nonprofit organization governed by an international board of trustees.

Population Council
One Dag Hammarskjold Plaza
New York, NY 10017

popcouncil.org

This work was made possible with the generous support of the John D. and Catherine T. MacArthur Foundation.

Suggested citation: McCarthy, Katharine, Martha Brady, and Kelly Hallman. 2016. "Investing when it counts: Reviewing the evidence and charting a course of research and action for very young adolescents." New York: Population Council.

Photo credits—cover: © Gabriel Amadeus Cooney; page 1: Sam Loewenberg; page 9: Nadia Zibani; page 17: Chris Stowers/Panos; page 33: Petrut Calinescu/Panos; page 53: Josh Estey/CARE; page 63: Andrea Lynch/IWHC

ISBN: 978-0-87834-134-5
Printed in the United States of America.

© 2016 The Population Council, Inc.

Contents

	<i>page</i>		<i>page</i>
Figures, boxes, and tables	iv	4 Making progress: Improving programs for VYAs	33
Abbreviations	iv	4.1 Identifying broad areas for VYA programs	34
Foreword	v	4.2 Programs for which we have substantial evidence	36
Acknowledgments	vi	4.3 Programs that hold promise, but more evidence is needed	43
Preface	vii	5 Research with VYAs: Collecting information to inform programs and policy	53
1 Introduction	1	5.1 Studies that include available data on VYAs	54
1.1 Investing in very young adolescent girls and boys: Why it matters	2	5.2 Ethical considerations in primary research with VYAs	54
1.2 Social, biological, and developmental changes in early adolescence	3	5.3 Research methods and tools	58
2 The health and well-being of VYAs: Overview and current status	9	6 Conclusion	63
2.1 Disease and disability: How do young adolescent girls and boys fare?	10	6.1 Programmatic interventions to be tested	64
2.2 Understanding the health-related behaviors of VYAs to stem the spread of noncommunicable diseases	10	6.2 Looking toward the future	66
2.3 Health outcomes for VYAs: The diverging world of girls and boys	11	Afterword: The time has come	67
3 Social and contextual influences on health: Evidence and insights	17	References	69
3.1 Critical domains of young adolescent girls' and boys' lives	18		
3.2 Gender differences in transitions from primary to secondary school	21		
3.3 Parental survival and residence	22		
3.4 The role of gender norms in early adolescence	23		
3.5 Violence against VYAs: Boys and girls both affected, but prevalence varies by gender	25		
3.6 Schooling and violence	28		
3.7 Programs responding to VYAs in acute and specialized circumstances	28		

Figures, boxes, and tables

FIGURES	<i>page</i>	TABLES	<i>page</i>
1 Adolescence shapes health over the life course	2	1 Developmental stages of very young adolescents, by age and gender	5
2 Percentage of world population aged 10–14, by country, 2012	3	2 SRH-related outcomes experienced prior to age 15 as reported by 15–19-year-old adolescent girls, by country	13
3 The stages of adolescence (PAHO classification)	4	3 Characteristics of very young adolescents based on recent DHS data, including residence, parental presence, and school attendance and achievement, by region	19
4 Early adolescence: When girls' lives go off-track	7	4 Percent of adolescents reporting any unwanted sexual experience in previous year, according to type of survey	27
5 Percentage of adolescents enrolled in school, aged 10–14 and 15–19, four selected countries, 2004–2009	22	5 Illustrative “Wellness Check” components for VYAs should be tailored for girls and for boys	44
6 Ecological framework along the life course	35	6 Risk and protective factors associated with adolescent mental health outcomes	44
7 Percentage of females aged 20–24 who were married by age 15, Ethiopia, 2005	59		
8 Percentage of females aged 10–14 not in school and not living with either parent, Guatemala, 2002/2006	59		
BOXES			
1 Major survey programs featuring data from respondents older than 14 that include information about VYAs	55		
2 Major survey programs with a primary focus on the VYA age group	56		
3 Should the research include VYAs?	57		
4 Face-to-face or computer-assisted interview?	60		

Abbreviations

ACASI	Audio Computer-Assisted Self-Interview	LMIC	Low- and Middle-Income Country
AIDS	Acquired Immune Deficiency Syndrome	LSE	Life Skills Education
CDC	Centers for Disease Control and Prevention	MICS	Multiple Indicator Cluster Survey
CSE	Comprehensive Sexuality Education	NCD	Noncommunicable Disease
DALY	Disability-adjusted Life Year	SRH	Sexual and Reproductive Health
DHS	Demographic and Health Survey	STI	Sexually Transmitted Infection
GSHS	Global School-Based Health Survey	UNFPA	United Nations Population Fund
HIC	High Income Country	UNICEF	United Nations International Children's Emergency Fund
HIV	Human Immunodeficiency Virus	VACS	Violence Against Children Survey
ICT	Information Communication Technology	VYA	Very Young Adolescent
ISPCAN	International Society for Prevention of Child Abuse and Neglect		

Foreword

The years between ages 10 and 14 are a pivotal period in the transition from childhood to adolescence. During these years of rapid development, important health and social knowledge is gained, behaviors are established, beliefs and attitudes are shaped, and the foundation is laid for adulthood.

In the 20 or so years since the Population Council began building a body of evidence on the lives of adolescents, it has become evident that “adolescents” are not a homogeneous group. Rather, it is important to look at the various ways in which girls and boys differ by whether they are married, where they live, what experiences they have, and many other characteristics. Age and gender are particularly distinguishing characteristics, as this report—which focuses on the earliest part of the second decade of life—makes clear. There are many ways in which 10–14-year-olds differ from older adolescents and profound differences in the experience of boys and girls; taking these differences into account when thinking about interventions is critical for improving their impact.

Given that very young adolescents are generally healthy, they have received little program attention, but as we have learned more about cognitive and social development, the importance of these years has become increasingly apparent. Program interventions aimed at

shaping the critical transitions that occur in early adolescence have the potential to have a positive and lasting effect, but more systematic attention to designing and assessing programs that account for the diversity of this group is needed.

The Population Council has been conducting research, and designing and evaluating programs for adolescents for decades. Since the first *Investing When It Counts* report was published 10 years ago, our work on and with very young adolescents has grown as has the work of many other organizations. There has been greater appreciation of the needs and opportunities of this age group as the availability of more and better data has made their situation clearer. This report presents the latest data and evidence on the lives of adolescents during this key period of transition to adulthood. We are committed to continuing our efforts to understand the lives of young adolescents so that investments made in them will be as effective as possible.

ANN K. BLANC, PHD

VICE PRESIDENT AND DIRECTOR
POVERTY, GENDER, AND YOUTH PROGRAM
POPULATION COUNCIL

Acknowledgments

This report benefited from the insights and contributions of many individuals. We are grateful to Michelle Chau who developed codes and conducted the initial analyses of DHS data. We also sincerely thank the many people who provided input into specific sections, including: Vira David for her work on spatial mapping, Stephanie Psaki for her review and insights related to the education section, Rebecka Lundgren for her review and input on the programming section, and Angel

del Valle who provided advice on participatory research methods. We thank Joyce Altman and Mike Vosika for their help in editing and designing the report. Finally, we thank our thoughtful and careful reviewers who made important contributions to the overall shape and texture of this report. They include: Ann Blanc, Judith Bruce, Sarah Engebretsen, Sara Peracca, and Miriam Temin.

Preface

In 2006, the Population Council in conjunction with UNFPA published *Investing When It Counts: Generating the Evidence Base for Policies and Programmes for Very Young Adolescents*, which represented the first major effort to synthesize information on 10–14-year-old adolescent girls and boys using existing datasets, research, and program experience (Chong, Hallman, and Brady 2006). Since then, we have witnessed a burgeoning interest in the very young adolescent (VYA) population and an ever-expanding array of programs aimed at addressing their social, health, and development needs. The current report builds upon the momentum generated from recent research and program efforts, and from the greater data available in the past decade.

The report is intended to be helpful to anyone who plans, manages, implements, monitors, evaluates, or funds research or programs that involve young adolescent girls and boys. Our focus is on outcomes and influencers of health and well-being. While the report presents some data for VYAs globally, we focus primarily on findings from low- and middle-income countries (LMICs), and wherever possible, disaggregated by sex.

The report is organized into five main sections. In the “Introduction,” we highlight the rationale for intervening with VYAs, given the numerous, rapid, and potentially irremediable transitions that take place in this period of life, along with the emergence of gender differences from this stage onward. We summarize what we know about young adolescent girls and

boys, and highlight the ways in which their life trajectories begin to take shape and diverge. We focus on key health outcomes and the social and contextual factors that underpin them. In “The Health and Well-being of VYAs,” we present global information on disease and disability among young adolescents, and discuss health outcomes of particular relevance during adolescence.

In “Social and Contextual Influences on Health,” we discuss how key influences in adolescents’ immediate environment shape their overall development, well-being, and health outcomes. This section draws upon a wide variety of sources, including recent reviews on the health status of adolescents published in *The Lancet* 2012, UNFPA’s *State of the World’s Population* 2014, and UNICEF’s *Progress for Children* 2012, among others. We also present an updated analysis of Demographic and Health Survey (DHS) data, and highlight trends over the past decade in key influences and outcomes of particular relevance for the 10–14-year-old age period. Additionally, we draw upon ideas and information from Population Council publications and resources, shown in the box titled “Population Council Resources on Adolescence.”

In “Making Progress: Improving Programs for VYAs,” we review the evidence related to improving key areas of adolescent health and well-being and describe programs or interventions intended to address them.

POPULATION COUNCIL RESOURCES ON ADOLESCENCE

PROGRAM AND RESEARCH TOOLKITS



Designing for Scale: Video Toolkit on Building Evidence-Based and Targeted Adolescent Girls Programs

designingforscale.popcouncil.org



It's All One Curriculum: Guidelines and Activities for a Unified Approach to Sexuality, Gender, HIV, and Human Rights Education

popcouncil.org/itsallone



Building Assets Toolkit: Developing Positive Benchmarks for Adolescent Girls

popcouncil.org/assettoolkit



From Research, to Program Design, to Implementation: Programming for Rural Girls in Ethiopia

popcouncil.org/ethiopiagirllsprogram



Girl-Centered Program Design: A Toolkit to Develop, Strengthen, and Expand Adolescent Girls Programs

popcouncil.org/girlcenteredprogram

RESEARCH PUBLICATIONS



Brief Series: Promoting Healthy, Safe, and Productive Transitions to Adulthood

popcouncil.org/transitionbriefs



Growing Up Global: The Changing Transitions to Adulthood in Developing Countries

popcouncil.org/growingupglobal



The Uncharted Passage: Girls' Adolescence in the Developing World

popcouncil.org/unchartedpassage



A Review of Control-Comparison Interventions on Girls and Health in Low- & Middle-Income Countries

popcouncil.org/interventiongirls



The Adolescent Experience In-depth—Using Data to Identify and Reach the Most Vulnerable Young People (Data Guides)

popcouncil.org/adolgirlsdataguides



Book Chapter: "The new population challenge" (Judith Bruce and John Bongaarts)

in *A Pivotal Moment: Population, Justice, and the Environmental Challenge*

In “Research with VYAs: Collecting Information to Inform Programs and Policy,” we focus on research approaches, existing data sources, and data tools that can be used to expand the knowledge base on young adolescents. We also address some of the sensitivities and ethical challenges of conducting research with girls and boys in this age group. Here we provide an expanded list of data-collection approaches and methods that include newer techniques such as mapping, program-coverage exercises, and other practical tools. This section also references key sources of data and resource tools related to conducting research with VYAs. The “Conclusion” provides a summary of key recommendations to improve program learning and research.

Throughout the report, we present a broad array of approaches, but we recognize that research methodologies must be culture-, age-, and gender-specific. Researchers must also work closely with community members in planning and executing research, disseminating results, and developing solutions. Ideally any investigation of this age group will disaggregate by gender and adolescent developmental stage within the entire five-year age range that VYAs cover (Section 1.2).

We apply a “gender lens” by describing differences in social influences and health outcomes for boys and girls, wherever possible. We believe this perspective is important, as this life cycle phase is a time when girls’ and boys’ lives begin to differ dramatically in terms of schooling, spatial mobility, domestic responsibilities and, in some countries, marital status. It is also a time when gender disparities in access to economic and institutional resources and opportunities begin to emerge. Moreover, in most settings, girls’ status is inferior to that of boys, expressed across almost all domains; girls have less power and face disproportionate risks that are rooted in gender inequality. Much of this begins to take shape

Objectives of this report

- Call attention to the distinctive needs, challenges, and emerging risks for young adolescent girls and boys
- Illustrate how events during the VYA period shape life-course trajectories
- Illuminate the health and social dimensions of the lives of VYAs, including updated DHS statistics for 71 countries and subnational-level data on select topics
- Summarize efforts to improve outcomes, disaggregated by gender and age
- Identify evidence gaps and areas for investment
- Describe data sources and approaches for gathering information on VYAs; provide practical tools and resources
- Offer recommendations for future research and programming

and solidify at this life stage. Attention to gender at this life stage can therefore improve where and how research efforts and programmatic interventions are targeted. Although we sought to include both boys and girls in our review, we place a greater emphasis on girls given that adverse outcomes, particularly those related to sexual and reproductive health, are often more profound and can be irremediable and life-changing for girls.

Introduction

1

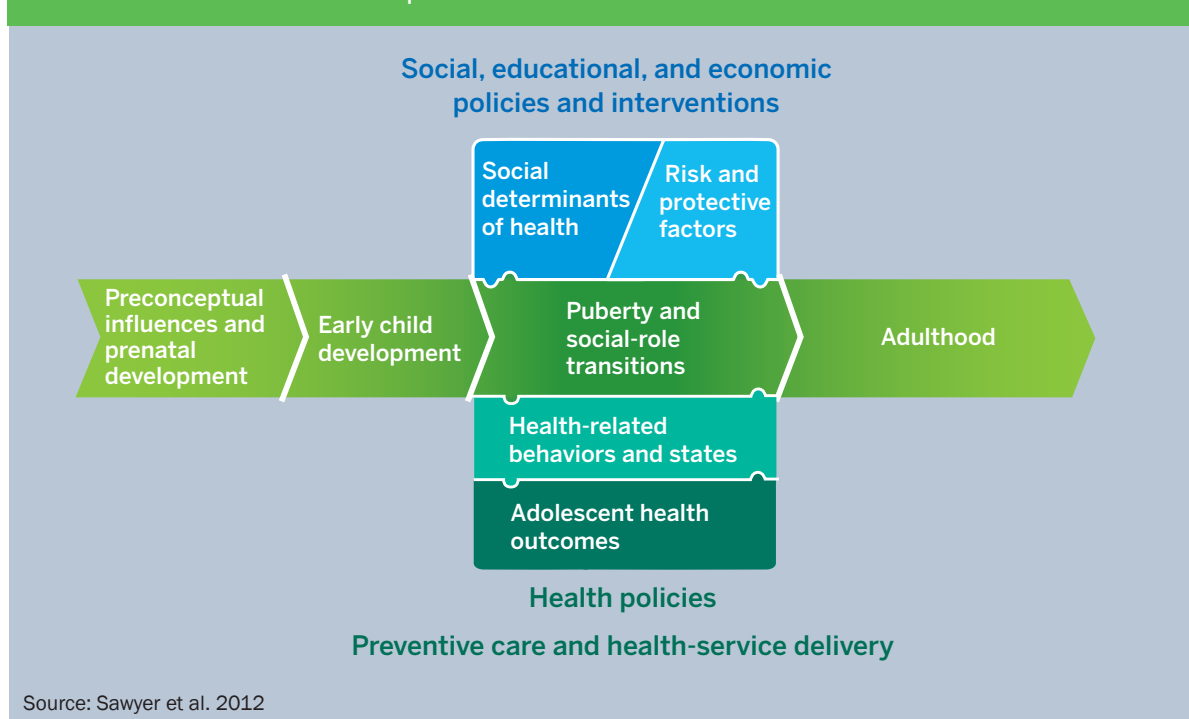


1.1 Investing in very young adolescent girls and boys: Why it matters

Focusing attention on young adolescents is a smart investment, as this is the period where lifelong health behaviors are formed, when pathways of opportunity or risk emerge, and when the future life course begins to take shape. The developmental and social changes associated with early adolescence can have a lasting influence on the future trajectories of young people (Figure 1). Although the period of adolescence spans 10 years, early or young adolescence (the life phase between ages 10 and 14) is a time of particularly dynamic and rapid transitions. Gathering evidence about the timing, nature, and consequences of the key transitions that young adolescents undergo is critical for the development of appropriate policies and programs for this population. Strategic timing of interventions allows for positive outcomes before the architecture of adolescents' lives is set.

As of 2015, there were an estimated 1.2 billion adolescents aged 10–19 years in the world, representing approximately 16% of the global population (UNDESA 2013). About one-half of the world's adolescents (0.6 billion) are in early adolescence; they are also referred to as Very Young Adolescents (VYAs) (UNDESA 2013). The vast majority of the world's adolescents, approximately 90%, reside in low- and middle-income countries (LMICs), where VYAs make up an even higher percentage of the population and the barriers to achieving positive health and well-being are often complex. The VYA segment of the total population is highest in sub-Saharan African countries where, unlike other world regions, the size of the youth population is projected to continue to grow over the next several decades (Figure 2) (UN 2015). This means that countries already struggling to meet the educational and health needs of VYAs will require increased resources in order to support young people in achieving good health and well-being in the coming years.

FIGURE 1 Adolescence shapes health over the life course



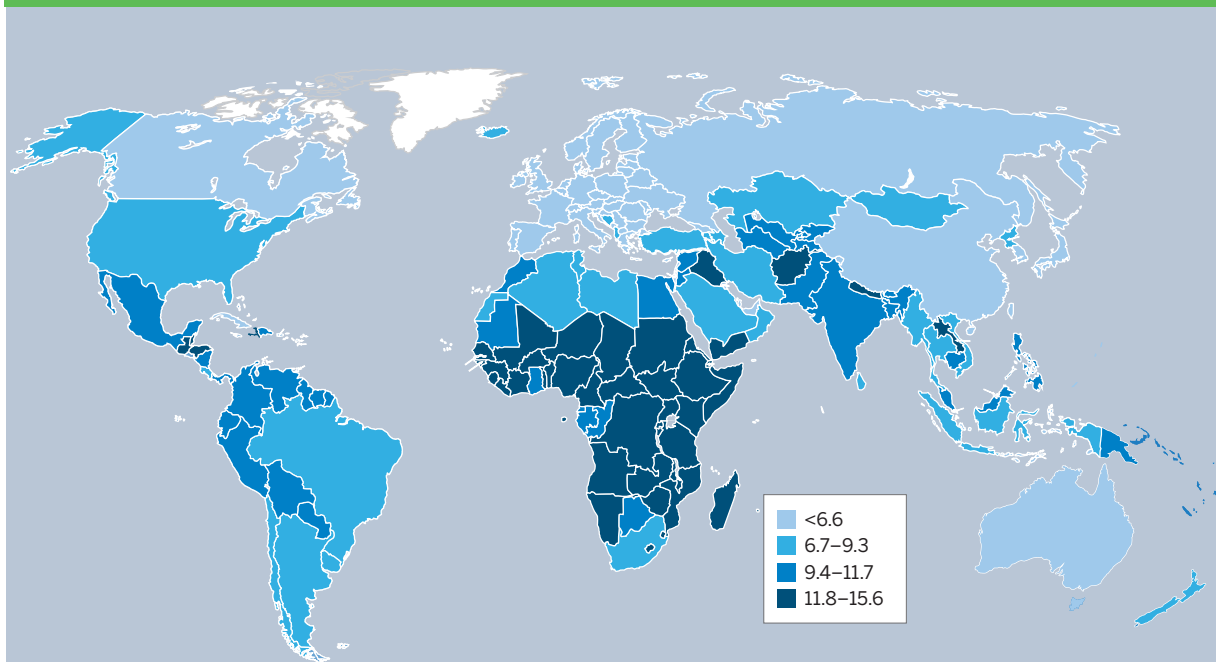
VYAs have received considerably less programmatic and policy attention than younger children and older adolescents. This lack of attention has reflected the fact that early adolescence is typically a relatively healthy period of life. However, as described in this section, early adolescence is a pivotal moment during which exposure to negative influences and the loss of rights can cause lives to go off-track, although the health effects of such harmful exposures may not manifest until later in life. There is growing recognition of the critical need to safeguard the health and rights of girls and boys during this period in order to promote a healthy transition into adulthood (Sawyer et al. 2012; UNICEF 2012c). In the sections that follow, we describe the dynamic transitions that define early adolescence and the opportunities and risks these changes offer for influencing both current and future health.

The vast majority of the world's adolescents reside in low- and middle-income countries.

1.2 Social, biological, and developmental changes in early adolescence

Between ages 10 and 14, children undergo tremendous physical, emotional, social, and cognitive changes, as well as socialization into prevailing gender norms. Throughout the world, young people experience these processes in unique ways and at different times, determined by both individual and contextual-level factors.

FIGURE 2 Percentage of world population aged 10–14, by country, 2012



Note: Legend categories reflect quartiles of the overall distribution.
Source: UNDESA (2013). Analysis by Katharine McCarthy, Population Council.

A distinguishing universal feature of early adolescence is the rapid and significant changes brought about by puberty, which affect the physical, mental, and emotional health of young people.

Developmental stages of the young adolescent girl and boy

Most young adolescents experience the onset of puberty in early adolescence—with girls doing so earlier than boys. The onset of puberty marks an abrupt life change, particularly for girls (Breinbauer and Maddaleno 2005; Patton et al. 2012; Sawyer et al. 2012). Some young adolescents will also experience their first sexual encounter in early adolescence. Girls (and some boys) are especially vulnerable to sexual coercion during early adolescence (Jejeebhoy, Shah, and Thapa 2005; UNICEF 2014c). Other transitions that in some contexts accompany puberty include leaving school; entering the labor force; child marriage; and becoming a

caretaker, parent, or worker. In turn, in many countries these actions may lead adolescents to be exposed to HIV, material deprivation, and political and social conflict, which erodes traditional safety nets and increases vulnerability.

A distinguishing universal feature of early adolescence is the rapid and significant changes brought about by puberty, which affect the physical, mental, and emotional health of young people (Sawyer et al. 2012; Igras et al. 2014). In fact, many program implementers and researchers take a life-course and ecological perspective that examines multiple effects and interrelatedness of social elements on individuals as they progress through this life phase (Blum et al. 2012; Blum, Astone, and Decker 2013). (See Section 4.)

As a result, most scientists and practitioners view these years as a series of stages rather than one homogeneous stage. A holistic model of adolescent development that integrates disparate developmental theories and incorporates research on the impact of the environment, reproductive maturation, and expanded cognitive and information processing was proposed by the Pan American Health Organization (PAHO). (See PAHO Classification of the stages of adolescence, Figure 3.)

FIGURE 3 The stages of adolescence (PAHO classification)

Age	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
GIRLS	PREADOLESCENCE			EARLY ADOLESCENCE		MIDDLE ADOLESCENCE		LATE ADOLESCENCE		YOUTH			YOUNG ADULTHOOD			
BOYS		PREADOLESCENCE			EARLY ADOLESCENCE		MIDDLE ADOLESCENCE		LATE ADOLESC.	YOUTH			YOUNG ADULTHOOD			

Domains of change that occur between ages 10 and 14, differentiated by sex, include:



- **PHYSICAL DEVELOPMENT**
- **BIOLOGICAL CHANGES** (onset of puberty)
- **COGNITIVE AND EMOTIONAL DEVELOPMENT**
- **CHANGES IN SOCIAL ROLES** (among the poorest, a dramatic shift to adult responsibilities)

Source: Adapted from Breinbauer and Maddaleno (2005).

In this classification system, starting with preadolescence and ending with young adulthood, changes are grouped into five developmental domains (Table 1): body, brain, sexual, emotional, and social. While others define the domains somewhat differently or collapse them into physical, cognitive, and socio-emotional (Sawyer et al. 2012), the fundamental elements remain the same. Because this report focuses on the very young adolescent, only those changes pertaining to preadolescence

and early adolescence are included here. We chose this particular classification because it breaks down the domains by age and gender, which are particularly important distinctions during adolescence. The age ranges given are averages at which developmental changes occur. There are exceptions to these boundaries, with precocious adolescents at one extreme and late-maturing adolescents at the other. The age of pubertal onset is believed to have fallen in recent decades, although the data are

TABLE 1 Developmental stages of very young adolescents, by age and gender

DEVELOPMENTAL DOMAINS	PREADOLESCENCE (ages 9–12 in girls, ages 10–13 in boys)	EARLY ADOLESCENCE (ages 12–14 in girls, ages 13–15 in boys)
BODY	Growth spurt starts; body gradually acquires secondary sex characteristics. Increase in body fat and weight. A gradual increase in sensation-seeking.	Girls onset of menstruation (mean age=12.4 years), and boys ejaculation (mean age=13.4 years). Significant growth spurt and a marked increase in sensation-seeking, particularly among boys.
BRAIN	A gradual shift occurs from ego-centric to socio-centric thought. More concrete logical thinking. Increased craving for new information, but language is still concrete. Little development of prefrontal lobe and executive functions.	More abstract thinking. There is still little development of prefrontal lobe and executive functions (e.g., decision-making, judgment, and problem-solving), particularly among boys. Deepening of moral thinking.
SEXUAL	Boys and girls explore more differentiated masculine and feminine roles. For girls, androgyny is a viable alternative to exclusive femininity, while for boys exclusive masculinity is socially expected.	Sexual arousal increases, as does need for masturbation. Other autoerotic behaviors, such as sexual fantasies and wet dreams occur. Gender identity is developed in the first years of life, but becomes increasingly challenged; development of sexual orientation.
EMOTIONAL	A gradual increase in self-consciousness, with fluctuations in self-image and feelings of embarrassment. Emerging need for greater privacy, individuation, and more emotional autonomy from parents. Growing capacity to differentiate shades and gradations among feelings.	High level of self-consciousness and fluctuations in self-image. Level of stress increases, particularly among girls. Need for more emotional autonomy from parents; de-idealization of one's parents, defining of adolescent's own opinions. Increase in emotional dependency on one's friends. Intimacy, loyalty, and shared values and attitudes assume a greater weight in friendship.
SOCIAL	The need emerges for a same-sex "best friend." Time is still spent with parents, and parental supervision is still present, but these start to decrease, accompanied by a gradual increase in conflicts between the preadolescent and parents. Susceptibility to peer pressure increases.	More time spent with social subgroups (cliques) and/or alone. Emerging interest in opposite-sex and/or "different" friends. Less time spent with parents, parental supervision decreases, and conflicts about independence increase. New social privileges are expected. Susceptibility to peer pressure reaches its peak.

Source: Adapted from Breinbauer and Maddaleno (2005).

Early adolescence is a pivotal moment during which exposure to negative influences and the loss of rights can cause lives to go off-track, although the health effects of such harmful exposures may not manifest until later in life.

more clear for girls, potentially widening the window of vulnerability (Bellis, Downing, and Ashton 2006; Herman-Giddens 2006; Downing and Bellis 2009). The rapidity with which a young person progresses through these stages depends upon numerous endogenous and environmental factors, including biological differences; cognitive abilities; educational, emotional, and life experiences; and cultural and social contexts. Drawing scientific knowledge from across the social, cognitive, and behavioral sciences, and integrating the model with fields of biology can provide a more sophisticated understanding of this life stage, which can then be brought to bear on program design for VYAs.

