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Mary E. Dillon *Editors*

International Handbook on Adolescent Health and Development

The Public Health Response

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Preface

This book comes out at an unprecedented time for global adolescent health. Before the twenty first century, there was a substantial international investment in neonatal and pediatric healthcare in virtually all countries around the world. At the same time, there was little research on adolescence, as a specific period in time with specific health needs. This level of interest began to change when health and social data revealed that the gains made in neonatal and pediatric healthcare were being lost during adolescences. Public health researchers and health providers pointed to the lack of adolescent specific health and social services designed to bridge the gap between children's health programs and the adult health and social care infrastructure.

Subsequently, interest in adolescent health issues has been growing and translated in major international initiatives. On September 26, 2015, the day after the General Assembly of the United Nations adopted the Sustainable Development Goals, the U.N. Secretary-General launched the Global Strategy for Women's, Children's and Adolescents' Health. The strategy lays out an ambitious vision for a world "in which every woman, child and adolescent in every setting realizes their rights to physical and mental health and wellbeing, has social and economic opportunities, and is able to participate fully in shaping prosperous and sustainable societies". What is different in this new strategy is that it includes adolescents as "central to everything we want to achieve, and to the overall success of the 2030 Agenda" (Ban Ki-moon). Aligned with the Global Strategy, the 68th World Health Assembly requested the World Health Organization Secretariat to develop a Global Framework for Accelerated Action for the Health of Adolescents (the AA-HA! Framework) in consultation with youth, Member States, and major partners. The Lancet established a Commission on Adolescent Health and Wellbeing to support actions in response to the shifting determinants of health and health needs among the world's youth.

With this, the sense of urgency that was growing over the past two decades that something needs to be done differently to enhance the positive development of adolescents has found its focus. We believe that this book provides a fair snapshot of the state of the knowledge and practice in adolescent public health, and hope that the reader will find practical answers to some of the questions that would instigate him/her to act locally.

Most definitions of adolescence define this period in terms of transition, dynamic changes and the goal of adulthood. This book is about a somewhat

different adolescence. It is about the period that for every single adolescent among 1.2 billion adolescents worldwide is their very present. It is about the adolescence that is not a mean to an end, but a *raison d'être* in itself. It is about adolescence that has biological underpinnings for being a distinct period of human growth and development, but it is also about adolescence that is socially constructed. There is no other period in human life that is so tightly regulated by societies as adolescence. There is a labyrinth of rules and regulations for adolescents about the desirability, onset and frequency of all sorts of behaviors and activities ranging from sexual activity to use of services—all with good intention to protect adolescents.

The problem is when the regulations are not informed by a developmental marker, but instituted arbitrarily by politicians and policy makers. There is no biological explanation why the age of criminal responsibility varies from 8 years of age in Scotland and 10 years of age in England and Wales to 18 in Belgium and Luxembourg. When adolescence is socially constructed, regulators may decide when to pull back adolescents towards childhood (e.g., regulations on informed consent for medical services) and when to push them towards adulthood (e.g., legal provisions for child marriage).

With so many rules and in the absence of a scientific basis for what is a normative level for various behaviors, no wonder that adolescents are “at risk” of trespassing socially constructed boundaries, and “targets” for various programs and initiatives in preventing them from doing so. This is not to say that adolescents are not vulnerable, but we have to distinguish between three different sources of vulnerabilities: (1) those that have a biological foundation (e.g., propensity for impulsive behaviors due to the peculiarities of brain development); (2) those that are socially determined (e.g., low community acceptance of premarital sexual activity), and (3) those that are politically constructed. Deliberate policies, irrespective of their primary intent, may undermine adolescents rights (e.g., minimum age for transferring juvenile cases to the adult criminal court, or regulations about third party authorization for adolescents access to services). This book will help the reader to make this distinction, and to see how it can be applied in designing adolescent specific public health responses.

The book is presented in four parts. **Part I** is *A Snapshot of Adolescent Health and Development Globally and from Selected Countries*, and explores the reasons why adolescent health is becoming a public health priority. It summarizes the current leading causes of morbidity and mortality among adolescents globally, as well as, with examples from Cuba and Japan, covers trends in health promoting and health compromising behaviors that commonly emerge during the adolescent years.

Part II, *Adolescent Health Conditions and the Public Health Response*, examines in more depth the leading causes of ill health and death in adolescence, provides examples of effective evidence based interventions and successful public health policies.

Generally, the health sector is not organized by diseases. Healthcare reforms are usually concerned with shifting service delivery to people-centered care, which means that it is focused, organized around the health needs and expectations of people and communities rather than

on diseases. From the point of view of policy making and healthcare organization, therefore, we found it useful in this book to discuss what arrangements need to be made in primary and referral level care in order to provide equitable, comprehensive, and integrated health services for the adolescent population. The exact configuration of services varies from country to country, but in all cases services require a well-trained workforce, robust financing, and financial protection mechanism. As well, attention must be paid to the particular needs of adolescents who report poorer satisfaction with the healthcare services compared with adults, and face greater cost and other barriers to accessing healthcare.

Part III of the book, *Adolescent Responsive Health and Social Systems*, therefore, looks at the key functions of health systems from the perspective of adolescents' specific needs and expectations.

There is a range of different platforms available to provide health services to adolescents: public and private facilities, schools, mobile clinics, pharmacies, youth centers, e-health, and outreach strategies. Among them, school health services are particularly well placed to reach adolescents with preventive interventions. In 2012, the primary gross school enrolment ratio was 108.4 % (global average) (the primary gross school enrolment ratio can exceed 100 % due to the inclusion of over-aged and under-aged students, because of early or late school entrance, and grade repetition). The secondary gross school enrolment ratio was 73 % (global average). Importantly, in many countries the trends for both indicators are positive. Among the scientific and political advances that adolescent health agenda witnessed during the last few years, however, the role of school health services has not been adequately addressed. We decided therefore to dedicate a distinct part in this book to case studies of school health services.

Part IV, *Pairing Children with Health Services: The Role of School Health Services*, describes this promising form of linking children and adolescents with preventive interventions and other services.

An initial glance at the table of content of this book may leave the reader with an impression that some key topics are missing. Indeed, there are no chapters that are called "Youth participation", "Adolescents' rights and gender equality", "The importance of social determinants of health", or "Adolescents are not all the same". So important are these topics for adolescent healthcare and protective policies, that they are **crosscutting themes in these chapters**:

- The importance of an **ecological understanding of adolescent health** and of addressing social and structural determinants in policy measures is a defining theme in chapters about sexual and reproductive health, adolescent nutrition, and injury prevention, among others. The authors demonstrate how adolescent health outcomes are influenced by the interaction of biological, psychological, social, economic, political, cultural, legal, historical, religious, spiritual factors, and how an ecological understanding of adolescent health informs program design.
- The importance of **gender equality and respecting, protecting and fulfilling adolescents right to health** and healthcare is a central idea in

the chapters from India and Chile, as well as, in chapters about sexual and reproductive health (Chaps. 8 and 9), restorative justice and mental well-being (Chap. 7), and quality of care (Chap. 15), among others.

- **Adolescent participation** in decisions, which affect their health and lives is the cornerstone for assessing the adolescent's capacity for autonomous decision-making (Chap. 18). Adolescent participation is also an inherent characteristic of quality healthcare services for adolescents, and is one of the eighth quality standards, as described in Chap. 15. The experience from Portugal on implementing an adolescent health curriculum shows how important student involvement in program evaluation was to improve the content and teaching methods of the adolescent health course (Chap. 17).
- **Adolescents are not a homogeneous group:** the fact that policies and programs need to take into consideration the heterogeneity of adolescents, including the differential in exposure to risk factors and differing developmental phases and health needs of younger and older adolescents is emphasized in several chapters (Chaps. 1, 3, 4, 18 and 20).
- **Some adolescents are particularly vulnerable** and this is why it is important to monitor the health of marginalized youth (Chap. 1). Policies need to be in place to track health disparities between subgroups of adolescents, and to provide financial and other forms of protection from factors of vulnerabilities (Chap. 19).

Forty four experts in the field have directly contributed towards the content of this book. We want to thank them all for their enthusiasm in knowledge sharing, and professionalism in knowledge synthesis for the benefit of the reader whom, we hope, will take it one step further into knowledge translation in their countries and settings.

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Part I

**A Snapshot of Adolescent Health
and Development Globally
and from Selected Countries**

Elizabeth Saewyc

Monitoring the Health of the Global Population of Adolescents

In 2013, there were 1.2 billion adolescents, about 17 % of the world's population (Clifton and Hervish 2013), the largest population of adolescents throughout history to date. While the aging of populations in high-income countries means a relatively low proportion of their population are between the ages of 10 and 19, in low- and middle-income countries, as many as 1 in 5 citizens are adolescents. Indeed, a majority of adolescents in the world today live in low- and middle-income countries, primarily in the global south.

Part of the reason for this demographic shift is the success of national efforts to reduce infant mortality and increase child survival as part of the Millennium Development Goals (United Nations 2015), often in the cultural context of early marriage and high fertility. But, will the efforts, which have improved survival during early childhood, improve survival during adolescence? Likewise, in high-income countries, given the increasing numbers of older adults who are living longer, with chronic health conditions

that require significant health care resources, are the policy makers aware of adolescents' health needs and issues, and include adolescents in health systems plans?

A key component of public health practice is monitoring and surveillance of the health status of populations. In many parts of the world, the health and mortality data collected are still not regularly reported separately for adolescents, and this remains a priority recommendation in several international reports (United Nations Population Fund 2012; World Health Assembly 2011; WHO 2014). A growing number of countries, however, are implementing national youth health surveys, or participating in international surveys, as well as improving their data collection and reporting key information about the health status of adolescents. In 2014, the World Health Organization assembled much of the existing information into a comprehensive report, *Health for the World's Adolescents: A Second Chance in the Second Decade* (<http://apps.who.int/adolescent/second-decade/>). While this chapter summarizes the latest information about adolescent health from that report and other sources, you can find more detailed information and trends for global regions and individual countries in the interactive World Health Organization online report.

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Leading Causes of Mortality Among Adolescents Worldwide

Adolescence is generally a healthy time period, and youth aged 10–19 have some of the lowest mortality rates among populations worldwide (WHO 2014). In the last half of the twentieth century, there was significant improvement in mortality rates among children, and, to a lesser extent, among adolescents, worldwide (Viner et al. 2011). These reductions in mortality rates continued between 2000 and 2012 for adolescents in nearly all regions in the world. The exception is boys aged 15–19 in the Middle Eastern region, where mortality rates increased slightly, primarily due to deaths from war. Among boys of the same age in South and Central America, the mortality rates remained the same (WHO 2014). In order to be comparable across regions and across age groups, mortality rates are generally reported as deaths per 100,000 of the population.

There has also been a shift in the leading causes of death among adolescents in most high-income countries and many middle-income countries. In the past, these countries suffered from deaths due to infectious diseases and cancers. In modern times, deaths have shifted to those caused by behaviors such as accidental injury, violence, and self-harm (Patton et al. 2009; Viner et al. 2011). Part of the reason for the shift was the systematic implementation of childhood immunizations, the development of antibiotics, as well as improvements in treatments for pediatric cancers. As a result, children and youth started surviving who might have died of such causes in the past.

Because of these improvements in high-income countries, the majority of deaths to adolescents now occur in low- and middle-income countries, primarily Africa and Southeast Asia, which together account for nearly 70 % of all deaths among adolescents globally. In many low- and middle-income countries, there are still far too many adolescents who die of infectious diseases such as HIV, cholera, tuberculosis, malaria, and measles (Viner et al. 2011; WHO 2014). For example, 16 % of deaths among

adolescents in the Africa Region in 2012 were due to HIV. They accounted for 90 % of deaths from HIV among adolescents worldwide. Similarly high rates of deaths due to other infectious diseases occur in low-income countries throughout the world. As a result, HIV, lower respiratory infections (pneumonia), diarrheal diseases, and meningitis still are among the top 10 leading causes of death among adolescents globally. Deaths from HIV were also estimated to have increased between 2000 and 2012 among adolescents, the only age group in which deaths from HIV have not declined. However, there have been some impressive successes in reducing deaths from infectious disease, even in low-income countries. Due to national immunization programs, for example, there were 90 % fewer deaths from measles in the past decade among adolescents aged 10–14 in Africa. The rate of death from measles worldwide (4 per 100,000 adolescents) has dropped 75 %, to 1 per 100,000 adolescents (WHO 2014).

Behavior-related causes of death are becoming some of the leading causes of mortality among young people in low- and middle-income countries. Worldwide, road traffic accidents are one of the leading causes of death among adolescents, at 10.22 deaths per 100,000 globally (WHO 2014). It is the leading preventable cause of death among adolescent boys, and among the top five causes of death among adolescent girls, in both older and younger adolescents, and across all regions. The rate varies widely by region and sex, however, with the highest rate at 21.11 deaths per 100,000 among boys in Africa, and the lowest at 3.70 deaths per 100,000 among girls in middle-income European countries. Another form of unintentional injury, deaths by drowning is also a major cause of mortality among younger adolescents in nearly every region of the world, except for Africa. In every region, boys are more likely to die from unintentional injuries than girls in the same region.

Deaths from violence, whether interpersonal violence or due to armed conflicts, are also an important contributor to mortality among adolescents, especially those 15–19 years of age. Although death due to war is nearly nonexistent

in high-income countries, it is the leading cause of mortality among males in low- and middle-income countries. In the Middle East, adolescent mortality is 39.56 deaths per 100,000 among boys aged 15–19. Among boys between 10 and 14 years of age, the mortality death rate is 15.07 deaths per 100,000. War also contributes measurably to mortality among girls, with 7.55 deaths per 100,000 among girls aged 10–19 in the Middle East region.

In contrast, interpersonal violence not related to war is a leading cause of death among adolescent boys in low- and middle-income countries in South and Central America. Among 15–19-year-old boys, the mortality rate is extremely high at 70.05 deaths per 100,000. Because deaths from interpersonal violence are common in several regions, it ranks among the top five causes of death among adolescents globally. It is one of the leading causes of death among boys in high-income countries as well.

Suicide is another leading cause of death among adolescents in nearly every region. Among high-income countries, it is the second leading cause of death, after road injuries, for both boys and girls, although the rates are still quite low, at 9.22 deaths per 100,000 for boys and 4.98 deaths per 100,000 for girls. The highest mortality rates from suicide are found in the Southeast Asia region, where it is the leading cause of death among older girls at 27.92 deaths per 100,000, and among older boys at 21.41 deaths per 100,000.

