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Adolescence science must grow up

Young people get a raw deal from society. Targeted study and approaches as part of a new global effort are urgently needed to help them.

The journalist Earl Wilson wrote that snow and adolescence are the only problems that disappear if ignored for long enough. When it comes to science- and evidence-based approaches to welfare, adolescence has been ignored for too long. That needs to change.

This week, *Nature* and the *Nature* journals try to point the way, to offer support to those living through a too-often misunderstood phase of life. In a special package (see page 425 and <https://www.nature.com/collections/adolescence>), we examine the complexity and promise of adolescence, and assess problems this age group faces, as well as possible solutions, through the lens of disciplines from medicine and social science to education and neuroscience. The need has never been greater: 10–24-year-olds now make up a record 25% of the global population.

When discussing this generation, it is easy — especially for those in rich societies — to resort to clichés about rebellious attitudes and eccentric behaviour. It’s worth remembering that both childhood and adolescence are cut short in many parts of the world, with young people working in hazardous conditions or bearing children in their teens. Millions of adolescents are forced to grow up too fast.

It can be one of the most creative times of life. But adolescence is also a difficult stage for many; not all development during these years is positive, especially given the increasingly digitized and socially competitive environment in which many teenagers live. Mental disorders such as depression and alcohol abuse are particularly likely to strike. And the pile-up of multiple problems, such as poor nutrition compounded by stress, is now understood to have lifelong consequences, including obesity and diabetes.

Too many people in science and medicine share society’s indifferent attitude: adolescence is a phase to be endured and moved on from as quickly as possible. That is wrong. A modern health-care system without a focus on the unique challenges of paediatrics or geriatrics would be unthinkable, yet there is no similar effort on behalf of adolescents.

It’s not just science. The international-development community has never sufficiently prioritized adolescence. In the past decades, major aid and development organizations and governments have come to agree on the importance of a child’s first 1,000 days of development. There has been no such emphasis on what comes later. The United Nations Millennium Development Goals set (important) targets for maternal health, child mortality and primary education, but teenagers were left out.

To improve things, first, the scientific community needs to appreciate what it doesn’t know. For infants, there exists a wealth of knowledge on normative growth, large-scale studies on the impacts of early deprivation and a rich evidence base for how to intervene positively in early development. No comparable body of knowledge exists for adolescents. Nobody knows for sure what it means to be a typically developing teenager, nor the best way to improve health or behaviour and to address young people’s mental-health conditions. And there are no good ways to measure progress towards improving the lives of adolescents around the world. (For babies, investigators

can track factors including mortality, stunting and vaccination rates.)

Next, society needs to be intelligent about interventions and programmes for young people. More-informed and thoughtful approaches are needed to study and address cognitive and social changes that happen during adolescence, and to design effective interventions. The input of adolescents themselves is crucial here: no scientific programme should be launched without talking to the people it aims to reach.

Such programmes shouldn’t assume knowledge on the basis of what researchers know about children and adults. They need major efforts to study the development of adolescents, and their thinking and challenges.

“The input of adolescents themselves is crucial.”

Take HIV: despite tremendous progress in other age groups, the virus remains one of the main killers and causes of disability in adolescents. And then there’s mental illness: fewer than half of the young people who need psychiatric services in the United States receive

treatment, and even fewer get effective specialized therapy. The situation in other parts of the world is much worse. Both of these crises are ripe for targeted approaches by agencies, policymakers and funders. Concerted efforts can produce a tangible improvement: between 1990 and 2016, a global focus on infant health halved the mortality rate for children under five years old.

Many of the issues are highly affected by social and cultural factors, and hence regional ones, and need to be tackled on that scale. But scientists could aim, for example, for global sharing of brain-development data.

It’s tough growing up. In many cultures, parents, educators, doctors and policymakers criticize adolescents for their impulsivity, misunderstand their rage and mock their language and customs. The next generation deserves better. And we can start by paying attention. ■

Blurred distinction

The idea of research excellence is ubiquitous, but what it means depends on the context.

Excellence is everywhere in science. Or that seems to be the plan: to make excellence ubiquitous in research. This month, the University of the West Indies in Kingston, Jamaica, became the latest academic institution to encourage its scientists to excel, setting up a Regional Centre for Research Excellence in the Caribbean.

To be good is no longer enough — excellence, by definition, must go beyond that.

And for those who achieve it — from individual researchers and