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Adolescent health

Re-imagining adolescent health & wellbeing in Kenya

A holistic approach based on engagement and multi-stakeholder cooperation

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Foreword

Philips contributes to make the world healthier and more sustainable through innovation. The goal of Philips is to improve the lives of 3 billion people a year by 2025 through meaningful innovation. In line with this mission, we believe it is important to promote and scale innovations that help accelerate the UN Global Strategy of Health for Women, Children, and Adolescents in support of the UN Sustainable Development Goal 3 (SDG-3) on Health. In Africa, we are doing this through the Philips Africa Innovation Hub.

In 2015 many countries adopted the SDG's which were preceded by the MDG. In the new SDG the importance of the health of adolescents was acknowledged. Together with women and children they now form the heart of the UN global strategy on health. This change acknowledged both the unique health challenges that confront adolescents and the importance of adolescent health and wellbeing for the overall success of the 2030 SDG agenda.

In 2012, a total of 1.3 million adolescents died from preventable or treatable causes, especially suicide and complications during pregnancy and childbirth. As this report sets out, the underlying causes are numerous, and adolescent health challenges cannot be disconnected from the broader social and economic challenges facing young people.

One significant factor in these underlying causes is the gap in current services. This leaves many adolescents underserved, with no equitable access to quality information and counseling, or to integrated, youth-friendly health services. Innovation can help to improve this situation, but only if it is locally relevant and grounded in deep insights into the aspirations and needs related to adolescent health. This is why Philips has teamed up with a large number of partners, including the United Nations Population Fund (UNFPA), and funded a study into this topic. Through this report, we want to share with you the insights we gained to inspire and inform innovative new approaches to adolescent health. Together with our partners and other stakeholders interested in Adolescent health, we would like to look for opportunities to further explore and validate some of the models proposed in this study.

We hope that the insights in this report will also help others to define effective approaches to adolescent health. By helping adolescents to realize their rights to health, wellbeing, education, and full and equal participation in society, we are equipping them to attain their true potential as adults and to become a force for change that helps advance all of the SDGs.

Maarten van Herpen

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Disclaimer | This report on adolescent health in Kenya communicates the findings and recommendations of a qualitative research study funded by Philips. Philips conducted the study and Orangelink and Dance4Life participated in the fieldwork. Statements and findings in this document and the presentation of the material do not imply the expression of any opinion on the part of Philips.



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Executive Summary

This document sets out the key findings from a qualitative study conducted by Philips to explore the state of adolescent health and wellbeing in Kenya, and to identify potential solutions to the issues that were recognized. The study involved desk research as well as workshops and interviews with a broad range of stakeholders including adolescents, government officials, policy influencers, healthcare workers, educators, NGOs, sports coaches, and parents of adolescents (see Addendum: Research Approach and Rationale). Like sub-Saharan Africa as a whole, Kenya has a 'youth bulge'. About a third of Kenya's population of 45 million consists of young people between the ages 10-24 years of age (PRB, 2016). This large young working-age population could be a stimulus for economic growth and development. But this depends on the right investments to ensure young people are healthy, and that they have the appropriate education and sufficient opportunities for meaningful employment. (Karibu-Mbae, 2015). Otherwise, the youth bulge risks becoming a socio-economic burden.

Other countries have benefitted from similar a demographic dividend; however, their experience shows that the window of opportunity is typically less than 30 years. (Chatterjee & Kibaru-Mbae, 2015). In Kenya's case, the working age population could potentially grow to 73 % of the entire population by the year 2050. And if the country could achieve a 90% employment rate, this would create a GDP per capita twelve times higher than the current GDP (Chatterjee & Kibaru-Mbae, 2015).

In recent years, the Kenyan government has shown an ambition to improve adolescent health and wellbeing. It published national guidelines for the provision of youthfriendly services in 2005, and in 2007 it announced other relevant policies, for instance, on gender in education, as well as a national youth policy. Yet, this awareness of the issues remains to be translated into effective solutions. Kenya's current rapid population growth (2.7% per year) and urbanization (4.4% per year) is highly disruptive especially for adolescents. Every year about 800,000 young Kenyans enter the workforce and most face major challenges in finding employment due to a lack of vocational skills. This leads to a cycle of unemployment, high dependency rates, poverty, abuse, crime, and poor health.

Social, physiological, and psychological circumstances all increase the vulnerability of Kenyan youth. Morbidity and mortality rise significantly after puberty due to HIV, sexually transmitted infections, pregnancy, poor eating habits, depression and mental disease, substance abuse, alcohol, and violence. Hence, the importance of targeting early adolescents of both genders (ages 10-14) with preventative and contextually relevant primary healthcare interventions, as well as interventions to ensure healthy transitions to young adulthood for post-pubescent (aged 15 to 24 years) young women and men. At the moment, many adolescents lack health awareness and most are not interested in health issues; this makes it difficult to engage and advise them, and to encourage the adoption of healthier habits.

For our study, we adapted a **model published in 2014 by the World Health Organization** (WHO) to ensure we examined the full context of adolescent health and wellbeing in a holistic way (Figure 1).



Individual

Age, gender education, knowledge, self-efficacy, skills, mindset

Interpersonal Family, friends, peers, teachers, social networks, expectations, conflict, financial & social capital

Community

Community values & norms, networks, support and social cohesion, community and religious leadership

Organizational

Infrastructure such as roads, schools, community halls, health facilities, opportunities for work & play

Environment

Physical environment: water, sanitation, pollution Socio-cultural environment: media Biological environment: epidemics

Structural

Policies, laws, gender attitudes, racial equality, equity

Macro

National wealth, wealth, distribution, war/social unrest, impact of globalization

Figure 1 A holistic ecosystem model for addressing adolescent health and wellbeing (WHO, 2014)

Our research revealed a multitude of issues at each level. To prioritize these and make them actionable, we devised a **'HELPERS' framework** that summarizes the **key adolescent health and wellbeing issues** (Figure 2). Our framework leverages a previous study on Adolescent Sexual and Reproductive Health (UNFPA, 2014).

Specifically, to address adolescent health and wellbeing and benefit from the demographic dividend, Kenya needs an integrated and holistic approach. Programs that focus on single issues such as women's empowerment, sexual reproductive health or HIV are not sufficient. Our research indicates that sustainable change depends on addressing the underlying factors of poor health and wellbeing in a systemic way through multi-stakeholder approaches and the active engagement of adolescents themselves. These should be combined with actions to tackle poverty, harmful social practices and mindsets, and the lack of education and vocational and life skills.



Figure 2 'HELPERS' – a framework to address key Adolescent Health and Wellbeing Issues.