There is one top ranked cause of mortality that only affects adolescent girls: deaths due to maternal conditions, which include deaths from childbirth and complications from self-induced abortions in countries where abortion is illegal. Although the Millennium Development Goals included a reduction in maternal mortality, and rates of maternal mortality among adolescent girls declined between 2000 and 2012, it still is the second leading cause of death among adolescent girls aged 15–19 globally, at 9.72 deaths per 100,000. The highest adolescent rates of maternal death are in Africa (33.83 deaths per 100,000), followed by the Middle East (9.94 per 100,000) and Southeast Asia (8.97 per 100,000).

In contrast, among girls in high-income countries, less than 1 death per 100,000 (0.32 per 100,000) was from maternal conditions in 2012.

The majority of the 1.3 million deaths among adolescents in 2012 were due to preventable causes. This is why it is important to monitor changing patterns of mortality among adolescents nationally, regionally, and globally. This data is used to suggest priorities for public health interventions. Yet, most reports of mortality combine data on older adolescents with that of adults (e.g., 15–29 years of age), and younger adolescents with toddlers and children (e.g., 1–14 years of age), making it difficult to identify the key causes of death in this age group and masking potential causes that are developmentally specific to adolescence.

Beyond Mortality: The Global Burden of Disease and Disability Among Adolescents

Although removing or reducing causes of premature death among adolescents is an important priority for public health, there are a number of health conditions that contribute to disability, suffering, and diminished health during these years, even when they do not cause death. Two measures are commonly used in public health monitoring related to morbidity, to allow comparisons across regions and across conditions: years lost to disability (YLDs) and disability-adjusted life-years (DALYs). YLDs are estimates based on how common the condition is and how debilitating it is in affecting the functions of daily living. This measure provides an estimate of the burden of ill health. DALYs combine both YLDs and causes of mortality for the population. As described in *Health for the World's Adolescents*, DALYs “are a measure of the years of healthy life lost due to ill health, disability or premature death. They estimate the gap between current health status and an ideal health status, with the entire population living to an advanced age free of disease and disability. For a specific health condition, DALYs are calculated as the sum of the years of life lost (YLL) due to

premature death plus disability (YLD) for people living with the health condition” (WHO 2014). DALYs are reported as years lost per 1000 of the population.

The top five causes of YLDs for adolescents globally have remained fairly consistent since 2000. They account for nearly half the years lost to disability among young people. They include mental health conditions (unipolar depressive disorders and anxiety), as well as chronic conditions (asthma, back pain, and neck pain), and malnourishment (iron deficiency anemia). Among older adolescents, alcohol use disorders replace asthma in the top five causes of YLDs; in fact, alcohol use disorders are the leading cause of YLDs among 15–19-year-old boys in nearly all regions except the Middle East, which includes high-income countries. It is lower among girls, but still within the top five causes of YLDs. There are other causes of YLDs that only affect particular global regions; for example, malaria is a leading cause of YLDs among younger adolescents in Africa, while hookworm is a similar cause of YLDs in Southeast Asia.

DALYs provide another common public health approach for identifying causes of poor health and disability, and for establishing priorities to guide population-level interventions. WHO reported a decline in DALYs between 2000 and 2012 for adolescents of about 8 %, but this is half the decline seen in other populations. In other words, the burden of disease, disability, and premature death among adolescents is not improving as much as it is for other groups. Low- and middle-income countries have higher rates of DALYs than high-income countries, with Africa reporting the highest burden of DALYs, due in part to the high rates of adolescent mortality in these countries.

Because DALYs combine both YLDs and causes of mortality, the top 10 causes of DALYs worldwide among adolescents aged 10–19 mirror the key issues seen in both YLDs and mortality rates: depression, road traffic injuries, iron deficiency anemia, HIV/AIDS, suicide and self-harm, back and neck pain, anxiety disorders, asthma, and lower respiratory infections. However, there are gender and age differences in the most

common causes of DALYs across adolescence. For example, depression is associated with a larger number of DALYs lost for girls than for boys, and road injuries are higher for boys. Among older adolescent girls (15–19 years of age), maternal conditions, pregnancy, and abortion-related deaths and health issues are the second leading cause of DALYs lost, and iron deficiency anemia is number four, but road injuries do not make it into the top five causes. In contrast, road injuries are at the top of the list among older adolescent boys, interpersonal violence is the second leading cause of DALYs lost, suicide and self-harm are number three, and alcohol use disorders are number four, with depression as number five. Among younger adolescent boys and girls, iron deficiency anemia is a leading cause of DALYs. Asthma is also in the top five worldwide and in most of the regions.

There are also regional differences in top causes of DALYs, and the patterns in some regions look very different from the global patterns. For example, in Africa, three of the top five causes of DALYs for both older boys and girls are infectious diseases, including HIV/AIDS (number one for both genders), meningitis, and lower respiratory infections, with maternal conditions and depression for older adolescent girls and road injury and interpersonal violence for older adolescent boys rounding out the top five. In Southeast Asia, HIV/AIDS and meningitis are not in the top five causes of DALYs lost for girls, but instead diarrheal diseases and iron deficiency anemia are. For boys it is drowning plus back and neck pain. In low- and middle-income countries in Europe, migraines are a top five cause of DALYs for girls, while alcohol use disorders are in the top five for boys. In the Middle East, war is one of the leading causes of DALYs lost for both older and younger boys, and is in the top five for younger girls; also, this is the only region where armed conflict/war makes it into the top five causes of DALYs lost among adolescents.

The varied patterns of DALYs (for older and younger boys and for girls across different regions) are used to help suggest key areas to focus health promotion and prevention programs

in the different regions. A number of the causes of DALYs lost are also preventable health issues.

Monitoring Health-Enhancing and Health-Compromising Behaviors Among Adolescents

As shown in the patterns of mortality and DALYs described above, there are a number of behaviors that emerge or are consolidated during adolescence that contribute to healthy growth and development, and may prevent both communicable and non-communicable disease (NCD) now and in older adulthood. This would include behaviors such as adequate levels of regular physical activity, healthy diet, and injury or infection prevention strategies such as wearing bicycle helmets or using condom or other barriers during sexual activity. Other behaviors may begin during adolescence that are linked to higher risks for disease, disability, and premature death such as tobacco use, alcohol or other drug use, unprotected sex, and violence involvement. To promote healthy development among adolescents, public health practice includes a focus on fostering health-enhancing behaviors and preventing or reducing hazardous behaviors. By focusing on some of the key behaviors and conditions linked to mortality and morbidity, public health professionals can work to improve young people's health during their adolescent years. These programs also help prevent or delay the onset of chronic conditions during adulthood.

How do public health professionals know where to focus their policies and programs to promote adolescent health? Adolescent health leaders and international organizations like WHO have called for identifying a set of key indicators of adolescent health and risk, including behaviors that may contribute to health and health problems (Patton et al. 2012). Although there are no indicators that are consistently collected across all countries, regularly repeated surveys monitoring the health and risk behaviors of adolescents are

an increasingly common approach for capturing this information. Many high-income countries administer these surveys to adolescents every few years in school settings; some of them even collaborate across multiple countries to administer comparable surveys; for example, the Health Behavior of School-Age Children (HBSC, www.hbsc.org) and the European School Survey Project on Alcohol and Other Drugs (ESPAD, www.espad.org). The HBSC captures data from 11-year-olds, 13-year-olds, and 15-year-olds, while the ESPAD focuses on those 15 years and older. A growing number of low- and middle-income countries are supported by international NGOs and governments to conduct school surveys as well, such as the Global School-Based Student Health Survey (GSHS, www.who.int/chp/gshs/en/), which surveys youth 13–17 years of age, and the Global Youth Tobacco Survey (GYTS, www.who.int/tobacco/surveillance/gyts/en/), which surveys youth 13–15 years of age. However, in those low-income countries where secondary school is not compulsory and marriage during adolescence is common, many young people may be in the work force rather than in school. These countries may also conduct household surveys, such as the Demographic and Health Surveys (DHS, www.measuredhs.com/), to gather information about adolescents along with other family members.

Several adolescent health behaviors and health issues are measured using school-based surveys such as the Global School-Based Student Health Survey (GSHS), GYTS, and Health Behavior of School-Age Children (HBSC). Some of these surveys have been repeated often enough, in dozens of countries, to allow monitoring of trends in health behaviors, although this has primarily been the case for high-income countries. A comprehensive discussion of all the various indicators, their patterns and trends globally, and variation across regions is beyond the scope of this chapter, but more detailed information can be found in the WHO *Health for the World's Adolescents* report's Chap. 4.

However, a few of the key indicators are mentioned below. Some are linked to the leading causes of mortality and morbidity among adolescents, and others are included because they are an emerging international priority for youth and adults.

Injuries and Violence Involvement

Although road traffic accidents are a leading cause of mortality and DALYs among adolescents worldwide, the data about driving behaviors are inconsistently captured, if at all. Different measures are used in different regions, and in other regions government monitoring is used. Thus, comparisons across nations are difficult to impossible. Among measures, both the GSHS and HBSC ask about interpersonal violence and injuries.

Data about involvement in physical fighting in the past year are available in the *Health for the World's Adolescents* report for more than 100 countries (WHO 2014). The patterns show that fighting is common, but with distinct gender differences. Boys more often report involvement in fighting than girls, and in more than half of the countries that asked about fighting, the majority of boys said they had been in at least one physical fight in the past year. In the countries with trend data from the HBSC, more than a third of the countries show declining rates among 13-year-old boys in recent years, but two countries—Ukraine and Greece—reported increasing prevalence of fighting among 13-year-old boys. Among 15-year-old boys, there were few countries with declining trends, and Greece reported a significant increasing rate of fighting.

Bullying is another important form of interpersonal violence among adolescents. It is linked to significant mental health problems for those who are targeted by bullying, as well as for those who both engage in bullying and are victimized by bullying (Luk et al. 2010; Winsper et al. 2012). In the GSHS and HBSC data (WHO 2014), the prevalence of recent bullying (experienced in the past 1 or 2 months) varied widely, both among countries within geographic regions

and across income levels. For example, Italy, Armenia, Macedonia, and Tajikistan all reported rates below 10 %, while Egypt, Vanuatu, Samoa, Solomon Islands, Zambia, and Belgium reported rates above 60 % (only for boys in Belgium). Boys were more likely to have been bullied than girls in about half the countries, but rates were significantly higher for girls in a few countries such as Algeria, Zambia, and the Cook Islands. In the HBSC data, trends in bullying appear to be decreasing in most countries.

Mental Health Issues

Mental health issues, such as depression and anxiety, are leading contributors to DALYs lost among adolescents throughout the world. Suicide is among the top causes of mortality. Very few of the school-based surveys include a measure of depression or anxiety, and those that do use a variety of different measures, so it is not feasible to compare or report results. Suicidal ideation and prior suicide attempts are among the key predictors of suicide completion (Kokkevi et al. 2012).

Normally, there are only one or two questions commonly used on surveys that ask about suicide. Even more of a problem, only a limited number of youth health surveys have questions about suicidal thoughts or attempts. Indeed, none of the countries that participate in the GSHS in Southeast Asia asked about suicide attempts, despite deaths from suicide being the highest in this region. Only a third of the countries in the GSHS ask this question, and it is not a core question for the HBSC in Europe and North America. There are a few national school-based surveys in Europe (Hibell et al. 2009) and in the USA (Eaton et al. 2012) that ask about suicide attempts, as does at least one provincial survey in Canada (Smith et al. 2014). Among all these studies, the prevalence of past-year suicide attempts ranges widely; many high-income countries report rates of around 5–10 %, while several low- and middle-income countries report rates closer to 15 %. In countries, such as Samoa and the Solomon Islands, more than one in three

adolescents have attempted suicide in the past year. In Barbuda and Kiribati, more than one in three girls reported suicide attempts. In Europe and the Americas, adolescent girls were nearly twice as likely to report suicide attempts as boys. In Africa, the Eastern Mediterranean, and the Western Pacific regions, there were no gender differences in suicide attempts.

Sexual and Reproductive Health Behaviors

Sexual and reproductive health among adolescents remains a priority within WHO and within other UN agencies, because sexual behavior contributes to mortality and DALYs, especially in terms of maternal mortality among girls. Unprotected sexual behavior is also one of the primary modes of transmission of HIV and other sexually transmitted infections. About 80 % of countries that conduct the GSHS or HBSC include at least one or two questions about sexual behaviors.

The national prevalence of youth who have ever had sex varies widely between nations in every region, from 69 % of boys in Samoa and 71 % of girls in Greenland, to fewer than 1 % of boys and girls in Indonesia. There are no clear patterns of trends in sexual behavior among the countries in Europe and North America that participate in the HBSC.

As well, in most of these countries (86 %) and at least half or more of 15-year-old adolescents reported using condoms the last time they had sex. Some countries have extremely high use, such as Estonia, with 91 % of sexually active boys and 89 % of sexually active girls reporting they used a condom the last time they had sex. Other countries have extremely low use of condoms reported. Trends show either no change or slight improvements in condom use among adolescents in European and North American countries, with several countries that ask this question reporting an increased percentage of adolescents using condoms, especially girls.

The prevalence of sexually active adolescents tends to increase with age, so it is important to

monitor sexual behaviors among older adolescents as well. Data for adolescents aged 15–19 years was available for 51 countries that are part of the Demographic and Household Surveys (DHS). Although the measure used differed somewhat from the school-based surveys, these surveys reported on condom use “at last higher risk sex,” which is sex with a non-cohabiting or unmarried partner. Some countries reported very low condom use among adolescents, such as Madagascar (about 9 % of young men and 5 % of young women), but other countries reported fairly high rates, such as Guyana, where 85 % of young men and 59 % of young women reported condom use during their last high-risk sex. Overall, young men reported higher condom use rates than young women, other than for Tanzania and Ukraine, where the rates were about equal for both.

In 75 % of the countries in Africa with high prevalence of HIV, only a third or fewer younger adolescent young women reported using condoms. Rates among the three Asian countries that participate in the DHS are also low. Condom use during high-risk sex in the past year was reported by less than 10 % of younger adolescent women in the Philippines, 11 % of young men in Timor Leste and 20 % of young women and 31 % of young men in India.