Brain development in adolescence

It is widely acknowledged that adolescence is a period of marked changes in brain structure and function (Blakemore 2008; Steinberg 2014), and that brain development continues throughout adolescence. The brain is the last organ in the body to fully mature, and current estimates indicate that the process is likely not complete until the late 20s or early 30s (Blakemore 2008; Giedd 2008; Dosenbach et al. 2010; Steinberg 2014). This means that during much of adolescence the brain is in a “building mode.” Neurons communicate with

each other through synapses, which are highly excitable and “plastic” during the late childhood and teenage years. Synapses grow when they are used frequently; thus practice can aid in mastering memorization, musical skills, and athletic performance—areas where young adolescents often thrive. It is this biological programming of the brain that makes it easier to learn, remember, and develop certain skills in adolescence compared with adulthood.

At the same time, it is this neural plasticity that may also be the underpinning of addiction. As is the case during learning, synapses become activated by substances causing reward-seeking circuits to become strengthened, and this in turn can lead to an addicted state. Some of the most common negative “stimuli” adolescents encounter that have been shown to modify brain development include certain drugs, nicotine, alcohol, as well as environmental factors such as stress, digital overload, and sleep deprivation (Jensen and Nutt 2015). It is noteworthy, however, that adolescents have a stronger response to reward than negative or punitive stimuli.

The frontal and prefrontal cortexes are the regions of the brain responsible for judgment, reasoning, impulse control, and empathy. The immaturity of the frontal cortex explains, in part, adolescent risk-taking behavior, however cognitive, affective, and social processing also play a key role. Social context also influences endogenous hormones in the body, how the neural system develops, and how adolescents make decisions (Crone and Dahl 2012; Blakemore and Mills 2014).

The study of adolescent brain development has made tremendous progress in a relatively short period of time. We have more information about how the brain functions than ever before, and today’s adolescents are the first generation of young people for whom this depth and breadth of information about their development is available. Making the best use

of this information to design interventions that are more responsive to the cognitive and social development of young adolescents is a worthwhile goal.

Early adolescence: A defining moment for girls

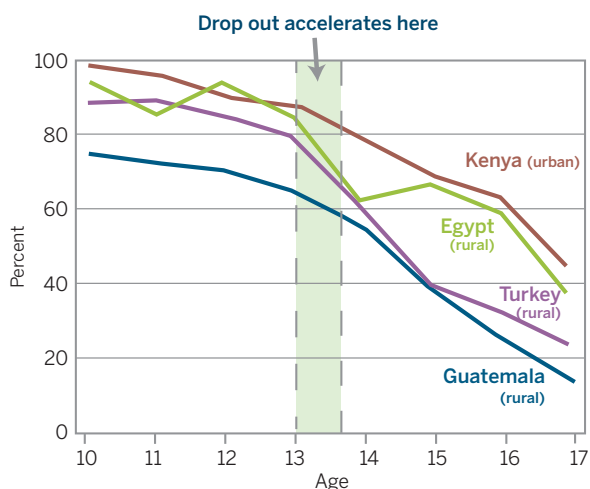
As mentioned previously, beginning with the onset of puberty, girls' trajectories can begin to diverge dramatically from boys' trajectories. If no safeguards are in place, these changes may result in the loss of rights, which may irretrievably shape a girls' future life.

In some LMICs, as evidenced in data from selected countries presented in Figure 4, there is a general pattern of girls beginning to drop out of school at a time corresponding with the onset of puberty (Panel A). A case example

of indigenous girls ages 10–19 in Guatemala further illustrates how diverging in one area (e.g., leaving school) may coincide with other negative transitions (early childbearing) (Panel B). These changes, and the social isolation often associated with these changes, may precipitate other events that negatively influence young girls' well-being and future health, such as early childbearing and acquisition of a sexually transmitted infection, including HIV (Hallman et al. 2007). Self-reported data among adolescents in Malawi supports such a chain of “negative life events.” Specifically, one study found that girls report experiencing a greater number of generally negative life events, such as leaving school, early sexual initiation, and child marriage (42% of girls experienced three or more life events) relative to boys (4%) (Mensch et al. 2011; Mensch et al. 2014).

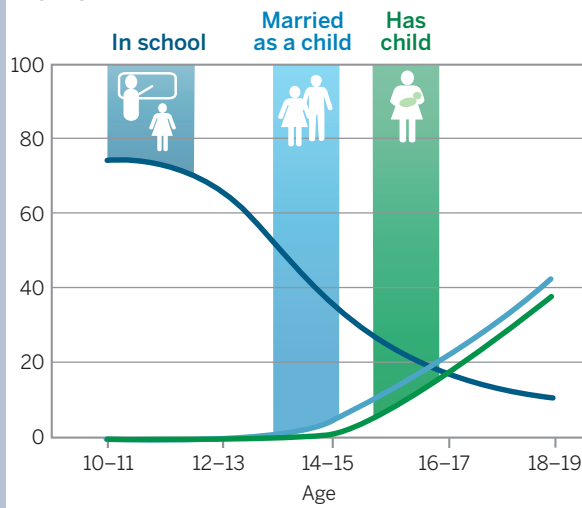
FIGURE 4 Early adolescence: When girls' lives go off-track

A. Four-country case study: Percentage of girls ages 10–17 attending school, by age



Sources: (Guatemala) Hallman et al. 2007; (Turkey 2003, Kenya 2003) Population Council Adolescent Experience In Depth Data Guides Series 2000–15; (Egypt) ERF 2006.

B. Guatemala example: School enrollment and early transition to adulthood among girls ages 10–19



Source: Hallman et al. 2007.

The health and well-being of VYAs: Overview and current status

2



2.1 Disease and disability: How do young adolescent girls and boys fare?

The most common forms of ill health during the VYA period are chronic rather than life-threatening conditions. In terms of morbidity and mortality, once girls and boys survive the first five years of life they tend to enjoy a period of relatively good health between the hazards of young childhood and the onset of adult risks and ill health. However, experiencing poor health at the time of such dynamic physical and social change can have lasting effects. We consider the epidemiological transitions taking place during early adolescence and discuss their influence on immediate and later-life health.

Global data on disease and disability

Mortality rates for 10–14 year olds are low relative to other phases of life and have continued a slight downward trend over the past several decades. While mortality rates are low, the top five causes of death among VYAs are HIV and AIDS, diarrheal diseases, road injury, lower respiratory tract infections, and drowning (WHO 2013; WHO 2014a and 2014b). Girls and boys experience similar mortality rates at this stage of life. For example, in 2012 the HIV/AIDS mortality rate was approximately equivalent in both sexes. While there is some variation among other causes of death (for example, diarrheal disease is a higher cause of mortality among girls, while road injury is higher among boys), the discrepancies are small given the relatively low disease prevalence.

Despite the many similarities in the causes of mortality among VYAs, there are large regional differences in where deaths occur: 61 out of every 100 VYA deaths occurred in sub-Saharan Africa and the Eastern Mediterranean (WHO 2013; WHO 2014b).

Nonlethal chronic conditions of poor health, such as mental health problems, are an additional and important cause of poor health, or morbidity, among VYAs. If unidentified and untreated, these chronic conditions can also hinder adolescents from making a healthy transition into adulthood.

Understanding morbidity is important for guiding public health priority-setting. Morbidity data allow assessment of the nonfatal diseases and conditions that develop during adolescence and may have lifelong repercussions. One way to measure morbidity is disability-adjusted life years (DALYs). DALYs are an indicator of overall disease burden and measure the years of healthy life lost due to poor health, disability, or premature death.

In 2012, the top five causes of DALYs for 10–14-year-olds globally were depressive disorders, iron-deficiency anemia, HIV/AIDS, diarrheal diseases, and road injury (WHO 2014a). While there are some differences in the top-ranked DALYs for girls and boys between the ages of 10 and 14 (for example, depression is a greater source of morbidity among girls, while road injury is greater among boys), differences become more apparent among 15–19-year-olds. Similar to regional differences in mortality for VYAs, the African region accounts for the highest level of DALYs among 10–14-year-olds, followed by the Eastern Mediterranean region (WHO 2014b).

2.2 Understanding the health-related behaviors of VYAs to stem the spread of noncommunicable diseases

Disability-adjusted life years do not reflect the future disease burden that results from health-related behaviors that begin or are reinforced during adolescence

(Gore et al. 2011). For example, while some behaviors, such as smoking, alcohol use, and unhealthy dietary practices, may start during adolescence, these risk behaviors often do not result in noncommunicable diseases (NCDs), such as cardiovascular disease, respiratory illness, diabetes, and cancer, until adulthood. The World Health Organization estimates that 70% of all premature deaths are attributable to unhealthy behaviors established in adolescence, and NCDs are top causes of adult mortality globally, accounting for an estimated 38 million deaths annually (28 million of which occur in LMICs) (PRB 2015).

Furthermore, in certain areas of LMICs where there is rapid globalization and modernization, alcohol use, tobacco use, and unhealthy dietary behaviors are projected to rise among young people. Given that VYAs account for a large share of the population in many countries (see Figure 2), NCDs are projected to become a leading cause of death throughout Africa (PRB 2015). The high cost associated with NCDs in already resource-strained contexts has major implications for countries' capacities to treat and address these illnesses. Taken together, early adolescence represents a window of opportunity for interventions to improve the future health of individuals and to shape the trajectory of future health epidemics.

2.3 Health outcomes for VYAs: The diverging world of girls and boys

We next consider three salient health outcomes among VYAs given their long-lasting and potentially irrevocable influence: sexual activity and reproductive health, mental health, and nutrition.

In 2012, the top five causes of disability-adjusted life years (DALYs) for 10–14-year-olds globally were depressive disorders, iron-deficiency anemia, HIV/AIDS, diarrheal diseases, and road injury.

Sexual activity, reproductive health, child marriage: Profound negative outcomes for girls

Policy and program commitments to address the sexual and reproductive health (SRH) needs of adolescents have expanded with the increased attention to, and investment in, adolescent health since the beginning of the 21st century. However, data on SRH knowledge, attitudes, behaviors, and outcomes among 10–14-year-old girls and boys is extremely limited, in part due to the sensitivities of collecting such information from this young age group. We do know that young adolescent girls and boys the world over are generally uninformed or misinformed about their bodies, sexual and reproductive health, and health-promoting behaviors (Santhya and Jejeebhoy 2015). Misinformation abounds regarding fertility (first menstruation and ejaculation), sexuality, conception, contraception, and so forth (Bankole et al. 2007; Dixon-Mueller 2010; Igras et al. 2014), which may hinder the adoption of health-promoting behaviors.

Where there are data on the sexual and reproductive health of young adolescents, more data are available for girls than boys, for those ages 15–19 than those ages 10–14, and for married rather than unmarried girls

(UNICEF 2014a). When we look at data available for 15–19-year-olds, UNICEF reports that approximately 11% of girls and 6% of boys ages 15–19 in the developing world, excluding China, have had sex before the age of 15 (UNICEF 2011). It is noteworthy, however, that the reported prevalence for girls is almost two times higher than for boys according to these data. Analysis of Demographic and Health Survey (DHS) data (see Table 2) shows that early sexual activity is fairly common in some world regions; 15% or more of girls ages 15–19 reported having had sexual intercourse before the age of 15 in 10 countries of sub-Saharan Africa.

Early sexual activity, especially in circumstances when sex is forced, increases the risk of exposure to sexually transmitted infections, such as HIV. While HIV prevalence is generally low among 10–14-year-olds and there is little difference between boys and girls (Idele et al. 2014), this changes in later adolescence. Among adolescents aged 15–19, girls begin to experience higher levels of HIV relative to boys; approximately two-thirds of new HIV infections in adolescents aged 15–19 are among girls (UNICEF 2013). Although prevalence rates vary across countries, this trend in the feminization of HIV holds throughout most of sub-Saharan Africa where heterosexual transmission is highest (Idele et al. 2014).

Other threats to reproductive health may include cultural rites of passage that often coincide with puberty and hence early adolescence. In some contexts, such rites of passage include harmful traditional practices for young girls, such as female genital mutilation (FGM) and female genital cutting (FGC). FGM/C involves partial or total removal of the female genitalia and is practiced in many countries of Africa as well as several in the Middle East and Asia (UNICEF 2014b). A 2013 study estimates that 14.1 million girls ages

10–14 in 27 countries of Africa and including Yemen are likely to eventually be cut (Yoder, Wang, and Johansen 2013).

A portion of young adolescent girls are married, and sexual activity is within the context of marriage. In 5 of 71 LMICs, childbearing prior to age 15 was reported by 5% or more of girls ages 15–19 (see Table 2). While these figures show early childbearing is not commonplace, they also show that a proportion of girls are still at-risk and in need of services (see Section 4.2 for a discussion of SRH programming for VYAs).

Child marriage: A human rights violation

In some cases, early transition to sexual activity and early childbearing occur within the context of child marriage. There is growing recognition that child marriage is a violation of girls' human rights and a hindrance to overall development outcomes. Child marriage (defined as before the age of 18) coincides with sexual activity and the initiation of childbearing, and forces girls into roles and responsibilities for which they are not prepared.

Research has documented poor outcomes among girls who marry early, although causal linkage has yet to be established (Mensch, Singh, and Casterline 2005). For example, studies have documented that girls married before age 18 experience higher rates of domestic violence than their unmarried peers (UNICEF 2005; UNICEF 2014b), are more likely to drop out of school (Erulkar et al. 2004), live in poorer households (UNICEF 2005), are at greater risk of contracting sexually transmitted infections, including HIV/AIDS (Clark 2004), and have more children at earlier ages (UNICEF 2014a). Analysis of DHS data from 38 LMICs has also shown that girls ages 15–19 have a 28%

TABLE 2 SRH-related outcomes experienced prior to age 15 as reported by 15–19-year-old adolescent girls, by country

COUNTRY	MOST RECENT DHS SURVEY YEAR	% WHO HAD SEX BEFORE AGE 15	% MARRIED BEFORE AGE 15	% WHO GAVE BIRTH BEFORE AGE 15
West and Central Africa				
Benin	2006	10	5	2
Burkina Faso	2010	3	6	1
Burundi	2011	3	1	0
Cameroon	2011	9	9	3
Central African Rep.	1995	23	16	5
Chad	2004	7	18	6
Congo	2006	23	4	2
Cote d'Ivoire	2012	18	6	4
Dem. Repub. of Congo	2013	17	6	3
Gabon	2012	16	4	3
Ghana	2008	8	3	1
Guinea	2012	12	14	6
Liberia	2013	22	4	3
Mali	2013	14	19	8
Mauritania	2001	2	13	4
Niger	2012	8	24	5
Nigeria	2013	5	12	2
Sao Tome & Principe	2009	9	3	1
Senegal	2011	4	9	3
Sierra Leone	2013	17	6	4
East and Southern Africa				
Comoros	2012	4	6	1
Ethiopia	2011	2	8	1
Kenya	2009	11	1	1
Lesotho	2010	8	2	1
Madagascar	2009	15	12	4
Malawi	2010	11	4	1
Mozambique	2011	22	10	4
Namibia	2007	7	1	1
Rwanda	2011	5	0	0
South Africa	1998	8	0	1
Swaziland	2007	7	0	1
Tanzania	2010	10	3	1
Togo	1998	19	4	2
Uganda	2011	11	3	2
Zambia	2007	11	3	2
Zimbabwe	2011	4	3	1
Latin America and the Caribbean				
Bolivia	2008	7	3	1
Brazil	1996	11	4	1
Colombia	2010	13	4	2
Dominican Republic	2007	12	10	2
Guatemala	1999	7	7	2
Guyana	2009	9	5	2
Haiti	2012	14	3	1
Honduras	2012	11	8	2
Nicaragua	2001	9	9	2
Paraguay	1990	5	3	1
Peru	2008	5	2	1
South and Southeast Asia				
Bangladesh ^a	2011	1	17	4
Cambodia	2011	0	1	0
India	2006	1	8	1
Indonesia	2012	1	2	0
Maldives ^a	2009	0	0	0
Nepal	2011	3	5	0
Pakistan ^a	2012	n/a	2	0
Philippines	2013	2	2	0
Timor-Leste	2010	1	1	0
Vietnam	2002	n/a	0	4
Middle East and North Africa				
Egypt ^a	2008	n/a	1	0
Jordan ^a	2012	0	0	0
Morocco	2004	n/a	2	0
Yemen ^a	1992	n/a	9	2
Europe and Central Asian Republics				
Albania	2009	1	1	0
Armenia	2005	0	0	0
Azerbaijan	2006	0	0	0
Moldova ^a	2005	1	1	0
Kazakhstan	1999	1	0	0
Kyrgyz Republic	2012	0	0	0
Tajikistan	2012	0	0	0
Turkey ^a	2004	n/a	1	0
Ukraine	2007	1	0	0
Uzbekistan	1996	0	1	0

n/a= Data for indicator not collected. Note: All analyses are based on data from the Demographic and Health Surveys.

^a Ever-married women aged 15–49 were surveyed. Data for 15–19-year-olds have been adjusted to represent all women in the age group. Never-married women are assumed not to have given birth or to have had sex, per DHS standards for analysis and reporting.

While, overall, most girls aged 10–14 are not married, in some regions and countries the proportion of 15–19-year-old girls who were married before age 15 is substantial.

higher risk of dying during pregnancy or childbirth compared with those ages 20–24 (Blanc, Winfrey, and Ross 2013).

While, overall, most girls aged 10–14 are not married, in some regions and countries the proportion of 15–19-year-old girls who were married before age 15 is substantial. Comparison of DHS analysis published in the 2006 *Investing When It Counts* report (Chong, Hallman, and Brady 2006) and the updated analysis of this report (Table 2), show that the percentage of girls aged 15–19 who report being married prior to age 15 appears relatively unchanged in most countries.

There are, however, a few notable exceptions. For example, the prevalence of child marriage in Ethiopia declined from 14% in 2000, to 8% in 2011. In Bangladesh, 27% of girls reported being married by age 15 in 1999, decreasing to 17% in 2011. It is noteworthy that both of these countries have made significant policy and program investments aimed at keeping girls in school and in delaying early marriage. Other analyses of trends in age of marriage have provided evidence for more progress in child marriage before age 18 (Mensch, Singh, and Casterline 2005; UNICEF 2014a).

Mental health: Depression is largest cause of disability among girls

Adolescence is the time when many mental health issues emerge; approximately half of lifetime mental disorders (including depression, bipolar disorder, anxiety-related disorders, impulse-control disorders, and substance-control disorders) begin by age 14 (Belfer 2008; Kessler et al. 2007). The interruption of developmental processes that normally take place during adolescence by the onset of mental illness, including the completion of schooling and formation of peer and romantic relationships, can adversely affect an adolescent's trajectory of future health, particularly if not identified or treated (Sawyer et al. 2012).

Globally, as many as one in five children and adolescents aged 17 and younger are estimated to experience a debilitating mental health problem in a given year (Kieling et al. 2011). Although the total disease burden among adolescents is generally low, neuropsychiatric disorders¹ account for nearly half (45%) of all health-related disability between the ages of 10 and 24 (Gore et al. 2011).² Among 10–14-year-olds, depression is the leading cause of health-related disability among girls and the third leading cause among boys. The gender gap in depression widens by ages 15–19, with depression remaining the leading cause of health-related disability among girls, and ranking as the fourth among boys (WHO 2014b). Suicide, which is closely related to depression, is also a leading cause

-
- 1 Neuropsychiatric conditions include: depression, bipolar disorder, anxiety-related disorders, schizophrenia, epilepsy, alcohol- and drug-use disorders, and dementia, among others (Gore et al. 2011).
 - 2 Data in analysis by Gore et al. from the WHO Global Disease Burden Study, which included 194 WHO Member States across world regions and income groups. For full listing see www.who.int/countries/en/.

of mortality among adolescent girls and boys, particularly at the ages of 15–19 (11.7 deaths per 100,000 15–19-year-olds for each sex, respectively) (WHO 2012b). In general, poor mental health outcomes concentrate among those who live in poverty or experience other forms of social disadvantage (Patel et al. 2007; Kieling et al. 2011).

The problem of under- and over-nutrition

The years between ages 10 and 14 typically correspond with a spurt of physical growth that involves significant gains in both height and weight. This development leads to increases in total blood volume, lean muscle, and bone mass. Maturation of reproductive organs also begins in this age period, and most girls experience the onset of menstruation. Given these changes, the need for micronutrients increases for both boys and girls in this stage. Inadequate nutrition can interfere with the ability of adolescents to achieve their full potential growth and can impair cognitive functioning (Hermoso et al. 2011).

As mentioned earlier, among 10–14-year-olds, iron-deficiency anemia is one of the top five DALYs. It is the most common nutritional deficit, accounting for 3.4% of DALYs among boys and 3.5% among girls (Gore et al. 2011). Anemia is of particular concern among girls who are at risk of childbearing, such as in areas where child marriage is common, due to the risk of stunted growth of the mother and low birth-weight of the infant (Black et al. 2013).

In addition to micronutrient malnourishment, both insufficient and excessive food intake can result in health consequences that manifest later in life, including cardiovascular disease, obesity, diabetes, and osteoporosis (Gore et al. 2011; Black et al. 2013). The introduction of more energy-dense and processed foods to

Among 10–14-year-olds, depression is the leading cause of health-related disability among girls and the third leading cause among boys.

rapidly modernizing areas, along with lower levels of physical activity (Keino et al. 2014), contributes to the rising trend of obesity and diabetes observed in many LMICs (see Section 2.2 on NCDs). Regions such as Africa are changing from areas with food insecurity, to areas with both food insecurity and over-nutrition. As a result, we now see the epidemics of hunger and obesity within the same settings. Given that adequate nutrition is needed to meet the greater developmental demands of VYAs, equipping VYAs to navigate these environments is of increasing importance.

Social and contextual influences on health: Evidence and insights

3



3.1 Critical domains of young adolescent girls' and boys' lives

In this section, we take a closer look at several key social and contextual domains that shape young adolescent lives. The multitude of factors influencing VYA health and well-being range from individual-level attributes (e.g., age, gender, genetic make-up); to the immediate environment (e.g., parents and school, social economic status); the physical environment (e.g., disease prevalence, housing quality and pollution, poorly-resourced communities); and policies and laws that regulate conditions where VYAs reside (WHO 2014b).

Ages 10–14 are typically a time when girls and boys reside with their parents and are enrolled in school. When that is the case, VYAs spend a great deal of time in these environments. Therefore, while peers, partners, service providers and other influential adults are also salient influences in the lives of VYAs, we focus on two of the arguably most important influences for a large portion of young adolescents: schools and parents.

Residing with one's parents and/or being in school may expand one's social assets, such as social networks, access to institutions of society, and relationships of trust. Living with parents and/or attending school may also increase human assets, including knowledge and skills, self-esteem, and self-efficacy to enact behaviors and make decisions. For example, about 50% of adolescents interviewed in a WHO study mentioned that their family was a source of information about health (WHO 2014b).

In contrast, VYAs who are either not in school and/or not residing with one or both parents may lack or have decreased access to the assets afforded by these support systems, and as a result have greater risk of a variety

of negative outcomes. Also important to note is that additional influences that can operate within or outside of the school and family environments may undermine the potential utility of these domains. For example, given the social and gender-role changes that take place in early adolescence, gender norms imbued within the immediate environments of the school, family, or other space may underlie disparities in VYAs' ability to access and build assets (Igras et al. 2014; WHO 2014b).

Exposure to violence or victimization in these contexts may further undermine health and well-being. An international study on adolescents' perceptions of health in their community revealed that both gender and personal safety were top concerns for young people in terms of barriers to good health (Mmari et al. 2014). Finally, subsets of VYAs with specialized vulnerabilities may be at particular risk because their potential to access support systems such as school and family may be interrupted due to emergency and humanitarian crises, migration, or trafficking.

We recognize that poverty is both a cause and consequence of poor health and that economic vulnerability dramatically influences the life trajectories of both girls and boys in different ways. While critically important, it is beyond the scope of this report to address the influence of poverty in the comprehensive manner that it warrants. We note that the interaction of conditions of poverty on adolescent well-being is the focus of other ongoing studies (Mmari et al. 2014; Decker et al. 2014).

We begin this section by presenting an overview of indicators of such dimensions available in the Demographic and Health Surveys (DHS) at the national level (Table 3). We then expand upon key identified influencers of VYA health (i.e., school, parents, gender norms, exposure to violence and specialized contexts of vulnerability).