Key actions and goals related to our 'HELPERS' framework:

Health

- Create an integrated health discipline for adolescent health
- Create a more integrated and systemic approach to collecting data and enable evidenced-based strategies for adolescent health
- Provide accessible health services that appeal to young people
- Create better health awareness amongst adolescents and motivate healthier behavior

Education

- Provide education and opportunities to learn vocational skills that are in demand
- Provide better support for adolescents (especially girls) to prevent them from dropping out of school

Leadership

- Develop and activate youth leadership, and give adolescents enablers, roles, and responsibilities to improve their own health and wellbeing
- Actively involve community leaders in the adolescent health program
- Hold leaders responsible for actions

Participation

- Create better adolescent engagement and better health
 services feedback mechanisms
- Develop better social and cultural opportunities for adolescents to cooperate, participate, compete, develop, and enjoy their adolescent years. This should include activities such as sports, self-defense, dance, music making, art, entertainment
- Engage parents and teachers in programs to develop better parenting and teaching skills

Employment

- Develop entrepreneurship and create employment opportunities
- Create local initiatives to improve environmental conditions and infrastructure, and turn these into local employment opportunities

Rights

- Create awareness and training on sexual and reproductive health and rights amongst adolescents, and also amongst community members
- Create better rights awareness and protection against abuse for adolescents
- Create effective community mechanisms to provide transparency and feedback for local politicians to influence policy
- Promote gender equality and address social attitudes about gender

Social Support

- Foster cultural change to abandon harmful traditions (such as alternative rites of passage)
- Create effective treatment and social support strategies for dealing with key diseases such as HIV, addiction, mental issues, early pregnancy, abortion, etc.
- Provide better life skills training and strengthen support networks for adolescents
- Develop effective counselors and stigma-free support systems

The way forward

We see a need to create **three integrated platforms** shaped with multiple partners:



Figure 3 Three proposed complimentary platforms to enable a holistic approach to Adolescent health, wellbeing, and development

1 Adolescence Institute or Academy

Despite major advances in adolescent health policy in Kenya, there is no integrated health discipline dealing with adolescent health (as compared to maternal health, gerontology, or pediatrics). A 'virtual' Adolescence Institute (or Adolescent Health Knowledge sharing platform) could be a valuable first step, enabling health professionals from various disciplines, academia, NGOs, and others to collaborate and share knowledge. This idea came about in one of the interview discussions with an expert from the Kenya Ministry of Health. Such an envisaged platform could lead to better health strategies for adolescents, better support and coordination of health services, as well as providing a powerful forum for shaping adolescent health policies. Data services and analytics would also be required to develop cross-disciplinary, evidence-based strategies and policy-making.

2

A competence platform for Youth Health Counselors

Lack of staff with appropriate training and aptitudes is one of the biggest obstacles to creating sustainable adolescent health services. Our study showed that simply creating posts and appointing counselors with the right paper qualifications is a recipe for failure. Health counselors (who represent the face of health services to adolescents) also require the empathy and ability to connect with young people and gain their trust. They need to be passionate about young people and their issues, and to understand youth culture and adolescent behavior. Kenyatta hospital has established possibly the best example of a youth-friendly service that works. The management has indicated that they would be interested in acting as mentors to help select and train talented adolescent counselors for other youth centers across the country. Such a platform would increase the likely success and sustainability of new youth-friendly health service centers.

3 Centers for Adolescent Health, Wellbeing and Development

Such centers would be community-based and should ideally be in close physical proximity, and collaborate closely with existing primary care facilities to avoid the cost and duplication of equipment and staff involved in setting up stand-alone youth health facilities. The centers would overcome young people's negative image of clinics and medical facilities by providing dedicated space for youth engagement programs based on health and wellbeingrelated activities. Experts that we interviewed indicated that many communities currently have no facilities for young people's social activities and where these do exist; they are often marred by criminal activity. Dedicated centers could offer meaningful activities such as fitness and dance classes, music tutoring, talent development, and vocational skills and entrepreneurship training, combined with health awareness, advice, and counseling or even health check-ups. Classes could be free or local entrepreneurs, NGOs, universities, and the private sector could run fee-paying activities. The entire program should be supervised (for instance, by health counselors and members of the youth leadership team) to support youth development and the creation of strong social bonds, as well as adolescent engagement with health services.

Most of the stakeholders mentioned already run a variety of programs related to adolescent health, but these could be better coordinated which would make them far more effective. The required investments could very likely also be synergized with existing programs. There are a number of funds available for youth development in Kenya, although currently most focus mainly on entrepreneurship development.

- The World Bank Board of Executive Directors approved a US\$150 million International Development Association (IDA) program to support 280,000 Kenyan young people to increase their employment and earnings opportunities in May 2016.
- Since 2006, the Kenyan government has implemented a Youth Enterprise Development Fund (YEDF) to address youth unemployment.
- In Kiambu county, the Ministry of Youth, Sports, and Communication has a substantial fund available for development of young entrepreneurs (especially women). Currently, this is not directed specifically towards healthrelated entrepreneurship, but this could be an interesting possibility to explore.

A potential next step:

We hope that these findings and proposed models will stimulate a dialogue between interested stakeholders, which may ultimately result in an opportunity to pilot this approach. It will require the collaboration of a number of stakeholders including the government, Ministry of Health, health professionals, NGOs, private enterprise, and local entrepreneurs, as well as local community members and adolescents themselves. The aim will be to make the approach sustainable through meaningful local participation and revenue-generating activities, benefitting all stakeholders.



Introduction

Research study

This gualitative study was carried out to explore the status of adolescent health and wellbeing in Kenya. It also investigated possible ways in which to deliver effective solutions for the needs identified.

The study included desk research as well as workshops and interviews with a broad range of stakeholders. These included adolescents, government officials, policy influencers, healthcare workers, educators, NGOs, sports coaches, and parents of adolescents (see Addendum: Research Approach and Rationale).

The study aimed to:

- · create a holistic understanding of key issues and developments affecting the health and wellbeing of adolescents in Kenya
- define key measures and actions that could make progress towards significantly improving adolescent health, wellbeing, and development
- identify key stakeholders with the potential to contribute effectivelv
- propose better adolescent and community engagement strategies to ensure effective participation of adolescents in healthcare programs, and to motivate healthier lifestyles
- propose a way forward for effective multi stakeholder cooperation and action.



By 2050, sub-Saharan Africa is projected to have more adolescents than any other region Population of adolescents 10-19 years old in millions, by region, 1950-2050

Sub-Saharan Africa is the only region of the world in which the number of adolescents continues to grow

Note: THe 2050 population figures are projections. Source: United Nations, Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2010 revision, CD-ROM edition, 2011

Figure 4 Growth of adolescents in Sub Saharan Africa - Source: Unicef Report card on Adolescence

Adolescent health in Kenya - an overlooked priority

Approximately 33 % of Kenya's population of 45 million consists of young people between the ages 10-24 years of age (PRB, 2016). This is similar to the situation in many countries in sub-Saharan Africa (Figure 4).