In other regions, prevalence of condom use was somewhat higher; for example, among low- and middle-income countries in Europe that participated in the DHS, condom use prevalence among young women varied from 36 % in Kazakhstan to 73 % in Ukraine. In nine countries from Central and South America, young women in Nicaragua reported the lowest rates, at 10 %, but the rest of the countries reported rates between 30 and 60 %.

Health and Risk Behaviors Linked to Non-communicable Diseases

With the decline in infectious diseases among adolescents, the onset of behaviors during the adolescent years that contribute to NCDs during adolescence and into adulthood have received

greater prominence in public health responses. These NCDs include cancer, cardiovascular diseases, chronic respiratory diseases, and diabetes. WHO has identified a core set of indicators to monitor among populations at risks for these NCDs (<http://www.who.int/nmh/ncd-tools/indicators-definition/en/>). Several of these indicators are focused on adolescents and are monitored through the HBSC, GSHS, and the GYTS school-based surveys. Some of the NCDs are also monitored among older adolescents in low-income countries via the DHS.

The health and risk behaviors that are monitored as part of the core set of indicators include tobacco use, alcohol use, fruit and vegetable consumption, consumption of sugar-sweetened beverages, and physical activity. An additional risk behavior, cannabis use, is regularly monitored because of its relatively widespread use and its link to mental health and neurocognitive declines. The most recent data on prevalence of these behaviors for each country is captured in the WHO online report, *Health for the World's Adolescents* (2014). Patterns of behaviors across regions and trends over time are summarized below.

Initiating *tobacco use* during adolescence, for example, increases the risk of persistent nicotine addiction and regular smoking (Hu et al. 2006). Tobacco use remains one of the strongest contributors to NCDs and to early mortality, which is why it continues to be monitored using the GYTS.

Globally, there have been significant declines in tobacco use among adults, and this pattern has also been shown among adolescents in most high-income countries and some lower-income countries (Robinson et al. 2014). The rates of those who have ever tried tobacco dropped by more than half in some countries over the past decade, and regular use declined as well. There were still areas, however, where tobacco use was quite common. In 12 of the 158 countries that participated in the GYTS, as many as, one in three adolescents reported being current smokers. Boys were more likely to use tobacco than girls in a number of countries, but it was not a consistent pattern, and in a few countries, such as

Latvia and Estonia, the percentage of adolescent girls who have tried tobacco appeared to be increasing rather than declining.

Alcohol use contributes to risks during adolescence for injury, including a lead role in road traffic accidents among youth. It has been linked to unprotected sexual behaviors and suicide attempts, but also plays a role in contributing to NCDs in adulthood such as diabetes, cardiovascular disease, strokes, and some cancers (Giesbrecht et al. 2011). The percentage of adolescents who report recent alcohol use (at least once in the past month) varies widely across countries, from nearly 66 % of boys and girls in the Seychelles, to only 1 % of boys and girls in Myanmar. In most countries that participated in the school-based surveys, a higher proportion of boys drank alcohol than girls. Alcohol use itself is not necessarily a health risk; it is high levels of alcohol intake, especially heavy episodic drinking, that contributes to the health risks. Thus, asking a question about ever having been drunk is one way to measure hazardous alcohol use. The percentage of youth who report drunkenness, however, varies widely across countries and regions. In trends among high-income countries in Europe and the Americas, most countries had declines in weekly drinking for both older and younger teens, in many countries by more than half among younger adolescents. However, a few countries reported increases and have been drunk twice or more in their life.

Cannabis use before age 18 is more likely to lead to persistent use, which is associated with mental health problems as well as an increase in the risk of injuries among adults (Hall and Degenhardt 2009). There were only 23 countries in the GSHS and 36 countries in the 2009 HBSC that asked about cannabis use. The percentage of adolescents in these surveys who reported they have ever tried cannabis varied widely, from 1 to 2 % in countries, such as Benin and Mongolia, to as many as one in every three 15-year-olds in Canada and Switzerland. Unlike gender differences in tobacco and alcohol use, in many countries boys and girls showed a similar prevalence of ever trying cannabis. As a trend, cannabis use does not appear to be increasing

among adolescents in most high-income countries; about half of the countries in Europe and the Americas with trend data reported declines in ever use of cannabis among students, although two countries, Latvia and Lithuania, reported increases. Among adolescents in the HBSC who have ever tried cannabis, there has been no change in the percentages who report using cannabis once or more in the past month.

Nutrition is an important contributor to health over the lifespan, and ensuring more fruits and vegetable consumption among adolescents is a goal to help improve micronutrients and reduce risks for obesity, diabetes, and some forms of cancer (WHO 2004). The 2014 report *Health for the World's Adolescents* documents the most recent data from the GSHS and HBSC about fruit and vegetable consumption. Younger adolescents in most countries who participated in the GSHS generally did not meet the recommended guidelines of five or more servings of fruits and vegetables; in only Vanuatu did more than half of the younger adolescents report eating five or more servings a day. In Europe and North America, the HBSC does not measure number of servings, but just whether adolescents ate fruits or vegetables every day in the past month, and only one country, Belgium, reported more than half of adolescents eat at least one serving of fruits and vegetables or just vegetables per day. Girls were slightly more likely than boys to have eaten fruits and vegetables every day in most countries. Despite the low levels of meeting the guidelines, there are some encouraging signs of improving trends. In two-thirds of the countries in Europe and North America, the percentage of youth who ate fruits daily has significantly increased since 2001, and nearly 75 % of countries showed increasing trends in daily vegetable consumption among adolescents.

Soft drinks, especially sugar-sweetened beverages, are popular with adolescents, but they contribute to overweight and obesity and increase the risk for type II diabetes (Malik et al.

2006, 2010). The GSHS does not ask about soft drink consumption, so the only multi-country data available are for Europe and North America. In these countries, about 1 in 4 adolescents drank at least one soft drink daily, although the rates range from a high of 49 % among boys in England, to only 3 % among girls in Finland. Trends are improving. At least two-thirds of the countries reported declines since 2001 in the percentage of adolescents who drank one or more soft drinks per day.

Moderate or vigorous physical activity has a key role in preventing overweight and obesity, diabetes, and cardiovascular disease (Ekelund et al. 2012), and promoting emotional health among adolescents (Smith et al. 2011). WHO guidelines recommend at least 60 min per day of moderate physical activity, or 30 min per day of vigorous physical activity for adolescents (WHO 2010). Most adolescents in the GSHS and HBSC countries who asked about physical activity did not reach the recommended daily level. Boys tended to be more active than girls, and adolescents in lower- and middle-income countries were more active than youth in high-income countries. Even so, in every country fewer than half of adolescents met the guidelines, and physical activity levels appear to decline with increasing age among teens (e.g., fewer 15-year-olds reported enough physical activity compared to 13-year-olds in their country).

The trends for this important health behavior in high-income countries, which have been monitoring physical activity over the past decade or longer, also raise some concern. Among countries that participated in the HBSC, nearly every country showed declines in the percentage of youth who met the physical activity guidelines. In every country, fewer than one in five of the 15-year-old girls reported achieving the recommended daily amount of moderate or vigorous physical activity, and in all but seven countries, fewer than 25 % of boys reported the recommended daily amounts.

Monitoring Healthy Growth: Underweight and Obesity

Underweight and obesity are health conditions, not behaviors, but they contribute to health issues in adolescence and into adulthood. Underweight is defined in the WHO guidelines as a body mass index (BMI) at or below two standard deviations from the mean BMI for age and sex (Onis et al. 2007). Underweight remains an important health risk for a significant portion of younger adolescents, both because of its contribution to mortality and its relationship with iron deficiency anemia, a leading contributor to DALYs lost among adolescents. There were 47 countries that measured height and weight among adolescents in the GSHS, and in at least 10 of these countries, 10 % or more of boys and girls were underweight. Most of the countries with this high prevalence of underweight were in the African or Southeast Asian regions.

Obesity is a risk factor for cardiovascular diseases and diabetes, and with increasing rates of obesity among adults observed worldwide, it has become a key condition for health systems to monitor and to address during adolescence (Patton et al. 2011). For adolescents, obesity is defined in the WHO growth charts as a BMI at or beyond two standard deviations from the mean BMI for age and sex (Onis et al. 2007). There were 56 countries in the GSHS in which adolescents' heights and weights were measured. Based on this data, there are some regional differences in the prevalence of obesity. African countries and Southeast Asian countries reported the lowest percentage of obesity among both younger and older adolescents, but there is wide variation within regions, as well as a growing issue of obesity in some countries that still have significant levels of underweight adolescents. In 14 of the countries that participated in the GSHS, more than 10 % of boys were obese, as were girls in nine countries. High rates of obesity were measured in the Western Pacific countries for boys in Niue and the Cook Islands (40 and 29 %

respectively), while for girls it was also Cook Islands and Tonga (19 % for both). Similarly, high rates of obesity were reported among adolescents in the Middle Eastern countries. The HBSC assessed height and weight by self-report, which can be less accurate than actual measurement. Among all of the countries in the HBSC, only the USA reported 10 % or higher prevalence of obesity among boys, and 9 % among 15-year-old girls.

Health Inequities Within Countries: Monitoring the Health of Marginalized Youth

Although national surveys can monitor the health of the majority of the population, there may be subpopulations that are harder to reach who experience significant health disparities compared to their peers in the general population. This could include, for example, homeless and street-involved youth, immigrants and refugees, and youth from particular ethnic minority populations within a country who are marginalized. Indigenous youth in many countries have documented health disparities (Blair et al. 2005; Clark et al. 2011; Tsuruda et al. 2012; Ning and Wilson 2012). Other groups that have shown persistent health disparities in many countries around the world include lesbian, gay, bisexual, transgender, and queer (LGBTQ) adolescents (Saewyc 2011).

To the extent that adolescents in these groups may not be regularly attending school or living in family households where they can be surveyed, their health issues may remain hidden. Even when they are part of the surveyed population, if surveys do not routinely ask questions about their ethnocultural background, indigenous status, and sexual orientation, for example, then it is difficult to track their health disparities over time compared to the majority population, or to notice improvements or declines in health status within their group. Ensuring health for all adolescents requires identifying and monitoring the health of

groups that are marginalized within a society and may experience health disparities.

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Annulla Linders

In the view of postmodern constructionists, literature, scientific studies, and other written text are but narratives, nothing more than descriptions that “focus chatter about an unknowable external world; a type of psychobabble”, which is used as confirmation of truth in the struggle over who dominates whom (Soulé 1996).

Introduction

Hardly a day goes by without a news story featuring teenagers being in trouble or causing trouble. They wreck cars, vandalize property, use and abuse drugs and alcohol, get themselves pregnant, spread STDs, drop out of high school, and pressure each other to do stupid and sometimes dangerous things. They are, in a sense, both a tribe apart (Hersch 1998) and an abandoned generation (Giroux 2003), both risk-takers (Bell and Bell 1993) and at risk (Capuzzi and Gross 2008), both rebellious (Lebrun 2011) and perilous (Newton 1995), and we—the grownups—simultaneously fear them and fear for them.

In this chapter, I expose another impediment to adolescent health. The impediment is our functional construct of adolescence as a period of development, and as a social category. I analyze adolescence as a social category to show how the

category itself, along with all its occupants, has turned adolescence into a perpetual social problem. What this means, in practice, is that adolescents—the people who occupy the category—are subject to extensive monitoring and regulation, are the targets of numerous programs and initiatives, and are effectively prevented from leaving the category until they are of age. That is, in order for adolescence to be conceptualized as a social problem it must first be recognized as a distinct period of human development that is different in fundamental ways from both childhood and adulthood. It also means that the category is self-reinforcing both in the sense that it provides an interpretive lens through which to understand youth behavior and in that it propels social arrangements that continuously reconstruct the period.

There is a vast literature addressing both the unique characteristics of adolescents and the unique social arrangements that guide their lives. One of the most recurrent themes in this literature is related to the challenges involved in the transition from the comforts and dependency of childhood to the responsibilities and demands of adult life. This transition, scholars have shown, is marked by confusion, experimentation, mistakes, dangers, and conflict. Designated as a time of “storm and stress” more than a century ago (Hall 1904), the idea of adolescence as a troublesome period and adolescents as constitutionally but temporarily irresponsible is by now firmly rooted in social arrangements, including a compulsory

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educational system designed to simultaneously prepare teens for the future and warehouse them while they are waiting to enter adult life (Buchmann 1989). Additionally, a separate system of criminal justice was built on the assumption that children and teenagers are essentially incapable of adult culpability and hence must be constrained and punished in different ways (Krisberg 2005). Moreover, a maze of rules and regulations confront teenagers wherever they go, telling them what they must and must not do and where they can and cannot go; some of those regulations pull them back toward childhood (e.g., regulation of sexuality), whereas others push them toward adulthood (e.g., being tried as adults). This regulatory framework constitutes a vast landscape of constraints and opportunities that have cemented an image of adolescents as forever teetering on the brink of chaos *because* they are adolescents and also ensures that they have little choice but to reconfirm this image through their actions. In short, then, adolescence is a social problem because we have made it so.

Although conceptualized as a time period that applies to all teenagers and affects all teenagers in the same way, there are good reasons for arguing that the category itself is both raced and gendered in ways that influence how particular teenagers are viewed and experience their teenage years. Moreover, and from a global perspective, although the category is construed as universal from a socio-biological perspective, the realities of teen life across the globe suggest that the conception of adolescence as a distinct phase in the life course is deeply embedded in social and cultural practices of the global north. Nonetheless, the forces of globalization—political, cultural, economic, and social—have begun to put pressure on the nations of the global south to adopt the kinds of practices and regulations regarding teenagers that facilitated the construction of youth as a distinct social category in the global north. In this paper, however, and following much of the scholarship of youth life, I focus on developments in the global north, especially the USA.

Why Are Adolescents the Way They Are?

While there is at least some scholarly agreement about what distinguishing features are characteristic of adolescence, there is extensive disagreement concerning the origins of these features. Here, I first present a brief overview of the socio-biological theories that dominate scholarship in the area and then develop a critique of them with the help of theories that view adolescence as a socially constructed period.