TABLE 3 Characteristics of very young adolescents based on recent DHS data, including residence, parental presence, and school attendance and achievement, by region

COUNTRY	MOST RECENT DHS SURVEY YEAR	% OF POPULATION AGED 10-14	% LIVING IN RURAL AREAS	AMONG 10–14-YEAR-OLD ADOLESCENTS*								
				% FOR WHOM ONE OR BOTH PARENTS ARE DECEASED	% WHO LIVE WITH NEITHER PARENT		% NOT ATTENDING SCHOOL		OF THOSE IN SCHOOL, % NOT AT GRADE FOR AGE		% WHO LIVE WITH NEITHER PARENT AND WHO ARE NOT ATTENDING SCHOOL	
					GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS
West and Central Africa												
Benin	2006	14	63	11	23	15	37	24	27	32	11	4
Burkina Faso	2010	14	80	9	16	11	49	45	30	33	9	4
Burundi	2011	13	92	22	17	14	13	11	54	56	4	4
Cameroon	2011	13	55	16	27	24	17	11	36	43	3	3
Central African Rep.	1995	13	55	17	28	25	49	27	45	66	17	8
Chad	2004	14	79	13	17	17	60	44	30	41	9	7
Congo	2006	13	49	15	29	25	8	8	57	62	3	3
Cote d'Ivoire	2012	13	55	13	34	28	38	25	31	37	16	7
Dem. Repub. of Congo	2013	14	66	14	23	20	11	7	55	53	4	2
Gabon	2012	12	15	10	28	25	2	2	46	52	1	1
Ghana	2008	13	58	11	27	21	12	12	49	52	4	2
Guinea	2012	15	68	14	26	23	46	34	25	31	13	9
Liberia	2013	13	41	11	38	29	13	15	78	78	5	5
Mali	2013	15	78	7	16	11	50	44	10	11	10	5
Mauritania	2001	15	60	12	19	18	34	25	36	34	8	5
Niger	2012	15	83	9	14	9	57	50	9	12	8	5
Nigeria	2013	12	60	9	15	12	28	23	30	33	3	2
Sao Tome & Principe	2009	14	47	6	27	20	7	7	37	36	3	1
Senegal	2011	13	59	11	23	18	36	37	21	19	9	6
Sierra Leone	2013	13	68	14	34	30	20	23	43	40	7	9
East and Southern Africa												
Comoros	2012	13	68	7	25	20	10	10	57	41	3	2
Ethiopia	2011	14	84	14	17	14	24	28	45	44	5	5
Kenya	2009	14	88	n/a	n/a	n/a	4	5	47	52	0	0
Lesotho	2010	13	80	39	36	33	4	11	45	61	1	5
Madagascar	2009	15	88	11	20	19	22	22	53	58	6	6
Malawi	2010	15	87	21	30	26	7	9	64	68	3	3
Mozambique	2011	14	70	20	28	25	21	20	52	55	6	6
Namibia	2007	13	67	26	45	43	5	7	18	24	2	4
Rwanda	2011	13	89	21	19	18	5	6	57	61	2	2
South Africa	1998	14	54	14	34	33	2	3	11	18	1	2
Swaziland	2007	15	86	33	39	41	8	9	48	61	4	4
Tanzania	2010	14	79	15	25	20	16	15	19	28	5	4
Togo	1998	15	70	15	29	23	34	15	54	68	12	4
Uganda	2011	15	89	18	17	15	6	5	76	78	2	1
Zambia	2007	15	64	25	32	29	10	10	38	41	4	4
Zimbabwe	2011	14	77	33	37	36	6	8	19	25	3	4

(continued next page)

TABLE 3 continued

COUNTRY	MOST RECENT DHS SURVEY YEAR	% OF POPULATION AGED 10-14	% LIVING IN RURAL AREAS	% FOR WHOM ONE OR BOTH PARENTS ARE DECEASED	AMONG 10–14-YEAR-OLD ADOLESCENTS*							
					% WHO LIVE WITH NEITHER PARENT		% NOT ATTENDING SCHOOL		OF THOSE IN SCHOOL, % NOT AT GRADE FOR AGE		% WHO LIVE WITH NEITHER PARENT AND WHO ARE NOT ATTENDING SCHOOL	
					GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS	BOYS
Latin America and the Caribbean												
Bolivia	2008	13	45	6	10	10	5	3	14	15	1	1
Brazil	1996	12	24	8	12	9	6	6	35	44	2	1
Colombia	2010	10	29	7	13	12	2	4	20	29	1	1
Dominican Republic	2007	12	34	6	22	20	5	7	30	45	2	2
Guatemala	1999	13	62	9	11	9	25	17	27	34	4	2
Guyana	2009	12	74	9	17	16	4	4	7	7	2	1
Haiti	2012	12	62	16	27	23	5	6	69	75	2	2
Honduras	2012	13	57	9	17	16	13	16	21	29	3	3
Nicaragua	2001	14	46	7	13	12	17	24	42	46	3	3
Paraguay	1990	12	55	0	15	12	17	11	35	45	3	1
Peru	2008	12	42	6	10	9	4	3	15	18	1	0
South and Southeast Asia												
Bangladesh ^a	2011	12	77	n/a	n/a	n/a	13	18	44	46	n/a	n/a
Cambodia	2011	12	86	10	11	11	10	10	42	52	1	2
India	2006	12	72	7	6	5	22	16	20	22	2	1
Indonesia	2012	10	53	n/a	n/a	n/a	5	5	4	5	n/a	n/a
Maldives ^a	2009	11	75	4	8	7	1	1	7	10	0	0
Nepal	2011	13	89	7	10	8	11	5	64	69	1	1
Pakistan ^a	2012	12	68	7	3	2	36	24	45	56	2	1
Philippines	2013	11	55	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Timor-Leste	2010	14	78	11	13	12	14	14	44	50	2	2
Vietnam	2002	13	86	n/a	n/a	n/a	9	6	10	13	0	0
Middle East and North Africa												
Egypt ^a	2008	10	61	7	1	1	8	7	8	10	0	0
Jordan ^a	2012	11	18	4	1	1	3	4	1	1	0	0
Morocco	2004	11	47	n/a	n/a	n/a	25	17	25	33	n/a	n/a
Yemen	1992	15	81	9	0	0	62	8	37	91	0	0
Europe and Central Asian Republics												
Albania	2009	10	61	4	1	0	3	2	6	6	0	0
Armenia	2005	9	44	4	2	2	2	2	3	2	0	0
Azerbaijan	2006	11	48	4	2	2	4	2	3	4	0	0
Moldova ^a	2005	9	69	6	14	9	1	3	n/a	n/a	0	0
Kazakhstan	1999	12	59	9	5	7	1	1	1	1	0	0
Kyrgyz Republic	2012	10	74	6	14	15	1	1	0	1	0	0
Tajikistan	2012	11	77	5	3	3	4	2	1	1	0	0
Turkey ^a	2004	10	35	4	3	2	14	5	12	17	0	0
Ukraine	2007	6	39	8	6	6	0	1	2	1	0	0
Uzbekistan	1996	12	65	5	1	1	1	2	1	1	0	0

Note: All analyses are based on data from the Demographic and Health Surveys. n/a = Data for indicator not collected.

*Data on 10–14-year-olds are reported by the head of household. ^a These countries surveyed ever-married women. Retrospective data presented in the final reports were mathematically adjusted so that they are representative of all women. Never-married women are presumed not to have given birth.

Widening the lens and sharpening the focus on young adolescent lives: Using DHS data to examine influences in the VYA immediate environment

To provide a snapshot of the contexts in which VYAs in LMICs reside, we conducted new analyses of dimensions of the VYA immediate environment (schooling status, parental survival, and household residence) that were available from the most recent Demographic and Health Surveys (DHSs)³ (years 2011 to 2013). Our new analysis provides information across 71 LMICs⁴ and also presents data on outcomes that reflect cultural practices and gender norms that emerge during the 10–14-year-old age period, such as experiences of early marriage, sexual initiation, and childbearing. Findings for the 10–14 and 15–19 age groups are presented in Table 3. For a more detailed description of information available in the DHS and other survey programs that include adolescents in their scope, see Section 5.1.

3.2 Gender differences in transitions from primary to secondary school

Education is associated with better health outcomes. With regard to selected indicators of VYA education, some progress has been made. As evidenced by our DHS analysis presented in Table 3, for the majority of countries less than 20% of VYAs are not in school. This is a vast improvement since our 2006 report, which showed that 50% or more of VYAs were not in school in many countries (Chong, Hallman, and Brady 2006). Policy changes to universalize access to primary education have led to many more children being in school. Despite improvements, there are still far too

many VYAs who are not in school. Table 3 demonstrates that in several West and Central African countries, and a few in the Middle East/North Africa region (MENA), approximately one-half of girls and one-third of boys aged 10–14 years are not attending school.

Our DHS analysis shows that the transition from primary to secondary school is likely to be a particular challenge in LMICs, especially among girls. Although varying by national education structure, the shift to secondary school often occurs after six completed years—which even with late primary entry and/or a grade delay, coincides with the VYA life-stage.

In Table 3, the “age for grade” variable provides insight on whether adolescents are lagging behind the grade level they should be enrolled in. Adolescents who are two years or more behind their peers in their current grade may be at increased risk of school dropout (Grant and Hallman 2008; Jimerson, Anderson, and Whipple 2002). Our findings reveal that in a multitude of countries, among 10–14-year-olds who are still enrolled in school, almost half are not studying at the grade for their age. Boys’ grade progression also lags behind that of girls.

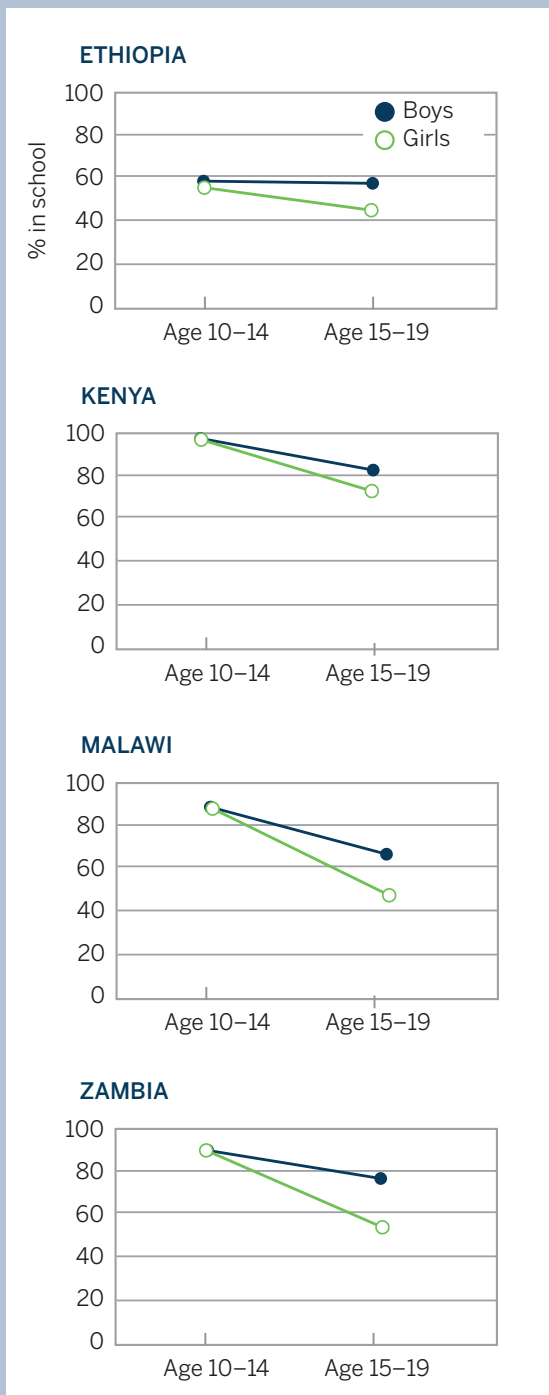
Further analysis shows that while boys are more likely to enter school in the first place, girls’ likelihood of dropping out of school around the time of puberty appears to exceed that of boys in many settings (UNESCO 2015). As shown by the country case studies in Figure 5, school enrollment falters more for girls with the onset of puberty than it does for boys.

A UNESCO (2011) analysis of 14 countries with the highest number of early adolescent girls out of school demonstrates that among children enrolled in primary, in eight countries girls are less likely than boys to make the transition to secondary (Burkina Faso, Burundi, Guinea, Mali, Niger, Madagascar, Tanzania, Uganda), in six countries the chances are equal (Ghana, Indonesia, Madagascar, Malawi, Myanmar, Pakistan), and in two countries (Ethiopia and

3 For more information, see www.dhsprogram.com.

4 The 2006 *Investing When It Counts* report included data analysis for 39 countries.

FIGURE 5 Percentage of adolescents enrolled in school, aged 10–14 and 15–19, four selected countries, 2004–2009



Sources: Demographic and Health Surveys. Ethiopia, 2005; Zambia, 2007; Kenya, 2009; Malawi, 2004. Analysis by Katharine McCarthy, Population Council, 2013.

Mozambique) girls are more likely to progress than boys (UNESCO 2011). Not progressing to secondary happens for a variety of reasons (Banerjee et al. 2013). Secondary school often entails higher fees and greater travel time and distance, which discourages some parents and guardians from sending their young adolescent girls. Despite strong evidence of the returns on investment of additional years of education (5–15% higher earnings per year of schooling attained, and higher returns for girls than boys), parents and students are often misinformed about such returns. Efforts to facilitate a smooth transition from primary to secondary are warranted and discussed in Section 4. School violence is an issue of wide concern that may diminish educational benefit (see Section 3.6).

3.3 Parental survival and residence

Parents have the potential to exert enormous influence on VYA's health and well-being. Young adolescents who do not reside with either parent may be particularly vulnerable to sexual exploitation, unsafe work, and substance abuse (Temin et al. 2013). Multi-country DHS data show that a high proportion of 10–14-year-olds in some sub-Saharan African countries are not living with either parent (Table 3). While data reported here do not provide the details of their situation, such as residence with extended families or foster arrangements, the findings do highlight the need for further investigation.

Across world regions, more VYA girls than boys in LMICs live with neither parent, while the highest percentage of 10–14-year-olds of both sexes who live with neither parent is in sub-Saharan Africa (for example, up to 45% of girls and 43% of boys ages 10–14 in Namibia) (Table 3). This may be explained, in part, by a long tradition of child fostering in this

region. The percentage of VYAs for whom one or both parents are deceased is also highest in sub-Saharan Africa countries, likely due to the high burden of AIDS. Compared with our 2006 analysis, the percent of girls and boys who live with neither parent remains relatively unchanged, while the change in the percentage of 10–14-year-olds for whom one or both parents is deceased is mixed and varies by country (Chong, Hallman, and Brady 2006).

3.4 The role of gender norms in early adolescence

Across most of the world, rigid gender norms regarding appropriate roles and behaviors for men and boys and women and girls have been shown to influence many aspects of adolescent lives, including health-related behaviors (Barker et al. 2007; Peacock and Barker 2014). For example, whether girls can travel away from home, where they can and cannot go in their community, and the nature and type of social interactions that are permitted with the opposite sex are all strongly influenced by gender norms. Typically, boys are able to move more freely outside the home, giving them greater opportunities than girls to participate in leisure and income-generating activities (Brady 2005; Barker 2000; Hallman and Roca 2006), and male advantage in spatial access to the community and spaces therein can become more extreme with puberty (Hallman et al. 2014).

Positive changes in gender-related social norms, values, and practices can have a transformative effect on the way societies value girls and how VYAs perceive their social and sexual roles, because gender norms play a role in their perceptions and behaviors (Lundgren et al. 2013). For example, a global systematic review of factors shaping young people's sexual behaviors confirmed that gender stereotypes and differential expectations about

Globally, more girls than boys in LMICs live with neither parent, while the highest percentage of VYAs of both sexes live with neither parent in sub-Saharan Africa.

appropriate sexual behavior of boys compared with girls influenced their sexual behavior (Marston and King 2006). Traditional gender-role expectations can lead to behaviors that disadvantage boys as well, including risk of violence, substance abuse, and accidents (Barker 2000 and 2007).

The onset of puberty and the beginning of menstruation for girls has both profound biological and social significance as it signals the beginning of girls' transition into womanhood. A systematic review of menstrual hygiene and health among young adolescent girls in LMICs found considerable stigma around menstruation due to its association with sexuality and reproduction (Sumpter and Torondel 2013). Findings suggest that girls often feel shame at the inability to manage periods effectively, and that menstruation is associated with dirt and pollution. The stigma associated with menstruation may translate into restrictions and/or exclusion of girls/women. For example, menstruating girls in some settings may not be permitted to carry out everyday activities (attending church/religious activities, kitchen and food preparation duties, making contact/touching a male, etc.). While some argue that menstruation is an obstacle to schooling attendance and contributes to dropout rates among pubescent-age girls, the evidence for this is mixed (Grant, Lloyd, and Mensch 2013).

We briefly highlight areas where emerging gender norms may influence VYAs' access to resources.

Food, nutrition, and gender

Gender has been identified as one factor that drives nutritional outcomes among VYAs, although the direction of the relationship varies by setting. Among in-school adolescents in sub-Saharan Africa, one review found girls were more likely to be overweight than boys (Keino et al. 2014). Conversely, in many food insecure settings, such as India where much of the global undernourished population resides, there is evidence that households favor the distribution of nutrient-rich foods for boys but not girls (More et al. 2013; Keino et al. 2014). Studies conducted in Cameroon, Ethiopia and regions of the Amazon found girls living in food-insecure households were more likely to be stunted relative to boys, which has been theorized to result from cultural preferences for boys to have better access to food and education (Mukuddem-Petersen and Kruger 2004; Hadley et al. 2008; Piperata et al. 2013). Such practices may reflect social norms that place higher value on boys than girls.

Cultural food taboos also affect access to foods among young adolescents and may reflect gender norms. In some resource-poor settings, these practices prioritize certain protein-rich foods for adult men and restrict access for young adolescents and women (Meyer-Rochow and Benno 2009). Food customs and taboos relate to key life-cycle transitions, such as menstruation, pregnancy, childbirth, and lactation, which affect girls. While practices related to pregnancy and childbirth may be intended to protect girls (or their developing fetus), they can also result in restrictions to nutritious foods during a time when the biological demand for micronutrients is higher (Meyer-Rochow and Benno 2009).

Information communication technologies: Does gender affect access?

Information communication technologies (ICTs), such as television, radio, mobile phones, and the Internet, have the potential to expand VYA access to information, connectedness with other people, and the ability to learn and share ideas. ICTs are increasingly accessible in LMICs. The growing ubiquitous presence of ICTs and their ever-evolving nature makes consideration of the advantages and risks of ICTs for young people critical. As the world witnessed in young activist movements throughout the Middle East in 2011 and 2012, young people can harness online and social media technology to extend their voices and have a powerful influence in social and political change (Martin 2012).

There are also potential negative influences of expanded ICT access for VYAs (Brody 2015), including exposure to idealistic body-image expectations; the marketing of unhealthy foods, beverages, and social behaviors (e.g. smoking); online bullying by peers; unintended disclosure of private information; and online predatory behavior. These risks also make clear the need to equip VYAs in order to harness the potential of ICTs while also employing safeguards to mitigate potential risks (see Section 4).

Not all VYAs access ICTs equally. Among 10–14-year-olds, available data shows that ICT use varies widely by country setting. For example, of countries with available data in 2011, Internet use in the past 12 months ranged from 12% of 10–14-year-olds in Paraguay, to 99% in Slovenia (UNICEF 2012c). Similarly, use of mobile phones ranged from 37% in El Salvador to 98% in Slovenia (UNICEF 2012c). There is within-country disparity in access as well, most notably related to gender. For example, in LMICs, girls and women are 21% less likely to own a mobile

phone than males (GSM Association 2013b). If a girl or woman resides in Africa or the Middle East, she is about one-fourth less likely to own a mobile phone than a male in her country, whereas she is more than one-third less likely to own one if she resides in South Asia (GSM Association 2013b). Within countries, those who are more educated, have higher income, or reside in urban areas also tend to have higher Internet use relative to those with lesser education, lower socioeconomic status, or who reside in rural areas (UNICEF 2012c).

Adolescents who lack access or training on the use of ICTs have a reduced ability to enter the global dialogue to gain information, communicate and connect with others, and participate in social campaigns. Mobile phones are an important means of participation, particularly in places where Internet access is limited. For example, results from adolescents ages 8–18 surveyed in a study in North Africa and the Middle East, show that more than half used their mobile phones to access the Internet (GSM Association 2013a). SMS and mobile messaging applications have also grown as new ways for young people to connect and share information.

3.5 Violence against VYAs: Boys and girls both affected, but prevalence varies by gender

A critical influence on VYA well-being, including physical and mental health and schooling progress, is the experience of violence. The Convention on the Rights of the Child guarantees that all children should live free from all forms of violence, yet abuse of VYAs occurs globally at the hands of caregivers, teachers, peers, and others. These experiences often disrupt VYA access and engagement with support systems such as family and school, because the majority of perpetrators are acquaintances of the child and often the very individuals charged with safeguarding them.

The first step toward curbing the problem is recognizing its nature and prevalence. Despite vast measurement challenges, abuse against VYAs is beginning to be quantified, with data increasingly available since the late 1990s (see Section 5.2. for sources of data on violence against VYAs). Bringing the issue to greater light is spurring the development of legislation, policies, and programs, including adult behavior-change campaigns to alter social norms and attitudes that may perpetuate violence against VYAs (see Section 4). Violence against VYAs takes several major forms. Data on these forms, largely compiled by UNICEF, are described below (UNICEF 2014c).

Physical violence

As children enter the second decade of life, both intentional and unintentional injuries become more prevalent (see discussion of disability-adjusted life years among VYAs in Section 2.1). Injuries overall are responsible for the deaths of 28% of adolescents ages 10–14 globally. Unintentional injuries include road injuries, falls, poisonings, exposure to fire/heat/hot substances, exposure to forces of nature, and others; these account for 25% of deaths of 10–14-year-olds globally, compared with the 15% figure among 0–9-year-olds (UNICEF 2014c). The proportion of deaths due to intentional physical injuries (including homicide, self-harm, and collective violence) among both boys and girls rises from 0.5% at ages 0–9, to 6% and 5%, respectively, at ages 10 and 14. In LMICs generally, adolescent homicide rates are higher in countries with greater wealth inequality. Among all 10–14-year-olds in West and Central Africa, and boys in Latin America and the Caribbean, the largest share of the disease burden from intentional injuries is homicide. Alarming, in seven LAC countries homicide is the leading cause of death for adolescent boys, and 3 out of 10 homicides in this region are due to gang violence.

In the 58 countries included in UNICEF's global database, nearly 85% of 10–14-year olds reported experiencing violent discipline in the month before they were interviewed.

While the previous statistics are sobering, far more children experience violence in the form of discipline by guardians and/or teachers. This usually occurs in their own home or in the school setting and starts at a very young age. Approximately 6 in 10 children worldwide between the ages of 2 and 14 are subjected to physical (corporal) punishment by their caregivers on a regular basis. Among the VYA age group, in the 58 countries included in UNICEF's global database, nearly 85% of 10–14-year olds reported experiencing violent discipline in the month before they were interviewed (UNICEF 2014c).

Psychological abuse

Psychological abuse of children, also referred to as emotional or mental abuse/violence, is frequently perpetrated by individuals with whom the child has a close relationship. Most often these are parents and caregivers, but new evidence suggests that teachers, peers, and dating partners may also be common perpetrators (Sedlak and et al. 2010; Leen et al. 2013; Theoklitou, Kabitsis, and Kabitsi 2012; Shumba 2002). This form of abuse is among the least studied, and statistics are lacking. This is due largely to the difficult nature of conceptualizing and quantifying the many forms it takes, including scaring, threatening, exploiting, terrorizing, rejecting, isolating, ignoring, insulting, humiliating, and ridiculing. Denying emotional support, neglecting health

or educational needs, exposing a child to domestic violence, and psychological bullying are also classified as emotional violence. Extreme forms include subjecting a child to solitary confinement or other humiliating forms of detention.

Although prevalence data regarding the psychological abuse of children in LMICs are scarce, the Violence Against Children Surveys (VACS) by UNICEF and the Centers for Disease Control and Prevention (CDC) asked about this form (and other forms) of violence in nationally representative surveys of adolescents in Kenya, Swaziland, Tanzania, and Zimbabwe using retrospective reporting. Available data are not disaggregated for VYAs; however, the results indicate that ever experiencing emotional violence before the age of 18 years is slightly more common among males than females. For males, the prevalence range was 30–38%, compared with 24–30% among females (UNICEF 2007; UNICEF, CDC, and Muhimbili University 2011; UNICEF et al. 2012; UNICEF and Collaborating Centre for Operational Research and Evaluation 2013). The forms of abuse were similar by sex and across the four countries. Humiliation by adult relatives and teachers was the most common form, followed by neglect and threats of abandonment by caregivers.

Sexual violence: Higher reporting among girls, often with irremediable consequences

Sexual violence is an extreme violation of adolescent human rights and is the subject of dedicated international legislation designed to protect children against its multiple forms. Sexual violence often co-occurs with other forms of violence. Sexual abuse is harmful and traumatic, regardless of the form it takes. Although estimates exist for the number of children who have experienced sexual violence, underreporting is an extreme challenge and hinders efforts to assess the true magnitude

of the problem. Research has demonstrated that 30–80% of survivors do not reveal their experiences of childhood sexual maltreatment until adulthood, and many others remain silent throughout their lives (UNICEF 2014c).

Data on sexual abuse of minors is highly subject to variation, including definitions, elicitation methods, study designs, and sampling. Systematic reviews and meta-analyses of self-reported data from surveys reveal a wide disparity in prevalence.

Retrospective questions are available in the DHS for 21 countries on the percentage of adolescent girls (aged 15–19) who were ever subjected to sexual violence and the age at which they first experienced it. In 16 of the 21 countries, at least 1 in 5 adolescent girls who reported sexual violence said it occurred for the first time between the ages of 10 and 14. Comparable DHS data on the age at which adolescent boys (aged 15–19) first experienced sexual violence were only available for four countries and the number of boys who reported such experiences was not sufficient to produce reliable estimates.

For the VYAs in LMICs, the Violence Against Children Surveys (VACS) are the most recent and detailed data source and often include females and males. As these ask about a diverse range of possible sexually abusive experiences, they generate higher overall prev-

alence rates than do less-detailed questions (Pereda et al. 2009a and 2009b); Collin-Vézina, Daigneault, and Hébert 2013; Andrews et al. 2004; Stoltenborgh et al. 2011; Pereda et al. 2009a and 2009b). What's more, surveys such as the DHS that restrict questions to the most extreme forms of sexual violence, such as physically forced intercourse, will produce lower prevalence rates because these acts are not as common, and when they occur are less likely to be reported than less severe forms. Table 4 presents a comparison of VACS and DHS prevalence data for unwanted sex in the past year for female and male adolescents. While survey year, sampling method, and age group vary, the VACS levels for females are noticeably greater, and those of boys aged 13–17 years is not negligible.

Although child sexual exploitation (defined as sex given for money, food, or other favors) is likely to be a widespread and severe form of abuse, it is not reported on here because of the lack of availability of national statistics. This is because such acts, by their very nature, are hidden, making it extremely difficult to capture the true magnitude of the problem. In addition, in the few surveys that explore the issue, some only inquire about completed acts while others include uncompleted attempts in the overall figure, making comparisons challenging.

TABLE 4 Percent of adolescents reporting any unwanted sexual experience in previous year, according to type of survey

COUNTRY (SURVEY)	FEMALES		MALES	
	VACS	DHS	VACS	DHS
Swaziland (VACS 2007 ^a)	33	n/a	Males not surveyed	n/a
Tanzania (VACS 2009 ^b , DHS 2010 ^c)	14	5	6	n/a
Kenya (VACS 2010 ^b , DHS 2008-09 ^c)	11	4	4	n/a
Zimbabwe (VACS 2011 ^b , DHS 2010-11 ^c)	9	7	2	n/a

^a 13–24 year olds ^b 13–17 year olds ^c 15–19 year olds.

3.6 Schooling and violence

Although systematic data are not available on its prevalence, school-related violence is reported to be a widespread phenomenon in both LMICs and high-income countries (HICs) (UN 2015; Leach, Dunne, and Salvi 2014). In addition to its damaging health and psychological effects, the impact of school-related violence on educational attainment is of paramount concern. Most existing studies on this issue have been descriptive or qualitative and those that are quantitative are mainly cross-sectional in nature (Psaki, Mensch, and Soler-Hampejsek 2015). Moreover, few studies disaggregate by VYA-specific age categories, and the preponderance of evidence comes from HICs.

Experiences of school violence in LMICs have been shown to be linked with absenteeism and dropout (Pereznieto et al. 2010). For instance, a nationally representative survey of primary school students in Ethiopia found that exposure to school violence reduced girls' class participation, lowered their school performance, and increased their grade repetition and dropout rates (Save the Children, Ethiopian Ministry of Education, and Ethiopian Ministry of Women's Affairs 2008).

A wider literature (UNICEF 2014c) indicates that experiencing any type of violence in childhood, whether during or outside of school, has serious consequences for academic success (NCAC 2013). Few statistics are available for children in LMICs, although one study from South Africa (Hallman 2007) showed that reported experience of non-consensual sex, regardless of the location or perpetrator, was associated with lower levels of school enrollment among females and males, and poorer grade attainment and progression among females. VYAs who experience multiple forms of violence are at especially high risk of poor educational

outcomes. Those who are bullied by peers at school while also experiencing abuse outside of school are at greater risk for poor academic performance (Schwartz et al. 2013). A study using longitudinal data from Malawi investigates the effects of school-related violence and domestic violence on educational outcomes and finds that domestic violence is associated with poorer education outcomes for females, while school-related sexual violence is associated with poorer education outcomes for males (Psaki, Mensch, and Soler-Hampejsek 2015).

3.7 Programs responding to VYAs in acute and specialized circumstances

Adolescents who grow up under adverse circumstances (i.e., child marriage, exploitive child labor, forced migration, armed conflict, and domestic and community violence) are thrust into adult roles and behaviors prematurely. Researchers are still investigating the long-term effects of such accelerated transitions on individuals' development and later capacity to fulfill adult roles. For example, researchers have begun to explore the effects of living in AIDS-affected households, exposure to violence, and low socioeconomic status in early adolescence on longer-term outcomes. An emerging body of evidence has documented the detrimental effects of growing up in disruptive conditions, for example the documentation of mental health problems among children orphaned by AIDS (Han, Ssewamala, and Wang 2013). Numerous other factors, such as armed conflict and war, forced displacement, immigration status, and abuse or neglect in childhood or adolescence have also been identified as risk factors for poor mental health (Kieling et al. 2011). In this section, we describe social conditions that contribute to particular vulnerabilities among marginalized groups of VYAs.