Adolescence remains an under-addressed window of opportunity for public health intervention in Kenya and for sub-Saharan Africa as a whole. However, existing health data on adolescent girls and boys is largely insufficient. In the past, interest in population data focused on the health of the economically active labor force (15-64 years old) in various labor markets. This focus has hampered a more granular understanding of the specific health and wellbeing issues affecting adolescents within this age range and younger.

The World Health Organization (WHO) now defines 'adolescence' as 10 to 19 years, and it uses the term 'youth' to refer to the years between 15 and 24. The term 'young people' widely refers to 10 to 24 year olds. Moreover, in global data reporting, the WHO increasingly makes a consistent differentiation, referring to early adolescence (10–13 years), middle adolescence (14–16 years), late adolescence (17–19 years), and early adulthood (20–24 years). This differentiation provides a more nuanced picture of the dramatically changing health profile across adolescents and young adults, while also enabling greater national and international comparison, and offering far deeper insight for effective intervention and preventative strategies.

Nonetheless, even with this change in reporting, the global health community still needs to build an empirical database for intervention with this age group. This is not only a challenge of data, resources, and finance; but also of changing the behavior of adolescents. In developing countries, health investment has long targeted populations with the highest levels of preventable maternal and infant mortality. However, to ensure a sustainable positive impact on the health of communities, health investments should serve all members of the community. And they should aim for universal health coverage, starting with investments in primary healthcare. In this context, there is a growing awareness of the need to expand the focus to adolescent and youth segments in developing economies. There are two key reasons for this. Firstly, African populations in general have a young demographic; in many sub-Saharan countries, adolescents and youth form a major part of the population. Secondly, this large demographic group is subject to numerous significant and rapidly changing factors affecting its health.

Throughout adolescence, young people in developing countries are vulnerable due to their social, physiological, and psychological circumstances. Soon after puberty, morbidity and mortality related to HIV, sexually transmissible infections, pregnancy, substance abuse and violence rises significantly. This underscores the importance of targeting early adolescents of both genders (ages 10-14) with preventative and contextually relevant primary healthcare interventions. Further interventions should address healthy transitions to young adulthood by advancing the public health agenda with post-pubescent (aged 15 to 24 years) young women and men.

Yet, despite the obvious needs, most adolescents in developing countries are not health-aware and have no interest in looking after their health i.e. they are not 'health seeking'. This makes it challenge to engage and advise them, and to change their behavior towards healthier habits. There is evidence that integrated approaches to adolescent health can be effective (World Health Organization, 2002) (Mullan-Harris, 2010). However, such approaches are still weak or absent in many developing countries.

¹ http://apps.who.int/adolescent/second-decade/section2/page2/age-not-the-whole-story.html

A holistic exploration of adolescent health and wellbeing

The WHO ecosystem model for the determinants of adolescent health

There are many underlying causes of poor adolescent health; building an understanding this topic thus calls for a holistic perspective. It is not enough to look at or to address single issues, or simply to provide more health clinics. The definition of youth health goes beyond simply 'not being sick'. In the words of the WHO, health is 'a state of complete physical, mental, social, and economic well-being, and not merely the absence of disease.'

Health equity and social determinants are also critical components of the post-2015 sustainable development global agenda (WHO, 2015). In this context, health is the sum of our physical, mental, social, and economic capabilities that enable us to cope with our environment, pursue our personal aspirations, and lead a rich and rewarding life. Most young people however do not spend much time thinking about their health. Rather they view being healthy as an enabler for enjoying a rich and rewarding life. Hence, health solutions for adolescents need to focus on removing obstacles that prevent healthy development. They should make it easy and enjoyable for young people to stay healthy and fulfill their potential. The WHO model (WHO, 2014) below (Figure 5) provides a useful ecosystem approach for a more comprehensive understanding of the determinants of adolescent health and wellbeing.



Individual

Age, gender education, knowledge, self-efficacy, skills, mindset

Interpersonal

Family, friends, peers, teachers, social networks, expectations, conflict, financial & social capital

Community

Community values & norms, networks, support and social cohesion, community and religious leadership

Organizational

Infrastructure such as roads, schools, community halls, health facilities, opportunities for work & play

Environment

Physical environment: water, sanitation, pollution Socio-cultural environment: media Biological environment: epidemics

Structural

Policies, laws, gender attitudes, racial equality, equity

Macro

National wealth, wealth, distribution, war/social unrest, impact of globalization $% \left({{\left[{{n_{\rm{s}}} \right]} \right]_{\rm{soc}}} \right)$

Figure 5 A holistic ecosystem model for addressing adolescent health and wellbeing – adapted from: (WHO, 2014)

Our exploration of the determinants of adolescent health

In exploring the different levels of the WHO model, we gained insights into the connections between the various layers. Through this deeper understanding of the ecosystem of adolescent health determinants, it became clear that multi-stakeholder cooperation is key for developing impactful and sustainable solutions. The following sections discuss our main findings with respect to each layer in the ecosystem model.

Individual

Adolescence at the Individual Level

Adolescence – a developmental phase of physical, neurological, and psychological change

Adolescence is arguably the period of fastest and most significant change in the development of individual humans. The body and brain undergo a significant transformation as young people become adults.

Hormonal changes are instrumental in controlling the development of the adolescent body and brain. Puberty occurs earlier for girls than for boys. The average age for a girl's first menstruation cycle is 12. Boys' sexual maturation begins later; their first ejaculation generally occurs around the age of 13. There is evidence that shows puberty is beginning earlier now than in previous generations (UNICEF, 2011). Today, both girls and boys reach puberty up to three years earlier than two years ago – largely due to higher standards of health and nutrition. However, the process of adolescent maturation of the brain may take more than a decade to complete.

Moreover, not all parts of the brain mature at the same rate:

- the limbic system (the primitive part of the brain concerned with survival) matures earlier during sexual maturation. The limbic system is responsible for pleasure seeking, reward processing, emotional response, and sleep regulation.
- the pre-frontal cortex and frontal lobe (responsible for judgment, self-control, impulse control, and abstract reasoning based on experience) matures last (only in the mid-twenties). As a result, the adolescent brain lacks sound judgment and control, and is more responsive to risk-taking and short-term rewards (Kihara, 2015).

Key Take-Aways

Individual Level

- Biological changes during adolescence lead to poor judgment and an appetite for risk taking.
- In this phase, individuals are also prone to depression and mental issues.
- Adolescents are not health seeking and have poor knowledge about health and SRHR. They also have poor access to health services.
- Rates of unplanned pregnancy are very high amongst teenage girls.
- Key DALYs are road injury, HIV, suicide, lower respiratory infections, and interpersonal violence.
- There is a need for engagement, education and better life and vocational skills.