Adolescence as a Natural Stage in the Life Course

Drawing on the works of Hall (1904) and Erikson (1968), developmental psychologists view adolescence as a natural stage in the life course, beginning at puberty and ending at maturity, characterized by physiological and psychological development. Inspired by evolutionary theories, early students of adolescence theorized that life course development could be understood as a form of recapitulation, where each stage in the development of an individual recapitulates the development of the species as a whole (Lesko 2001). Building on Freud, Erikson (1968) elaborated the notion of developmental psychosocial stages to include the entire life course, even though his theorizing focused primarily on adolescence. Later theorists have further developed adult stages, with a special emphasis on the midlife crisis (Levinson 1978). From a developmental perspective, in other words, the urge to develop is built into the body itself. The question of exactly where the developmental urge sits in the body has been subject to intense scholarly scrutiny, and tentative answers have ranged from hormones to DNA. Less tentative is the conclusion that it is chronological age that triggers the developmental stages. This does not mean that social factors have no role in developmental theories, only that they are viewed as facilitators or hindrances of an otherwise natural process. In

so far as development is tied to chronological age, in other words, deviations from the normal path are viewed as potentially problematic.

The primary developmental task or challenge associated with the adolescent period is the establishment of an identity. As all developmental tasks, this one too is characterized by crisis. The assumption is that the establishment of an adult identity is preceded by an intense period of confusion and experimentation that compels the adolescent to shed the vestiges of childhood and assemble an identity that will take him/her into adulthood (Lesko 2001). And, it is precisely the assumptions about this developmental stage that have given rise to both the social arrangements that organize teen life and the perceptions of teenagers that accompany these arrangements. The conflation of risk and development in socio-biological theories, in other words, serves to simultaneously naturalize adolescent confusion and justify the social control measures that organize teen life. If it is developmentally necessary for adolescents to engage in some risk-taking behaviors (Irwin 1993), then it follows that we ought to arrange social life in such a way that young people can work through their developmental crisis in as safe and protected a way as possible. In contrast, social constructionist theories maintain, as I discuss below, that the troubles of adolescence are essentially caused by the social arrangements designed to protect them from their own confusion and the adult world from the fallout of adolescent risk-taking. From this perspective, the problems ascribed to adolescents lose much of their assumed naturalness and instead demand that a new approach, which abandons the assumption that the trouble of adolescents is inherent in their development age—rather than a result of the social arrangements that organize their lives (Gaines 1998; Vadeboncoeur 2005).

Adolescence as a Social Construction

Sociologists and anthropologists, drawing on cross-cultural and historical theories of youth, for the most part reject the biological underpinnings

of stage theories and instead view adolescence as a social stage (Coleman 1974), a social construction (Lesko 2001), or an invention (Baxter 2008; Berger 1965; Chinn 2009; Fasick 1994). What these and other scholars argue is that adolescence, far from being a natural stage in the life course, represents a social period during which those who occupy it are essentially sequestered from adult life and held in abeyance in institutionally designated places—primary among them the school system—until the adult world deems them ready to move on with their lives. Although there have obviously always been young people, the recognition of youth as a distinct species and the designation of adolescence as a separate stage in the life course are a fairly recent phenomenon (Buchmann 1989; Côté and Allahar 1996; Hine 1999), its emergence facilitated by a number of social, cultural, and institutional changes beginning in the late nineteenth and taking root in the twentieth century, including changes related to the institutions of family, work, science, and, especially, education. Perhaps the most important impact of compulsory education on social life in general, and on the emergence of adolescence as a social problem particularly, is the institutional separation of young people from much of the adult world. The school system is not only a social space carved out for young people, but also an age-graded set of material structures that channel the movements of adolescents and guide their activities in both positive (do this, go there) and negative (do not do this, do not go there) ways. In this sense, the system of education itself is part of the explanation for why adolescence has become a social problem (Crosnoe 2011).

From a sociological perspective, then, meanings associated with age are viewed as socially constructed and the accumulation of meanings around particular age categories is approached as a social process that varies extensively across time and place (Ariés 1962; Karp and Yoels 1982; Lesko 2001; Sommerville 1990). From this perspective, the emergence of age-specific and sequential meaning bundles is both a cause and a consequence of age-grading practices (Coleman 1974). And the very idea of a biologically driven

life course development is a particularly important part of the process whereby life stages have become naturalized. It is for this reason that some observers insist that we abandon the notion of adolescence, a term that designates socio-biological development, and instead adopt the term teenager-hood, which designates a socially constructed period (Danesi 1994).

Although a distinct period in and of itself, teenager-hood is also a transition period that captures, and is meant to bridge, “the distinction between mature, rational adults and immature, irrational children” (Heywood 2010, p. 359). In this sense, young people are somehow “unfinished” (Vadeboncoeur and Stevens 2005). As I discuss further below, this means that the lives of adolescents are circumscribed in such a way that it is difficult for them to avoid getting into trouble. Moreover, because they are more or less expected to mess up, when they do, their status as teenagers provides a readily available explanation; that is, the adult world assumes that teens mess up *because* they are teens. In this way, adolescence is a distinct lens through which teenagers are viewed, understood, and judged. And yet, even though it provides a distinct and fairly narrow view that impacts all teenagers, it is nonetheless a lens that is deeply entangled in other social statuses, including especially gender, race, and class (Cohen 1999). In other words, while all teens are affected by age-related expectations, constraints, and opportunities, understandings and consequences of their actions are inevitably filtered through the other social locations they inhabit.

No Longer Children, Not Yet Adults

Teens are distinguished from both children and adults in numerous ways, including legally, institutionally, and culturally. However, insofar as adolescence serves as a bridge of sorts between childhood and adulthood, the two heads of that bridge are neither firmly nor stably anchored in social life. Although chronological age is used across the institutional landscape as a marker of progress toward adulthood, taken as a

whole the markers provide inconsistent cues. That is, teens encounter numerous mixed signals as they go about their daily lives and the period itself is stretching both downwards into childhood—the notion of tweens (Cook and Kaiser 2004) captures this development—and upwards into adulthood, which is captured by concepts such as “emergent” adulthood (Arnett and Taber 1994; Arnett 2000) and “arrested” adulthood (Calcutt 1998; Côté 2000).

The institutional landscape in the USA and elsewhere is filled with age-related laws and regulations concerning any number of social practices, including voting, working, driving, buying alcohol and cigarettes, having sex, getting married, schooling, access to particular spaces, being outside at particular times a day, being executed. Not only do such laws and regulations give inconsistent cues to teens concerning the progress they are making toward adulthood, but they can also vary from time to time and place to place. Take voting, for example; this is perhaps the clearest marker of the transition to adulthood in that the right to vote signals adult citizenship. In the USA, a Constitutional Amendment (the 26th) lowered the voting age from 21 to 18 in 1971. This change was driven in large part by the conflicts surrounding the war in Vietnam, where young men deemed too young to vote but old enough to die for their country perished by the thousands. A similar debate drove the Supreme Court’s ruling in 2005 (*Roper v. Simmons*) that held that people who were minors (persons under 18) when they committed a crime were not eligible for the death penalty. In other social domains, however, people who are officially adults (18) are still prevented from doing what older adults can do (buying alcohol and tobacco, for example) and can also be legally discriminated against in various settings (required to pay a higher price for car insurance, for example). Regulations regarding sexual activity, similarly, have changed quite drastically since the nineteenth century, with the age of consent steadily moving upwards (from 10–13 years to 16–18 years). Not only does age of consent vary from state to state, but the conditions under which minor can have sex with each other, or

non-minors can have sex with minors, also vary, which means that a relationship that is legal in one state can be illegal in another. Patterns such as these both contribute to and are affected by the image of adolescence as a treacherous period characterized by confusion and contradictory expectations. At the core of this treachery is an insoluble tension between images of youths as, on the one hand, needing help and protection as they move through the period (teens are troubled) and, on the other hand, as causing so much trouble along the way that the adult world needs protection from them (teens as troublesome).

Contradictory Expectations: Troubled and Troublesome

Regardless of theoretical perspective, scholars from a range of disciplines agree that the transition between childhood and adulthood is particularly precarious and this is so because the psychological, social, and legal demands on children and adults are so vastly different. During the transition period between these two major life stages young people are supposed to shed the dependency of childhood and emerge as fully responsible adults at the other end. In some respects, the surrounding social arrangements facilitate the transition, but in other cases they complicate and confuse it.

The notion of “youth at risk” perfectly captures the precariousness of the transition from childhood to adulthood. Although some youths are clearly more “at risk” than others, the concept nonetheless rests on the assumption that all young people are potentially vulnerable to the pitfalls of adolescence (Dryfoos 2000; Lerner and Ohannessian 1999; Wolfe et al. 2006). As long as the focus remains on the young people themselves; however, the structural arrangements that are responsible for much of the confusion recede into the background (Davis 1999). That is, as long as young people are viewed as inherently prone to risky behavior, the simple observation that they do engage in risky behavior requires no explanation at all; rather, it is excessive and self-destructive risk-taking that becomes the

target of both scholarly studies and policy interventions (Irwin 1993).

Even in the best of circumstances, youth as a social transition period is typically viewed as treacherous. There is by now extensive evidence that the organization of youth life facilitates the kind of risk-taking and self-destructive behavior that has spurned the notion of youth at risk (Lerner and Ohannessian 1999; Wolfe et al. 2006). Moreover, scholars who focus on the organization of youth life point to the many ways in which society itself generates risks for the young by hindering rather than facilitating the transition to adulthood (Dryfoos 2000) and/or not supporting young people enough (Mortimer and Larson 2002). More critical observers refer to an outright abandonment of the young (Giroux 2003) and point to the many ways in which the adult world uses the young as scapegoats for its own failures to solve the problems of society (Males 1996). Taken together, then, observers differ in terms of where they locate the risk—in precarious development or in precarious social arrangements—but they typically share the conclusion that youth is a particularly treacherous time.

Yet, there is also evidence to suggest that the particular perils we have come to identify with youth are more likely to affect the children of the white middle-class than poor children of color (Currie 2005; Kenny 2000). In this sense, the trouble of adolescence is like a malaise of modern privileged life. This does not mean, however, that less privileged teenagers are somehow exempt from the dilemmas of youth. On the contrary, they have fewer opportunities to take advantage of the freedoms, privileges, and exemptions that come with adolescence and hence are at greater risk of carrying the burdens acquired during adolescence into adulthood. From this perspective, then, the children of the disadvantaged are doubly at risk; they are more vulnerable to the dangers of youth but also less protected by their youth. Yet, no matter how serious the liabilities facing youth in the wealthy nations of the global north, they pale in comparison with the difficulties of growing up amidst poverty, environmental depletion, and violent

conflict. The recent efforts by global forces—economic, cultural, health, governmental—to extend the western notion of adolescence to all parts of the world, therefore, have brought particular challenges to youth of the global south. As of yet, however, we know relatively little about these developments (Jensen and Arnett 2012; Larson 2002).

Adolescence as a Social Problem

In a book published almost 20 years ago, Mike Males addressed a series of myths concerning the troublesomeness of adolescents and concluded that adults were waging a war on its young people (Males 1996). Focusing on one problem area at a time, Males used available statistics to demonstrate not only that adults were worse than kids in most categories of analysis—they drink more, use more drugs, and are more violent—but also that it is poverty, not genetic makeup, that explains variations in youth exposure to and engagement with risky and deviant behaviors. Over the past 20 years, youth involvement in criminal behavior has fairly drastically declined. According to data from the FBI Uniform Crime Reports, teenage arrests for violent crimes dropped more than 50 % from the early 1990s to the early 2010s. Overall, teenagers were less likely than the two youngest adult groups (18–24 and 25–34) to be arrested for violent crimes, a pattern that has held for the past half century (https://www.youthfacts.org/?attachment_id=224). Data on drug arrests, also from the FBI Uniform Crime Reports, show a similar pattern: There has been a sharp decline in teen arrests since the early 1990s, but not in adult arrests, and teenagers are arrested at a much lower rate than the two youngest adult age groups (18–24 and 25–34). (https://www.youthfacts.org/?attachment_id=228). The decline in youth crime, alongside crime for everyone, is evident in all areas, but the distinction between teenagers and adults is not always as clear as in the above examples. What is clear, however, is that it is in the youngest *adult* category (18–24) that crime rates are the highest, even though the rates in that age group too have

declined markedly. This group of adults is now routinely referred to as “emerging adults” in the vast literature on adolescence and youth that is grounded in a developmental perspective (Arnett 2000). Objectively speaking, then, it would seem that adolescents (those under 18) are less of a problem today than they were 20 years ago. But such a conclusion does not fit the evidence concerning increased regulation and monitoring of young people; in a sense, “to be a child is to be under surveillance” (Steeves and Jones 2010, p. 187).

The analysis below is designed to illustrate these points and is organized around a series of recurrent themes in both the debate over and the literature on the problems of youth: the criminalization of children and youth, sex and pregnancy, drugs and alcohol, and the commercialization of youth identity. These themes capture in various ways how it is that young people have ended up as social problems. They describe the kinds of activities youth engage in and bring to the forefront the particular kind of adult anxiety that results in mixed signals for young people—these signals simultaneously push teenagers in the direction of adulthood and pull them back toward childhood. Taken together, they point to what Coté and Allahar (1996) refer to as the “liabilities of youth.” And yet, as endemic as they are, these and other problems remain construed as fixable at the individual or group level; that is, all sorts of interventions to alleviate the troubles of youth target the immediate circumstances of their lives and involve giving teens the tools to leave those circumstances behind. As a result, the structural features that shape and organize the period we call adolescence recede into the background and remain largely unaffected by policy initiatives designed to help individual youths overcome obstacles in their way and get on the right path toward adulthood. Moreover, and more importantly for the purposes of this paper, this also means that the links between the social period itself and the problems it generates for those who occupy it are effectively concealed. In short, if the root cause of the many problems associated with adolescence is caused by the period itself, then the

ambition to eliminate the problems of youth without changing the contours of adolescent life is doomed to fail.

The Criminalization of Children and Youth

The organization of youth life in contemporary society rests on the assumption that young people are not ready for adult responsibilities. We keep them in school to train and prepare them for adult life; we try to protect them from danger by various age regulations pertaining to work, sex, drugs, etc., and we typically exempt them from full adult responsibility in their encounters with the legal system. In so doing, we not only construct the social circumstances that propel so many young people in the direction of crime, delinquency, and violence—even though adult perceptions of youth violence are greatly exaggerated (Males 1999; Zimring 1998)—but we also subject youth to extensive monitoring. And this monitoring keeps generating the data that inform evaluations of how well or poorly young people manage the transition to adulthood. However, as long as there is no generally agreed upon threshold for what constitutes a non-problematic pattern of youth transgressions, any data, even data showing that teens are less destructive than adults, can be brought to bear on the problem of youth. It is for this reason that concerns over youth delinquency play such an important part in the construction of adolescence as a social problem (Spencer 2011).