VYAs in humanitarian, crisis, and emergency settings: High risk for early school leaving and child marriage

Very young adolescents in humanitarian settings face unusual challenges, which may differ by sex. Emergencies can take various forms, including natural disasters, human conflict, and disease outbreaks. Although most individuals, irrespective of sex or age, are forced to assume new roles during crises, adolescent girls may be the most likely to assume new leadership roles within the family. They frequently become the managers of households when parents are absent or missing, the primary caretakers of younger siblings, and the main procurers of shelter, water, and food. Girls can inadvertently become a means of survival for families in crisis. Girls may drop out of school, forgo meals, engage in unsafe livelihoods, assume disproportionate levels of domestic burden, and/or marry early to relieve financial responsibilities for their families.

Parents and girls are reported to resort to early marriage as a protection against both real and perceived livelihood risks, because they believe they have no alternatives. Child-bearing risks are also compounded for girls in conflict settings due to increased exposure to forced sex and reduced availability of SRH services. These circumstances isolate them from friends, school, and social networks. An extreme example is the 2014 Boko Haram kidnapping of school girls in Nigeria, who were reportedly then sold as slaves, forced to convert to Islam, marry their abductors, and act as suicide bombers (CBS News 2015).

Very young adolescent boys also face dangers as a result of crises, including sexual exploitation and forced combatant roles. In Afghanistan, for example, boys are sexually abused and exploited by armed groups and wealthy warlords. The practice of *bacha bazzi* (boy plays) uses young adolescent boys who dance in women's clothes and are raped. The

During humanitarian crises, girls may drop out of school, forgo meals, engage in unsafe livelihoods, assume disproportionate levels of domestic burden, and/or marry early to relieve financial responsibilities for their families.

boys are usually forced into this by economic circumstances and as a means of survival (UNICEF 2014c).

Another form of VYA exploitation is child soldiers. An estimated 250,000 children served involuntarily as soldiers in 2015, defined as any minor under the age of 18 who is part of a regular or irregular armed force or group in any capacity (War Child 2015). This definition includes not only those who carry weapons, but noncombat roles as well. Female child soldiers may be recruited for the purposes of forced sex and/or marriage, in addition to serving in combat roles, and are particularly vulnerable to sexual violence. Although difficult to ascertain, girls are estimated to account for between 10% and 30% of child soldiers (CSI 2015). The large majority of child soldiers are forcibly recruited through abduction, while others may be coerced under social, cultural, or economic pressures. As of 2015, there have been reports of child soldiers in at least 14 countries in Africa, the Middle East, and East Asia and the Pacific regions (CSI 2015). The experience of being in an environment of extreme violence has been found to lead to psychological and physical health effects, including post-traumatic stress disorder, substance abuse, depression, and

suicide (Schauer and Elbert 2010). Exposure to violence and trauma as a child interferes with normal development and impedes the ability of youth to integrate as full-functioning members of society.

Voluntary migration: Common among adolescents but prevalence for VYAs is unknown

Very young adolescents who migrate independently of their parents or guardians, like adult migrants, are usually seeking new social and economic opportunities (Edmonds and Shrestha 2009). When acknowledged by legal systems, these children are often referred to as “unaccompanied minors.” Many migrant adolescents, however, are not recognized as migrants because they are identified using other labels, such as domestic worker, street child, or foster child. Many send remittances to their families, combine work with schooling, and manage to save money. There is little information to facilitate comparison of the benefits versus the many costs and risks migrant adolescents face. Independent migrant adolescents may be significantly affected by the absence of protection and support from their families and by the challenges of their new environments after migration (Yaqub 2009).

A 2013 study examined evidence on the social and economic drivers of internal migration for adolescent girls in developing countries, and the links between migration, risk, and opportunity (Temin et al. 2013). The report focused on the ways in which rural-to-urban migration can—when necessary safety nets and resources are in place—present adolescent girls with new opportunities that are unavailable in their home villages and towns. Although it can be risky, the research found that for the majority of girls, voluntary migration can lead to autonomy, opportunity, and prosperity. Some migrant girls are able to combine work and

schooling and expand their opportunities, with many earning enough to send money home to their families. When a girl sends money home, it changes how her family views her—it can give her greater influence in decision-making, and in some cases, can delay early marriage.

To reap the benefits of migration, however, girls need adequate preparation before they migrate, arrangements for safe travel during their journey, and support once they arrive at their destinations. Programs and policies aimed at helping migrants have largely ignored adolescent girls, especially very young adolescents. On the rare occasions when policies and programs attempt to reach vulnerable migrant girls, they are on a small scale and more likely to benefit more advantaged migrant girls or male migrants. Many programs and local governments view urban migration in negative terms, without acknowledging its potential benefits (Temin et al. 2013).

The SRH needs of young adolescents who migrate may be compromised by a lack of social connections at their destination. Most scholars agree that migrants are positively selected for good health and some aspects of the migration process can be protective. Nevertheless, several studies have found that adolescent migrants—particularly poor migrants in very large cities of LMICs—exhibit poor SRH outcomes (Mmari and Astone 2014). Distinct evidence on the VYA segment of the adolescent migrant population is lacking.

Human trafficking: Girls younger than 18 may constitute nearly half of trafficked persons

Voluntary migration, which ideally involves planning, protection, and social support, is very different from human trafficking, which is characterized by deception, abuse, social isolation, and multiple human rights violations. While trafficking appears to be on the rise, its covert nature makes it difficult to obtain

accurate estimates of incidence. Numbers reported in the literature are inconsistent and likely to be underestimates. A 2013 study estimates that approximately 800,000 people are trafficked across international borders annually and, of these, 80% are women or girls and 50% are minors (Deshpande and Nour 2013)—implying that 40% of all trafficked persons may be girls younger than 18 years of age. Minors were not disaggregated by age segment in the study.

Victims of human trafficking are forced into many different types of labor, with commercial sexual exploitation as the largest category, which may be followed by child marriage (Buckley and Barry 2015; CBS News 2015). Young women and adolescents are a particularly vulnerable group for international and domestic sex trafficking (Logan, Walker, and Hunt 2009). The global sex trade is believed to be the fastest-growing form of commerce, worth \$32 billion annually (Deshpande and Nour 2013). This criminal human rights violation has profound health implications for the victims. Of particular concern is the easy availability of very young adolescent girls who are highly sought after by “johns” through popular, legitimate web-based sales-for-services sites and social networking websites (McClain and Garrity 2011).

Research from the United States indicates that poverty, indigenous ethnicity, social isolation, drug addiction, violence in the family, school failures, a history of child sexual abuse, family dysfunction, and a history of criminal involvement make adolescents emotionally and economically vulnerable to trafficking (Konstantopoulos et al. 2013; Logan, Walker, and Hunt 2009; Williamson and Prior 2009; Small and Justice Policy Center 2008). For internationally trafficked adolescents, the promise of a better life in another country is frequently enough to lure young girls or for their families to place them in the hands of

traffickers (Hodge and Lietz 2007). These adolescents or their families may be promised legitimate opportunities such as marriage, modeling careers, or jobs, but arrive in the foreign country only to be forced into sexual slavery (McClain and Garrity 2011). Young adolescents are very susceptible to the tricks of traffickers, and the average age that girls are forced into sex trafficking is estimated at 13 years (Shared Hope International 2009). Victims of sex trafficking acquire adverse physical and psychological health conditions and social disadvantages. Victims may face legal barriers, where the traffickers will confiscate or sequester all forms of immigration and citizenry documentation. Language and cultural barriers, fear, limited knowledge, and lack of money are other barriers that internationally trafficked girls may face that prevent them from escaping sex-trafficking rings (Deshpande and Nour 2013).

Making progress: Improving programs for VYAs

4



4.1 Identifying broad areas for VYA programs

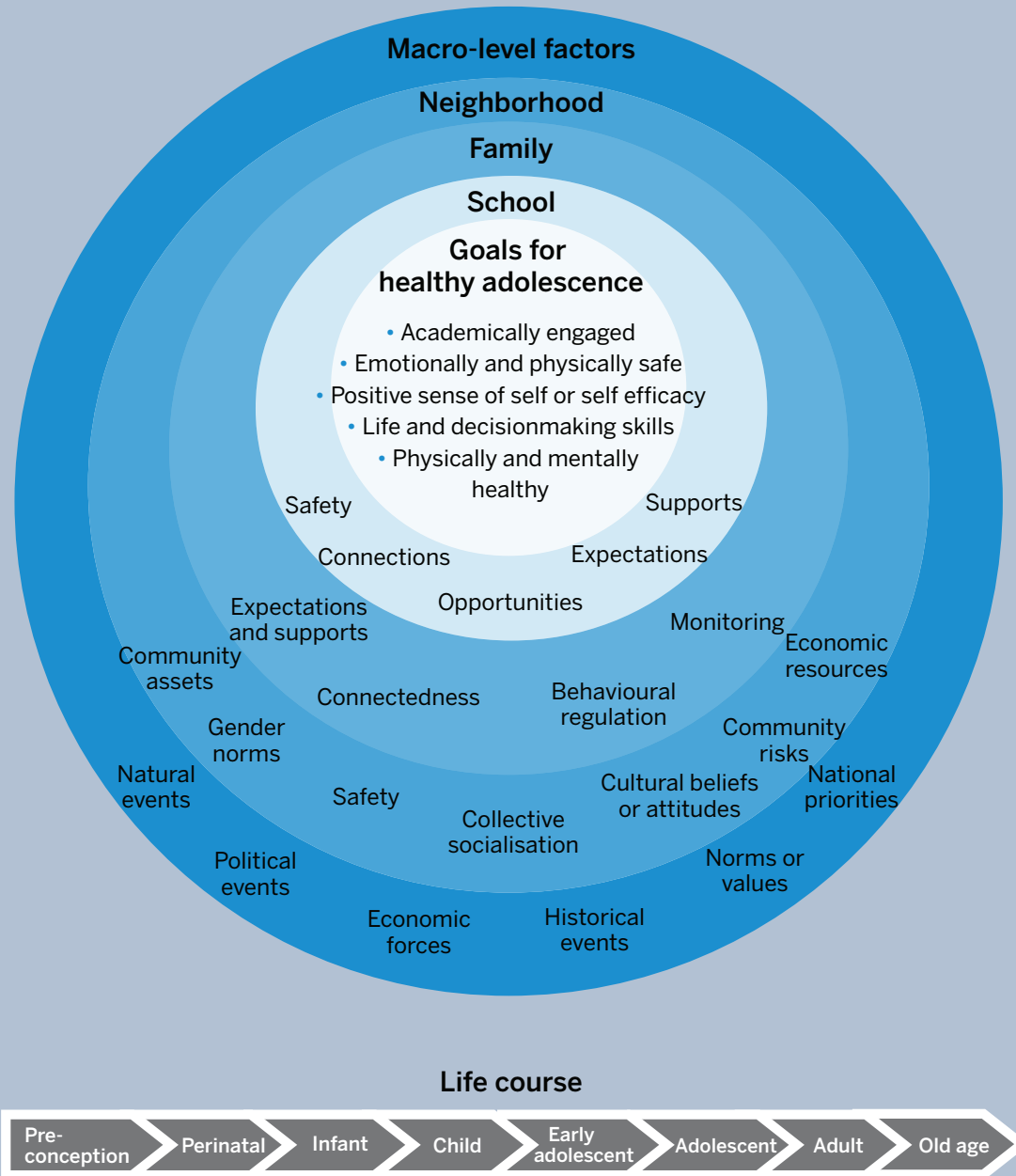
In this section, we describe broad programmatic areas that are, or could be, working with young adolescent girls and boys across a range of topics. Where possible (and when data are available) we assess the resultant evidence of these efforts. As mentioned previously, there is enormous diversity in the VYA population (girls/boys, in-school/out of school, married/nonmarried, rural/urban, etc.), which has significant implications for programming. We argue that any meaningful programming must first be clear on the gender and age segment of the VYA population of interest and must design with them in mind.

A key principle of “smart design” is to know the needs and interests of the “end user,” in this case the specific VYA population. Another key principle is to work at multiple levels of the VYA environment. Applying an ecological framework that recognizes the dynamic relationships between the individual (VYA girl or boy), family, community, and broader social institutions can be extremely helpful in thinking through and designing holistic programs (Figure 6) (Blum et al. 2012). The ecological framework examines the multiple effects and interrelatedness of social factors on individuals, and expands upon the immediate-level factors, including parental, school, gender norm, and violence influences discussed in Section 3. Implementing holistic, gendered policies and programs that recognize and respond to the unique needs of this life-course phase provides an opportunity to facilitate healthy transitions into adulthood (Blum, Astone, and Decker 2013).

From a programming perspective, potential points of contact for younger children include immunization and other child health programs as well as school registration efforts, while older adolescents may be targeted for peer education or other activities. VYAs tend to fall through the cracks as they are too old for most child health interventions. Girls especially are too young to participate in maternal health and women’s empowerment programs. In most countries, there are policies mandating that children be in school at this age, and we see a higher proportion of VYAs in school than 10 years ago (Chong, Hallman, and Brady 2006) and compared with older adolescents. At the same time, there are many VYAs who are not in school and who may therefore be at higher risk for adverse outcomes. A more nuanced understanding of the range and type of circumstances that such vulnerable adolescents are grappling with is essential for effective and responsive programming.

Scaling up or “going to scale” is a topic of frequent discussion but of relatively little rigorous study in the field of adolescent programming (Brady 2011b). Although the need to scale-up effective interventions is great, the challenges of so doing are considerable. We know, for example, that moving from pilot to scale requires attention to the streaming of program content, structure, and cost. We know that maintaining fidelity to the original intervention is also a challenge. Unless carefully planned from the outset, pilot demonstration projects are often intensive and costly, reducing the likelihood of wide-scale adoption. Often the institutional and management capacity to take a program to scale is not in place, and funds for doing so can rarely be found in country budgets.

FIGURE 6 Ecological framework along the life course



Source: Blum et al. 2012.

Relatively few large-scale programs for VYAs are well-documented, and even fewer have been rigorously evaluated.

While there is an expanding body of research around scaling up health interventions (Simmons, Fajans, and Ghiron 2007; ExpandNet n.d.; Kohl 2011), less is known or documented about scaling up programs for adolescents generally, and for girls and VYA intervention more specifically. Given that this is a relatively new field at an early stage of experimentation, the evidence base regarding which strategies are most effective is still emerging. In addition, because most adolescent girls programs are multi-sectoral, identifying the appropriate institution(s) to adopt the innovation is a key step along the critical path to scale-up. Moving forward, research is needed both to guide the scaling-up process and to measure the impact of such efforts.

It is noteworthy that there are relatively few large-scale programs that are well-documented, and even fewer that have been rigorously evaluated. Moreover, explicit attention to the distinctive needs and risks of young adolescent girls and boys has not been adequately addressed in most programs. That said, there are several broad thematic areas that warrant consideration and more experimentation. We highlight some of these in this section. Rather than focus on specific individual programs, we attempt to paint a broad picture of areas of intervention. For more detailed information on program and resources on VYAs, visit: www.k4health.org/search/site/VYA%20alliance.

4.2 Programs for which we have substantial evidence

Comprehensive sexuality education

Despite scant data on sexual activity and reproductive health outcomes for young adolescent girls and boys (as shown in Section 2.3), it is clear that very young adolescents—both boys and girls, sexually active or not—could benefit from age-appropriate comprehensive sexuality education (CSE). A call for CSE has been made by advocates and researchers alike (UNESCO 2009; UNFPA 2010). By taking an empowerment approach, CSE helps young people see themselves and others as equal members in relationships, and as individuals capable of participating in society. Importantly, a 2015 review of sexuality education programs revealed that very few address gender and power in their curricula; those that do, however, had better SRH outcomes (Haberland 2015). Based upon this review and analysis, more emphasis on—and greater resources for—sexuality education that takes a gender- and rights-based approach are warranted.

Programming aimed at shifting gender roles and norms

Early adolescence is an opportune time to intervene with progressive and gender-equitable programming before harmful gender norms become entrenched. Research suggests that it is possible to challenge dominant roles of masculinity and femininity by modeling alternatives (Barker et al. 2007; Peacock and Barker 2014). Gender-transformative programs—those that promote equal value of females and males and challenge prevailing gender-inequitable norms and roles for girls and boys—can lay the foundation for improving a range of outcomes, including SRH and nonviolence, among others (Lundgren et al. 2013).

Several programs have experimented with this approach. For example, “Keep It REAL” in Uganda, the Gender Roles, Equality, and Transformations (GREAT) Project in Uganda, and the ISHRAQ program in Upper Egypt, work to transform gender norms through various strategies (Selim et al. 2013; IRH and USAID 2010). In Nepal, the CHOICES program works by helping young adolescent boys and girls discover alternative views of traditional gender roles (Lundgren et al. 2013). Gender-synchronized programming (one that works with both males and females either simultaneously or in sequence) is emerging as an important approach to shifting gender norms (IRH and USAID 2010). While promising, more experimentation and evaluation of gender-synchronized programming is needed.

Puberty education

Prior to, or at the time of puberty is a logical and salient point of intervention. Puberty is an overlooked area for programming, consequently there is a dearth of data on this period. Understanding the physiological, emotional, and social implications of puberty is key to mitigating nutritional, sexual, and reproductive health risks among adolescents (Sommer 2011). The early-adolescent period may offer a critical window of opportunity for health interventions, beginning with puberty education, hygiene, body awareness, and so forth. Recently, a number of projects, including, for example, the “Grow UP Smart” program in Rwanda, have been focusing on this topic (IRH 2015a). A number of educational resources, such as “My Changing Body,” which focuses specifically on puberty, have been developed and are being used in a number of settings (IRH 2015b).

The time around puberty also offers a potential point of intervention as it may coincide with engagement with the health system (e.g., school requirements for physical health examination or immunization). Some research has

Understanding the physiological, emotional, and social implications of puberty is key to mitigating sexual and reproductive health risks among adolescents.

examined the feasibility and effectiveness of pairing the delivery of specific health interventions at this time. For example, a Global Alliance for Vaccines Initiative conducted a systematic review of adolescent health interventions that could be delivered alongside administration of the human papillomavirus (HPV) vaccine to VYAs, including iron supplementation, menstrual hygiene education, and SRH education, among others (Hindin, Bloem, and Ferguson 2015). While synergies exist, more experimentation is needed.

Life skills education

Life skills education (LSE) is viewed by many as an important mechanism to equip young people with the skills and resources to navigate the risks and challenges of adolescence and to enable productive participation in society (UNICEF 2012b). LSE has been used to teach a broad set of social and behavioral skills that are intended to enable young people to deal effectively with the demands of everyday life. Intended outcomes of LSE include a wide range of skills and knowledge such as: critical and creative thinking, decision-making, effective communication, as well as skills for developing healthy relationships and positive self-concept. These skills are considered universally applicable, but certain psychosocial skills have been identified as especially relevant for contending with specific risks, such as HIV and violence, among others.

Well-designed savings programs can empower girls to make good decisions in critical areas of their lives, such as sexual and reproductive health and education.

While well-conceived gender and age-specific life skills programs hold promise, more rigorous evaluation is needed. To date, there has been no systematic review of the impact of LSE on specific outcomes for VYAs, either girls or boys. Given the varying definitions of LSE, the range of implementation models, and the diversity of thematic areas (i.e., HIV/AIDS, health, environment, etc.), measuring outcomes is particularly challenging. Clarifying the specific life skills that are relevant for girls and boys, at which ages, in which particular settings, and the best program model for delivery, will allow for more robust measurement of outcomes.

Financial education and savings

Adolescents are both current and future economic actors whose decisions and actions will shape the development of their societies. Promoting financial education for young people is essential to ensure a financially literate population capable of making informed decisions. Having the skills to manage financial resources at an early age can lessen social and financial vulnerability and thereby reduce the risk of poverty (UNICEF 2012a). There are benefits to introducing financial education early, while young people are still in the process of formulating personal financial behaviors (Mandell 2009). Early adolescence is a time to build critical money-management skills and develop savings

habits. These skills will help adolescents meet short-term goals and daily financial needs, mitigate the effect of household emergencies, and plan for a healthier, more stable future (Austrian and Muthengi 2013).

Financial education can provide young adolescents with a better understanding of financial matters by teaching principles of planning, money management, budgeting, saving and spending, investments, and credit. Moreover, financial education exposes young people to various types of financial systems and teaches them how to interact effectively with different service-delivery channels, such as online and mobile phone banking (UNICEF 2012a). This type of education, combined with the opportunity to participate in savings schemes (either individual savings or group-based savings clubs), can be an extremely powerful tool for young people. In a South African experiment, financial education was found to increase girls' (not boys') social capital, and having a financial goal was associated with a higher likelihood of girls having accessed HIV testing (Hallman, Govender, and Roca 2007 and 2015).

A recent systematic review of financial education research studies revealed a wide range of programs and content being delivered in diverse ways and settings. The results of this review suggest that financial education is effective in improving knowledge, attitudes, and behaviors, and produces tangible gains in financial capacity among children and youth (O'Prey and Shepard 2014). While the degree of methodological quality varies across studies, some of the most rigorous studies are also the most recent, suggesting that the evidence base is improving over time. The 2015 four-country YouthSave LMIC study showed promising results for VYAs and pointed to the importance of lowering legal age limits for saving accounts, providing alternative adult account cosigners when

parents are absent or deceased, increasing girls' access to ID documents, and reducing girls' spatial constraints by providing banking services where they already assemble (Johnson et al. 2015).

There is growing recognition on the part of national governments, multilateral and nongovernmental organizations (NGOs), and financial service providers of the importance of financial education for adolescents. However, no universally accepted best practices exist for integrating financial, social, and livelihoods education for young adolescents. In recent years, attention has focused on experimentation with financial education and savings programs for adolescents, particularly girls. This is an important avenue for intervention given that as adolescent girls grow and take on more personal and household responsibilities, the need to access money also increases. Well-designed savings programs can empower girls to make good decisions in critical areas of their lives, such as health care and education. We argue for increased attention to program and research in this area.

Efforts to reduce child marriage

During the past decade, child marriage prevention programs have expanded in number; the largest number of evaluated programs is in South Asia, especially in Bangladesh and India, as well as in Ethiopia. Programs in a broader range of African and Middle Eastern countries are also adding to the evidence base on what works (Malhotra et al. 2011). Research aimed at determining the most effective strategies to reduce child marriage has been conducted or is underway in a number of settings. For example, in Bangladesh and Ethiopia, the Population Council and its partners are implementing multi-component programs aimed at delaying marriage (Erulkar and Muthengi 2009; Amin et al. 2014).

Interventions that combine girls' empowerment, community mobilization, enhanced schooling, economic incentives (including cash transfers), and policy changes have shown effectiveness in reducing child marriage in several settings.

While there is no singular approach proven to be effective at combating child marriage in all settings, a set of strategies focusing on girls' empowerment, community mobilization, enhanced schooling, economic incentives (including cash transfers), and policy changes have shown effectiveness in reducing child marriage in several settings (Malhotra et al. 2011; Erulkar and Muthengi 2009; Amin et al. 2014). A 2011 study by the International Center for Research on Women identified 150 initiatives to prevent child marriage that provide skills and education for girls and encourage families and communities to change gender norms that perpetuate early marriage. Programs working directly to empower girls and their families appear to be more effective than efforts to change laws or policies alone (Malhotra et al. 2011).

The role of guardians in the lives of VYAs: The promise of parenting-skills interventions

The statistics presented in Section 3.3 show that most VYAs reside with one or both parents. Parents and guardians therefore represent a powerful and underutilized resource to improve adolescent outcomes

in LMICs. Research shows that stronger parenting skills among VYA caregivers may reduce the harmful impacts on adolescent development of residing in a low-resource setting (Mejia, Calam, and Sanders 2014). Although wide variations exist across and within LMICs, many are characterized by high levels of poverty, income inequality, and social disorganization, and the health and social support systems in place to deal with these challenges are often woefully under-resourced (Knerr, Gardner, and Cluver 2013). These conditions increase risks for interpersonal and intra-family violence (IOM 2008) (discussed in Section 3.5). Poverty itself may exacerbate the

risks for emotional and behavioral difficulties in children and families (Slopen et al. 2010). Such circumstances point to the need for effective parenting interventions in LMICs (WHO 2001; WHO 2009).

The potential of parenting-skill programs in LMICs is great. Interventions present an opportunity for increasing positive parenting practices, improving parent-child relationships, and reducing abusive parenting behaviors. Improvements in these have, in turn, shown subsequent healthful effects on children's brain architecture, psychological and social functioning, mental health, later health-risk behaviors and life expectancy

EDUCATION

KEY OBSERVATIONS FROM THE LMIC LITERATURE INCLUDE:

- The percentage of VYAs in LMICs completing primary school increased greatly between 2000 and 2015.
- Primary completion rates remain very low in West and Central Africa and selected Middle East and North Africa (MENA) countries.
- Parents and students underestimate the economic returns to additional years of education and thus underinvest in schooling.
- Conditional cash transfers (CCTs) and unconditional cash transfers (UCTs) raise VYA primary attendance. CCTs are more effective than UCTs for both sexes, but especially for girls.
- School-based health interventions increase primary-school participation.

PARENTING

KEY OBSERVATIONS FROM THE LMIC LITERATURE INCLUDE:

- Few studies focus on the VYA age group.
- Most studies report either parent or adolescent outcomes, and few report on both.
 - Of the studies reporting on parenting practices, the vast majority assess only parent-child communication.
 - There is a lack of measurement of other parental behaviors, including involvement or disciplinary methods.
 - A minority assess parental knowledge or attitudes.
 - Only one study reported on child behavioral outcomes.
- Regarding reporting methods, there are no studies with direct observation of parent-child interactions (considered the gold-standard in parenting research).

(Larkin, Beckos, and Shields 2012). Despite evidence of such interventions being effective across multiple socioeconomic strata and ethnic groups within high-income countries (Kumpfer et al. 2008), there are few studies of parenting interventions in LMICs.

Although calls by international bodies to expand global research on these approaches (UNODC 2009; ISPCAN 2007; WHO 2009; Knerr, Gardner, and Cluver 2013) have initiated the conversation, LMIC studies remain scarce, and among parenting interventions in LMICs (Eshel et al. 2006; Butchart 2006; Kumpfer et al. 2008), there are few rigorous evaluations. A review of 26 high-quality review articles on child maltreatment prevention approaches (Mikton and Butchart 2009) found a total of 298 well-structured studies, of which all but two were from high-income countries. A review of interventions with parents to promote the sexual health of their children (Wight and Fullerton 2013) revealed robust evaluations of 44 programs, of which only four were from LMICs. A review with a dedicated focus on LMICs examined positive parenting programs to prevent violence (Knerr, Gardner, and Cluver 2013) and found only 12 evaluations with RCT designs. Mejia and colleagues reviewed evaluations published since 1990 of LMIC programs for parents and caregivers with children up to 12 years of age, and found 44 qualitative and quantitative studies (Mejia, Calam, and Sanders 2012).