As they mature, adolescents have to deal with not only hormonal changes during the onset of puberty, but also with a changing body, and changing desires and relationships. And while all this is happening, they are developing their own sense of identity and ideals, choosing role models, and dealing with issues of self-esteem.

During adolescence, young people become aware of their own sexuality and feelings of love and desires intensify. Adolescence is a period of sexual exploration, uncertainty, and behavioral change, which can render adolescents very vulnerable to pleasure seeking and risk-taking. They easily succumb to inappropriate thoughts and behaviors to achieve goals with compelling short-term incentives such as material or pleasurable gratification (Casey, 2008). They can be emotionally devastated if they are disappointed in a romantic relationship as they lack the emotional skills to cope with such set-backs.

The changing role of the family is an important factor for today's adolescents. Many rely more on their peers for feedback than on family members. This makes them highly susceptible to the opinions of others in their age group and far more vulnerable to bullying. Here too, their lack of emotional maturity can create difficulties; they may struggle to deal with harsh feedback, peer pressure and rejection, creating a serious risk of mental suffering and illness.

Adolescents also feel the need to understand and contextualize the changes that are happening to their bodies and their feelings. In many societies, numerous aspects of puberty (menstruation, sexuality, etc.) are difficult to discuss openly. As a result, adolescents often rely on risky experimentation to test their new boundaries. Both boys and girls are vulnerable during adolescence. In Kenya one in every five girls between 15 and 19 is either pregnant or already a mother (PRB, 2015). Teenage pregnancy is not only a social complication, but puts the life of young mothers at risk. Adolescent girls face far higher pregnancy and maternity risks than young women above the age of 20 because they are not physiologically fully developed. Most adolescent pregnancies are unintended and unwanted, which increases the likelihood of girls opting for abortion (Akwara, 2015). Furthermore, 45% of women who suffer severe complications after abortions are teenagers (SABC, 2015) Teenage girls who become pregnant and get married are also far more vulnerable to violence and exploitation. The vast majority (70%) of girls aged 15 to 19 who have been married have experienced violence at the hand of their spouse or partner (Ndiba, 2015). Such violence is deeply ingrained in the social patterns of behavior in many countries in sub-Saharan Africa. Surveys show that around half of women of all ages and more than half of men believe that it is justified for a man to beat his spouse under certain conditions. (UNICEF, 2012).

Adolescent boys experience their own challenges. During puberty, there is an approximate 30-fold increase in testosterone production in boys. This increase is linked to changes in mood and behavior. Boys are more prone to aggression and show an increased appetite for risk-taking. At the same time, they are likely to display poor judgment and self-control due to the lagging maturation of the prefrontal cortex. And like girls, they are also prone to depression and self-harm (Duke SA, 2014).



Health-related behavior and health awareness

Very few adolescents actively think about their own health or the health consequences of their actions, or that these could eventually lead to disease. Yet, some diseases contracted in adolescence will result in Disability Adjusted Life Years (DALYs) that will affect individuals throughout their adult life. Such diseases include HIV, sexual and reproductive health problems, eating disorders, substance abuse, alcohol addiction, smoking and respiratory disease, depression, mental health, and diabetes (WHO, 2014).

Investment in guiding and helping adolescents towards healthier behaviors would thus deliver lifelong personal, social, and economic benefits. However, addressing adolescent health requires a deep understanding of the changes that adolescents undergo and calls for creative ways to reach and engage them in adopting healthier behaviors. It is not sufficient to offer health awareness, diagnosis, and treatment alone. An extensive literature review has concluded that health awareness does not deliver the same results as active health engagement (Centre of Excellence for Youth Engagement – The Students Commision, 2003). Specifically, sufficient health awareness combined with a change towards healthier behaviors leads to better health outcomes.

Engagement can be in the form of extra-curricular activities such as sports, volunteering, and life skills development. Through these, adolescents learn to develop better relationships with adults (e.g. youth coaches), better social collaboration and peer support. When adolescents feel more in control of their own health and circumstances, they also learn to communicate better and to take more responsibility for their own health and wellbeing. The development of youth leadership skills makes it easier to reach out and involve adolescents. Engaged adolescents are more grounded. They realize their own potential and are far less likely to engage in risky behavior, leading to better health outcomes.

Key health issues resulting in increased mortality and DALYs

For adolescents, all the measures of death, disease and disability is remarkable similar across ages, sexes, and regions and between low and middle income countries and high income countries (WHO, 2017).

The leading causes of death among (global) adolescents in 2012 were:

- road injury
- · HIV
- suicide
- lower respiratory infections
- interpersonal violence.

These causes are consistent with the biological and behavioral changes that take place during adolescent development. These include sexual experimentation, greater risk-taking, increased propensity to engage in violent conflict, increased substance abuse (including alcohol and tobacco smoking), and an increase in depression and mental illness due to poor coping strategies and support.

The major causes of Disability Adjusted Life Years (DALYs) amongst adolescents changed little between 2000 and 2012 (WHO, 2014). Between 2000 and 2012 the overall global overall DALYs for adolescents decreased from 165 to 152 per 1000 population. The African Region had the highest DALYs. In 2012, there were 300 DALYs per 1000 population. In 2012, depression, road injuries, iron-deficiency (anemia), HIV and intentional self-harm were the top five global causes of DALYs for adolescents. The one notable change from 2000 was rise of HIV which ranked fourth among causes of DALYs in 2012, while in 2000, it was not yet among the top ten (WHO, 2014). It is noteworthy that the DALYs due to depressive disorders are almost twice as high amongst adolescent girls compared to boys. For road injury, the reverse is true, with boys far more likely to suffer in traffic accidents.

Education, vocation, and life skills

The Kenya Free Primary Education Policy (FPE), which has been in effect since 2003, has extended access to primary education to far more children than before. However, while access has increased, the quality of primary education has dropped due to dramatically higher pupil to teacher ratios and over-crowded classes. Nevertheless, the policy does mean that children from poor families, including girls, can now get a primary care education. This access to a basic education brings major health benefits as children learn to read and thus have greater access to information. The inclusion of hygiene and health lessons in the school curriculum adds to these beneficial effects.

Post-primary school, one of the biggest education-related challenges is early dropout. Despite government investment to subsidize secondary school tuition, dropout rates are high, particularly among girls (Daily Nation, 2015). A study (Morara, 2013) has found that that several social factors are responsible for this. They include teenage pregnancy, chronic repetition of lessons in classes, family size, low motivation for schooling, parental negligence, influence of peers, shortages of trained teacher counselors, and early marriages. High dropout rates are not the only issue. Kenya also faces a complex situation of both under- and overeducation, reflecting a mismatch between labor market requirements and young people's skills. In particular, the country is training too many tertiary graduates who do not have the right skills to find meaningful jobs in the labor market. As a result, each year 50,000 new university graduates enter the job market and 75% struggle to find employment and end up joining the pool of 2.3 million young unemployed Kenyans (Daily Nation, 2014). Meanwhile, the real need is for practical vocational skills, work experience, and young entrepreneurs who can create their own business opportunities (see p. 28).