Most young people break the law at some point during their adolescent years, but only relatively few get entangled in the criminal justice system (Cullen and Wright 2002). More recently, however, scholars have noted a trend toward a more punitive and preventative approach to juvenile transgressions (Stevens and Morash 2015). To some observers, this new trend amounts to the criminalization of childhood (Hirschfield and Celinska 2011; Parker et al. 2014). What this means most obviously is that behaviors, which in the past were viewed as minor infractions are now treated as criminal

conduct. More important for the purpose of this paper is to take note of the increased monitoring and surveillance that is part of the criminalization of youth (Irwin et al. 2013; Simmons 2009). More and more children have to go through metal detectors to get to school, are met by armed guards as they enter the school grounds, are subject to video surveillance wherever they go, and are faced with a growing number of rules and regulations concerning the kinds of clothes they can wear to school (prohibitions ranging from long black trench coats to bare midriffs), what kind of bags they can transport their books in (e.g., requirement that bags are see-through), what kind of hair styles they can sport, and so on. Although the surveillance of the young is especially pronounced in schools (Kupchik 2010; Monahan and Torres 2010), it also spills over into other institutional contexts and spaces (Fine et al. 2003; Fisk 2014; Rich 2012; Steeves and Jones 2010). More generally, the relentless monitoring of youth life in contemporary times both confirms and contributes to the notion of adolescence as a social problem. In this sense, the monitoring itself produces the very problems that it keeps generating evidence of (Kamp 2005; Foucault 1977).

Nonetheless, although affecting all young people at some level, the consequences of these processes for teenagers are vastly different depending on social location—poor, black and brown children are at much higher risks of getting entangled in the criminal justice system which in turn hampers their chances of living satisfying and productive adult lives (Simmons 2009). As William Chambliss (1973) demonstrated more than 40 years ago in his famous essay, *The Saints and the Roughnecks*, it is *perceptions* of youth delinquents, not the quality of the delinquency, that determine adult responses. Such perceptions, research has demonstrated, are deeply affected by not only age but also the various other social statuses people occupy, primary among them class, gender, and race (Beckett et al. 2006; Farmer 2010). This means that similar activities are understood differently depending on who engages in them. And research has consistently shown that brown and

black youth, both inside and outside school, are much more likely to be perceived as dangerous and hence subject to more monitoring and policing, more surveillance, more arrests, harsher punishments, and any number of other justice-related disparities (Davenport et al. 2011; Pettit and Western 2004; Simmons 2009; Wakefield and Uggen 2010).

Despite the fact that the educational system in many ways serves as the antidote to the criminal justice system—education is the way out of crime—the analysis in this section has pointed to the entanglement of the two institutions. Not only do they rely on similar surveillance technology and increasingly operate on the same principles (e.g., zero tolerance), but they also collude in the production of educational failures that feeds the prison industry (Simmons 2009).

In short, it is difficult to arrive at a conclusion other than that the system that produces failures as predictably as it produces successes is designed to do just this (Kozol 1967, 1991). According to the National Center for Education Statistics (2014), the overall US high school graduation rate in 2012 surpassed 80 %, but the rates varied extensively across social groups, with Asians/Pacific Islanders at the top (93 %), followed by whites (85 %), Latinos (76 %) and African Americans (68 %). These numbers capture one of the most entrenched dilemmas associated with the educational system: It keeps generating an underclass of high school dropouts (Fordham 1996).

Given the structural features of the educational system, in other words, it quite effectively reproduces larger patterns of inequality and, in so doing, ensures the continued presence of sufficient numbers of poorly educated people to, on the one hand, fill the growing number of precarious jobs and, on the other hand, ensure a steady stream of bodies to sustain the prison-industrial complex (Davis 2003; Wilson 2014). In this way, the criminalization of childhood has effectively shored up adolescence as a social problem even as teen criminality has declined, and it has done so in a way that subjects all adolescents to measures of social control but

only get a fairly small portion of teens overall into serious trouble.

Too Much (Unsafe and Unmarried) Sex

Adult anxiety over teenage sexuality is of long standing. As with other aspects of the adolescent problem, the issue is filled with tensions and contradictions. At the same time as teenage sexuality is discouraged, even criminalized, young people, especially girls, are commercially sexualized. At the same time as fewer and fewer children and young people are exposed to comprehensive sex education, they are increasingly compelled in the direction of sexual experimentation by the culture they partake in. The result is a landscape filled with mixed signals, opportunities, and pitfalls that teens for the most part have to navigate on their own (Thompson 1996). The adult world has essentially abdicated its responsibility by insisting that the best solution to the problems of teenage sexuality is that young people refrain from sex altogether even as it bombards them with sexual messages and makes it difficult for them to avoid some of the pitfalls associated with sex.

The sexual component of the social problem of adolescence comprises a bundle of different practices and experiences related to sex, including poor contraceptive practices, pregnancy, teenage parenting, sexually transmitted diseases, and sexual violence. It is not so, however, that teenagers have more sex than adults or are engaged in more risky sex than adults (Males 1996); rather, their sexuality receive more public attention, more scrutiny, and engender more anxiety. At the heart of the matter is the simple fact that teenagers are sexual beings that both engage in sex themselves and provoke sexual desire in others.

Of the sex-related problems, teenage pregnancy occupies a special position as a social problem in its own right (Murcott 1980). According to the Office of Adolescent Health, the teenage birth rate in the USA has steadily

declined for the past two decades, from more than 60 (in 1991) to under 30 (in 2013) births for every 1000 adolescent girls (U.S. Department of Health & Human Services 2015). Despite this marked decline, the US teen birth rate is still significantly higher than in all other nations in the global north. There is extensive variation across different social groups, however, with the rate in 2010 ranging from about 24 for white girls, to just over 50 for black girls, and more than 55 for Hispanic girls (Kost and Henshaw 2014). Such variations point to the many ways in which the circumstances of teen life impact both the choices teens have and the decisions they make regarding sex and pregnancy (Garcia 2012; Thompson 1996). Yet, as a social problem, teenage pregnancy ensnares all teens in adult concerns over their sexual lives.

What is it about teenagers' getting pregnant and giving birth that warrants a social problem designation? Research has shown that the problem has less to do with pregnancy and more to do with the fact that so many teenagers are unmarried/single when they give birth (Luker 1996; Davis 1989; Vinovskis 1988). And unmarried teen parents are considered problematic for any number of reasons, ranging from moral concerns around teen sexuality to claims that single under-educated young women are dooming both themselves and their children to a life of poverty (Edin and Kefalas 2005; Linders and Bogard 2014). Because it is only women who can get pregnant, they are the primary targets for social interventions, with the result that girls' sexuality is controlled much more stringently than boys' (Nathanson 1991). Taken together, both scholarship and policy making share the basic assumption that teenage sexuality is a source of concern and hence an appropriate target for adult intervention and monitoring. When it comes to actual adolescent sexual activity, however, it appears less affected by adult efforts at managing it than one might think, at least in some respects—in both Europe and North America the average age at which young people start sexual activity has remained fairly stable—at around 17 years—for the past half century (Dillon and Cherry 2014).

The point I want to make here is not to deny that sexuality is a treacherous field for teenagers, but instead to emphasize the ways in which the problems of teenage sexuality are linked at a fundamental level to the very notion of adolescence itself. In short, it is precisely because of the assumptions and institutional arrangements that have given rise to a separate social location for teenagers that *teenage* sexuality as a distinct social problem apart from adult sexuality has taken shape. What this means, in essence, is that although aspects of teenage sexuality can be tweaked with policy making, the problem of teenage sexuality itself is insoluble.

Drugs and Alcohol

Alongside sexuality, consumption of drugs and alcohol is one of the greatest concerns that adults have for youths. Just like with sexuality, the rate at which young people consume drugs and alcohol, even though much lower than adult rates (Males 1996), stands as unequivocal evidence of the failure of prohibition (Danesi 2003). Nonetheless, adolescent drug and alcohol use is carefully monitored and school-aged children are subject to any number of anti-drug initiatives and messages. In addition to the risks associated directly with the abuse of drugs and alcohol, adolescent drug and alcohol use is also linked to a number of other concerns; in this sense drugs and alcohol are proxies of other problematic teen behavior, such as sex, violence, and school failure (Wolfe et al. 2006).

As with other aspects of the adolescent problem, however, adult concerns have less to do with the magnitude of actual use/abuse than with the fact that the risk is ever-present. After all, the use of drugs among teenagers has declined steadily over the past decade and an increasing number of adolescents do not use any drugs at all. According to the National Institute of Drug Abuse (NIDA), adolescent alcohol and drug use is on the decline. From 2009 to 2014, the proportion of high school students who used alcohol decline significantly in each age category by about 5–6 % points (NIDA 2015). Use of illegal

drugs, similarly, has declined from its peak in the late 1990s, but more recently the use of some drugs, especially marijuana, has stabilized (Ibid). Taken together, though, the vast majority of high school students do not report using drugs on a regular basis. So, from an objective position, the problem seems overdrawn. And yet, it remains a major preoccupation of adult caretakers. For example, Ohio has just adopted a new law that requires schools in the state to “teach children about the dangers of prescription painkillers, a leading gateway drug to heroin abuse” (Recovery Society 2015).

I am not suggesting that drugs are not dangerous or that we should stop worrying about teenagers who get caught up in a cycle of dangerous drug use. There can be no doubt that drugs can cause serious damage, not only to individual teens and their families, but also to entire communities devastated by drugs like heroin. Rather, it is to observe how both the underlying conditions of the problem—the contours of youth drug use—and the conceptions of the problem—as a particular youth problem—are caught up in the very organization of adolescent life. Despite the assumption that youth is a period consumed by the preparations for adult life, it is in many ways a period of abeyance, a waiting period during which young people are locked out from adulthood and corralled into age-segregated environments. In short, we have placed a “generation on hold” (Côté and Allahaar 1996). It is not surprising therefore that one of the responses by youth is to seek excitements and distractions in drugs and alcohol (Currie 2005). And when they do, it is also not surprising that adult observers filter adolescent use of drugs and alcohol through the conception of youth as a period of confusion marked by bad choices (Griffin 1993). In this sense, adolescent abuse of drugs and alcohol come to confirm the conception of youth that justify keeping young people sequestered rather than encouraging questions about how the very organization of youth life not only might facilitate irresponsible youth behavior but also keep generating adult concerns for the well-being of the young. Moreover, the conceptualization of drug use as a particular risk for

youth discourages analyses of the *similarities* between youth and adult behaviors.

Identity for Sale: Subcultures and the Commodification of Teenagers

When Marcel Danesi (2003) titled his book about today’s youth, *My Son is an Alien*, he captured a widespread adult anxiety around teenagers and the life they lead; they dress oddly, they listen to incomprehensible music, they have strange friends, they develop a bad attitude, they spend an inordinate amount of time in front of their computers/tablets/phones, they acquire new (bad) habits and (questionable) tastes, and they no longer tell their parents where they go or what they do. It is like they wake up one day and start acting like completely different persons than the ones their parents/siblings/neighbors/relatives/teachers thought they knew. Insofar as these trends take on an organized character among teenagers, they sometimes give rise to more widespread moral panics about youth life (Cohen 1993; Springhall 1998; Thiel-Stern 2014). The problem here does not primarily originate in the kinds of physical dangers that accompany some of the other adult concerns around youth—associated with drugs and violence, for example—but instead is linked to what adults perceive as the fragility and susceptibility of adolescent identity. Primary targets of these concerns are peer groups, media and advertising, popular culture, and various other purveyors of youth identity (Quart 2003; Sternheimer 2003). From an adult perspective, it can seem as if young people are pressured into taking on new identities by the nonstop onslaught of popular culture (cf. Moje and van Helden 2005; Oliker and Krolikowski 2001), which now, in the context of internet and social media, never let up its potential influence (Thiel-Stern 2014).

There are numerous reasons why popular culture directed at youth causes adult concerns, but primary among them are worries that the development of identity somehow gets thwarted by the manipulation of the pop culture industry that has grown up around teenagers (cf. Chin 2001). Although teenagers by and large are poor

compared to adults, whatever disposable resources they have are usually much more discretionary than those possessed by adults (who have fixed bills and recurrent financial obligations). One consequence of this is that teenagers have become a serious target of marketers who produce an endless number of goods and services with the purchasing power of teens in mind. Marketers not only draw on youth culture to sell their products but also infiltrate youth life to stir up demand, by giving popular kids clothes and other products to wear and display, for example (Quart 2003). They also find ingenious ways of penetrating the social media environment with product endorsements and thinly veiled marketing pitches. From a parental perspective, this can result in seemingly incomprehensible and forever fleeting demands for particular products. But the problem I am getting at here is deeper than the mere materialism of youth life—which still pales in comparison with adult life—in that it reveals deep seated adult anxiety over the very instability of youth life which can translate into possibilities of major challenges to the status quo (Giroux 2003).

The social structure of school and other institutions dominated by adolescents is not quite following the social structure of adult life. In this sense, the spaces dominated by teens allow for—encourage—the development of unique youth cultures (Milner 2004; Haenfeler 2010; Larkin 1979). These cultures—or subcultures—are unique not simply in terms of content but also, and more importantly, in the ways in which they stretch and cross, and sometimes violate, the social boundaries that characterize and guide adult life. These boundary crossings—across economic, racial, religious, cultural, and residential lines—are in themselves cause for worry among adults and, especially when coupled with more or less dangerous activities (e.g., drugs, alcohol), provide insights into adult anxieties over teen life. Moreover, although teen institutions, especially education, are deeply entangled in the social processes that reproduce patterns of advantage and disadvantage, it is still so that teenagers are not quite yet as implicated in the larger systems of rewards and penalties that

affect adult life. This means most obviously that young people are in a position to establish their own status systems and to decide on what basis to confer and withhold respect. It also means that young people because they are less committed to and/or less entangled in adult life are considerably more volatile from a sociopolitical perspective. And that can be very frightening to adults (Giroux 2003). The main point I am making here, though, is that this very volatility can be productively understood as a consequence of the organization of youth life without recourse to theories of psychosocial development.