Among the parenting-skills interventions in LMICs found within the various review studies and through a search of the literature by the authors, there were six evaluated programs that included participants within the 10–14-year age group that were offered nonselectively to potentially at-risk populations and were preventative in nature (versus treatment interventions offered to individual children identified as having specific problems). The box titled “Key Observations from the LMIC

Research conducted in low-resource settings has demonstrated that stronger parenting skills may reduce harmful impacts on adolescent development.

Parenting Literature” summarizes our findings from those six studies (Baptiste et al. 2009; Peña et al. 2008; Phetla et al. 2008; Villarruel et al. 2008; Kagitcibasi, Sunar, and Bekman 2001; Van Wyk, Eloff, and Heyns 1983; Wight and Fullerton 2013).

Despite the promise they hold for LMIC populations, there is a clear lack of high-quality studies of parenting-skills interventions generally and in particular with very young adolescents. Studies of parenting-skills programs with VYAs are needed that have sufficient sample size, rigorous design (experimental or quasi-experimental), assessment of both parent and child behavioral outcomes, and measurement not only by self-report behaviors but also by direct observations of parent–child interactions.

Engaging and keeping VYAs in school

Although the percentage of children in LMICs completing primary school increased greatly between 2000 and 2015 (UN 2015), very young adolescents continue to face educational challenges. These challenges remain despite the fact that education is a basic human right and the presence of compulsory school attendance laws in many countries. As articulated in Section 3.2, the transition from primary to secondary school remains a particular challenge in LMICs and, in part, relates to the low demand by parents for children’s

The transition from primary to secondary school remains a particular challenge in LMICs and, in part, relates to the low demand by parents for children's education (especially girls).

education (especially girls). Poor nutrition and common parasitic infections can interfere with learning and achievement.

The school environment has the potential to hinder attendance and performance. As described earlier, school safety is perceived to be an educational barrier, especially for girls, though data to confirm this hypothesis is limited. Teacher attendance and pedagogical methods are also issues of concern, though poorly understood in LMICs. Experimentation regarding policy solutions has taken place for some of these challenges. For example, interventions providing accurate information on the returns to schooling have led parents to revise their beliefs about the value of education (Nguyen 2008; Jensen 2010). There is also data showing that local female role models can increase the educational attainment of girls (Banerjee et al. 2013; Beaman et al. 2012).

A recent review of studies on financial incentives for education (Baird et al. 2014) concludes that primary school attendance and completion are responsive to cost and that poorer households have the greatest schooling increases after cost reductions. Both conditional cash transfers (CCTs) and unconditional cash transfers (UCTs) improve the odds of VYAs being enrolled in and attending school, with larger effect sizes for CCTs. Among cash transfer programs that include

conditions, those with explicit rules, compliance monitoring, and noncompliance penalties have the greatest impacts.

The impacts of CCTs and UCTs appear to be similar for boys, but CCTs seem to be more effective for girls' attendance. This may be because parents are more likely to send boys to school anyway, and the conditionality serves as an enforcement mechanism for girls' attendance. We found no research on cash transfer experiments supporting the transition from primary to secondary school; we recommend these, especially for girls.

There is little evidence that cash incentives improve student learning, in part because cash transfers tend to draw more poorly prepared students into the system. There is also no empirical proof that financial rewards that are conditioned on student performance improve academic achievement. No research was found on the impact of increasing monetary credit (loans) to households for education in LMICs.

Some VYA health issues have been addressed in the school setting. At the primary school level, studies have demonstrated that school-based deworming, iron fortification and iodine supplementation increase school participation (Kremer and Holla 2009). There is no evidence, however, from similar experiments at the secondary-school level in LMICs.

Qualitative studies indicate the importance of school sanitation on girls' enrollment (Birdthistle et al. 2011). Research using annual school-level data from India compares schools that received latrines during a national school-latrines construction initiative to similar schools that did not (Adukia 2013). Latrine construction increased enrollment of all students. At younger ages, girls and boys benefited substantially from a latrine, regardless of whether it is unisex or sex-specific. At older ages, however, only sex-specific latrines

increased girls' enrollment and these effects persisted at least three years after the latrines were made available.

Initiatives to increase school safety are being piloted. "Whole school" interventions designed to combat school violence are being supported by large bilateral organizations in cooperation with UN agencies (Fulu, Kerr-Wilson, and Lang 2014). The "Good School Toolkit," developed by Raising Voices to reduce physical violence from school staff to primary school children in Uganda is the first randomized controlled trial intervention to reduce school violence among young adolescents (Devries et al. 2015). The intervention included training in specific behavior-change techniques for staff, students, and administration, including: setting school-wide goals, developing action plans with specific dates for deliverables, encouraging empathy by facilitating reflection on experiences of violence, providing new knowledge on alternative nonviolent discipline, and providing opportunities to practice new behavioral skills. Results also showed that the intervention improved students' feelings of safety at school, showing the potential to improve the school environment for VYAs.

At the primary-school level, pay incentives for teacher attendance improve student achievement. Incentives tied to student test scores have shown mixed results. Studies are needed on whether these incentives could increase students' performance as they begin secondary school. Although curriculum and pedagogy are subjects of growing interest, it is not known which approaches are most effective. Provision of ICT has potential, but only one study examined the potential of ICT on student learning. This was at the primary-school level and it did not show improvements to student learning (Barrera-Osorio and Linden 2009). Clearly, more research is needed on the potential impact of ICTs on learning.

4.3 Programs that hold promise, but more evidence is needed

Preventive health services addressing the specific health needs of VYA girls and boys are virtually nonexistent in LMICs. When considering the potential constellation of health and social services that young adolescent girls and boys might need, the Population Council and its partners developed an illustrative "Wellness Check" (see Table 5) that outlines key health and social elements of relevance for this age group. Some of these elements have been pilot tested in Rwanda and elsewhere, but a comprehensive approach to a "Wellness Check" remains under explored.

Experimentation with some or all of these components, specifically tailored for girls and for boys, is needed, and would be worthy of investment. Such efforts would encourage systematic health checks-ups and the collection of health-monitoring data, and would begin to create a "culture of health." This is a potentially pivotal time in which to establish health-seeking behaviors and create a demand for health services (Temin and Levine 2009).

Promoting mental health

To better ensure the healthy transition of VYAs into adulthood, research has characterized the risk and protective factors associated with mental disorders among adolescents in an effort to inform intervention (see Table 6) (Patel et al. 2007; Sawyer et al. 2012). Evidence from systematic reviews has demonstrated the potential of mental health interventions in childhood or adolescence.

A 2013 review of mental health promotion interventions for young people ages 6 to 18 in LMICs found moderate to high evidence for both school-based and community-based interventions on emotional and behavioral outcomes (Barry et al. 2013). Of the 22 reviewed interventions, programs included

TABLE 5 Illustrative “Wellness Check” components for VYAs should be tailored for girls and for boys

HEALTH	SOCIAL
<ul style="list-style-type: none"> • Physical exam • Immunization review and catch-up • Nutrition/growth check-up • Sexual and reproductive health information and services • HPV vaccine* • HIV and AIDS prevention information • Violence screening and support • Mental health screening and support • Injury screening and prevention • Physical activity/play/sports check-in 	<ul style="list-style-type: none"> • Counseling • Life-skills building • Educational assessment and support • Peer and social-support screening and improvement • Drugs/alcohol/smoking screening and support for addiction prevention • Family wellness and social support • Citizenship and social-participation skill-building, including acquisition of ID documents

Source: Catino 2012.

*NOTE: The World Health Organization recommends that girls ages 9–13 years receive the human papillomavirus (HPV) vaccine. While ideally both boys and girls should be vaccinated, given the cost limitations of the vaccine and the challenges of getting boys vaccinated, targeting girls and increasing coverage for girls is a priority.

TABLE 6 Risk and protective factors associated with adolescent mental health outcomes

	RISK FACTORS	PROTECTIVE FACTORS
Biological	Exposure to toxins in pregnancy Genetic background Malnutrition Perinatal and postpartum depression Other illnesses	Prenatal support programs Good physical health and nutrition Postpartum support for mother
Physiological	Developmental and behavioral problems Physical and emotional abuse Neglect	Enhanced self-esteem Social skills Problem-solving ability
Social		
<i>Family</i>	Family conflict Inadequate caregiving	Family attachment Positive family involvement
<i>School</i>	Educational disadvantage Inadequate learning environment Bullying, harassment, victimization	Educational opportunities Rewarding educational achievement Identity with school
<i>Community</i>	Transitions (e.g., urbanization, conflict, displacement, war) Discrimination/marginalization Exposure to violence	Connectedness to community Positive role models Rewards for community involvement

Source: Adapted from Patel et al. 2007.

focus on life skills, recreation and resilience training, cognitive behavioral strategies, family skills building, and psychosocial interventions for children affected by armed conflict. The review findings highlight the potential of multi-component programs, which partner delivery of school-based social and emotional skill training with parents and the larger community. In some cases, differential effects were observed by gender, signifying the need for further gender-specific research. Although not explicitly tested among adolescents, evidence also suggests the potential of task shifting for the delivery of mental health services, including psychological interventions for perinatal depression, by trained lay workers in LMICs (Patel et al. 2011; Chowdhary et al. 2014).

While results from these studies show promise, globally only 10% of mental health interventions have been evaluated in LMICs, while even fewer have included adolescents.

To inform culturally appropriate and youth-specific mental health services, research on the magnitude and specific mental health needs of VYAs in local settings is needed. There is also a need to strengthen information systems related to mental illness. A review of WHO member states, for example, found that few countries, and fewer developing countries, had a health services data monitoring system that included measurement of mental health (8 in 20 high-income countries compared with 1 in 16 low-income countries) (WHO, WPA, and IACAPAP 2005). Measurement is also complicated by the current classification of mental illness. Current standards typically rely on standard DSM-V criteria and are based on clusters of symptoms that may be observed in a limited fraction of the population (Jacob and Patel 2014). As a result, many adolescents who are at risk of mental health issues but who do not yet display clinical symptoms are likely to be missed.

In many LMICs, only a small proportion of adolescents with mental health issues receive appropriate treatment and support (Morris et al. 2011). Common barriers identified in a 2012 WHO review of adolescent mental health programs found that lack of government or national policies related to mental health hampered service development, accountability, and resource allocation (WHO 2012a). Existing mental health programs identified in the review often failed to reach adolescents, were not tailored for young people, had high out-of-pocket costs, or were planned according to an NGO or organizational mission, rather than the needs of the local population.

Promoting the mental health needs of very young adolescents is a global challenge, but one with the potential for large public health impact. Increasing evidence shows that early interventions can provide long-term health benefits as young people transition into adulthood. Events such as the establishment of the Movement for Global Health, an online research and advocacy forum, and the WHO Mental Health Gap Action Program (mhGAP), which provides evidence-based recommendations to scale-up services in LMICs, show a growing recognition of the relevance of mental health in global development (Patel, Boyce, et al. 2011).

The benefits of good nutrition, physical activity, and sports

Sports and physical activity have been shown to have positive social and mental health benefits throughout the lifecycle. For example, the physical and mental health benefits of sports has been well documented: regular participation in sports promotes physical fitness, helps reduce chronic disease, and boosts mental health by reducing symptoms of stress and depression (CDC 2015). A growing body of research

A young person's participation in sports can lead to healthy fitness habits for life, which helps reduce chronic disease and boosts mental health by reducing symptoms of stress and depression.

supports the important conclusion that a physically active lifestyle lowers risk for heart disease, certain cancers, obesity, and osteoporosis (Staurowsky et al. 2015; WHO 2015; CDC 2015). In 2004, the World Health Organization put forward a “Global Strategy on Diet, Physical Activity, and Health” to catalyze action to improve national diets and increase physical activity. More recently, WHO adopted a Global Non-communicable Disease (NCD) Action Plan 2013-20 that includes key indicators related to diet and physical activity (Puska 2004). Taken together, these efforts are designed to reduce disease and death rates related to unhealthy diet and physical inactivity.

Good nutrition and adequate physical activity are modifiable behaviors that can stem the rising incidence of NCDs observed in HICs and LMICs (see Section 2.2). Of significant concern is the global rise in unhealthy bodyweight among young people, as obese children and young adolescents are likely to become obese adults and to suffer from poor self-image that can interfere with positive development. A review of school-based obesity interventions in LMICs has highlighted the potential of interventions that target dietary behavior and/or physical activity in children and adolescents. Findings suggest interventions that target both diet and physical activity,

involve parent role models for healthy behavior, and integrate educational activities into school curriculum can improve physical health outcomes among adolescents, although few studies reviewed presented anthropometric outcomes (Verstraeten et al. 2012; Hingle et al. 2010). School-based interventions that include nutrition supplement programs, such as iron fortification, in addition to education on food diversity can be particularly effective in improving nutritional outcomes, such as reducing the prevalence of anemia, which is of particular concern among pregnant girls (see Section 2.3) (Black et al. 2013).

Sports and play are also associated with healthy child development and self-efficacy, and appear to have therapeutic effects post-trauma. Increasingly, sports have been used as delivery platforms for health messages and campaigns; only a few have been rigorously evaluated (Clark et al. 2006). Despite the clear evidence that sports and physical activity promote good health, social and cultural norms have prevented women and girls from participating in sports. However, the recent emergence of new sports opportunities for girls represents a departure from the traditional scripts of femininity (Brady 2011a).

Sports participation helps transform the ways girls view themselves and the ways in which their families and communities perceive them, which can contribute to shifts in gender norms. Girls' entrance and visibility in the public arena challenge cultural myths of acceptable gendered behavior. Participation in sports draws girls into a network of institutions, programs, mentors, and role models to which they would otherwise not have access. These connections are extremely valuable and often lacking for girls. This social capital has been shown to have myriad benefits for girls, including as a protective factor against non-consensual sex (Hallman 2011).

Late childhood and early adolescence (10–12) is a time when girls typically enjoy the freedoms afforded boys in terms of mobility and physical activity before many of the gendered restrictions set in. Social norms around girls' and boys' mobility, leisure pursuits, and access to public space begin to become evident around the time of puberty; safety concerns for girls are heightened, and thus their mobility is often curtailed (Hallman et al. 2014). Research suggests that early engagement in sports and physical activity is important, especially for girls; if they are not engaged by early adolescence, they are less likely to do so later in life. The early adolescent period provides an opportune moment for getting VYAs engaged in sports and physical activity, which provides immediate and long-term benefits.

VYAs and information and communication technologies (ICTs)

ICTs offer the potential to educate and empower young adolescents, particularly as VYAs are often “early adopters” of new technologies (Raftree and Bachan 2013). For example, an analysis of countries with available data shows that young people under the age of 25 are more likely to use the Internet relative to those aged 25 and older (UNICEF 2012c).

A growing, albeit limited, body of research has sought to systematically examine the efficacy of interventions utilizing ICTs to improve adolescent outcomes. Most research has taken place in high-income countries (Guse et al. 2012; Lau et al. 2011). Results of systematic reviews that have focused on ICT-based interventions among adolescents have to date been mixed and vary by outcome. For example, a study in Brazil and Kenya randomized schools to enroll students in either an online sexual health intervention or to simply provide access to electronics without the Internet (Halpern et al. 2008). At follow-up there were significant differences in knowledge and attitudes between intervention and comparison

groups; however, the degree of change was small and the direction of the effect was not always in the anticipated direction.

Additionally, some ICT-based programs that target adolescent girls have encountered parental and community resistance over concerns related to social norms on appropriate behaviors for girls, despite being shown effective. For example, in an effort to improve literacy among adolescent girls in Pakistan, girls were provided with a mobile phone and a prepaid connection, and received texts messages from teachers on topics related to health, nutrition, and religion. After efforts to educate families on the nature of the text messages and their benefits to literacy, acceptance of the program improved, showing ICT-based interventions have the potential to affect social change at multiple levels (GSM Association 2013b). Other ICT-based interventions that are targeted to the general population, such as the “Half the Sky Movement Media and Technology Engagement Initiative,” also show the potential to promote gender equality, through film, online educational tools, and mobile learning games (Dasgupta et al. 2012).

While results from ICT-based interventions hold promise, more research from studies employing rigorous designs is needed to build a robust evidence base on the effectiveness of ICTs in general, and with particular regard to their use by VYAs. In addition, evidence-based strategies are needed to guide and support young adolescents to appropriately use ICTs. By equipping adolescents to become informed users of ICTs, VYAs can better avoid risks such as unsuitable Internet content, online predatory behavior, and the unintended sharing of private information (Raftree and Bachan 2013). To ensure full implementation, parallel strategies are needed to address barriers such as gender norms and cost, so that the most underserved adolescents have the potential to benefit.

Programs responding to VYAs in acute and specialized circumstances

Humanitarian, crisis, and emergency settings

There appear to be common activities that VYAs are thrust into during crises (CAG 2012). Even as young adolescents take on greater responsibilities to ensure the survival of family members, adults and aid workers do not recognize the enormity of their actions in buttressing the health and social well-being of the family during crisis. As is often the case with unpaid labor, the care and productive activities that VYAs engage in remove them from the public eye, resulting in their invisibility to crisis response actors. Because of this lack of visibility, humanitarian response programs—as currently designed—typically neglect young adolescent girls and boys as distinct populations.

Emergency response efforts often fail to address the needs of female versus male VYAs. Some relief activities inadvertently neglect adolescent girls, for instance, by assuming that their ability to move about the community or camp is the same as it is for boys or adult women (CAG 2012). Research has shown that even in noncrisis settings, safety concerns highly curtail pubescent girls' spatial access to the community relative to boys (Hallman et al. 2014). Sex-specific safe spaces for girls and boys in humanitarian contexts are therefore being explored as a programming tool (Browne 2013).

Economic strengthening (financial education, vocational training, and microcredit) is being examined as a mechanism for reducing the risk of gender-based violence for young adolescents in humanitarian settings (Caton et al. 2014). A recent three-country study led by the Women's Refugee Commission and Johns Hopkins University concluded that it is critical to involve parents, peers, friends, teachers,

and health providers in knowledge and awareness-building of the needs and risks for VYAs in humanitarian settings (WRC et al. 2014).

Evaluation of emergency relief policy and programming has to date had little focus on the needs of very adolescent girls or boys as particular populations. A shift is beginning, however. The WRC-JHU study (WRC et al. 2014) purposefully engaged VYAs in Ethiopia, Lebanon, and Thailand around sexual and reproductive health knowledge, risks, and needs. A consortium of development and relief agencies has formed a task force called "Adolescent Girls in Emergencies Working Group" to establish programmatic and research priorities for girls in emergency settings. This group posits that there are, in fact, few programmatic or research tools relevant to the needs of VYAs in emergencies. Consortium partners have recently identified five phases in the response cycle to an emergency in which needs differ by gender and age. Of the little existing research on VYAs in emergencies, most focuses on the later stabilization and recovery periods. Programmatic interventions for young adolescent girls and boys need to be formulated for the earlier phases of the cycle too.

Funders and actors within the humanitarian realm need to assess the specific challenges that adolescent girls and boys face in emergency settings and develop concrete sex-specific recommendations. Providing VYAs with accessible services, safe spaces, and support could not only reduce their risks but also lead to a more robust overall response, particularly given the invisible leadership roles young adolescents assume on behalf of their families. Identifying and designing program features that reduce these large but unrecognized burdens could lessen the likelihood of their experiencing large and irreversible health, psychosocial, and educational deficits.

NOVEL APPROACH DEVELOPED BY THE ADOLESCENT GIRLS IN EMERGENCIES WORKING GROUP

The “**I’m Here Approach**” for action research engages with girls in emergency settings. Tools are included to accompany each action (Robles 2014).

Within the crisis setting, programs should:

Identify the specific crisis-affected community where displaced adolescent girls are concentrated and map the key service points where humanitarian actors are delivering emergency information and services.

Make the universe of adolescent girls visible: sort them into basic vulnerability and capacity categories, e.g., age, marital status, education, accompaniment status, and childbearing status.

Hold group meetings with adolescent girls of similar vulnerabilities or capacities to learn girls’ urgent needs, fears, and protection concerns, as well as to record the vital information, skills, and assets they need to overcome the negative consequences of displacement and to mitigate their risks of experiencing violence.

Elaborate specific plans that respond to the universe of girls in the crisis-affected area, e.g., set up safe physical spaces where girls can immediately learn about and receive vital information and services and, as soon as possible, benefit from targeted, asset-building support.

Rally support across humanitarian sectors and with local actors around the need for adolescent-sensitive emergency response, strategies, indicators, and rights.

Engage the capacity of adolescent girls to support humanitarian response and recovery operations.

Voluntary migrants: Guidance available on internal migrants but lacking for cross-border cases

Young adolescents are affected by migration in all regions of the world, but the understanding of its effects is highly limited. Data collection, monitoring, and research are needed to better understand how migration affects societies, families, and adolescents at countries of origin and settlement; to inform policies to mitigate adverse impacts; and to enable families and

children to make informed decisions about movement. The Girls on the Move study (Temin et al. 2013) provides policymakers, program planners, and funders with evidence on the circumstances of internal migrant girls in the developing world, and offers eight recommendations to minimize the negative aspects of migration and maximize its benefits for adolescent girls in the developing world.

VYAs who migrate internationally face additional challenges. Many cross borders without

GIRLS ON THE MOVE: ACTION AGENDA FOR IMPROVING THE LIVES OF MIGRANT ADOLESCENT GIRLS

- 1. Prepare and equip girls before they migrate:** Ensure education, life skills, knowledge of rights, IDs.
- 2. Make health and education services “migrant girl friendly”:** Ensure that service providers are sensitive to age, sex, and migration status.
- 3. Ensure a smooth landing for migrant girls:** Reduce isolation through safe places to stay and links with trusted individuals.
- 4. Build a safety net:** Create time and space for migrant girls to meet with peers, mentors, and support networks.
- 5. Test innovative ways to prepare migrant girls for success:** Investigate ways to develop girls’ assets before things go wrong.
- 6. Focus on the most isolated and vulnerable:** Design girl-only approaches to reach domestic workers, child brides, and sexually exploited girls.
- 7. Fill critical evidence gaps:** Illuminate age- and sex-disaggregated internal migration rates using new and existing quantitative data. Develop qualitative and longitudinal studies to shed light on migrant girls’ experiences, as well as to evaluate and improve programs.
- 8. Increase migrant girls’ visibility through policy and advocacy:** Maximize the benefits of migration for adolescent girls by increasing their visibility in policy engagement and advocacy efforts.

legal permission and become noncitizens. Most existing legal frameworks do not directly address this consequence. Domestic child protection laws do not cover issues of foreign citizenship, including the risk of deportation and lack of entitlement to social benefits that noncitizen children face. What’s more, migration law, which establishes the parameters of lawful status for recognized categories of migrants, does not make provisions for the needs and circumstances of most children and adolescents who travel independently of their families (Bhabha 2008).

Regional and domestic legislation regulating immigration has included provisions promoting family unity and the right of minors to join their adult relatives. A broader engagement around cross-border migrant minors is needed, however. There is little international or regional legislation that systematically and comprehensively addresses minors’ needs. As a result, the existing legislation is reported to be inconsistent and incomplete with regard to international child migrants, including very young adolescents (Bhabha 2008).

Trafficked adolescents: Health providers can be a key ally in identifying and aiding victims

Equipping health providers with knowledge and skills is another promising area of intervention. Studies suggest that up to half of sex trafficking victims in the United States (most from abroad) seek medical attention while in their trafficking situation, yet it is unclear how the health care system responds to the needs of victims of sex trafficking. Health services for victims are patchy and poorly coordinated, particularly in the realm of mental health (Konstantopoulos et al. 2013; Baldwin et al. 2011; Family Violence Prevention Fund and World Childhood Foundation 2005). Various factors function as barriers to a greater health response, including low awareness of sex

trafficking and attitudinal biases among health workers. A more comprehensive and coordinated health system response to sex trafficking may help alleviate its devastating effects on vulnerable women and girls.

There are no clinically validated screening tools for young adolescents, older adolescents, or adults specifically designed to identify victims in the health care setting. Given that victims seldom self-identify, it is likely that the majority of victims are unrecognized (Greenbaum 2014). The opportunity for comprehensive assessment and intervention is then lost.

Health care professionals can work to improve the screening, identification, and assistance of victims of sex trafficking in a clinical setting and help these women and girls access legal and social services. Health care providers represent one of the few groups of professionals who may come into contact with victims of sex trafficking. Health care professionals can work to improve the screening, identification, and assistance of victims of sex trafficking in a clinical setting and help these girls and women access legal and social services.

Research with VYAs: Collecting information to inform programs and policy

5



5.1 Studies that include available data on VYAs

Research on young adolescents is emerging but still requires further innovation, testing, and application. Without such methodological research, there will remain a paucity of information on the risks, needs, and capacities of this age group. In this section, we highlight the data that exists and discuss the ethical and methodological challenges we face when collecting data on VYAs. We begin by highlighting the major survey programs that include VYA data. Then we provide an overview of ethical considerations and highlight available guidance documents for those considering including VYAs in their research. Finally, we present an overview of methods and tools that could be used with VYAs in a research study.

Some information about VYAs can be found in existing datasets on child health and development, or may be embedded as the younger end of the age range in surveys with adolescents and youth more generally. It is noteworthy that data about the lives of young adolescents is limited and does not appear in any one collected place; it must be gleaned from a variety of sources. There are, however, a number of survey programs that include VYAs in their scope.

Survey programs that have a primary focus on the VYA age group

Examples of major survey programs that collect data from young adolescents themselves are presented in Box 1. Survey programs, such as the UNICEF/CDC Violence Against Children Surveys (VACS), which ask sensitive questions related to experiences of violence (see Box 2) have been successful in large part due to deep stakeholder involvement and responsiveness to ethics boards within each country of focus. In the United States, there have also been studies in which children as young as 10 years

of age have been interviewed about sexual violence (Finkelhor et al. 2005). Additionally, the ISPCAN Child Abuse Screening Tool (ICAST) has been used in multiple countries to collect data on the extent and nature of child abuse among children between the ages of 12 and 17 (Zolotor et al. 2009). Such tools require local adaptation and pretesting among a small group of respondents with similar characteristics to the study population.

Survey programs with non-VYA respondents that include information about VYAs

A number of large survey initiatives are good sources of information about VYAs that were reported by an adult respondent of the household. Many of these include data on VYA health, anthropometry, education, and work, among other topics. Such surveys include, but are not limited to, the Demographic and Health Surveys (DHS), the HIV/AIDS/STD Behavioral Surveillance Surveys, UNICEF's Multiple Indicator Cluster Surveys (MICS), and the World Bank Living Standards Measurement Surveys (LSMS).

5.2 Ethical considerations in primary research with VYAs

While the survey data described above provide some information on the age group of interest, they are not exhaustive of topics or regions. Primary data collection with VYAs may therefore be warranted. Most researchers are justifiably cautious when considering whether to include VYAs in their studies. Lack of comprehension, ethics and safety, IRB approval, as well as possible high rates of nonresponse are concerns (Chong, Hallman, and Brady 2006). Fear, stigma, shame, and social desirability bias may render invalid VYA responses to questions on sensitive behaviors such as sexual activity or experiences of violence. Retrospective

BOX 1 Major survey programs featuring data from respondents older than 14 that include information about VYAs

Demographic and Health Surveys (DHS). The DHS Program collects nationally representative data on health, population, HIV/AIDS, and nutrition in more than 90 LMICs. Available datasets from the DHS include household survey data, which include indicators on household residents of all ages. In addition to household surveys, individual surveys are conducted with women ages 15-49 and men ages 15-49, 15-54, or 15-59. Data presented on adolescents and young people are from both household surveys (age group 10-14) and individual surveys (ages 15+). The data are weighted to be representative at the national, urban/rural, and regional levels. For more information, visit www.dhsprogram.com/data/.