In response to these issues, the government, in association with other stakeholders, has invested in programs to develop young entrepreneurs (see section below 'Investment in Adolescent Development' (see p. 31). However, there is still a need to make opportunities more accessible to young people. They also need life skills training to increase their chances of success in today's fast-changing environment, such as:

- critical and creative thinking
- decision making and problem solving
- communication and interpersonal relations skills
- coping with emotions and stress
- self-awareness and empathy

Such life skills are essential not only in helping adolescents succeed, but also in equipping them to deal constructively with failures along the way. Ultimately, these skills can also have a positive impact on the health and wellbeing of adolescents. This said, currently, most Kenyan adolescents lack such core skills. The school curriculum covers some of the basics, but more could be achieved through supplementary community-driven programs with experienced coaches and counselors.



Utilization of health services

Our interviews found that many adolescents have very poor access to healthcare and do not choose to use facilities even when they are available. In many cases, facilities are not within easy reach, and adolescents cannot afford the travel costs. Furthermore, most primary care facilities do not have sufficient medical personnel. Nor do they have counselors with the skills to build relationships of trust with adolescents and to provide support for their health and wellbeing needs. In our interviews, some experts mentioned that typically healthcare authorities select staff based on their technical healthcare qualifications, rather than on their soft skills in dealing with adolescents.

These barriers to access are compounded by adolescents' dislike of waiting in queues alongside pregnant mothers and the sick. Thus, it is not surprising that young people shy away from clinics and healthcare facilities.



Adolescence at the Interpersonal Level

Friendship

As discussed earlier in this document, adolescence brings a new level of independence from parental control, with young people turning to their peers for acceptance and belonging. This can have both positive and negative effects. Peer pressure can lead to detrimental behavior, yet friends who have strong values and good behavior tend to bring out the best in one another.

Parenting

Adolescence often brings emotional conflict between young people and their parents. Inexperienced parents may be particularly unprepared for the sudden change and this may lead to a growing rift between parents and their children (Casey, 2008). Despite this, adolescents are still in need of parental guidance and conflict in the family can drive them into even more risky behavior outside the sphere of parental control.

These factors show that parental guidance and attention still play an important role in adolescent health. However, in rapidly urbanizing societies like Kenya, parents often do not have enough time to spend with their children and to guide their behavior. They may also lack parenting skills.

Key Take-Aways

Interpersonal Level

- Friendships can play a major role in the behavior and motivation of adolescents.
- Poor parenting and family problems can make adolescents far more vulnerable to abuse, mental illness, and self-harm.
- Peer influence can shape adolescent aspirations and can often fuel unrealistic expectations.
- It is difficult for adults to reach young people and win their trust. Youth leaders can play a role in mediating better connection to adults.
- Youth culture creates a strong sense of shared identity amongst adolescents. It can be leveraged to improve communication with the young generation.

In particular, adolescent girls who become pregnant do not have the maturity and skills to guide their own children. As a result, they are also far more likely to suffer from depression and to develop psychosocial disorders (Omoni, 2005).

Studies have shown that adolescents growing up in families where one or both parents (especially the mother) are suffering from depression or other psychiatric disorders are may face negative impacts. These adolescents are far more likely to suffer from chronic and severe depression, psychiatric disorders, and poor psychosocial functioning. Plus, they also have a much higher tendency towards suicidal behavior (PRB, 2015) (Khasakhala, 2013).

Peer relationships and youth culture

Adolescence is a key phase in an individual's development when personal identities are shaped, and group identities and mindsets formed. And for each generation, changing socio-economic circumstances bring a unique experience to their formative years, creating a different outlook from those of generations that have gone before.

In Kenya, today's adolescents live in a society that is undergoing tremendous change with a very high rate of urbanization. In these urban environments, the majority of young people grow up in the harsh conditions of 'slumburbia', which is blighted by high levels of crime, abuse and violence. Many of these urban environments are also a melting pot of different cultural and ethnic influences, with their own new urban subcultures and even languages. Sometimes, these new languages are incomprehensible to older generations. Sheng is one such language. A mixture of English and Swahili, Sheng originated in the underclass of Nairobi townships and has become the language of choice for urban youth of many different socio-economic backgrounds. Such is its popularity that Sheng has spread to neighboring Tanzania and Uganda (Sheng slang, n.d.) and it is rapidly transforming into local dialects in various regions. Sheng has a huge influence on music, poetry and daily communication and fashion. Kenyan hip-hop (Genge or Boomba style), one of the most influential music genres amongst urban youth, uses Sheng rather than English, along with elements of American hip-hop culture, to articulate the fear and insecurity of Kenyan youth.

Even global brands such as Coca Cola have started to incorporate Sheng words into their marketing campaigns. In short, any attempts to reach out to adolescents should leverage the signifiers of youth culture in a context. That includes language and ways of communication, fashion, and other iconic cultural signifiers.



Material aspirations

At a time when many emerging economies are slowing, Africa is now the second fastest-growing economic region after Asia and is becoming a magnet for international capital (World Economic Forum, 2016).

This shift towards growth in African markets has created unrealistic aspirations and expectations and a rising wave of materialism amongst adolescents. The media plays a powerful role in fueling this desire to get rich quickly. Many adolescents have changed their career objectives from those that require years of study and hard work to succeed (such as doctor or lawyer) to becoming a DJ, musician, or politician as a quick route to wealth.

A survey by Deloitte (Deloitte LCC, 2014) found that Kenyan urban youth are the most image-conscious and consumerist of the four African countries included in the study (Egypt, South Africa, Nigeria and Kenya). This is the case, even though their income was the lowest. Many young people run the risk of falling into unsustainable debt just to keep up with the latest trends, with one in three saying, 'buying well-known brands makes me feel good.' At 32%, this was the highest rating of the four countries surveyed. This trend reflects a high level of peer pressure amongst youth and adolescents to compete and to conform by buying fashionable status symbols, which may be beyond their means.

Interviews with experts conducted for this research indicate a need for greater mentoring, coaching and engagement to create more realistic expectations and more sustainable paths to happiness and fulfillment for young people in Kenya.

Counselling, coaching and mentorship

In the past, it was easier for adolescents to approach trusted family members with issues that they felt were too intimate or difficult to discuss with their parents. Now, rapid urbanization has led to many adolescents losing contact and easy access to members of their extended family.