Conclusion

The aim of this chapter has been to, first, demonstrate that adolescence has emerged as a social problem in contemporary life and, second, to identify some of the key components of that problem. My argument overall is that the problematic aspects of adolescence are not fixable with programs, interventions, and tweaks to individual lives. Rather, they are built into the very DNA of teenage life. Hence, the only way to solve the problem of adolescence is to get rid of it as we know it.

This is obviously not a feasible policy option. The period we call youth is deeply engrained in the fabric of social life and therefore cannot easily be dissolved or even majorly elaborated. Nonetheless, it is possible to ease the transition between childhood and adulthood, both individually and collectively. To do so effectively requires that we abandon the fiction that young people, en masse, are incapable of taking responsibility for their own lives. There is quite a bit of evidence to back up the claim that teenagers not only can but also want to take a more active part in social life; that is, young people have a much better understanding of the conditions of their lives than adults usually give them credit for (Chin 2001; Loeb 1995; Sternheimer 2003; Vaedeboncoeur and Stevens 2005). This is extremely important if the goal is to improve adolescent health. This analysis suggests, at the very least, that young people must be consulted

in a meaningful way about how their lives are organized. At a more fundamental level, however, we must come to terms with and confront the many ways in which the structuring of adolescence both inspire and stifle challenges to the healthcare sector and status quo. This means, in the end, that the solution to improving adolescence health does not start with adolescents but instead with adults. They have the power and resources to reorganize adolescent life, but perhaps not the political will.

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Mercedes Esquivel Lauzurique

The Republic of Cuba The Republic of Cuba is an archipelago of 1600 islands, islets, and cays nestled in the Caribbean Sea. Its territory is organized into fifteen provinces and a special municipality, and its capital is Havana. It has an area of 109,886 Km².

The total population is about 11,224,190 inhabitants (2014), with a population density of 101 inhabitants per Km². Some 75 % of the population reside in urban areas and 25 % in rural areas. The nearest countries are the Bahamas, Haiti, Jamaica, Mexico, and USA.

Cuba ranked 44th on the Human Development Index (HDI = 0.81) prepared by the United Nations in 2014, ranking among the top four nations in Latin America and the Caribbean together with Chile (41), Argentina (49), and Uruguay (50). These four countries have the most favorable data on human equality, gender equality, gender development, and general poverty in this region (Rebossio 2014a, b). The Netherlands ranks number 1 and the USA is ranked number 5. The HDI is an

indicator of human development by country, prepared by the United Nations Development Program (UNDP) based on a statistical social indicator, which consists of three parameters: long and healthy life, education, and standard of living. All citizens of Cuba have free and universal access to all health services and education, as well as full employment and a strong system of social security and assistance.

Introduction

Adolescence is a key phase of human development. It is a period when rapid biological and psychological changes occur and affect every aspect of this stage of life. According to the World Health Organization (WHO), it corresponds to the period of life from 10 to 19 years of age and divided, in turn, as early adolescence (between 10 and 14 years of age) and late adolescence (between 15 and 19 years of age) (OPS 2014; OMS 2014a; WHO 2014; UNICEF 2011).

Generally, it is considered that adolescents are relatively healthy segment of the population; however, we must not forget that investing in the health of young people is essential to protect investments in children and to ensure the health

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of the future adult population. Added to this, most of the harmful habits that manifest as health problems in adulthood are acquired during adolescence, adding an avoidable financial burden on health systems (OPS 2010, 2014).

The health status of a population can be defined as “synthetic expression of the behavior of health-disease process in the community, in a particular historical moment and through the degree of equilibrium established among human beings and nature in terms of physical, mental, and social health” (Curbelo 2005). To determine a nation’s or community’s health status, periodic evaluations should use globally accepted indicators including demographic information on the population by age, fertility, morbidity, and mortality. Data on characteristics of growth and development, and data on people who are disabled also reflect the community’s health. Thus, these health components that allow the study of the behavior of the health-disease process in a population or population group can be summarized as shown in Fig. 3.1.

The health of adolescents, in particular, is of obvious importance to the national interest. It is only possible to produce lasting changes in the lives of children, young boys and girls, and insuring investments made in the first decade of life if greater attention is focused on the second

decade of life. Wellness and active participation of adolescents in their own health care are decisive from a life cycle perspective. Health, in this context, can help break the intergenerational transmission of poverty, exclusion, and discrimination (UNICEF 2011).

The adolescent population is also an important group because of their vulnerability and the intense biological, physical, psychological, and sociological changes that occur in less than a decade. Changes will determine, to a large extent, the characteristics of the adult population that will shape the country. Therefore, it is of particular interest to know the levels of the various indicators of health status.

The purpose of this chapter is to describe and analyze the state of health of the adolescent population of Cuba. As primary sources of information, we used the following:

- Mortality Database of Cuba, available in the Statistical Yearbook of the Ministry of Public Health (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015a).
- Population estimates issued by the National Office of Statistics and Information of Cuba (ONEI 2012, 2014, 2015).
- Information from Multiple Cluster Surveys (MICS) UNICEF/Ministry of Public Health. Cuba 2010/2011 and 2014 (Dirección

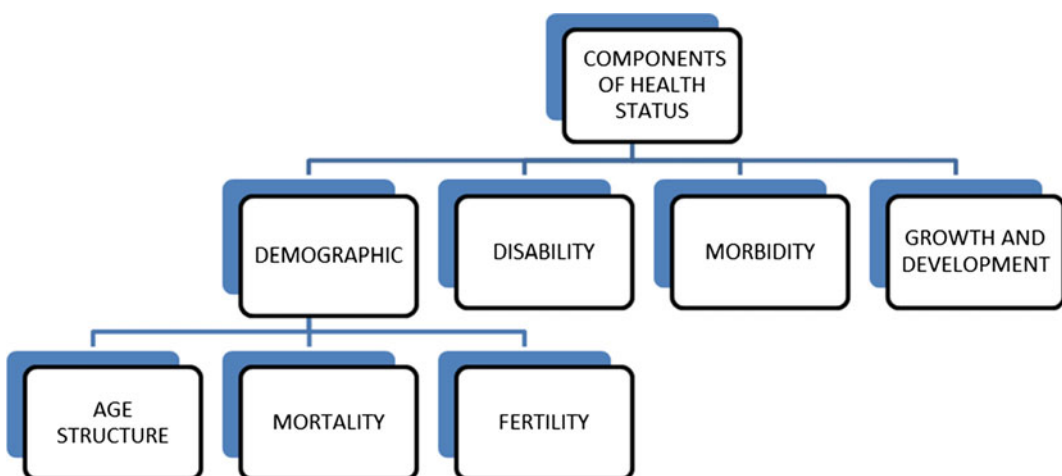


Fig. 3.1 Main components of the health status of the population. *Source* Adapted from Curbelo (2005)

Nacional de Registros Médicos y Estadísticas de Salud. Cuba. 2012, 2015a).

- III National Risk Factor Survey 2010/2011. Havana, 2014 (Bonet and Varona 2014).
- IV Database of the National Research Group of Human Growth and Development. Faculty of Medicine Julio Trigo López. University of Medical Sciences of Havana (Esquivel and González 2009, 2013; Department of Human Growth and Development 2006).

Comprehensive Health Care for Cuban Adolescents

The principles set out in the Declaration of Alma Ata of 1978 and the Ottawa Charter for Health Promotion reaffirm that health is a fundamental right of all human beings. It is a human right irrespective of race, religion, political belief, economic, or social status. Moreover, inequities in a population's health between countries and within countries are unfair and unacceptable. For its part, the United Nations Conference on Sustainable Development in 2012, in the Final Document, "The Future We Want" Rio + 20, acknowledged that governments are responsible for the health of their population (OPS/OMS 2014a). The Cuban state has worked for decades to comply with these guidelines. As a result, important goals have been achieved (Campbell and Bialek 2015), among these are:

- Cuba is among the top 20 countries in the progress toward achieving the Millennium Development Goals of the UN.
- Save the Children places Cuba as the best country in Latin America to be a mother.
- Cuba has the lowest rate of HIV in the Americas.
- The doctor-patient relationship in Cuba is among the highest in the world; 61 % of doctors are women.
- 100 % of pregnant women have more than four prenatal visits.
- The infant mortality rate in Cuba in 2014 was 4.2 and that of children under five years of age was 5.7 per thousand live births.
- Life expectancy in Cuba is 78 years.

National Health System

With the creation in the 1960s of the Ministry of Public Health and the National Health System, health care provided the Cuban people, and in particular to the adolescent population, has been radically altered from previous healthcare practice as the government guarantees free medical attention and complete access to the health services. Combining a scientific and practical approach, Cuban health care is unique, comprehensive, decentralized, and free of charge and provides preventive counseling as a general method of maintaining a healthy population. It is characterized by the intersection of community participation in the activities of the organization for public health and develops internationalism as a general principle of the Cuban society (Castro et al. 2010). In 2014, Cuba had 85,563 doctors for a rate of 76.6 per 10,000 inhabitants. Of this total, 12,842 family physicians provided 100 % of the primary level of care. The rate of Cuban nurses was 81.3 per 10,000 inhabitants. In the same year, there were 14.9 dentists per 10,000 population (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015b).

National Program for Comprehensive Health Care for Adolescents

In 2000, the National Program for Comprehensive Care for Adolescent Health of the Ministry of Public Health increased the pediatric age to 18 years of age and developed services in hospitals and primary care specifically for adolescents. Later, in 2002, the Section of Comprehensive Adolescent Health of the National Pediatrics

Group was strengthened with the creation in 2004 of the National Working Group on Childcare. The National working group expanded comprehensive health care for children and adolescence in order to cover the health and development needs of this population (Departamento Materno-Infantil y Planificación Familiar 2011; Esquivel et al. 2014).

As part of this program, Cuba has worked on the creation and development of reference centers and training for comprehensive care for this age group. Activities in different provinces have been supported by UNICEF and PAHO/WHO. A Manual of Clinical Practice for Comprehensive Care for Adolescent Health was published in 1999 (Cruz et al. 1999). The Section of Adolescence is a member of the Committee on Adolescence of the American Association of Pediatrics (ALAPE).

Indicators of Adolescent Health in Cuba

The following indicators are utilized to monitor Cuban adolescent health at the national and local levels: demographic variables, morbidity, growth and development, disability, and sexual and reproductive health.

Demographic Data

Changes in demographic variables, which may influence the relative health burden of different types of diseases, are used in planning services and programs for the health sector. Demographic information identifies the size of populations exposed to different health risks and provides data on some characteristics of these groups. This facilitates the establishment of measurable objectives, selecting the most appropriate tools and evaluating the results of programs and medical resources in general (Curbelo 2005).

While, the health-related demographic variable mortality is important, fertility is no less important, because it can be used in determining the age structure of the population; all of these

elements make up demographic aspects related to health.

Population Structure by Age

Knowledge of the population structure by age group is very important for the formulation of health policies and the design of more responsive health programs. This is possible because different ages are associated with different risks and incidence of accidents, disease, and death (Curbelo 2005). The Cuban population, in 2014, totaled 11,224,190 inhabitants according to the National Bureau of Statistics and Information (ONEI 2015). Of these, 5,595,379 (49.85 %) were men and 5,628,811 (50.15 %) were women. This population is characterized by its advanced demographic transition, which is aging and stagnant population growth, two important demographic challenges. Cubans, 60 years of age and older, make up 19 % of the population. Life expectancy at birth is high but fertility rates are low, which has resulted in stagnate population growth since 1978 (Gran et al. 2013).

In 2014, the level of population replacement was low, with a birthrate of 11.3 births per thousand inhabitants. The general fertility rate was 43.2 live births per 1000 women 15–49 years of age. There was also a decreased fertility rates among younger women of child-bearing age. The total fertility rate was 1.68 and the gross reproduction rate of 0.81. The sex ratio was 994 men for every 1000 women, for a discreet feminization of the population since 2012. The percentage of children born in hospitals or health institutions was 99.9 %.

According to the “Life expectancy 2011–2013” data released by the National Bureau of Statistics and Information (ONEI 2014), life expectancy at birth of the Cuban population reached 78.45 years at the end of the triennium (2011–2013). This life expectancy places Cuba among the 25 most advantaged countries in the world on this demographic indicator and represents a gain of 0.48 with respect to life expectancy in 2005–2007, when was

77.97 years. All provinces of Cuba experienced increases in life expectancy for both genders. This study shows that Cuban women have a life expectancy of 80.45 years, while life expectancy for men was 76.50 years. This life expectancy for men and women is much higher than those estimated in 2012 for the world population, which was 72.7 years for females and 68.1 years for men (OMS 2014a).

In 2014, the total number of adolescents in Cuba was estimated at 1,381,135, representing 12.3 % of the total population. By age group, adolescents between 10 and 14 years of age made up 49.3 % of the adolescent population. Those between 15 and 19 years of age made up 50.7 % of the adolescent population. By gender, 51.5 % of the adolescents are male, while 48.5 % are female (ONEI 2015). Adolescents represent a lower percentage of the population than reported for Latin America and the world (see Fig. 3.2); due to the low birthrate and aging population, adolescents make up a smaller percentage of the population today than they did decades ago (23.8 % in 1980 and 17.5 % in 1990).

Mortality

Adolescents, as a specific age group, have lower mortality rates when compared to the general population. In Cuba, in 2014, the mortality rate among adolescents was 2 per 1,000 for those 10–14 years of age, and 3 per 1000 for those

15–19 years of age. This mortality rate is much lower than that found in 2012 in the region of the Americas, which was of 7.75 per 1000 (OPS/OMS 2014a). The mortality ratio for all males and females was 1.3, similar to that reported worldwide. Of the 96,328 deaths in the Cuba in 2014, 386 occurred in this age range, representing only 0.4 % of total deaths in the country. As shown in Fig. 3.3, these figures have been declining steadily over the past decades.

Since the 1970s, the five leading causes of death in this population are similar although they have varied a little in terms of order (see Table 3.1). Accidents are the leading cause of death. In 2014 accidents accounted for 7.4 deaths per 100,000 inhabitants. This number reflects a sharply declining trend compared to previous years. The mortality rate for accidents was much higher among males (11.6 vs. 3.1 in females). Transportation accidents and motor vehicles were the most common cause of death, followed by drowning and accidental submersion.