Health Behavior in School-aged Children (HBSC). HBSC collects data on school-going young people aged 11, 13, and 15 using self-completed questionnaires administered in the classroom. Membership is currently restricted to countries within the European region; 36 countries participated in the 2001–02 round of data collection. The core set of questions looks at background factors, individual and social resources, health behaviors, and health outcomes. For more information, visit www.hbsc.org.

HIV/AIDS/STD Behavioral Surveillance Surveys (BSS). UNAIDS, WHO, Family Health International, and other agencies have worked to develop a framework for HIV surveillance that is appropriate to the stage of the epidemic within a country. BSS data track trends in HIV/AIDS knowledge, attitudes, and risk behavior in subpopulations at particular risk of HIV infection, such as female sex workers, injecting drug users, migrant men, and young people, and have been implemented in 15 African and Asian countries. Although the populations of young people surveyed typically do not include those younger than 15, the retrospective questions in the BSS yield important data concerning behavior in early adolescence. For more information, see www.fhi.org.

Living Standards Measurement Survey (LSMS). LSMS is a World Bank household survey program that collects data on topics related to poverty, as well as education, migration, income, agriculture, health, and fertility. In addition to information on household status, adult household respondents (aged 15 years or older) provide information on education and health outcomes for children and young adolescents. Surveys have been implemented in 36 LMIC countries since 1985. For more information, visit <http://go.worldbank.org/IPLXWMCNJO>.

Multiple Indicator Cluster Survey (MICS). MICS is a household survey program developed by UNICEF to assist countries in filling data gaps for monitoring the situation of children and women. The MICS website provides access to MICS datasets, surveys, tools, and resources, including close to 250 surveys in over 100 countries. MICS consists of three questionnaires: a household questionnaire, a questionnaire for women aged 15–49, and a questionnaire concerning children younger than age 5. Although the MICS does not survey very young adolescents directly, like the DHS it yields rich retrospective data and is an important source of information on out-of-school adolescents. Visit the MICS website at www.childinfo.org.

UNESCO Institute for Statistics (UIS). The UIS collects cross-sectional and nationally comparable data on education, literacy, science, technology, culture, and communication for more than 200 countries and territories either annually or biennially. Collected data are available for children who are primary-school age and older, who are either in school or out-of-school, as well as adults. UIS questionnaires and datasets are disseminated on the UIS Data Centre, as well as the UN Millennium Development Goals Report and Education for All Monitoring Report. For more information, see www.uis.unesco.org/UISQuestionnaires/.

BOX 2 Major survey programs with a primary focus on the VYA age group

The Global School-based Student Health Survey (GSHS). A collaboration between WHO and the CDC, the GSHS is a surveillance project designed to help countries measure and assess the behavioral risk factors and protective factors in ten key areas among young people aged 13–15. The ten areas are: alcohol and other drug use; dietary behaviors; hygiene; mental health; physical activity; protective factors; background demographics; sexual behaviors; tobacco use; and violence and unintentional injury. Twenty-two countries from all regions have either implemented the GSHS or are in the process of doing so. For more information, country fact sheets, and questionnaires, visit www.who.int/school_youth_health/assessment/gshs/en/.

Violence Against Children Surveys (VACS). UNICEF, in collaboration with the CDC and government partners, conducts national population-based surveys in several countries in Eastern and Southern Africa and the Caribbean to generate evidence on sexual and other types of violence against children. VAC research is now expanding to countries in the East Asia and Pacific Region. VAC research documents the prevalence of physical, emotional, and sexual violence against children, as well as the risk and protective factors associated with violence and its health consequences. Nationally representative surveys of young females and males ages 13–24 are collected using three-stage cluster household survey design to ensure data are representative at the national and subregional levels. For more information, visit www.cdc.gov/violenceprevention/vacs/publications.html.

Young Lives: An International Study on Childhood Poverty. Young Lives is a 15-year longitudinal study designed to improve understanding of the causes and consequences of childhood poverty. It includes 12,000 children in four countries: Ethiopia, India, Peru, and Vietnam. Through a household survey, two cohorts are followed in each country: children born in 2001–02 and 1994–95. In-depth interviews and case studies are also conducted to complement data collected on the material and social circumstances where children reside, by adding information on young people's own perspectives and aspirations. For more information, visit www.younglives.org.uk/what-we-do/access-our-data/access-our-data.

reporting by an older age group (e.g., 15–19 years) on behaviors and experiences while a VYA has frequently been relied upon, even though recall bias is a concern. The problem with this approach is that one does not learn what is happening with VYAs now. Box 3 presents questions to reflect upon when deciding whether or not to include VYAs as direct study respondents.

What ethical resources are available?

In cases where data collection with the VYAs appears justified, rigorous steps need to be taken to minimize potential harm to study participants. Guidance documents are available that draw on research from the child protec-

tion, sexual violence, and population studies fields. These include :

- *Ethical Research Involving Children (ERIC)*, a guide to ethical approaches for including children in international studies (Graham et al. 2013).
- *Child Protection Monitoring and Evaluation Reference Group*, on reducing research discomfort, distress, and trauma of child survivors of violence (CPMERG 2012)
- *Ethical Approaches to Gathering Information from Children and Adolescents in International Settings* (Schenk and Williamson 2005).
- *WHO Ethical and Safety Guidance Notes for Research with Adolescents* (WHO 2011).
- *Ethics Review Committee documentation on reproductive health research in LMICs* (Marie Stopes International, ERC documents).

Studies with VYAs require review by Independent Review Boards, both in the country where the study will take place and with the host institutions of research partners. It is also recommended that national child protection groups and local civil society organizations working on child protection be engaged to review study tools and provide advice on whether particular questions are likely to cause distress and require modification or extremely careful handling with VYAs.

Protecting VYA respondents during the research process

To minimize the risk of respondent distress, the attitudes of the research staff to the research issues (sex among VYAs, child abuse, child sexual violence, etc.) should be screened as part of their training and as part of the final decision about which individuals to hire for projects that deal with sensitive subjects. Training should include exercises to help the researchers examine their own attitudes and beliefs regarding the topics. The researchers need to be trained to listen carefully to the information received from respondents with a nonjudgmental attitude. They should be aware of the effects that the questions may have on the informants and how best to respond, based on the respondent's reactions. Interviewer training should include practice sessions on how to identify and respond appropriately to signs of discomfort, as well as how to suspend or terminate the interview if the impact of the questions becomes negative. A VYA-centered approach is recommended that allows the process to proceed at the VYA's pace and under the VYA's control (Mudaly and Goddard 2009). Local laws on conditions and processes for reporting child abuse also need to be codified for the research team and adhered to during the research process.

When exploring sensitive topics with VYAs, it can be helpful to have a debriefing with the respondent at the end of the data collection ac-

BOX 3 Should the research include VYAs?

In deciding on the main issue a study will explore, researchers should clarify whether questions to VYAs are necessary. *Does the question require the direct or indirect involvement of VYAs? Is each question appropriate? Can participants be hurt?* Particularly when research asks about exploitative or violent experiences, could respondents be further traumatized by answering questions or could there be retaliation to the child by adults whose actions may be reported on?

- **In defining the sample**, researchers should clarify whether VYAs can be harmed by being included in the sample or by virtue of being excluded.
- **In collecting data**, researchers should clarify whether there are any potential physical, psychological, social, or emotional risks to the subjects or those close to the subjects. What are the best research methods to be used? Who's the best person to approach the VYA? Can confidentiality of responses be ensured?
- **In explaining how the data will be used**, researchers should be clear and transparent with respondents and their guardians. Will results increase any stigma attached to respondents? How and where will the data be stored?
- **In sharing data and research results**, researchers should clarify how the results will be used. Researchers should have a clear plan for sharing the results with participants before it is more widely shared. Will the research be useful to the VYAs involved? How will the confidentiality and anonymity of participants be ensured?

tivity (Black and Ponirakis, 2000; Carroll-Lind et al. 2006). Researchers should be trained to look for signs that may indicate a need for clinical intervention, acknowledging to the respondent that some sensitive issues have been covered and providing information about obtaining professional assistance (Black and Ponirakis 2000). The respondent should be informed how to obtain confidential support locally (Carroll-Lind et al. 2006).

Finally, while terms such as “violence” and “exploitation” may be used in research proposals, extreme caution should be used during the fieldwork so as to not label respondents’ lives or experiences in a manner that may create or reinforce stigma. A concerted effort should be made to ensure that the research is not presented to, or becomes referred to by, community members as the “violence study” or by other unfavorable terms.

5.3 Research methods and tools

Guidance for conducting research with minors is concerned not only with protecting children but also with their ability to truly participate and fully understand the questions being posed. The goal of research with the VYA age group is normally to reveal respondents’ experiences and views in a way that is safe and constructive for them. Tools should ideally be VYA-centered to encourage active participation and allow their voices to be heard.

Research with VYAs will often fall into two general types: (1) what is the prevalence of a particular characteristic or outcome, and (2) what are the processes or explanations underlying how and why various phenomena occur. The former requires large, representative samples and a rapid diagnostic tool—usually a structured survey. The latter entails in-depth exploration with a small number of systematically selected types of groups or individuals using tools that are less structured.

Structured quantitative tools to establish prevalence

Community census mapping where VYAs reside—Household adult or guardian respondent

A census is used to establish where and how many people by age and sex reside in a defined geographic area. Global information system (GIS) technologies now allow us to quickly produce accurate spatial maps that depict these data. A recent application of community census mapping focused on the VYA population is the Girl Roster tool for program planning and targeting (Bruce and David 2015). With this tool, a 5–10 minute interview is conducted in each household in the community. Responses, along with a GPS reading of household location, are electronically recorded on a PDA and then uploaded in real-time to a central server. Questions about resident VYAs can include: sex, age, parental presence, school enrollment, grade-for-age status, marital status, parity, and livelihood sources. This fine-grained approach is effective in placing VYAs along a local vulnerability spectrum according to social, economic, and parental support. Recruitment for, as well as the content of, programs in the community can be informed by such rapidly available information.

To better visualize the diversity of young adolescents and their needs, DHS data can also be organized into country-specific maps (many maps are available in the Adolescent-Experience In-Depth data guides series published by the Population Council). Mapping subnational regional variation in adolescent outcomes can serve to highlight geographic areas with barriers to health or high concentrations of multiple adverse outcomes for VYAs. As demonstrated in Figure 7, the prevalence of girls who were married by age 15 reached 42% in the Amhara region of Ethiopia, which far exceeds the rate in other regions. Subnational analysis can also identify areas of composite vulnerability (see Figure 8). Visualizing existing data through the use of maps can better inform program and pol-

icity development by identifying priority areas for intervention, which may be otherwise masked within national-level averages.

Service utilization of VYAs—Surveying providers

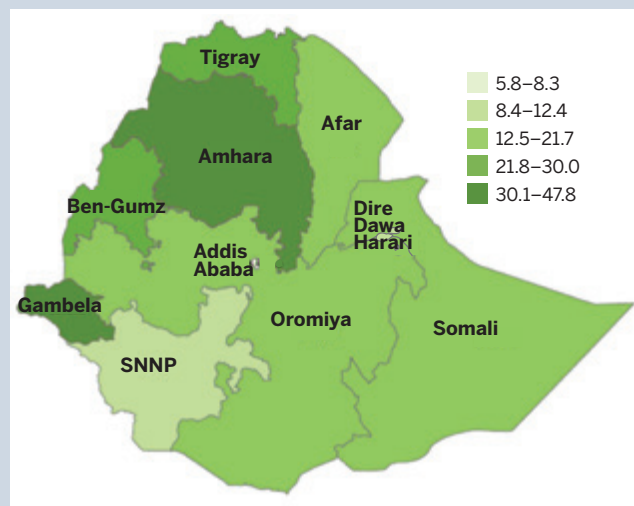
Another useful tool in VYA-focused studies is the analysis of existing and/or rapid collection of information on who is utilizing different types of services in the community. Youth centers, clinics, and other service providers frequently record basic demographic information about users of their services. To assess whether VYAs are availing themselves of such services, researchers can work with providers to compile a profile of the demographic characteristics of users in the past month. In cases where such information is not already being collected, a simple tool, the Program Coverage Exercise, is available (Austrian and Ghati 2010) for service providers to record anonymous data as users come in for service; this is usually recorded for a period of one month, but the duration is flexible.

When this tool is combined with a household census mapping, one can compare VYAs in the community against the types of adolescents who are actually using services (Lardoux and N'Bouke 2013). Efforts can then be made to target those who are not accessing community resources and to refine service offerings to better meet the needs of those being left out.

Household-based surveys—Surveying VYAs

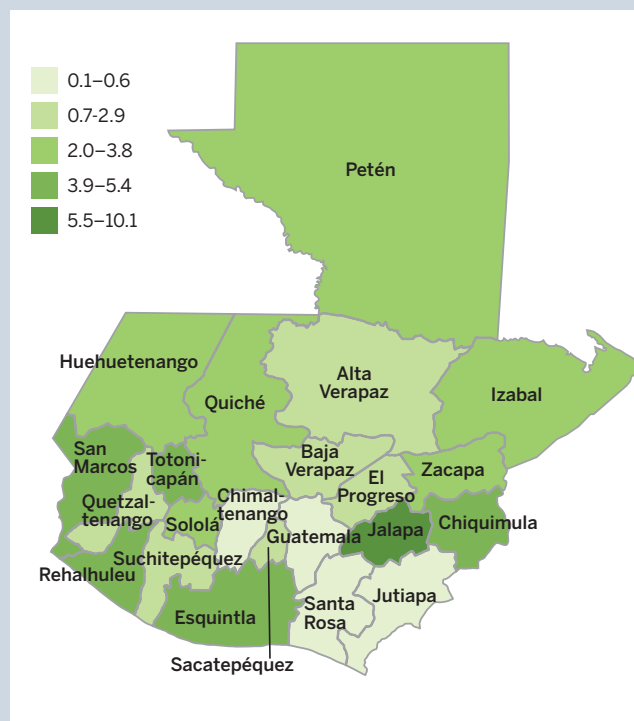
While it is possible to obtain information about less controversial VYA outcomes, such as education, health, and living arrangements from guardians, there are still no agreed-upon reliable methods to obtain large sample prevalence measures of VYA outcomes that are more sensitive in nature, such as abuse and sexual experiences. More evidence is needed on whether VYAs of various age, sex, and education levels have the cognitive, emotional, and maturation ability to understand and respond to survey-based questions that require a thoughtful assessment of the barriers they

FIGURE 7 Percentage of females aged 20–24 who were married by age 15, Ethiopia, 2005



Source: Population Council. 2015b. "The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Ethiopia, 2005." New York: Population Council.

FIGURE 8 Percentage of females aged 10–14 not in school and not living with either parent, Guatemala, 2002/2006



Source: Population Council. 2015b. "The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Guatemala 2002/2006." New York: Population Council.

BOX 4 Face-to-face or computer-assisted interview?

The question of whether to conduct survey interviews with adolescents using face-to-face interview (FTFI) or audio computer assisted interview (ACASI) methods remains a difficult one. Cost, feasibility, and acceptability within the study context are key issues to assess when making this choice. A systematic review and meta-analysis of quantitative interviewing tools to investigate self-reported HIV- and STI-associated behaviors in low- and middle-income countries (Phillips et al. 2010) concluded that differences between FTFI and non-interviewer-administered interview methods for sensitive behaviors were not uniform and no method was clearly better than the other. The review also observed variations in the level of reporting behaviors according to the outcome, study, and population characteristics. In summary, FTFI may not always be inferior to other interview tools depending on the sensitivity of the question as well as the population assessed.

face or the potential consequences of their actions. It is important that efforts to refine tools continue, however, as global data (DHS, VACS, etc.) indicate that a sizable percentage of adolescents (especially girls) will have sexual and/or violence experience before the age of 15 years. It is encouraging that there is recent precedent (in the VACS, etc.) for including 13–14-year-olds in large-scale surveys that assess such outcomes.

If VYAs in a particular setting are deemed to have the ability to engage with such questions, an overriding concern in the field is that fear and/or stigma may cause sensitive behaviors and experiences to be under-reported by VYAs and hence underestimated in the population. There is still no systematic evidence on this question. Retrospective reporting among a slightly older group about experiences while a VYA is one approach to address this concern. (See Box 4 on interviewing techniques.) It is also worthwhile to collect data on precursors of behaviors, particularly given that some

outcomes of interest (such as sexual behaviors) may still be relatively uncommon within certain VYA populations.

Participatory tools to capture processes and explanations of how and why

For all participatory tools, it is ideal for participants to be systematically selected based on clear criteria that are relevant for the study (age, gender, socioeconomic status, marital status, parental survival, parental residence, school enrollment, etc.); otherwise, small numbers of participants can produce non-representative results. Facilitators and interviewers should be experienced and trained in VYA-centered research methods, which include attention to pacing, energy level, attention span, and the possible discomfort of the respondent, and how to respond to these, including giving VYAs breaks and/or ending the group session or interview if the respondent appears to be experiencing distress.

Selected participatory qualitative methods with VYA groups

For all group-based participatory methods with VYAs, we strongly recommend that groups be divided by gender and age, with 10–12-year-olds and 13–14-year-olds in separate groups. The following suggestions can be adjusted depending on the theme and context of the research:

- **Focus group**—An organized event in which a researcher selects and assembles a group of individuals to discuss and comment on, from personal experience, the topic that is the subject of the research.
- **Participatory community mapping**— Within a focus group setting, respondents use paper and markers to depict the boundaries and features of their community; various issues can be explored such as safety, access to public spaces, access to resources, etc.
- **Ranking**—This technique produces an ordered listing of VYA preferences or reasons

within a particular domain, for example reasons for not attending school from most to least important.

- **Most significant change**—The procedure involves the collection, systematic selection, and analysis of local stories of perceived significant changes caused by development projects; perhaps appropriate only with 13–14-year-old VYAs.

Selected participatory methods with individual VYAs

- **IDI**—This is a short list of questions used to explore a particular topic with an individual; the technique should encourage respondents to develop subjective themes in connection with their own stories; perhaps appropriate only with 13–14-year-old VYAs.
- **Diary keeping**—Daily guided notes on certain themes can allow VYAs to share thoughts that might not surface in group or face-to-face interview settings; literacy is required, and the technique may be more fruitful with 13–14-year-old VYAs.

A number of resources and toolkits exist that provide guidance on these and other techniques, including which methods to use for particular research topics and age groups, and step-by-step instructions on how to apply them. Schenk and Williamson (2005) present a comprehensive list of resources in Annex 1 of their ethical guidance report. Aitken and Herman (2009) and Ager, Akesson, and Schunk (2010) provide reviews of child-focused participatory toolkits.

A few toolkits produced between 2005 and 2015 include:

- *Adolescent Girls' Programming Toolkits* (Population Council 2015)
- *Participatory Tools for Evaluating Psychosocial Work with Children in Areas of Armed Conflict* (Hart et al. 2007)
- *Conducting a Participatory Situation Analysis of Orphans and Vulnerable Children Affected by HIV/AIDS: Guidelines and Tools* (DeMarco 2005)

- *Kit of Tools for Participatory Research and Evaluation with Children, Young People and Adults: A compilation of tools used during a Thematic Evaluation and Documentation on Children's Participation in Armed Conflict, Post Conflict and Peace Building, 2006-2008.* (Save the Children 2008)

Mixed methods—Assessing prevalence while gaining nuanced insights

The mixed-methods approach is promising for conducting research with VYAs. Many definitions of mixed methods are available. Common themes in a mixed methods research approach are (Creswell and Clark 2007):

- A focus on research questions that enhance real-life contextual understandings, multi-level perspectives, and cultural influences
- Utilization of rigorous quantitative tools to assess the magnitude and frequency of constructs, and rigorous qualitative tools to explore the meaning and understanding of these constructs
- Use of multiple methods (e.g., randomized control trials and in-depth interviews)
- Intentional combination of methods to draw upon the strengths of each one

Mixed method inquiry includes various sources and many levels that influence a given problem (e.g., policies, organizations, family, individual). Quantitative (mainly deductive) methods are ideal for measuring the prevalence of “known” phenomena. Qualitative (mainly inductive) methods allow for identification of previously unknown processes, explanations of why and how phenomena occur, and the range of their effects (Pasick et al. 2009). Mixed methods research is more than simply collecting qualitative data from interviews, or collecting multiple forms of qualitative evidence (e.g., observations and interviews) or multiple types of quantitative evidence (e.g., surveys). It involves the intentional collection of both quantitative and qualitative data and the combination of the strengths of each to answer research questions.

Conclusion

6



For very young adolescents, the nature and quality of their future depends on how successfully they negotiate the transitions to the roles of citizen, spouse, parent, and worker. While we have a clearer picture of the lives of VYAs than before, and a confirmation of the need to intervene early, the paucity of research on this age group persists and has resulted in gaps in knowledge about the critical factors that shape the contours of young lives. Researchers and program planners must recognize that many of the key transitions in the lives of young adolescents are likely played out not over five-year intervals but rather in much shorter periods of time: one-, two-, or three-year intervals. In light of the rapid transitions of early adolescence, we recommend that any future analysis of data be broken down into these two and three timeframes rather than

using the typical five-year age group, as such analyses homogenize extremely diverse experiences. By so doing, a more detailed picture of threshold periods of change will emerge as research progresses.

6.1 Programmatic interventions to be tested

To chart a course for programming, several topics have emerged from this review that warrant greater focus, experimentation, and evaluation. Within each broad category of potential interventions, a myriad of research questions could be posed. Identifying the key questions and developing age, gender, and cognitively appropriate tools to address them would be an important next step.

CALL TO ACTION TO IMPROVE RESEARCH

To make the case for greater attention to VYAs, we must argue for more and better data illuminating the unique situation and the diversity of circumstances that shape the lives of young boys and girls. Through a systematic collection of data from a variety of sources, we can paint a more comprehensive picture of their lives.

The following actions are needed:

- **Validate methods** of gathering information, differentiating tools and techniques that work for girls versus boys, and younger versus older VYAs.
- **Establish a data repository** where surveys and other information on VYAs can be accessed.
- **Conduct fresh analyses** of existing data, disaggregated by age and gender, to glean insights on a broader range of topics.
- **Disaggregate data** by 2- and 3-year intervals (e.g., 10–12, 13–14).
- **Focus on marginalized VYA populations**, including young married girls, boys and girls living in urban slums, migrants, refugees, and other vulnerable populations.
- **Embed research** into programming initiatives.
- **Build the program evidence base** about what works, for which segments of the VYA population, and under what circumstances.
- **Conduct research** to both guide the scaling-up process and to measure the impact of such efforts.

Health awareness, promotion, and disease prevention

Creating a culture of health and promoting the concept of the “right to health” could lay the foundation for healthier futures for many of the world’s VYAs. As noted elsewhere, young adolescents respond more to reward than punishment; thus positive, empowering approaches are likely to be a more effective strategy with potential long-term benefits. Examples of health promotion activities that would benefit from experimentation:

- “health wellness check” (including mental health)
- comprehensive sexuality education
- sports and physical education
- community gardens, nutrition education, and healthy food choices
- puberty education

These and other tactics can help create a “demand” for health information, services, and programs that will have longer-term payoff.

Given the emergence of noncommunicable diseases (NCDs) as a key driver of morbidity and mortality globally, more explicit attention to understanding the social and behavioral underpinnings of these is needed. Building awareness of the importance of addressing the emergence of mental health issues and behaviors that contribute to poor health later in life is also needed. This area of work could constitute an important and timely area of programming as LMICs begin to grapple with new health challenges and opportunities to shape the health trajectory of this generation of young people.

Comprehensive sexuality education

The need for CSE for adolescents is clear. Regardless of age, gender, or locale, young adolescents are uninformed about their bodies, their health, and their rights. CSE can

be delivered through schools in the education sector, or through various types of community platforms. Testing different approaches to CSE in a variety of settings would be worthwhile. A comprehensive review of life-skills programs would also make clear what sets of skills are most effective for particular areas of health and well-being.

Puberty programming

Given the salience of puberty for VYAs, experimentation around “puberty programming” might be valuable. The content of a “puberty program” would necessarily vary by context and gender, and would include CSE as described above. For girls, explicit attention to, and possibly new tools for, menstrual hygiene and management could be considered. Body awareness and “body self-esteem” are important, especially for girls. Identification of key health technologies appropriate for this age group (e.g., HPV vaccine) and the platforms for safe and appropriate delivery of emerging health products may also be a worthy investment. Different conceptualization and content of “puberty programming” could be developed and tested. At the same time, basic research is needed to understand more about the timing and nature of pubertal transition and its implications for mobility, schooling, marriage, gender norms, and so forth.

Gender norms, equity, and rights

Much can be gained through programs that explicitly address gender norms and behaviors. Work in this area is nascent but promising. CSE is one example of a program that aims to promote gender equity, but there are others. Most programs aimed at reducing child marriage and other harmful traditional practices have at a core focus on gender norms and ensuring girls’ rights. Another important area for exploration involves girls’ access to community spaces and resources, the right to play, and so forth. There is a need

to design, implement, and evaluate more and diverse gender-transformative programs to build an evidence base on this topic.

Education transitions

To date, a considerable amount of work has been done around cash transfer programs. Continuing to experiment with such programs, especially incentives that encourage the transition from primary to secondary school (i.e., larger cash incentives in the early secondary grades) would be worthwhile. Determining whether pay incentives to teachers or performance incentives to students can improve secondary grade advancement is also worthy of study. A critical emerging area for experimentation would be rigorously designed school safety initiatives. Finally, innovation to improve upon educational content, quality, and pedagogy is needed, including experimentation with new approaches, teaching critical thinking skills, comprehensive sexuality education within schools, and understanding the impact of ICTs.

Parenting interventions

Despite the promise that parenting interventions hold for LMIC populations, there is a clear lack of high-quality studies of parenting-skills interventions generally and in particular with very young adolescents. Studies of parenting-skills programs that have sufficient sample size, rigorous design (experimental or quasi-experimental), assessment of both parent and child behavioral outcomes, and measurement not only by self-report behaviors but also direct observations of parent-child interactions are needed. Parenting interventions to address maltreatment have the potential to help reduce violence experienced and later perpetrated by VYAs.

6.2 Looking toward the future

We have outlined several key areas that would benefit from more experimentation and new research. Initiating programs at or around this age is an acknowledgment of young people's evolving capacity and distinctive needs. By gathering data on the risks and opportunities VYA girls and boys face, strategies can be developed that target them effectively, providing them with the right mix of information, skills, and services. Strategic timing of interventions allows for positive outcomes before the architecture of young adolescents' lives are set.

Given the enormous diversity of the very young adolescent population, no one methodology or approach will work in all settings or with all subgroups of VYAs. We must learn more about the timing, nature, and consequences of the key transitions that young adolescent girls and boys undergo, and in particular how these play out among the most vulnerable groups.

As we look toward the future, we envision a stronger, bolder, and more dynamic strategy of research and action to support innovative policies and programs that will provide adolescent girls and boys with a safe, healthy, and productive transition to adulthood. The bridge linking childhood and young adulthood is far too precarious for many children in the developing world. Strengthening this passage to ensure that it leads to a brighter future deserves more of our attention. We believe that the time is right for a new generation of research and program interventions dedicated to very young adolescents.