Grandparents, aunts, and uncles often live in other towns or provinces. Yet, the level of freedom of adolescents and exposure to potentially harmful experiences in modern urban environments means there in and increased need for guidance, coaching and mentorship. As a result, teachers, sports coaches, community health workers, youth health counselors and youth leaders need to step into this void to build effective cross-referral and positive re-enforcement networks to address the problem. This is also why the development of youth leaders is so important – such trusted peers can help lower the barriers to young people seeking help from trained counselors.

However, with so few counselors for such a large adolescent population, the challenges do not end there. Plus, for the counselors that are available, getting to the heart of a problem is by no means easy. Adolescents frequently fear that other people will judge, ridicule or stigmatize them, so they will seldom express the core of their problem openly. Our interviews confirmed that it takes time and patience – often over several sessions – to build relationships with adolescents. Initially, the counselor must invest a lot of effort in getting to know a young person and putting them at ease. Trust often begins through discussing a young person's interests or other issues, before addressing their core concern.



Community

Adolescence at the Community Level

Cultural practices

Shared social codes, cultural practices, beliefs and values are important for social cohesion and stability of communities. This creates a necessary level of stability that is essential for adolescents to flourish.

Key Take-Aways

Community Level

- Harmful rites and practices (such as FGM) that are still widespread need to be addressed.
- Community leaders should be supportive and engaged in actions to promote adolescent health and wellbeing.
- Adolescents themselves should be empowered as active participants in finding solutions.

However, in many communities certain cultural practices may cause harm. One example is female genital mutilation (FGM). This can lead to infection and birth complications. FGM has been in decline due to active campaigning by human rights organizations, NGOs, and other groups, and is officially illegal in Kenya. Nevertheless, there are some regions (notably in the northeast) where 98% of women are still being subjected to FGM. This practice persists because it has a deep cultural meaning and is a symbolic ritual signifying passage into womanhood. There may be also deep-seated superstitions and beliefs that make communities fearful of abandoning these rituals. NGOs have found that involving all members of the community can be effective in addressing these issues. By raising the level of understanding of the problem and by working with the community to identify safe alternatives, they are making progress towards elimination of such harmful practices.

Community empowerment and engagement

Academic studies support the conclusion that community involvement is the only effective route to addressing many adolescence-related problems (Ballard, 2016). In Kenya, this involvement means reaching out to community and religious leaders, elders, chiefs, and youth leaders. All these people can contribute to improving adolescent health and wellbeing.

Adolescents as stakeholders

Active involvement of adolescents themselves in decisions and actions is also crucial (WHO, 2014). Young people are better educated than in the past and many are networking via social media. They need to be engaged as actors of social change and not only as recipients. In this context, adolescent leadership development programs and peer-topeer advocacy are vital building blocks towards better adolescent health and wellbeing. Adolescents should be able to discuss and articulate their needs and perceived shortcomings, and feel empowered to help shape solutions. The adolescent peer network is potentially the most powerful instrument to build engagement. It can also mobilize young people to participate in health programs and to create sustainable behavioral change.



Adolescence at the **Organizational Level**

On an organizational level, creating positive change in adolescent health calls for a shift from single-issue thinking towards an organic view of how different organizational entities can collaborate (UN - Every Woman Every Child, 2016).

Health facilities

As mentioned earlier, Kenya suffers from a major shortage of primary care facilities, and facilities that can accommodate and treat adolescents are even rarer. In addition, young people are not involved in the design or planning of healthcare facilities, and their needs are not taken into account. As a result, health facilities and services are often intimidating and unpleasant for young people to use.

Key Take-Aways Organizational Level

- Kenya lacks youth-friendly health services, despite clear guidelines and policies.
- Schools need to play a key role in helping to prevent early dropout from education (especially girls).
- There is a need to work more closely with religious groups and to transform unhelpful religious views.
- Coordination and cooperation of NGOs involved in adolescent health should be improved.
- Business needs to take more responsibility for solutions and their results, moving towards models that are outcome and value-sharing based.

The Kenyan government launched a policy for youth-friendly health services in 2005, but there is still a large gap between policy and implementation. The poor utilization of health services by adolescents presents a major challenge and requires a multi-stakeholder approach that includes health services, community leaders, parents, teachers, and adolescents themselves.

Our research indicates that adolescents want services that focus on their needs. Involving and listening to them would help to shape appealing services. It is essential to create affordable and sustainable models for adolescent engagement and for delivering such services. Different stakeholders need to think together creatively about promoting, establishing and operating youth-friendly health services. This cannot be done as 'business as usual' – it calls for a transformation in the way health services operate today.

Schools

Teachers play a potentially valuable role as a source of trusted information to adolescents, (PATH, 2006). Adolescents do not like asking siblings or friends for sensitive health information, and in general, they prefer not to ask a person of the opposite sex. On the other hand, adolescents trust teachers and students feel that they will handle questions with a level of discretion. Nonetheless, despite the official school curriculum dealing with sensitive topics such as sexual reproductive health and rights, many teachers shy away from such uncomfortable topics, which they lack the knowledge and coaching to deal with effectively. In our expert interviews, teachers said that they also tend to give less open and direct answers when adolescents ask them about such matters.

Another key challenge for schools is to collaborate with community stakeholders to avoid early dropout (especially of girls). Some schools provide opportunities for girls who become pregnant to return to education after the birth of their child. However, few girls take up this opportunity, as they feel humiliated, and fear stigmatization and ridicule. Thus, while young mothers could in principle go back to school, in practice, there is not yet an effective strategy for re-integrating them into the school system.

Religious groups

Organized religion (Christianity and Islam) figures strongly in the lives of Kenyans. Both religions play a positive role in moral guidance and group cohesion. However, religious conservatism is the norm in Kenya, and both religions disapprove of modern birth control methods. They also tend to be judgmental about behaviors which they characterize as sins, leaving adolescents afraid to be shamed in their religious circle. Interviewees for this research said that adolescents feel there are no avenues open to them in religion to obtain proper advice. Adolescent women who become pregnant are particularly affected; fearing stigmatization, ridicule, and judgment they may decide to run away. Thus, while there is much fruitful collaboration between organized religion and health services (with many religious groups offering their own health services), there is often tension on how to deal with sensitive issues such as hirth control and safe sex

NGOs, donors, and global aid organizations

Not-for-profit organizations play a vital role in improving the health of communities. Yet despite decades where billions of dollars of aid have been poured into improving health in sub-Saharan Africa, major issues remain unaddressed. Moreover, many of these aid programs are now coming under increasing pressure due to changes in funding policy (for example, the global gag rule in the USA under the Bush and Trump administrations).



New US policies that bar funding to groups that offer abortion or abortion advocacy will impact heavily on programs dealing with countering HIV and prevention of unwanted adolescent pregnancies in countries like Kenya (Starrs, 2017). This will heighten pressure for more effective cooperation between different stakeholders on how to 'achieve more with less'.