After accidents, malignant tumors have been the second leading cause of death for this group since 2000, with a rate in 2014 of 4.2 per 100,000 inhabitants. This was followed by intentional self-inflicted injuries, which ranked second until the 1990s. Currently, intentional self-inflicted injuries rank third with a rate of 2.3 per 100,000 inhabitants. Assault has a current rate of 2.2 per 100,000 population and ranks fourth. Congenital anomalies, deformities, and chromosomal abnormalities rank fifth with a rate of 1.4 per 100,000 inhabitants in 2014.



Fig. 3.2 Percentage of adolescents in Cuba, Latin America and Caribbean, and the world. *Source* *ONEI (2015). **UNICEF (2014)

Fig. 3.3 Overall mortality among adolescents by year and age group. Cuba, 1990–2014. *Rate per 1000 inhabitants. *Source* Dirección Nacional de Registros Médicos y Estadísticas de Salud (2015a)

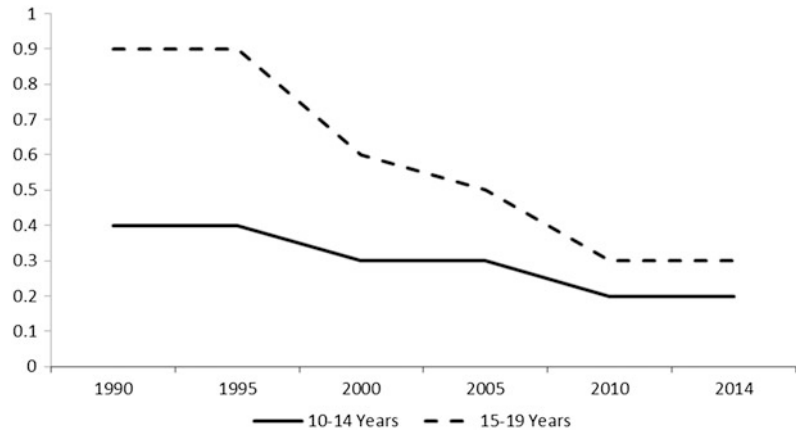


Table 3.1 Leading causes of death in adolescents by year (Cuba 1970–2014^a)

Cause	1970	1980	1990	2000	2010	2014
Accidents	25.3	23.8	26.4	15.8	7.7	7.4
Malignancies	6.8	6.1	6.0	5.3	4.6	4.2
Intentional self-inflicted injuries	8.0	17.0	9.6	3.7	2.9	2.3
Assault	3.1	2.4	4.8	2.1	2.0	2.2
Congenital malformations, deformities, and chromosomal abnormalities	2.5	2.0	3.6	2.3	1.3	1.4

^aRate per 100,000 population

Source Dirección Nacional de Registros Médicos y Estadísticas de Salud (2015a)

The three leading causes of death among adolescents worldwide are traffic injuries, HIV/AIDS, and suicide (OPS/OMS 2014b). In Cuba, injuries caused by traffic accidents and suicide are also among the leading causes of death but not HIV; as will be shown below, HIV/AIDS has a low prevalence in the country (Portal 2014).

Fertility

Fertility is the demographic variable linked to the reproduction of the population that expresses the relationship between live births occurring during a certain period of time and the number of females of childbearing age during that same period. In Cuba, the fertility rate has been very low for many years. It has remained below population replacement level for more than thirty years (CEPAL 2008).

The decline in fertility has been one of the most significant sociodemographic developments in recent years, both because of its implications in the short or medium term as a condition that has changed the age structure of the population. The consequences of the decline in fertility are of great importance to health planning. The decrease in the average number of children born to women during their reproductive years will cause a significant change in the demand for health services.

The trend in fertility plays a key role in maternal and child morbidity and mortality. In general, the reproductive health of women is partly determined by the way the health sector develops the maternal and child programs, which include family planning. During the period 2008–2011, there was a slight upward trend in fertility in Cuba. This was followed by a decline in births for all females of childbearing age, particularly among adolescents, where the

Fig. 3.4 Fertility rate among adolescent females 15–19 years of age—Cuba 2008–2014. *Rate per 1000 women. *Source* Dirección Nacional de Registros Médicos y Estadísticas de Salud (2015a)

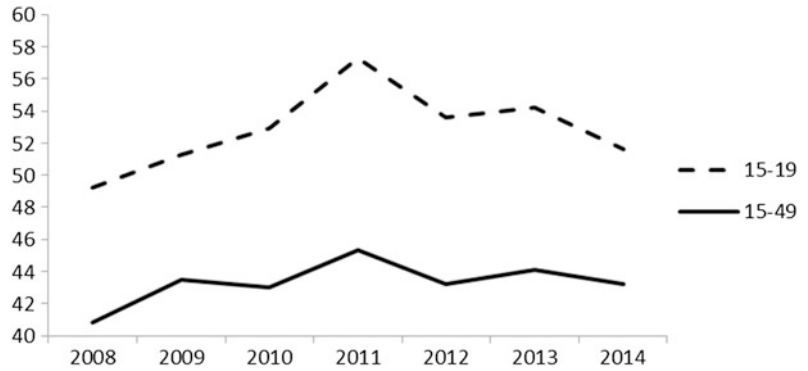


Table 3.2 Average number of children per woman, selected countries of Latin America and Cuba: 1961, 1980, 1990, 2000, 2010

Countries	Average number of children per woman				
	1961	1980	1990	2000	2010
R. Dominican	7.49	4.42	3.47	2.89	2.58
Costa Rica	7.30	3.62	3.18	2.41	1.85
Peru	6.87	5.01	3.83	2.93	2.50
Colombia	6.80	3.99	3.10	2.64	2.10
El Salvador	6.75	5.14	3.95	2.93	2.25
Ecuador	6.72	5.06	3.67	2.95	2.48
Brazil	6.19	4.07	2.81	2.36	1.83
Chile	5.54	2.68	2.62	2.09	1.86
Cuba	4.36	1.89	1.75	1.63	1.69

Source Center for Latin American Studies ECLAC (Gran et al. 2013)

birthrate fell from 57.3 per 1000 in 2011 to 51.6 by 2014 (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015b). Figure 3.4 shows births per 1000 for Cuban women and for 15–19-year-old adolescent females. The birthrate for 15–19-year-old adolescent females is about 25 % higher than that for 15–49-year-old Cuban women. Currently, the rate of childbearing among 15–19-year-old Cuban adolescent females is lower than that reported for Latin America, which is 65 births per 1000 adolescent females aged 15–19, but slightly higher than that reported for the world (49 births per 1000 adolescent females aged 15–19 years) (OMS 2014a).

As the average number of children per woman continues to trend down in this region of the world, Cuba is not an exception. Cuba has one of the lowest birthrates among countries in Latin America (see Table 3.2).

Morbidity

Regarding morbidity, the leading causes for teenagers seeking a medical consultation are episodes of acute respiratory infections followed by acute diarrheal diseases. These are health conditions that have little impact on the mortality of adolescents. In 2014, 67,644 medical consultations for acute diarrheal diseases and 1,231,354 medical consultations for acute respiratory diseases were provided to adolescents and young people between 10 and 24 years of age. The rate for acute diarrheal diseases was 34.1 per 1000 population between 10 and 14 years of age and 28.7 per 1000 population between 15 and 24 years of age, while the rate for acute respiratory diseases was 785.5 in the group of 10–14 years of age and 447.8 in the group of young people between 15 and 24 years of age

(Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015b).

Tuberculosis is not a health problem in Cuba, even though in the course of the last decade, a slight increase in incidence was detected. The rates among adolescents are low and are below the national average. In the group of adolescents, under 15 years of age, the incidence of tuberculosis increased discreetly, with little notice, the rate increased from 0.3 per 100,000 in this age group in 1990 to 0.8 per 100,000 in 2014.

In 2014, the prevalence rate for hypertension among adolescents 10–14 years old was 1.9 per 1000. For adolescents 15–18 years old, the prevalence was higher at 25.1 per 1000. *Diabetes* among adolescents 10–14 years old was 1.5 per 1000, and it was 5.4 per 1000 for adolescents 15–18 years old. The prevalence rate of *asthma* among adolescents is relatively high. Among those adolescents 10–14 years old, the rate was 147.4 per 1000. Among those 15–18 years old, the rate was the highest for any age group in Cuba, 188.3 per 1000 (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015b).

The incidence of cancer among adolescents varies between younger and older adolescents. In 2014, those between 10 and 14 years of age had 108 per 1 million in this age group; while in the 15–19-year-old group, the incident rate was 146.9 per 1 million in this age group. Leukemia, lymphoma, and brain tumors are the most prevalent cancers in the 10–14 age group, whereas adolescents aged 15–19 most frequently present with lymphomas, carcinomas and other malignant epithelial neoplasms, bone tumors, and leukemia in that order (Directorate of Medical Records and Health Statistics 2015a).

Sexually transmitted infections (STIs) have declined since the year 2000. There has been a corresponding decline in child birth among all women. Pregnancy among girls under 14 years of age is not a problem in Cuba. HIV/AIDS among young people aged 15–24 has stabilized at a low rate. The estimated prevalence in this group is only 0.05 % (Portal 2014).

Although adolescent pregnancy and adolescent sexually transmitted infection are at low levels in Cuba, adolescent sexual activity has

increased. In recent decades, just as has happened in other countries, adolescents 10–14 years of age, at least some of them, have been involved in a sexual relationship and have done so without the knowledge and understanding of the consequences of irresponsible sexual behavior.

Cuba has a National Strategic Plan for the Prevention and Control of STIs and HIV/AIDS, which has its origins in earlier strategic plans. These strategic plans are updated every five years. As the plan develops, data will be gathered from 2014 to 2018 with the goal of identifying gaps in preventative health services. Thus, since the beginning of the 1980s, when the Task Force was established, it has coordinated and organized action and prevention services to prevent and control sexually transmitted infections and especially HIV/AIDS. While basic sexual education was incorporated into primary care, a corresponding Intersectional Response Plan for Education, Prevention and Control of STIs and HIV/AIDS was developed to allow different agencies and organizations to implement concrete and specific plans for action with emphasis on education and prevention (Ministry of Public Health 2013).

These programs embody the basic principles of the Cuban strategy for the prevention and control of STIs and HIV/AIDS (i.e., intersectional participation, an interdisciplinary approach, active participation of government institutions, NGOs involvement, and the involvement of civil society at the grassroots level).

Growth and Development

Implementing periodic national anthropometric studies of the Cuban people has been an ongoing practice of the National Health System since the beginning of the 1970s. This practice is based on the recognition, by various international organizations, that anthropometric measurements are very useful for assessing the health status of the populations.

Anthropometric measurements allow researchers to evaluate health trends and

concerns in various populations. For instance, anthropometry studies have been used to assess and monitor the nutritional status of children. These measurements can be used to determine the prevalence of inadequate nutrition and whether there is a need for nutritional support. It can also be used to track progress in reaching a number of health targets and broader goals related to social equity. Given adequate nutrition and basic health care during prenatal, childhood, and during adolescence, the majority of children will experience normal growth and development (Esquivel 2013). Anthropometric measurements are used in Cuba to evaluate and monitor the health trends of children.

Physical Development

In Cuba, two national studies of growth and development of children under the age of 20 were conducted in 1972 and 1982. Furthermore, several additional studies have been carried out at the provincial level. In the city of Havana, which is the capital (and where approximately a fifth of the total population resides), five investigations have been conducted using the same anthropometric measures in 1972, 1982, 1993, 1998, and 2005. The purpose of these studies was to collect reliable information that could be compared over time. The design required specifically trained personnel to collect anthropometric measures from a representative sample by age. The measures were collected using high-precision equipment, which was rigorously calibrated. This design provided data that were comparable to data from previous studies (Department of Human Growth and Development 2006; Esquivel and González 2009; Esquivel 2013).

Among the anthropometric indicators that have been used to describe the growth of children and adolescents are the height, weight and the body mass index (BMI). In 2005, using a representative sample of adolescents, the study revealed that both sexes were, on average, 2.7 cm taller at each age group than their peers in the initial investigation of 1972. This suggests that by 2005 children were taller and reached, in

greater extent, their genetic potential for longitudinal growth. The increase was higher in late adolescence (2.9 and 2.8 cm for males and females, respectively) than in early adolescence (2.5–2.6 cm). This increase in height over time has been detected in numerous investigations. The cause for the increase in the height of adolescents has been linked to improved living conditions, which makes these measures a valuable indicator of national economic and social development.

In addition, we also have growth data that go back to 1919. A Belgian anthropologist, Georges Rouma, conducted a study of school children between 7 and 13 years of age in Havana. Between 1919 and 2005, these studies show that there was an average increase in the children's height for each of the age groups of 1.2 cm per decade, for both sexes, over the last 85 years.

The average weight was also higher among adolescents in 2005 than in 1972. In absolute terms, male participants weighed, on average, 1.9 kg more than their counterpart in 1972, but in female adolescents, this figure was only 0.8 kg. During early adolescence, the average difference was 1.5 kg for boys and 0.6 kg for girls. During late adolescence, the difference was 2.4 kg and 1 kg, respectively. The smaller differences in weight among girls between 1972 and 2005 may be the result of sociocultural influences that value slenderness in girls more so than in boys.

The BMI in male adolescents were similar in both studies, while the female teens was lower (-0.4 kg/m^2 on average). In early adolescence, average difference was -0.1 and -0.3 kg/m^2 . For later adolescence, the average difference was -0.02 and -0.5 kg/m^2 for boys and girls.

There is a clear trend to higher body fat values in the study of 2005 with respect to previous studies of both sexes. In males, this represented an average increase of the area of the middle third of the left arm of 1.8 cm^2 fat at each age and 2.2 cm^2 in females. In early adolescence, the numbers were 1.9 and 2.0 cm^2 in males and females and 1.7 and 2.4 cm^2 in later adolescence. This is significant because body fat values have important implications for the health of a population. In fact, this phenomenon (Esquivel and González 2010)

is reflected in the morbidity of this population which shows marked increases in the prevalence of patients treated for chronic non-communicable diseases such as it noted above.

The age of menarche in Havana, which in part requires adequate weight (using the status quo method), was 12.64 years in 1972 and 12.5 years in the study of 2005.