Afterword

The time has come

This *Investing When It Counts* report further enhances the arguments and evidence set forth in the 2006 report. While the 10–14-year-old passage in life is meant to be a peaceful time when girls and boys are in school, healthy and growing, and acquiring the skills needed to move confidently through childhood into early adulthood, very little of the idealized, step-wise process of “transition” actually holds true for the poorest and most excluded girls and boys in the poorest communities of the world.

In many settings, puberty is a negative experience for girls, bringing with it more restrictions and self-doubt. Girls internalize spatial restrictions on their movements as exclusions from broader life opportunities (Hallman et al. 2014). Girls are subjected to many serious, and often permanent, human rights abuses, such as female genital cutting and sexual coercion that leave an indelible mark and may inhibit the emergence of agency, marrying and bearing children while still a child (“child marriage,” not early precocious marriage), and contracting sexually transmitted diseases from forced sex with older partners. And, although unprepared for this role, adolescent girls in many parts of the world can expect to become the sole or substantial supporters of their children and themselves, given the extremely high and steady rates of single motherhood arising from divorce, widowhood, and economic abandonment. During the 10–14-year age period, the most stressed adolescents, particularly girls, may migrate or

“be migrated,” running from difficult pressures in their natal home and lack of opportunity to what may be equally challenging and unknown possibilities in urban settings.

Yet there are virtually no policies and dedicated programs for 10–14-year-olds apart from the overly optimistic plan of their “being in school.” Schooling alone—especially given the generally poor quality of schools in the poorest communities—cannot carry the weight of young adolescents’ needs at this time of explosive growth and challenge. There are other skills beyond the cognitive that must be explicitly planned for—financial literacy, establishing savings and healthy habits, personal documentation, awareness of rights and the means to claim them, and active citizenship. This is a critical and defining juncture, especially for girls. Without a plan and a supportive “bridge” to adulthood, a young girl’s emerging sexuality and fertility, and the labor of both boys and girls—their life potential, essentially—may be appropriated by families and communities under the guise of “culture,” and intensified by scarcity.

Without a vigilant and accountable set of accessible community-based programs, the poorest girls and boys in the poorest communities will increasingly not be drawn up into the emerging markets or leadership, but rather pulled down to subsidize family crises and societal shocks. Young adolescents, especially girls, are deeply affected by climate-based emergencies (such as seasonal flooding,

acute natural disasters, conflict, and infectious diseases—whether “slow” HIV or fast Ebola). Neglect at this vital moment creates marginalization and lays the foundation for individual and collective poverty.

The time has come to prioritize explicit entitlements for 10–14-year-olds—especially those in marginalized communities—down to the subnational level. The plans will need to be gender-specific, as the lives of boys and girls diverge sharply, carrying distinctive risks and opportunities.

So let’s fill this gap. There are a plethora of programs for children younger than five, and “adult rights” are theoretically available at adulthood, at the age of consent, or at age 18 (all usually the same). What happens in between?

We must articulate and execute programs for very young adolescents that build health, social, economic, and cognitive assets. Central to this is the creation of community platforms/meeting places—places for skill building and

safe engagement, especially for girls whose social space is already confined and in many cases shrinking. Meaningful access requires practical local information campaigns (where do VYAs get an ID?) and tangible connections (where do girls get vouchers for services?) within their daily geography. Rights may be global, but access is local. If very young adolescents do not know about it, they cannot seek it. If they cannot walk to it, they cannot get it. While energized at national levels, these VYA programs must be affirmed at subnational levels and delivered at the community level in order to succeed. The goal of an explicit young adolescent policy should be to assure, through resources and dedicated local structures, that VYAs are safe, happy, and productive beings no matter who or where they are.

JUDITH BRUCE

SENIOR ASSOCIATE AND POLICY ANALYST
POVERTY, GENDER, AND YOUTH
POPULATION COUNCIL

References

- Adukia, Anjali. 2013. "Sanitation and Education." Cambridge, MA: Harvard Graduate School of Education. www.open.uwi.edu/hflecaribbean/sites/default/files/adukia_sanitation_and_education.pdf.
- Ager, Alastair, Bree Akesson, and Kelly Schunk. 2010. "Mapping of child protection monitoring and evaluation tools, Final Report." New York: Columbia University and CPC Learning Network.
- Aitken, Stuart and Thomas Herman. 2009. "Literature review on qualitative methods and standards for engaging and studying independent children in the developing world." Florence: UNICEF Innocenti Research Centre.
- Amin, Sajeda, Sigma Ainul, Farhana Akter, et al. 2014. "From evidence to action: Results from the 2013 baseline survey for the BALIKA project." New York: Population Council. www.popcouncil.org/uploads/pdfs/2014PGY_BALIKA_report.pdf.
- Andrews, Gavin, Justine Corry, Tim Slade, Cathy Issakidis, and Heather Swanston. 2004. "Child sexual abuse," in *Comparative Quantification of Health Risks: Global and Regional Burden Of Disease Attributable to Selected Major Risk Factors*, pp. 1851–1940.
- Austrian, Karen and D. Ghati. 2010. "Girl-centered program design: A toolkit to develop, strengthen, and expand adolescent girls programs." Nairobi: Population Council. www.popcouncil.org/girlcenteredprogram.
- Austrian, Karen and Eunice Muthengei. 2013. "Safe and smart savings products for vulnerable adolescent girls in Kenya and Uganda." Evaluation Report. New York: Population Council.
- Baird, Sarah, Francisco H.G. Ferreira, Berk Özler, and Michael Woolcock. 2014. "Conditional, unconditional and everything in between: A systematic review of the effects of cash transfer programmes on schooling outcomes," *Journal of Development Effectiveness* 6(1): 1–43.
- Baldwin, Susie B., David P. Eisenman, Jennifer N. Sayles, Gery Ryan, and Kenneth S. Chuang. 2011. "Identification of human trafficking victims in health care settings," *Health and Human Rights* 13(1): E36–49.
- Banerjee, Abhijit, Paul Glewwe, Shawn Powers, and Melanie Wasserman. 2013. "Expanding access and increasing student learning in post-primary education in developing countries: A review of the evidence." Cambridge: Massachusetts Institute of Technology. www.povertyactionlab.org/sites/default/files/publications/PPE%20Review%20Paper%20April%202013.pdf.
- Bankole, Akinrinola, Ann Biddlecom, Georges Guiella, Susheela Singh, and Eliya Zulu. 2007. "Sexual behavior, knowledge and information sources of very young adolescents in four sub-Saharan African countries," *African Journal of Reproductive Health* 11(3): 28–43.
- Baptiste, Donna R., Chisina Kapungu, Steve Miller, Laurel Crown, David Henry, Dona Da Costa Martinez, and Karen Jo-Bennett. 2009. "Increasing parent involvement in youth HIV prevention: A randomized Caribbean study," *AIDS Education and Prevention* 21(6): 495–511.
- Barker, Gary Thomas. 2000. "What about boys? A literature review on the health and development of adolescent boys." Geneva: World Health Organization.
- Barker, Gary Thomas, Christine Ricardo, Marcos Nascimento, et al. 2007. "Engaging men and boys in changing gender-based inequity in health: Evidence from programme interventions." Geneva: World Health Organization. http://asset.atlasproject.eu/who/t_file/664c72a1-9e60-4fa2-bec9-035459fd46a7/9af80260-bf71-11e1-afa7-0800200c9a66/Engaging_men_boys.pdf.
- Barrera-Osorio, Felipe and Leigh L. Linden. 2009. "The use and misuse of computers in education: Evidence from a randomized controlled trial of a language arts program." Cambridge, MA: Abdul Latif Jameel Poverty Action Lab (JPAL). www.leighlinden.com/Barrera-Linden%20Computadores_2009-03-25.pdf.
- Barry, Margaret M., Aleisha M. Clarke, Rachel Jenkins, and Vikram Patel. 2013. "A systematic review of the effectiveness of mental health promotion interventions for young people in low and middle income countries," *BMC Public Health* 13: 835. doi:10.1186/1471-2458-13-835.
- Beaman, Lori, Esther Duflo, Rohini Pande, and Petia Topalova. 2012. "Female leadership raises aspirations and educational attainment for girls: A policy experiment in India," *Science* 335 (6068): 582–86.
- Belfer, Myron L. 2008. "Child and adolescent mental disorders: The magnitude of the problem across the globe," *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 49(3): 226–236. doi:10.1111/j.1469-7610.2007.01855.x.

- Bellis, M.A., J. Downing, and J.R. Ashton. 2006. "Adults at 12? Trends in puberty and their public health consequences." *Journal of Epidemiology and Community Health* 60(11): 910–911.
- Bhabha, Jacqueline. 2008. "Independent children, inconsistent adults: International child migration and the legal framework." Florence: UNICEF Innocenti Research Centre. ideas.repec.org/p/ucf/indipa/indipa08-3.html.
- Birdthistle, Isolde, Kelly Dickson, Matthew Freeman, and Leila Javidi. 2011. "What impact does the provision of separate toilets for girls at schools have on their primary and secondary school enrolment, attendance and completion?: A systematic review of the evidence." London, UK: EPPI-Centre, Social Science Research Unit, University of London.
- Black, M. and A. Ponirakis. 2000. "Computer-administered interviews with children about maltreatment: methodological, developmental and ethical issues." *Journal of Interpersonal Violence* 15(7): 682–695.
- Black, Robert E., Cesar G. Victora, Susan P. Walker, et al. 2013. "Maternal and child undernutrition and overweight in low-income and middle-income countries." *The Lancet* 382(9890): 427–451.
- Blakemore, Sarah-Jayne. 2008. "The social brain in adolescence." *Nature Reviews. Neuroscience* 9(4): 267–277. doi:10.1038/nrn2353.
- Blakemore, Sarah-Jayne and Kathryn L. Mills. 2014. "Is adolescence a sensitive period for sociocultural processing?" *Annual Review of Psychology* 65(1): 187–207. doi:10.1146/annurev-psych-010213-115202.
- Blanc, Ann, William Winfrey, and John Ross. 2013. "New findings for maternal mortality age patterns: Aggregated results for 38 countries." *PLoS One* 8(4): e59864. <http://dx.plos.org/10.1371/journal.pone.0059864>.
- Blum, Robert, Nan Marie Astone, and Michele Decker. 2013. "A conceptual framework for early adolescence: A platform for research and action." Geneva: World Health Organization.
- Blum, Robert W., Francisco I.P.M. Bastos, Caroline W. Kabiru, and Linh C. Le. 2012. "Adolescent health in the 21st century." *The Lancet* 379(9826): 1567–68. doi:10.1016/S0140-6736(12)60407-3.
- Brady, Martha. 2005. "Creating safe spaces and building social assets for young women in the developing world: A new role for sports." *Women's Studies Quarterly* 33(1–2) 35–49.
- . 2011a. "Leveling the playing field: Building girls' sports programs and creating new opportunities." *Promoting Healthy, Safe, and Productive Transitions to Adulthood*. Brief No. 1. New York: Population Council.
- . 2011b. "Taking Programs for Vulnerable Adolescents to Scale: Experiences, Insights, and Evidence." *Promoting Healthy, Safe, and Productive Transitions to Adulthood*. Brief No. 36. New York: Population Council.
- Breinbauer, Cecilia and Matilde Maddaleno. 2005. "Promoting healthy behaviors in adolescents," in *Youth: Choices and Change*, pp. 262–264. Washington, DC: Pan American Health Organization (PAHO). www.paho.org/English/DD/PUB/Youth.
- Brody, Jane. 2015. "Screen addiction is taking a toll on children," *The New York Times*, July 6, Section: Well. well.blogs.nytimes.com/2015/07/06/screen-addiction-is-taking-a-toll-on-children/.
- Browne, Evie. 2013. "Child-friendly spaces for adolescent girls in emergency settings." Helpdesk Research Report. Birmingham, UK: GSDRC, University of Birmingham.
- Bruce, Judith and Vira David. 2015. "The girls roster toolkit: Seeing and valuing all the girls in your community." New York: Population Council. www.popcouncil.org/uploads/pdfs/Girl_Roster_flyer.POPCOUNCIL.2015.pdf.
- Buckley, Chris and Ellen Barry. 2015. "Rohingya women flee violence only to be sold into marriage." *The New York Times*, August 2. www.nytimes.com/2015/08/03/world/asia/rohingya-women-flee-violence-only-to-be-sold-into-marriage.html.
- Butchart, A. 2006. "Preventing child maltreatment: A guide to taking action and generating evidence." Geneva: WHO/IPSCAN.
- Carroll-Lind, Janis, James W. Chapman, Janet Gregory, and Gabrielle Maxwell. 2006. "The key to the gatekeepers: Passive consent and other ethical issues surrounding the rights of children to speak on issues that concern them." *Child Abuse & Neglect* 30(9): 979–989. doi:10.1016/j.chiabu.2005.11.013.
- Catino, Jennifer. 2012. "The health of vulnerable adolescent girls: A strategic investment for double return." New York: Population Council and VN Adolescent Girls Task Force.
- Caton, Carolyn, Josh Chaffin, Emmanuelle Comping, Mendy Marsh, and Jennifer Schulte. 2014. "Economic strengthening to reduce risk of gender-based violence for adolescent girls in humanitarian settings." Washington, DC: Search for Common Ground (SFCG).
- CBS News. 2015. "Boko Haram sends girl suicide bombers to attack Nigeria markets." New York: CBS News. www.cbsnews.com/news/boko-haram-girl-suicide-bomber-attack-nigeria-markets-reports/.

- Centers for Disease Control and Prevention (CDC). 2015. "Physical activity facts." Atlanta: CDC. <http://www.cdc.gov/healthyyouth/physicalactivity/facts.htm>.
- Child Protection Monitoring and Evaluation Reference Group (CP MERG). 2012. "Ethical principles, dilemmas and risks in collecting data on violence against children: A review of available literature." New York: UNICEF, Statistics and Monitoring Section, Division of Policy and Strategy.
- Child Soldiers International (CSI). "Child Soldiers International." 2015. www.child-soldiers.org.
- Chong, Erica, Kelly Hallman, and Martha Brady. 2006. "Investing when it counts: Generating the evidence base for policies and programmes for very young adolescents." New York: UNFPA and Population Council. www.unicef.org/InvestingWhenItCounts.pdf.
- Chowdhary, Neerja, Siham Sikander, Najia Atif, et al. 2014. "The content and delivery of psychological interventions for perinatal depression by non-specialist health workers in low and middle income countries: A systematic review," *Best Practice & Research Clinical Obstetrics & Gynaecology* 28(1): 113–133.
- Clark, Shelley. 2004. "Early marriage and HIV risks in sub-Saharan Africa," *Studies in Family Planning* 35(3): 149–160.
- Clark, Thomas S., Gerhard K. Friedrich, Methembe Ndlovu, Torsten B. Neilands, and Willi McFarland. 2006. "An adolescent-targeted HIV prevention project using African professional soccer players as role models and educators in Bulawayo, Zimbabwe," *AIDS and Behavior* 10(1): 77–83.
- Coalition for Adolescent Girls (CAG). 2012. "Missing the emergency: Shifting the paradigm for relief to adolescent girls." www.iywg.org/resources/missing-emergency-shifting-paradigm-relief-adolescent-girls.
- Collin-Vézina, Delphine, Isabelle Daigneault, and Martine Hébert. 2013. "Lessons learned from child sexual abuse research: Prevalence, outcomes, and preventive strategies," *Child and Adolescent Psychiatry and Mental Health* 7(1): 22–30.
- Creswell, John W. and Vicki L. Plano Clark. 2007. *Designing and Conducting Mixed Methods Research*. Thousand Oaks, CA: Sage Publications.
- Crone, Eveline A. and Ronald E. Dahl. 2012. "Understanding adolescence as a period of social–affective engagement and goal flexibility," *Nature Reviews Neuroscience* 13(9): 636–650. doi:10.1038/nrn3313.
- Dasgupta, P., K. Tureski, R. Lenzi, K. Bindu, and G. Nanda. 2012. "Half the Sky Movement Multi-Media Communication Initiative: An evaluation of the 9-minutes mobile game and video." Washington, DC: D-Change, FHI 360.
- Decker, Michele R., Beth Dail Marshall, Mark Emerson, et al. 2014. "Respondent-driven sampling for an adolescent health study in vulnerable urban settings: A multi-country study," *Journal of Adolescent Health* 55(6): S6–12. doi:10.1016/j.jadohealth.2014.07.021.
- DeMarco, Renee. 2005. "Conducting a participatory situation analysis of orphans and vulnerable children affected by HIV/AIDS: Guidelines and tools." Arlington, VA: Family Health International.
- Deshpande, Neha A. and Nawal M. Nour. 2013. "Sex trafficking of women and girls," *Reviews in Obstetrics and Gynecology* 6(1): e22.
- Devries, Karen M., Louise Knight, Jennifer C. Child, et al. 2015. "The good school toolkit for reducing physical violence from school staff to primary school students: A cluster-randomised controlled trial in Uganda," *The Lancet Global Health* 3(7): e378–386.
- Dixon-Mueller, Ruth. 2010. "The Sexual and reproductive health of young adolescents in developing countries: Reviewing the evidence, identifying research gaps, and moving the agenda." Report of a WHO Technical Consultation. Geneva: WHO. http://www.who.int/immunization/hpv/target/the_sexual_and_reproductive_health_of_young_adolescents_who_2011.pdf.
- Dosenbach, Nico U.F., Binyam Nardos, Alexander L. Cohen, et al. 2010. "Prediction of individual brain maturity using fMRI," *Science* 329 (5997): 1358–1361. doi:10.1126/science.1194144.
- Downing, Jennifer and Mark A. Bellis. 2009. "Early pubertal onset and its relationship with sexual risk taking, early pubertal onset and its relationship with sexual risk taking, substance use and anti-social behaviour: A preliminary cross-sectional study," *BMC Public Health* 9. doi: 10.1186/1471-2458-9-446.
- Economic Research Forum (ERF). 2006. "Egypt Labor Market Panel Survey (ELMPS) 2006." Egypt: Central Agency for Public Mobilization and Statistics.
- Edmonds, Eric and Maheshwor Shrestha. 2009. "Children's work and independent child migration: A critical review." Florence: UNICEF Innocenti Research Centre. ideas.repec.org/p/ucf/inwopa/inwopa586.html.
- Erulkar, A., T. Mekbib, N. Simie, and T. Gulema. 2004. "The experience of adolescence in rural Amhara Region, Ethiopia." Accra: Population Council.
- Erulkar, Annabel and Eunice Muthengi. 2009. "Evaluation of Berhane Hewan: A program to delay child marriage in rural Ethiopia," *International Perspectives on Sexual and Reproductive Health* 35(1) 6–14.
- Eshel, Neir, Bernadette Daelmans, Meena Cabral de Mello, and Jose Martines. 2006. "Responsive parenting: Interventions and outcomes." *Bulletin of the World Health Organization* 84(12): 991–998.

- ExpandNet/WHO Tools. n.d. www.expandnet.net/tools.htm.
- Family Violence Prevention Fund and World Childhood Foundation. 2005. "Turning pain into power: Trafficking survivors' perspectives on early intervention strategies." San Francisco: FVPF. www.futureswithoutviolence.org/turning-pain-into-power-trafficking-survivors-perspectives-on-early-intervention-strategies.
- Finkelhor, D., S.L. Hamby, R. Ormrod, and H. Turner. 2005. "The juvenile victimization questionnaire: Reliability, validity, and national norms," *Child Abuse & Neglect* 29: 383–412.
- Fulu, Emma, Alice Kerr-Wilson, and James Lang. 2014. "What works to prevent violence against women and girls: Evidence Review of Interventions to Prevent Violence against Women and Girls." Pretoria: Medical Research Council. http://r4d.dfid.gov.uk/pdf/outputs/VAWG/What_Works_Inception_Report_June_2014_AnnexF_WG23_paper_prevention_interventions.pdf.
- Giedd, Jay N. 2008. "The teen brain: Insights from neuroimaging," *Journal of Adolescent Health* 42(4): 335–343. doi:10.1016/j.jadohealth.2008.01.007.
- Gore, Fiona M., Paul J.N. Bloem, George C. Patton, et al. 2011. "Global burden of disease in young people aged 10–24 years: A systematic analysis," *The Lancet* 377(9783): 2093–2102. doi:10.1016/S0140-6736(11)60512-6.
- Graham, A., M. Powell, N. Taylor, D. Anderson, and R. Fitzgerald. 2013. "Ethical research involving children (ERIC)." Florence: UNICEF Innocenti Research Centre.
- Grant, Monica J. and Kelly K. Hallman. 2008. "Pregnancy-related school dropout and prior school performance in KwaZulu-Natal, South Africa," *Studies in Family Planning* 39(4): 369–382.
- Grant, Monica J., Cynthia B. Lloyd, and Barbara S. Mensch. 2013. "Menstruation and school absenteeism: Evidence from rural Malawi," *Comparative Education Review* 57(2): 260.
- Greenbaum, V. Jordan. 2014. "Commercial sexual exploitation and sex trafficking of children in the United States," *Current Problems in Pediatric and Adolescent Health Care* 44(9): 245–269.
- GSM Association. 2013a. "Children's use of mobile phones: An international comparison." London: GMSA and Japan: NTT DOCOMO.
- . 2013b. "Women and mobile—A global opportunity: A study on the mobile phone gender gap in low and middle-income countries." London: GSMA Development Fund, Cherie Blair Foundation for Women, Vital Wave Consulting.
- Guse, Kylene, Deb Levine, Summer Martins, et al. 2012. "Interventions using new digital media to improve adolescent sexual health: A systematic review," *Journal of Adolescent Health* 51(6): 535–543. doi:10.1016/j.jadohealth.2012.03.014.
- Haberland, Nicole A. 2015. "The case for addressing gender and power in sexuality and HIV education: A comprehensive review of evaluation studies," *International Perspectives on Sexual and Reproductive Health* 41(1): 31–42.
- Hadley, Craig, David Lindstrom, Fasil Tessema, and Tefara Belachew. 2008. "Gender bias in the food insecurity experience of Ethiopian adolescents," *Social Science & Medicine* 66(2): 427–438.
- Hallman, Kelly. 2007. "Non-consensual sex, school enrolment and educational outcomes in South Africa," *Africa Insight* 37(3): 454.
- . 2011. "Social exclusion: The gendering of adolescent HIV risks in KwaZulu-Natal, South Africa," in J. Klot and V. Nguyen (eds.), *The Fourth Wave: An Assault on Women—Gender, Culture and HIV/AIDS in the 21st Century*, pp. 53–80. New York: Social Science Research Council and Paris: UNESCO.
- Hallman, Kelly, K. Govender, and Eva Roca. 2007. "Enhancing financial literacy, HIV/AIDS skills, and safe social spaces among vulnerable South African youth." Transitions to Adulthood. Brief 4. New York: Population Council.
- . 2015. "Siykaka Nentsha: Local secondary school graduates create safe space classrooms for gendered social, health and financial skills acquisition in Rural South Africa." Unpublished. New York: Population Council.
- Hallman, Kelly K., Nora J. Kenworthy, Judith Diers, Nick Swan, and Bashi Devnarain. 2014. "The shrinking world of girls at puberty: Violence and gender-divergent access to the public sphere among adolescents in South Africa," *Global Public Health* 10(3): 279–295.
- Hallman, Kelly, Sara Peracca, Jennifer Catino, and Marta Julia Ruiz. 2007. "Indigenous girls in Guatemala: Poverty and location," in Maureen A. Lewis and Marlaine E. Lockheed (eds.), *Exclusion, Gender and Schooling: Case Studies from the Developing World*, pp. 145–175. Washington, DC: Center for Global Development.
- Hallman, Kelly and Eva Roca. 2006. "Reducing the Social Exclusion of Girls." Brief No. 27. *Promoting Healthy, Safe and Productive Transitions to Adulthood*. New York: Population Council.
- Halpern, Carolyn Tucker, Ellen M.H. Mitchell, Tilda Farhat, and Phil Bardsley. 2008. "Effectiveness of web-based education on Kenyan and Brazilian adolescents' knowledge about HIV/AIDS, abortion law, and emergency contraception: Findings from TeenWeb," *Social Science & Medicine* 67(4): 628–37. doi:10.1016/j.socscimed.2008.05.001.

- Han, Chang-Keun, Fred M. Ssewamala, and Julia Shu-Huah Wang. 2013. "Family economic empowerment and mental health among AIDS-affected children living in AIDS-impacted communities: Evidence from a randomised evaluation in Southwestern Uganda," *Journal of Epidemiology and Community Health* 67(3): 225–230.
- Hart, Jason, Ananda Galappatti, Jo Boyden, and Miranda Armstrong. 2007. "Participatory tools for evaluating psychosocial work with children in areas of armed conflict: A pilot in Eastern Sri Lanka," *Intervention* 5(1): 41–60.
- Herman-Giddens, Marcia E. 2006. "Recent data on pubertal milestones in United States children: The secular trend toward earlier development," *International Journal of Andrology* 29(1): 241–246.
- Hermoso, Maria, Vesna Vucic, Christiane Vollhardt, et al. 2011. "The effect of iron on cognitive development and function in infants, children and adolescents: A systematic review," *Annals of Nutrition and Metabolism* 59 (2–4): 154–165.
- Hindin, M.J., P. Bloem, and Jane Ferguson. 2015. "Effective nonvaccine interventions to be considered alongside Human Papilloma Virus vaccine delivery," *Journal of Adolescent Health* 56(1): 10–18.
- Hingle, Melanie D., Teresia M. O'Connor, Jayna M. Dave, and Tom Baranowski. 2010. "Parental involvement in interventions to improve child dietary intake: A systematic review," *Preventive Medicine* 51(2): 103–111. doi:10.1016/j.ypmed.2010.04.014.
- Hodge, David R. and Cynthia A. Lietz. 2007. "The international sexual trafficking of women and children: A review of the literature," *Affilia* 22(2): 163–174.
- Idele, Priscilla, Amaya Gillespie, Tyler Porth, et al. 2014. "Epidemiology of HIV and AIDS among adolescents: Current status, inequities, and data gaps," *Journal of Acquired Immune Deficiency Syndromes* 66 (July): S144–S153. doi:10.1097/QAI.0000000000000176.
- Igras, Susan M., Marjorie Macieira, Elaine Murphy, and Rebecka Lundgren. 2014. "Investing in very young adolescents' sexual and reproductive health," *Global Public Health* 9(5): 555–569. doi:10.1080/17441692.2014.908230.
- Institute for Reproductive Health (IRH). 2015a. "Ending the hesitation around menstruation': GrowUp Smart." Washington, DC: IRH. www.irh.org/blog/ending-hesitation-around-menstruation-growup-smart.
- . 2015b. *My Changing Body: Body Literacy & Fertility Awareness for Young People (2nd Edition)*. Washington, DC: IRH. <http://irh.org/resource-library/my-changing-body-body-literacy-fertility-awareness-for-young-people-2nd-edition/>.
- Institute for Reproductive Health (IRH) and USAID. 2010. "Reaching Very Young Adolescents (VYAs): Advancing program, research and evaluation practices." Washington, DC: Institute for Reproductive Health, Georgetown University. irh.org/wp-content/uploads/2013/04/IRH_VYA_Technical_Consultation_2010_Meeting_Report_FINAL.pdf.
- Institute of Medicine (IOM). 2008. *Violence Prevention in Low and Middle-Income Countries: Finding a Place on the Global Agenda*. Washington, DC: National Academies Press.
- International Society for Prevention of Child Abuse and Neglect (ISPCAN). 2007. *World Perspectives on Child Abuse*, 6th Edition. Chicago: Aurora.
- Jacob, K.S. and Vikram Patel. 2014. "Classification of mental disorders: A global mental health perspective," *The Lancet* 383(9926): 1433–1435.
- Jejeebhoy, Shireen, Iqbal Shah, and Shyam Thapa. 2005. *Sex Without Consent: Young People in Developing Countries*. London: Zed Books.
- Jensen, F.E. and A.E. Nutt. 2015. *The Teenage Brain: A Neuroscientist's Survival Guide to Raising Adolescents and Young Adults*. New York: Harper Collins.
- Jensen, Robert. 2010. "The (perceived) returns to education and the demand for schooling," *The Quarterly Journal of Economics* 125(2): 515–548.
- Jimerson, Shane R., Gabrielle E. Anderson, and Angela D. Whipple. 2002. "Winning the battle and losing the war: Examining the relation between grade retention and dropping out of high school," *Psychology in the Schools* 39(4): 441–457.
- Johnson, L., Y. Lee, D. Ansong, M. Sherraden, G. Chowa, and F. Ssewamala. 2015. "Youth savings patterns and performance in Colombia, Ghana, Kenya and Nepal." YouthSave Research Report. St. Louis: Washington University. csd.wustl.edu/Publications/Documents/RR15-01.pdf.
- Kagitcibasi, Cigdem, Diane Sunar, and Sevda Bekman. 2001. "Long-term effects of early intervention: Turkish low-income mothers and children," *Journal of Applied Developmental Psychology* 22(4): 333–361.
- Keino, Susan, Guy Plasqui, Grace Ettyang, and Bart van den Borne. 2014. "Determinants of stunting and overweight among young children and adolescents in sub-Saharan Africa," *Food & Nutrition Bulletin* 35(2): 167–178.
- Kessler, Ronald C., G. Paul Amminger, Sergio Aguilar-Gaxiola, Jordi Alonso, Sing Lee, and T. Bedirhan Ustün. 2007. "Age of onset of mental disorders: A review of recent literature," *Current Opinion in Psychiatry* 20(4): 359–364. doi:10.1097/YCO.0b013e32816ebc8c.