Ironically, performance indicators and the pursuit of measurable outcomes and accountability can also hinder the effectiveness of healthcare programs by forcing the focus onto single issues (for instance, HIV, FGM, poverty, or violence and abuse). Yet, as discussed earlier, such issues are frequently inter-related can call for more coordinated and integrated approaches.

Business

With global health funding and donations coming under pressure, the search is on for new healthcare and business models. In particular, there is a move away from the model of selling expensive equipment, because this approach has largely failed. Reports show that up to 40% of healthcare equipment in developing countries is out of use (Blue, 2012). There are many reasons for this: equipment from global suppliers is often unsuitable for challenging environments such as in sub-Saharan Africa; and there is a lack of training, maintenance and support to ensure equipment is available for use once it has been provided.

In contrast, private companies and entrepreneurs are now becoming integral to shaping affordable and sustainable healthcare solutions. These new approaches reflect the shift towards outcome-based business models in healthcare. Integrating business as partners in delivering solutions - and holding them accountable for results together with other stakeholders - will radically transform the way in which companies do business. Companies will have to think far more strategically about investments and take a longterm perspective. They will also have to consider how to ensure results, and how to invest in programs that help to eradicate poverty and stimulate local prosperity and entrepreneurship, because this will generate shared-value for the partners involved. Moreover, innovation will need to be tailored to the context, and leveraging and developing local talent will be equally essential. Importantly, with the right programs and investments, the large young workforce in sub-Saharan countries could become an asset to business.



Environment

Adolescence at the **Environmental Level**

The modern Kenyan context - a changing experience of adolescence

Our interviews and research reflect the view that modernization has changed the meaning and the context of adolescence in Kenya (Ginsberg, 2014). As we have discussed above, traditionally, young people grew up in close proximity to their family and were answerable to all adults. The social transition to adulthood happened soon after puberty based on traditional initiation rites. Through these rites, community leaders taught individuals entering adulthood about the accepted adult behaviors within their community.

Key Take-Aways

Environmental Level

- The majority of Kenyans live in slum-like conditions in unhealthy environments with little access to water, sanitation, and health services.
- Many adolescents experience crime and violence.
- Gender-based violence is common due to long-held patriarchal attitudes. This disempowers women and keeps them in poverty.
- The media play a strong role in changing attitudes of adolescents (for good or bad).
- Unemployment is very high amongst adolescents (and young adults) due to a lack of skills.
- There is a lack of safe spaces for adolescents to meet which makes it difficult to engage young people.

In modern environments, this family and community guidance has declined. Parents typically have little time and grandparents or other relatives may not live close by. Today, most adolescents grow up in an environment shaped by high levels of mobility, urbanization, access to education and information where, instead of parents or the community, they rely on their peers or potentially unreliable sources for knowledge and direction.

The physical environment

The 'slumburbia' described earlier (see p. 18) is a reality for a huge part of the Kenyan population. At least 56% of Kenyans live in slums with little or no access to basic amenities (Mohammed, 2015). These slums have expanded rapidly due to the combined effects of rural-urban migration, increasing urban poverty and inequality, the high cost of living, and a lack of access to affordable housing for the urban poor. As discussed, these are harsh conditions for adolescents and many fear living in such environments.

These slums take a toll on physical health. With no sanitation or safe drinking water, diarrhea and disease are common. This situation is further aggravated by the high density of people crowded in a limited space. Respiratory disease is also prevalent amongst adolescents. This is partly because most people cook on coal or wood-burning stoves due to a lack of electricity. Tobacco smoking which is also widespread, including among the young, is another contributing factor.

Furthermore, people living in these slums have little or no access to healthcare or schools. Many survive in the informal sector; very few are in formal employment. In such conditions, adolescents easily fall into a life of crime and are extremely vulnerable to abuse.

Socio-cultural context and media

It is impossible to address adolescent health and wellbeing without systematically addressing deep-seated sociocultural issues such as gender bias in Kenyan society. Certain cultural practices and gender norms still restrict communication between girls and boys, and between girls and male teachers. This is particularly so regarding sexual and reproductive health and rights. Additionally, cultural practices and gender norms limit women's empowerment and infringe on the rights of adolescent girls by promoting preferential treatment for boys. Families expect girls to stay at home and help with domestic chores, leading to a higher school dropout rate than for boys. As we have said (p. 19), some sociocultural and religious practices condone sexual discrimination and harmful practices against girls and young women, including FGM, early marriage, and forced marriage after pregnancy. Such traditional, socially embedded views of the social roles of men and women pose challenges for policy implementation. Patriarchal societies expect men to show their strength and masculinity, and the seduction of women is a way to demonstrate male power. Women, on the other hand, are expected to play a secondary, submissive role in sexual matters. However, as the level of education and earning power of women increases, traditional male roles are coming under pressure. This can lead to anxiety and a loss of identity amongst men, thereby increasing the likelihood of aggression and violence.

The media are also playing a key role in re-shaping societal views. Today, many adolescents have access to global media via TV, magazines, radio and the Internet. Young people spend a lot of time accessing information via these different media. Music is very influential in youth culture, especially hip-hop, which has become very popular amongst Kenyan urban youth. Global hip-hop has often been criticized as being disrespectful of women and promoting misogynistic views, However, Kenyan and other East-African hip-hop is increasingly moving beyond the superficiality of materialistic 'bling' culture associated with hip-hop, and start to articulate the realities of the young urban underclass. Lyrics cover topics such as socio-economic discontent amongst youth, the realities of HIV, displacement of minorities, etc. (Ntarangwi, 2009). Exposure to media can broaden the views of adolescents on social constructs and the roles of the sexes in society. It is, however a double-edged sword. The media can contribute to the empowerment and sexual liberation of women. But, they can also promote promiscuity and access to material that can misinform adolescents, create other biases, and reinforce undesirable stereotypes. Parents frequently lack experience of the digital world and are unaware of the risks young people are exposed to on the Internet (UNICEF, 2013). This is especially true of those living in poorer urban neighborhoods or rural areas, where digital literacy is low amongst both parents and caregivers. Hence, the need for better advocacy and awareness so parents can better guide adolescents.

Furthermore, sponsored media often promotes materialism at the expense of a society where people care for one another and for the environment. Here too, mentors such as teachers, youth leaders, role models and parents can provide balance by highlighting the benefits of social prosperity and wellbeing.

Despite their potentially negative impacts, digital media can be a valuable resource for adolescents who are able to access them. They provide information, ideas, and a way to connect with peers and the outside world. Indeed, the proliferation of local servicers such as M-PESA (a local digital money transfer and micro-financing service) and mobile phone gaming has opened a world of possibility to people in Kenya. From our interviews, we learned that many adolescents also use the Internet as a primary source of health information – mostly via their mobile phones. However, they find it difficult to distinguish between reliable sources and misleading or false information.