Nutritional Status

The nutritional status of Cuban adolescents has been evaluated in a number of studies. They include highlights of the studies on growth and development at the national and provincial level, and the Third National Risk Factor Survey 2010/2011. In these research studies, it has been shown the low rate of malnutrition and the increasing prevalence of overweight and obesity in this age group. In the case of the National Risk Factor Survey (see Table 3.3), information includes the group of 15–19 years and 20–24 years, that is, late adolescence and the period known as youth (Bonet and Varona 2014).

Additionally, according to the Third National Survey of Risk Factors (2013), although there has been an improvement compared to previous surveys, there is still a significant percentage of the population dealing with nutritional issues. One such issue is eating habits that are harmful to one’s health. Insufficient fruit and vegetable consumption and the excessive use of saturated fats result in aggregate health problems. Another health issue is the lack of regular physical activity. Based on the findings from the

International Physical Activity Questionnaire (IPAQ) only 76.9 % of young people between 15 and 24 were rated as active, 5.7 % were classified as irregularly active, and 17.3 % were classified as sedentary (Bonet and Varona 2014).

The most common measure of malnutrition is *chronic energy deficiency*. This measure is defined as 3 grades based on BMI: Grade I (mild) is a BMI between 17.5 and 18.4, Grade II (moderate) is a BMI between 16.0 and 17.4, and Grade III (severe) is a BMI 16.0 or lower. A BMI of 18.5 is considered normal. Table 3.4 shows *chronic energy deficiency* and the percent of Cuban adolescents who are overweight.

Disability

According to the International Classification of Functioning, Disability and Health—adopted as a conceptual framework for the World Report on Disability prepared by the World Health Organization and the World Bank in 2011—disability is a generic term for impairments, which includes deficiencies, limitations of activity, and participation restrictions. Disability is the interaction between individuals with a health condition and personal and environmental factors (OMS 2011).

Generally, it is estimated that worldwide between 110 million (2.2 %) and 190 million (3.8 %) people 15 years of age and older are living with a significant disability. In Cuba, several sources, such as data from the National Census 2012 of the National Statistics Office and the Psychosocial and Clinical-Genetic Study of people with disabilities in Cuba, estimate the

Table 3.3 Nutritional status of adolescents from different provinces

Nutritional status ^a	Havana, 2005 (%)		Guantanamo, 2002 (%)	
	10–14	15–19	10–14	15–19
Malnutrition	3.0	2.1	3.3	1.0
Thin	6.5	7.6	9.9	9.1
Normal	72.6	76.9	79.7	82.8
Overweight	11.3	8.0	5.3	5.2
Obese	6.6	5.4	1.8	1.9

^aSource Provincial Growth and Development Studies. Havana, Guantánamo 2005 and 2002

Table 3.4 Nutritional status of adolescents and youth, Cuba 2010/2011^a

Nutritional status	Cuba, 2010/2011 15–24 years of age (%)
Grade I (mild) chronic energy deficiency	1.8
Grade II (moderate) chronic energy deficiency	3.3
Grade III (severe) chronic energy deficiency	12.8
Acceptable	63.1
Overweight	14.9
Obese	3.1
Extremely obese	1.1
Total	100

^aSource Third National Risk Factor Survey, 2013

prevalence of adolescents between 10 and 19 years with a disability between 2.4 and 3 % (ONEI 2012; Cobas 2011). This latest study showed that the most common forms of disability are intellectual, physical-motor, and visual impairment.

Sexual and Reproductive Health

Most people become sexually active during adolescence. Contraceptive use at this age is usually low and this contributes to health risks from sexually transmitted infections (including HIV), as well as abortions. Adolescent pregnancy can also affect the health of newborns. Some aspects of adolescent sexual and reproductive health behavior that have serious consequences are the issues of early sexual initiation, early marriage, the onset of contraceptive use, and comprehensive knowledge about STIs and HIV/AIDS.

Early Sexual Behavior and Childbearing

Sexual activity and childbearing at an early age involve significant risks, both for the teen mother and her newborn. Relevant indicators of early childbearing (see Table 3.5) among Cuban

adolescents have been obtained from the Multiple Indicator Cluster Surveys (MICS) implemented in Cuba in 2010 and 2014 under the program developed by the United Nations Fund for Children (UNICEF) to provide internationally comparable, statistically rigorous data on the situation of children and women. These surveys show that the percentage of girls under 15 years of age with a live birth has remained the same for decades. The birthrate is 0.2 %, a very low rate. According to UNICEF, in developing countries 3 % of girls under 15 have given birth and 19 % became pregnant before age 18 years (Williamson 2013). In the most recent survey, these indicators continue to suggest positive behavior changes among Cuban adolescents (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2012, 2015a).

Early Marriage

One of indicators of adolescent health that is commonly used is the number of adolescents married or in union before the age of 15. In Cuba, between 2010 and 2014 the percentage of girls who were married before the age of 15 did not significantly change. There was a decline, however, in the percentage of all adolescent girls who were married or in a marital union. Additionally, as shown in Table 3.6, the number of married adolescent males is much lower compared to females (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2012, 2015a). When the percentage of Cuban

Table 3.5 Reproductive process in adolescents 15–19 years of age (Cuba 2010 and 2014)

Reproductive Process	2010 (%)	2014 (%)
Girls who had a live birth	10.8	6.7
Girls who are pregnant—their first child	3.4	2.3
Girls are sexually active	14.1	8.9
Girls who had a live birth before age 15	0.2	0.2

Source Dirección Nacional de Registros Médicos y Estadísticas de Salud (2012, 2015)

Table 3.6 Early marriage among adolescents 15–19 years of age (Cuba 2010, 2014)

Early Marriage	2010 (%)	2014 (%)	
	Girls	Girls	Boys
Adolescents married before age 15	4.2	4.1	1.7
Adolescents married or in union	19.8	15.8	6.7

Source Dirección Nacional de Registros Médicos y Estadísticas de Salud (2012, 2015)

Table 3.7 Percentage of married women or some types of marital union before age 15 and 18 years in Cuba, Latin America and the Caribbean, and the world

Early marriage	Cuba, 2014 ^a (%)	Latin America and Caribbean ^b (%)	World ^b (%)
Women aged 20–24 married or in some types of marital union before age 15	4.7	7	11
Women aged 20–24 married or in some types of marital union before age 18	26	29	34

^aSource Dirección Nacional de Registros Médicos y Estadísticas de Salud (2015)

^bSource UNICEF (2014)

adolescents girls, who are married or in a marital union, are compared to adolescent girls in Latin America, the Caribbean, and developing countries globally, Cuban adolescents girls are marrying later in life than their peers, which presages a healthy adolescent population (see Table 3.7) (UNICEF 2014).

Features of the First Union and the Onset of Sexual Relations

The average age at first marriage or union in Cuba, according to the National Fertility Survey conducted in 2009 by the National Bureau of Statistics, was 19.4 years for women and 22.2 years for men. This suggests a pattern of early marriage. The onset of sexual intercourse, however, starts earlier. The average age is 16 for men and 17 for women. In other words, the onset of sexual intercourse occurs about four years before the first marriage for men and two years earlier in women. These patterns of first marriage and sexual initiation have varied over time. Even so, the tendency is for adolescents to marry young and initiate sexual behavior at an even younger age (ONEI 2009).

This information is of considerable importance because it confirms the observation that sexual initiation occurs generally before the first marriage, probably with casual partners or during a short-term relationship. These behaviors are a major public health concern because of the severe consequences. To preserve the sexual and reproductive health of teenagers by reducing the risks of STIs, sexual education campaigns and programs are utilized.

Use of Contraceptive

The early onset of sexual activity exposes adolescents to the risks of unwanted pregnancy and abortion to interrupt the pregnancy. Too often in the context of the first sexual intercourse, contraceptive use is not always part of the plan. According to the 2009 Fertility Survey, 26 % of girls aged 15–24 did not use any method at first intercourse. In 2014, 40.1 % of girls aged 15–19 married or in union were not using any contraceptive method. Among those who did use contraception, the pills were the most popular and used by 22.9 %, male condoms were used by 19.4 %, and intrauterine device was used by

15.2 % of the teenage girls who participated in the survey (ONEI 2009; Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015a).

Comprehensive Knowledge of HIV/AIDS

While in 2010, 53.7 % of girls aged 15–19 had a comprehensive knowledge of HIV transmission, in 2014 this percentage increased to 59.2 %. The percentage of men with a comprehensive knowledge of HIV transmission in 2014 was 47.9 % (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2012, 2015a).

Protective and Risk Factors

The indicators of adolescent health analyzed in the foregoing sections share similar risk and protective factors that are interrelated and associated with a set of social determinants. These factors include living conditions, educational level, tobacco/snuff and alcohol consumption, and living with parents.

Living Conditions

Just over 75 % of Cuban adolescents reside in urban areas. When urban youth were compared to rural youth by age group and gender, there were no significant differences between the groups of 10–14 and 15–19 years of age. In addition, there were no significant differences between urban and rural youth by sex. Overall, in 2014, 94 % of the Cuban population used improved drinking water sources and 95 % made

use of improved sanitation, figures well above those reported for the world and also higher than in this region of the Americas in regard to sanitation (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015a; OMS 2014a).

Educational Level

Cubans have a high level of schooling because children are required by law to attend school through the 9th grade. Education is free and the country has the facilities and qualified human resources to provide the different levels of education. Figure 3.5 shows that by age 18, more than 60 % of Cuban adolescents have acquired post-secondary education. Also noteworthy is the higher percentage of girls who acquire post-secondary education as compared to boys (ONEI 2012).

Tobacco/Snuff and Alcohol Use

About 76 % of adolescent boys and 91.5 % of girls have ever smoked cigarettes or used other snuff products. In addition, only 42.7 % of boys and 58.9 % of girls had drunk alcohol according to the results of the MICS Cuba, 2014 (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2015a). These figures are very low relative to reports from other regions of the Americas (OPS 2010).

Living with Parents

Teenagers living with their parents have great relevance for the adolescent’s social integration

Fig. 3.5 Completed level of education at age 18 by sex. Cuba, 2012. Source ONEI (2012)

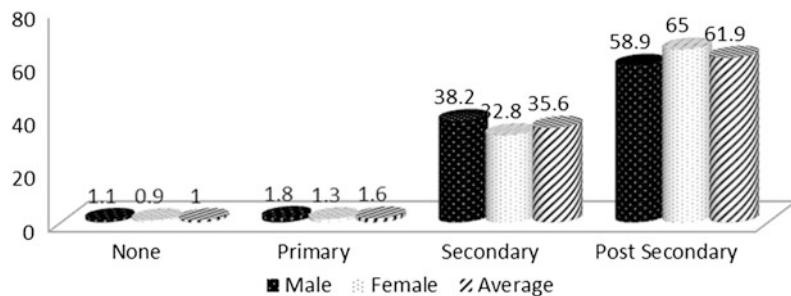


Table 3.8 Percentage of adolescents living with parents by age group (Cuba 2010/2011 and 2014)

Coexistence	Age group			
	10–14		15–17	
	2010	2014	2010	2014
Living with both parents	54.0	47.7	42.0	46.9
Living with mother	36.0	43.1	41.9	41.8
Living with father	2.7	2.3	2.3	2.5
Not living with any biological parent	7.0	5.8	10.9	7.6
Could not be determined	0.1	1.3	2.9	1.1

Source National Medical and Health Statistics, 2012, 2015 records

and emotional balance. In Cuba, the frequency of adolescents living with both parents, only the mother, or father, or a none relative is shown in Table 3.8. In general, over 45 % of Cuban adolescents live with both parents. Slightly over 40 % live only with their mother. Less than 10 % live with neither of their biological parents. The percentage of teens living only with their father is minimal, a little over 2 % (Dirección Nacional de Registros Médicos y Estadísticas de Salud 2012, 2015a).

In the cases of children who are orphaned, abandoned, or have no family support, the Cuban State provides social assistance for households, homes for minors without parental protection, and mixed children's programs that provide education, food, health care, and subsequently helps them integrate into society when they reach adulthood. There are laws that have been established by several legal bodies, among which is the Family Code. This code states that the main objective is to create optimal conditions for normal psychosocial development and full social integration of children and adolescents living in these children's homes (Bosh 2014; Figueredo 2015).

Conclusions

Surveys focused on the health of Cuban adolescents are very positive. Compared to their peers living in other countries, in this region of the Americas, Cuban adolescents show low rates of mortality, morbidity, and disability; a positive secular trend of physical development; low consumption of snuff and alcohol; and reduction of

the fertility rate, as well as of indicators related to early reproductive process and early marriage. However, it is necessary to continue working on reducing teen pregnancy, the prevalence of overweight and adiposity and chronic diseases, and in developing campaigns to preserve sexual and reproductive health of this population. This purpose is feasible thanks to the universal and free access of the adolescents in Cuba to all health services and education and to the features of the National Health System.

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Adolescent Health, Development, and the Public Health Response in Japan

4

Miyuki Nagamatsu, Yukiko Hamada and Takeshi Sato

Introduction

Between 2001 and 2014, various adolescent health and health education initiatives were carried out in Japan as part of a national campaign by the Ministry of Health, Labour and Welfare called “Healthy Parents and Children 21.” The present report gives an outline of adolescent health in Japan within the scope of this campaign and its final evaluation performed in 2014 (Ministry of Health, Labour and Welfare 2013a).

In Japan, adolescent problems became more severe during the 1990s with an increase in abortions, sexually transmitted infections (STIs), and drug abuse, as well as other issues including truancy and psychological problems such as

social withdrawal. Although sex education is listed in the Course of Study published by the Ministry of Education, Culture, Sports, Science and Technology, the course described therein only covers certain aspects of sex such as reproduction and STIs, which means there is no “sex education” course that comprehensively addresses sexuality. Consensus between parents and the school must be achieved before sex education classes are designed and taught. However, people hold a variety of views regarding the specific sex education topics that should be taught to different age-groups. As a result, implementation of these initiatives varies greatly among schools.

This is particularly true regarding topics such as sexual intercourse and contraception, which are often avoided in a school setting; hence, not all adolescents are able to access the information and education they need about sexual matters. Nevertheless, children live in an environment where they can easily access harmful media sexual content through channels on the Internet. Unfortunately, many adolescents engage in unprotected sex without receiving proper sexual education at school or at home. These adolescents are influenced by explicit material from the sex industry that stimulates their sex drive.

In Healthy Parents and Children 21, goals were set and strategies were developed to overcome these adolescent health problems. Specific initiatives included strengthening the consultative capacity of school health promotion systems

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