- Kieling, Christian, Helen Baker-Henningham, Myron Belfer, et al. 2011. "Child and adolescent mental health worldwide: Evidence for action," *The Lancet* 378(9801): 1515–1525.
- Knerr, Wendy, Frances Gardner, and Lucie Cluver. 2013. "Improving positive parenting skills and reducing harsh and abusive parenting in low-and middle-income countries: A systematic review," *Prevention Science* 14(4): 352–363.
- Kohl, R. 2011. "An analytical framework for scaling up pilots in public health," in Richard A. Cash, A. Mushtaque, R. Chowdhury, George B. Smith, Faruque Ahmed (eds.), *From One to Many: Scaling up Health Programs in Low Income Countries*, pp. 241–254. Dhaka, Bangladesh: University Press Limited.
- Konstantopoulos, Wendy Macias, Roy Ahn, et al. 2013. "An international comparative public health analysis of sex trafficking of women and girls in eight cities: Achieving a more effective health sector response," *Journal of Urban Health* 90(6): 1194–1204.
- Kremer, Michael and Alaka Holla. 2009. "Improving education in the developing world: What have we learned from randomized evaluations?" *Annual Review of Economics* 1: 513.
- Kumpfer, Karol L., Methinin Pinyuchon, Ana Teixeira de Melo, and Henry O. Whiteside. 2008. "Cultural adaptation process for international dissemination of the strengthening families program," *Evaluation & the Health Professions* 31(2): 226–239.
- Lardoux, Solène and Afiwa N'Bouke. 2013. "Reaching adolescents and youth in Burkina Faso, Guinea-Bissau and Mauritania," *African Journal of Reproductive Health* 17(1): 73–84.
- Larkin, Heather, Brooke A. Beckos, and Joseph J. Shields. 2012. "Mobilizing resilience and recovery in response to Adverse Childhood Experiences (ACE): A Restorative Integral Support (RIS) case study," *Journal of Prevention & Intervention in the Community* 40(4): 335–346. doi:10.1080/10852352.2012.707466.
- Lau, Patrick W.C., Erica Y. Lau, Del P. Wong, and Lynda Ransdell. 2011. "A systematic review of information and communication technology-based interventions for promoting physical activity behavior change in children and adolescents," *Journal of Medical Internet Research* 13(3): e48. doi:10.2196/jmir.1533.
- Leach, F., M. Dunne, and F. Salvi. 2014. *School-Related Gender-Based Violence: A Global Review of Current Issues and Approaches in Policy, Programming and Implementation Responses to School-Related Gender-Based Violence (SRGBV) for the Education Sector*. Paris: UNESCO.
- Leen, Eline, Emma Sorbring, Matt Mawer, Emma Holdsworth, Bo Helsing, and Erica Bowen. 2013. "Prevalence, dynamic risk factors and the efficacy of primary interventions for adolescent dating violence: An international review," *Aggression and Violent Behavior* 18(1): 159–174.
- Logan, T.K., Robert Walker, and Gretchen Hunt. 2009. "Understanding human trafficking in the United States," *Trauma, Violence, & Abuse* 10(1): 3–30.
- Lundgren, Rebecka, Miranda Beckman, Surendra Prasad Chaurasiya, Bhawna Subhedi, and Brad Kerner. 2013. "Whose turn to do the dishes? Transforming gender attitudes and behaviours among very young adolescents in Nepal," *Gender & Development* 21(1): 127–145.
- Malhotra, Anju, Ann Warner, Allison McGonagle, and Susan Lee-Rife. 2011. "Solutions to end child marriage." Washington, DC: International Center for Research on Women. www.icrw.org/files/publications/Solutions-to-End-Child-Marriage.pdf.
- Mandell, L. 2009. "Starting younger: Evidence supporting the effectiveness of personal financial education for pre-high school students." Seattle: University of Washington and the Aspen Institute. www.nationaltheatre.com/ntccom/pdfs/financialliteracy.pdf.
- Marie Stopes International. Ethics Review Committee (ERC) documents. <https://mariestopes.org/data-research/ethics-review-committee>.
- Marston, Cicely and Eleanor King. 2006. "Factors that shape young people's sexual behaviour: A systematic review," *The Lancet* 368(9547): 1581–1586.
- Martin, Megan. 2012. "The Arab Spring: Youth, freedom and the tools of technology." Al Arabiya News. April 6. english.alarabiya.net/views/2012/04/06/205837.html.
- McClain, Natalie M. and Stacy E. Garrity. 2011. "Sex trafficking and the exploitation of adolescents," *Journal of Obstetric, Gynecologic, & Neonatal Nursing* 40(2): 243–252.
- Mejia, Anilena, Rachel Calam, and Matthew R. Sanders. 2012. "A review of parenting programs in developing countries: Opportunities and Challenges for preventing emotional and behavioral difficulties in children," *Clinical Child and Family Psychology Review* 15(2): 163–175.
- . 2014. "Examining delivery preferences and cultural relevance of an evidence-based parenting program in a low-resource setting of Central America: Approaching parents as consumers," *Journal of Child and Family Studies* 24(4): 1004–1015. doi:10.1007/s10826-014-9911-x.
- Mensch, Barbara, Susheela Singh, and John B. Casterline. 2005. "Trends in the timing of first marriage among men and women in the developing world." New York: Population Council.

- Mensch, Barbara, Erica Soler-Hampejsek, Christine A. Kelly, and Paul C. Hewett. 2011. "Transitions to adulthood in rural Malawi: Estimating the sequencing of sexual initiation, school leaving and marriage." Paper presented at the 2011 Meeting of the Population Association of America, Washington, DC.
- Mensch, Barbara, Erica Soler-Hampejsek, Christine A. Kelly, Paul C. Hewett, and Monica J. Grant. 2014. "Challenges in measuring the sequencing of life events among adolescents in Malawi: A cautionary note." *Demography* 51(1): 277–285. doi:10.1007/s13524-013-0269-2.
- Meyer-Rochow, Victor Benno. 2009. "Food taboos: Their origins and purposes." *Journal of Ethnobiology and Ethnomedicine* 5:18. doi:10.1186/1746-4269-5-18.
- Mikton, Christopher and Alexander Butchart. 2009. "Child maltreatment prevention: A systematic review of reviews." *Bulletin of the World Health Organization* 87(5): 353–361. doi:10.1590/S0042-96862009000500012.
- Mmari, Kristin and Nan Astone. 2014. "Urban adolescent sexual and reproductive health in low-income and middle-income countries." *Archives of Disease in Childhood* 99(8) 778–782.
- Mmari, Kristin, Robert Blum, Freya Sonenstein, Beth Marshall, Heena Brahmabhatt, Emily Venables, Sinead Delany-Moretlwe, et al. 2014. "Adolescents' perceptions of health from disadvantaged urban communities: Findings from the WAVE study." *Social Science & Medicine* 104: 124–132.
- More, Sarika, V. B. Shivkumar, Nitin Gangane, and Sumeet Shende. 2013. "Effects of iron deficiency on cognitive function in school going adolescent females in rural area of Central India." *Anemia*. doi:10.1155/2013/819136.
- Morris, Jodi, Myron Belfer, Amy Daniels, et al. 2011. "Treated prevalence of and mental health services received by children and adolescents in 42 low-and-middle-income countries." *Journal of Child Psychology and Psychiatry* 52(12): 1239–1246.
- Mudaly, N. and C. Goddard. 2009. "Ethics involving children who have been abused in child abuse research." *International Journal of Children's Rights* 17(2): 261–281.
- Mukuddem-Petersen, J. and H. Salome Kruger. 2004. "Association between stunting and overweight among 10-15-y-old children in the North West Province of South Africa: The THUSA BANA Study." *International Journal of Obesity and Related Metabolic Disorders* 28(7): 842–851. doi:10.1038/sj.ijo.0802586.
- National Children's Advocacy Center (NCAC). 2013. "As a matter of fact: The relationship between child maltreatment and academic achievement." Huntsville: NCAC.
- Nguyen, Trang. 2008. "Information, role models and perceived returns to education: experimental evidence from Madagascar." Unpublished.
- O'Prey, L. and D. Shepard. 2014. "Financial education for children and youth: A systematic review and meta-analysis." Aflatoun Working Paper, 2014.Ic.
- Pasick, Rena J., Nancy J. Burke, Judith C. Barker, et al. 2009. "Behavioral theory in a diverse society: Like a compass on Mars." *Health Education & Behavior* 36(5 Suppl.): 11S–35S.
- Patel, Vikram, Niall Boyce, Pamela Y. Collins, Shekhar Saxena, and Richard Horton. 2011. "A renewed agenda for global mental health." *The Lancet* 378(9801): 1441–1442. doi: 10.1016/S0140-6736(11)61385-8.
- Patel, Vikram, Alan J. Flisher, Sarah Hetrick, and Patrick McGorry. 2007. "Mental health of young people: A global public-health challenge." *The Lancet* 369(9569): 1302–1313. doi:10.1016/S0140-6736(07)60368-7.
- Patel, Vikram, Helen A. Weiss, Neerja Chowdhary, et al. 2011. "Lay health worker led intervention for depressive and anxiety disorders in India: Impact on clinical and disability outcomes over 12 months." *The British Journal of Psychiatry* 199(6): 459–466.
- Patton, George C., Carolyn Coffey, Claudia Cappa, et al. 2012. "Health of the world's adolescents: A synthesis of internationally comparable data." *The Lancet* 379(9826): 1665–1675. doi:10.1016/S0140-6736(12)60203-7.
- Peacock, Dean and Gary Barker. 2014. "Working with men and boys to prevent gender-based violence principles, lessons learned, and ways forward." *Men and Masculinities* 17(5): 578–599.
- Peña, R., M. Quintanilla, K. Navarro, J. Martínez, V. Castillo, W. Pérez, and C. Källestål. 2008. "Evaluating a peer intervention strategy for the promotion of sexual health-related knowledge and skills in 10- to 14-year-old girls. Findings from the 'Entre Amigas' project in Nicaragua." *American Journal of Health Promotion* 22(4): 275–281.
- Pereda, Noemi, Georgina Guilera, Maria Forn, and Juana Gómez-Benito. 2009a. "The international epidemiology of child sexual abuse: A continuation of Finkelhor (1994)." *Child Abuse & Neglect* 33(6): 331–342.
- . 2009b. "The prevalence of child sexual abuse in community and student samples: A meta-analysis." *Clinical Psychology Review* 29(4): 328–338.
- Pereznieto, P., C. Harper, B. Clench, and J. Coarasa. 2010. "The economic impact of school violence: A report for Plan International." London: Plan International and Overseas Development Institute. www.ungei.org/files/violence.pdf.

- Phetla, Godfrey, Joanna Busza, James R. Hargreaves, et al. 2008. "They have opened our mouths": Increasing women's skills and motivation for sexual communication with young people in rural South Africa," *AIDS Education and Prevention*, 6(December): 504–518. doi:10.1521/aeap.2008.20.6.504.
- Phillips, A.E., G.B. Gomez, M.C. Boily, and G.P. Garnett. 2010. "A systematic review and meta-analysis of quantitative interviewing tools to investigate self-reported HIV and STI associated behaviors in low- and middle- income countries," *International Journal of Epidemiology* 39(6): 1541–1555.
- Piperata, Barbara A., Kammi K. Schmeer, Craig Hadley, and Genevieve Ritchie-Ewing. 2013. "Dietary inequalities of mother-child pairs in the rural Amazon: Evidence of maternal-child buffering?" *Social Science & Medicine* 96: 183–191. www.sciencedirect.com/science/article/pii/S0277953613004231.
- Population Council. 2015. "Adolescent Girls' Programming Toolkits." New York: Population Council. www.popcouncil.org/research/adolescent-girls-programming-toolkits.
- . 2000–15. "The adolescent experience in-depth: Using data to identify and reach the most vulnerable young people." New York: Population Council. Accessed June 16. www.popcouncil.org/research/the-adolescent-experience-in-depth-using-data-to-identify-and-reach-th.
- Population Reference Bureau (PRB). 2015. "Addressing risk factors for noncommunicable diseases among young people in Africa: Key to prevention and sustainable development." Washington, DC: Population Reference Bureau.
- Psaki, Stephanie, Barbara Mensch, and Erica Soler-Hampejsek. 2015. "The effects of violence in school and at home on education outcomes in rural Malawi: A longitudinal analysis." Paper presented at the 2015 Annual Meeting of the Population Association of America. San Diego, CA.
- Puska, Pekka. 2004. "The global strategy on diet, physical activity & health: 10 years on." Cancer Prevention Research and Policy Blog. wcrf.org/int/blog/articles/2014/05/global-strategy-diet-physical-activity-health-10-years.
- Raftree, Linda and K. Bachan. 2013. "Integrating information and communication technologies into communication for development strategies to support and empower marginalized adolescent girls." New York: UNICEF.
- Robles, Omar. 2014. "I'm here: Adolescent girls in emergencies report." New York: Women's Refugee Commission. womensrefugeecommission.org/resources/document/1078-i-m-here-report-final-pdf.
- Santhya, K. G. and Shireen J. Jejeebhoy. 2015. "Sexual and reproductive health and rights of adolescent girls: Evidence from low- and middle-income countries," *Global Public Health* 10(2): 189–221. doi:10.1080/17441692.2014.986169.
- Save the Children. 2008. "Kit of tools for participatory research and evaluation with children, young people and adults." Oslo, Norway: Save the Children.
- Save the Children Denmark, Ethiopian Ministry of Education, and Ethiopian Ministry of Women's Affairs. 2008. "A study on violence against girls in primary schools and its impacts on girls' education in Ethiopia." Addis Ababa: Save the Children.
- Sawyer, Susan M., Rima A. Afifi, Linda H. Bearinger, Sarah-Jayne Blakemore, Bruce Dick, Alex C. Ezeh, and George C. Patton. 2012. "Adolescence: A foundation for future health," *The Lancet* 379(9826): 1630–40. doi:10.1016/S0140-6736(12)60072-5.
- Schauer, Elizabeth and Thomas Elbert. 2010. "Psychological impact of child soldiering," in Erin Martz (ed.), *Trauma Rehabilitation After War and Conflict*, pp. 311–360. New York: Springer Science + Business Media.
- Schenk, K. and J. Williamson. 2005. "Ethical approaches to gathering information from children and adolescents in international settings: Guidelines and resources." Washington, DC: Population Council.
- Schwartz, David, Jennifer E. Lansford, Kenneth A. Dodge, Gregory S. Pettit, and John E. Bates. 2013. "The link between harsh home environments and negative academic trajectories is exacerbated by victimization in the elementary school peer group," *Developmental Psychology* 49(2): 305.
- Sedlak, A. and et al. 2010. "Fourth National Incidence Study of Child Abuse and Neglect (NIS-4) Report to Congress." Washington, DC: US Department of Health and Human Services, Administration for Children and Families.
- Selim, Mona, Nahla G. Abdel-Tawab, Khaled El Sayed, Asmaa Elbadawy, and Heba El Kalaawy. 2013. "The Ishraq Program for out-of-school girls: From pilot to scale-up." Cairo, Egypt: Population Council.
- Shared Hope International. 2009. *The National Report on Domestic Minor Sex Trafficking: America's Prostituted Children*. Vancouver: Shared Hope International.
- Shumba, Almon. 2002. "The nature, extent and effects of emotional abuse on primary school pupils by teachers in Zimbabwe," *Child Abuse & Neglect* 26(8): 783–791.
- Simmons, R., P. Fajans, and L. Ghiron. 2007. "Scaling up health service delivery: From pilot innovations to policies and programmes." Geneva: World Health Organization.

- Slopen, Natalie, Garrett Fitzmaurice, David R. Williams, and Stephen E. Gilman. 2010. "Poverty, food insecurity, and the behavior for childhood internalizing and externalizing disorders," *Journal of the American Academy of Child & Adolescent Psychiatry* 49(5): 444–452.
- Small, Kevonne and Justice Policy Center. 2008. *An Analysis of Federally Prosecuted CSEC Cases Since the Passage of the Victims of Trafficking and Violence Protection Act of 2000: Final Report*. Washington, DC: Urban Institute, Justice Policy Center.
- Sommer, Marni. 2011. "An early window of opportunity for promoting girls' health: Policy implications of the girl's puberty book project in Tanzania," *International Electronic Journal of Health Education* 14: 77–92.
- Staurowsky, E., M.J. DeSousa, G. Ducher, N. Gentner, K. Miller, S. Shakib, N. Theberge, and N. Williams. 2015. "Her life depends on it III: Sport, physical activity, and the health and well-being of American girls and women." East Meadow, NY: Women's Sports Foundation. www.womenssportsfoundation.org/en/sitecore/content/home/research/articles-and-reports/mental-and-physical-health/her-life-depends-on-it-iii.aspx.
- Steinberg, Lawrence. 2014. "The science of adolescent brain development and its implication for adolescent rights and responsibilities," in Jacqueline Bhabha, *Human Rights and Adolescence*. Pennsylvania Studies in Human Rights. Philadelphia: University of Pennsylvania Press.
- Stoltenborgh, Marije, Marinus H. van IJzendoorn, Eveline M. Euser, and Marian J. Bakermans-Kranenburg. 2011. "A global perspective on child sexual abuse: Meta-analysis of prevalence around the world," *Child Maltreatment* 16(2): 79–101.
- Sumpter, Colin and Belen Torondel. 2013. "A systematic review of the health and social effects of menstrual hygiene management," *PLoS ONE* 8(4). doi:10.1371/journal.pone.0062004.
- Temin, Miriam and Ruth Levine. 2009. "Start with a girl: A new agenda for global health." Girls Count Series. Washington, DC: Center for Global Development. www.cgdev.org/files/1422899_file_Start_with_a_Girl_FINAL.pdf.
- Temin, Miriam, Mark R. Montgomery, Sarah Engbretsen, and Kathryn M. Barker. 2013. "Girls on the move: Adolescent girls & migration in the developing world. A *Girls Count* report on adolescent girls." New York: Population Council. www.popcouncil.org/uploads/pdfs/2013PGY_GirlsOnTheMove.pdf.
- Theoklitou, D., N. Kabitsis, and A. Kabitsi. 2012. "Physical and emotional abuse of primary school children by teachers," *Child Abuse & Neglect* 36(1): 64–70.
- UNESCO. 2009. "International technical guidance on sexuality education: An evidence-informed approach for schools, teachers, and health educators." Paris: UNESCO.
- . 2015. "Education for all 2000–2015: Achievements and challenges." Education for All Global Monitoring Report. Paris: UNESCO.
- UNESCO Institute for Statistics. 2011. "Early adolescent girls: A global view of participation in lower secondary education." Fact Sheet 11. Paris: UNESCO. www.uis.unesco.org/FactSheets/Documents/fs11-2011-en.pdf.
- . 2015. "A growing number of children and adolescents are out of school as aid fails to meet the mark." UNESCO Paper 22/Fact Sheet 31. Paris: UNESCO. www.uis.unesco.org/Education/Documents/fs-31-out-of-school-children-en.pdf.
- UNFPA. 2010. "Comprehensive sexuality education: Advancing human rights, gender equality and improved sexual and reproductive health." New York: UNFPA.
- UNICEF. 2005. "Early marriage: A harmful traditional practice." New York: UNICEF.
- . 2006. "Guidelines on the protection of child victims of trafficking." New York: UNICEF. www.unicef.org/ceecis/0610-Unicef_Victims_Guidelines_en.pdf.
- . 2007. "A national study on violence against children and young women in Swaziland." Mbabane: UNICEF Swaziland.
- . 2011. "Adolescence: An age of opportunity—the state of the world's children." New York: UNICEF. www.unicef.org/adolescence/files/SOWC_2011_Main_Report_EN_02092011.pdf.
- . 2012a. "Child social and financial education. A Companion to the Child Friendly Schools Manual." New York: UNICEF.
- . 2012b. "Global evaluation of life skills education programmes." New York: UNICEF.
- . 2012c. "Progress for children: A report card on adolescents." New York: UNICEF.
- . 2013. "Towards an AIDS-free generation: Children and AIDS Sixth Stocktaking Report." New York: UNICEF.
- . 2014a. "Ending child marriage: Progress and prospects." New York: UNICEF. www.unicef.org/media/files/Child_Marriage_Report_7_17_LR.pdf.
- . 2014b. "Female genital mutilation/cutting: What might the future hold?" New York: UNICEF.
- . 2014c. "Hidden in plain sight: A statistical analysis of violence against children." New York: UNICEF. www.unicef.org/publications/index_74865.html.

- UNICEF and Collaborating Centre for Operational Research and Evaluation. 2013. *National Baseline Survey on Life Experiences of Adolescents*. Harare: UNICEF and Zimbabwe National Statistics Agency.
- UNICEF, National Center for Injury Prevention and Control, US Centers for Disease Control and Prevention, and Kenya National Bureau of Statistics. 2012. *Violence Against Children in Kenya: Findings from a 2010 National Survey*. Nairobi: UNICEF.
- UNICEF, US Centers for Disease Control and Prevention Children's Fund, and Muhimbili University of Health and Allied Sciences. 2011. *Violence against Children in Tanzania: Findings from a National Survey 2009*. Dar es Salaam: UNICEF Tanzania.
- UNODC. 2009. "Guide to implementing family skills training programmes for drug abuse prevention." Vienna: UNODC.
- United Nations Department of Economic and Social Affairs—Population Division (UNDESA). 2013. *World Population Prospects, the 2012 Revision*. esa.un.org/wpp/.
- Van Wyk, J.D., M.E. Eloff, and P.M. Heyns. 1983. "The evaluation of an integrated parent-training program," *The Journal of Social Psychology* 121(2): 273–281.
- Verstraeten, Roosmarijn, Dominique Roberfroid, Carl Lachat, et al. 2012. "Effectiveness of preventive school-based obesity interventions in low- and middle-income countries: A systematic review," *The American Journal of Clinical Nutrition*. August. doi:10.3945/ajcn.112.035378.
- Villarruel, Antonia M., Carol Loveland Cherry, Esther Gallegos Cabriaes, David L. Ronis, and Yan Zhou. 2008. "A parent-adolescent intervention to increase sexual risk communication: Results of a randomized controlled trial," *AIDS Education and Prevention* 20(5): 371–383. doi:10.1521/aeap.2008.20.5.371.
- War Child. 2015. "Child soldiers." www.warchild.org.uk/issues/child-soldiers.
- Wight, Daniel and Deirdre Fullerton. 2013. "A review of interventions with parents to promote the sexual health of their children," *Journal of Adolescent Health* 52(1): 4–27.
- Williamson, Celia and Michael Prior. 2009. "Domestic minor sex trafficking: A network of underground players in the Midwest," *Journal of Child & Adolescent Trauma* 2(1): 46–61.
- Women's Refugee Commission (WRC), Johns Hopkins University, Adolescent Reproductive Health Network, International Medical Corps, Save the Children, American University in Beirut. 2014. "Very young adolescents in humanitarian settings: Examining the sexual and reproductive health needs and risks of girls and boys aged 10–14 in Ethiopia, Lebanon and Thailand." New York: WRC.
- World Health Organization (WHO). 2001. "Prevention of child abuse and neglect: Making the links between human rights and public health." Geneva: WHO.
- . 2009. "Preventing violence through the development of safe, stable and nurturing relationships between children and their parents and caregivers." Geneva: WHO
- . 2011. "WHO ethical and safety guidance notes for research with adolescents: Report of a WHO technical consultation." Geneva: WHO. whqlibdoc.who.int/hq/2011/who_rhr_11.11_eng.pdf.
- . 2012a. "Adolescent mental health: Mapping actions of nongovernmental organizations and other international development organizations." Geneva: WHO. whqlibdoc.who.int/publications/2012/9789241503648_eng.pdf.
- . 2012b. "Global health estimates." Geneva: WHO. www.who.int/healthinfo/global_burden_disease/estimates/en/.
- . 2013. "Health data and statistics." Geneva: WHO. www.who.int/healthinfo/statistics/en/.
- . 2014a. "Global health estimates 2013 summary tables: DALYS, YLLs and YLDs by cause, age and sex by WHO regional group and World Bank income classification, 2000–2012 (provisional estimates)." Geneva: WHO.
- . 2014b. "Health for the World's Adolescents: A Second Chance in the Second Decade." Geneva: WHO. apps.who.int/adolescent/second-decade.
- . 2015. "Interim Report of the Commission on Ending Childhood Obesity." Geneva: WHO.
- WHO, World Psychiatric Association (WPA), and International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP). 2005. *Child and Adolescent Mental Health Resources: Global Concerns—Implications for the Future*. Geneva: WHO. www.who.int/mental_health/resources/Child_ado_atlas.pdf.
- Yaqub, Shahin. 2009. "Independent child migrants in developing countries: Unexplored links in migration and development." Florence: UNICEF Innocenti Research Centre. ideas.repec.org/p/ucf/inwopa/inwopa09-62.html.
- Yoder, P. Stanley, Shanxiao Wang, and Elise Johansen. 2013. "Estimates of female genital mutilation/cutting in 27 African countries and Yemen," *Studies in Family Planning* 44(2): 189–204.
- Zolotor, A.J., D.K. Runya, M.P. Dunne, D. Jain, H.R. Petrus, C. Ramirez, E. Volkova, et al. 2009. "ISPCAN Child Abuse Screening Tool Children's Version (ICAST-C): Instrument development and multinational pilot testing," *Child Abuse & Neglect* 33(11): 833–841.



**POPULATION
COUNCIL**

Ideas. Evidence. Impact.

One Dag Hammarskjold Plaza
New York, NY 10017

popcouncil.org