Finally, in addition to the digital divide between parents and adolescents, there is significant gender divide as well. In sub-Saharan Africa, men are almost twice as likely to have access to the Internet as women. This is a severe limitation for the development of women, particularly because women have lower earning power and leave school earlier than men. Yet digital skills are highly sought after and in short supply in developing economies like Kenya (Clayton, 2012). This underscores the value of initiatives to boost access to the Internet and the development of digital skills, especially amongst young, financially disadvantaged women.

Opportunities for work

In Kenya, the absence of formal employment opportunities poses a serious risk for the economy and many skilled people leave because they can find better incomegenerating opportunities outside the country. Despite this, there is demand for professional level experience and skills in areas such as IT; as well as in engineering for the development of mining, oil, and gas; and in geology, for mining and mineral processing, and marine resources extraction (Mwololo, 2015). However, while there is an abundance of young people in Kenya, they face chronic unemployment because they do not possess these necessary skills and experience. And at the same time, there is growing demand for a wide range of practical down-toearth vocational skills such as hairdressing, carpentry, craft and jewelry making, sewing and knitting, catering, hospitality services, computer skills, plumbing, media and communication, construction and maintenance and repair.



Meanwhile, the healthcare sector faces a dire shortage of skilled healthcare staff and workers offering peripheral services such as equipment maintenance, sanitation services, and counseling. In the light of this, a sustainable healthcare strategy cannot focus exclusively on providing access points and equipment, but must also address this human resource problem. Health systems strengthening can be an opportunity to develop entrepreneurship and new skill sets amongst adolescents, enabling them to become part of the solution. This would in turn make healthcare projects more sustainable and help towards alleviating poverty and financial dependence in local communities.

Opportunities for play

During adolescence, young people learn social skills by socializing and networking, but in many Kenyan communities there are few safe facilities where young people can meet, socialize, and have fun. From our interviews, we learned that some attempts to provide community halls have failed because no one had oversight or took responsibility for them. They quickly degenerated into unsafe places where delinquent youths could 'hang out.' Tackling such situations requires a strong framework of guidance and coaching for youth leaders who can take responsibility for shaping a diversified and inclusive program that creates opportunities for young people to participate, grow and enjoy a rich and rewarding youth.





Adolescence at the **Structural Level**

National adolescent health policies

At national level, Kenya has made a lot of progress in the last decade in starting to address adolescent health.

Key Take-Aways

Structural Level

- Great progress has been made through the adoption of youth-friendly health services guidelines and youth policies. Implementation is still lacking.
- There is a need for better coordination and cooperation to act on policies.
- Meaningful investments are already showing results to improve youth skills and develop entrepreneurship.
- Better cooperation is required in healthcare to promote adolescent health as a discipline.

Among policies dealing directly or indirectly with adolescent health and wellbeing are:

- National Guidelines for Provision of Youth-Friendly Services, 2005
- Kenya HIV & AIDS Prevention and Control Act, 2006
- Sexual Offences Act, 2006
- Ministry of Youth Affairs and Sports (MOYAS) Service Delivery Charter, 2007
- Gender Policy in Education, 2007
- National Youth Policy, 2007
- National Reproductive Health Policy: Enhancing Reproductive Health Status for All Kenyans, 2007
- Kenya Vision 2030, most notably the First Medium Term Plan, 2008-2012
- Ministry of Youth Affairs and Sports Strategic Plan, 2008–2012
- National Reproductive Health Strategy, 2009-2015
- Reproductive Health Communication Strategy, 2010-2012

However, appropriate support is vitally important to ensure these policies are implemented and to create effective programs that can deliver on them. A survey by the Population Reference Bureau in 2013 highlighted a number of key points that need to be addressed in order to advance policy implementation (Graff, 2012):

- Establish a more integrated approach to policy development and implementation; specifically, better coordination between, and active involvement of, multiple stakeholders, including parents, schools and adolescents
- Strengthen leadership and coordination
- Increase policy awareness
- Strengthen implementation plans that are both comprehensive and transparent

- Improve resource mobilization and management, especially with respect to financial accountability
- Improve service delivery, especially youth-friendly services
- Provide capacity building for policy implementation
- Increase adolescent/youth access to services
- · Improve monitoring and evaluation.

According to our interviews, one of the key impediments to better adolescent health is the scattered nature of provision and a lack of coordination across the health departments involved. This indicates a need to work towards a new health discipline that focuses on adolescent health (in a similar way to how pediatrics or geriatrics focus on specific age groups).

Investment in adolescent development

In 2016, the World Bank Board of Executive Directors approved a US\$150 million International Development Association (IDA) program to support 280,000 young people in Kenya. The program aims to increase their employment and earnings opportunities, and is aligned with the World Bank Group's Kenya Country Partnership Strategy (CPS). By targeting vulnerable young people, the program supports the World Bank Group's twin goals of ending extreme poverty and boosting shared prosperity.

The program will run for a five-year period (Worldbank, 2016), focusing on four core areas:

- Improving youth employability by engaging training providers and private sector employers to offer training and work experience which address skills mismatches
- Supporting self-employment by focusing on job creation initiatives and the launch of new business start-ups; improving the productivity and job creation potential of existing enterprises, and offering innovative approaches to help hard-to-serve youth
- 3. Improving labor market information by improving access to, and the quality of, labor market information
- 4. Strengthening youth policy development and project management through capacity building support to the Ministry of Public Service, Youth, and Gender Affairs

In 2006, the Kenyan government also implemented a Youth Enterprise Development Fund (YEDF) to address youth unemployment. YEDF seeks to increase access to capital for young entrepreneurs in order to reduce youth unemployment. However, young people face several huddles in accessing this fund, thereby effectively cutting off many would-be beneficiaries. For instance, some young people cannot fulfill YEDF requirements such as developing a business plan, being in a registered group or having an existing bank account. To leverage this investment, young people need the support of others who can help them take advantage of the opportunities. They also need mentors who can coach them in creating new entrepreneurship ventures – particularly as such ventures typically have a high rate of failure. All this requires a systemic approach involving multiple stakeholders such as the government, aid organizations, NGOs, and private sector, to increase young people's access to equitable development opportunities.

Policies and implementation

Our interviews with respondents from the Kenyan Ministry of health (MOH) emphasized the importance of establishing a specialized branch of healthcare dealing with adolescents' needs. As mentioned above, this would be similar to existing disciplines such as pediatrics and obstetrics. However, it would focus on adolescents who are particularly vulnerable in developing economies and who suffer from high rates of preventable deaths due to suicide, early pregnancy, drug abuse, HIV, accidents, and violence.

Our interviews indicated that an Adolescence Institute, or at least a multidisciplinary Adolescent Health Platform, would help to create more holistic strategies for adolescent health.



Adolescence at the **Macro Level**

The economic dividend

As mentioned in the Executive Summary, young people between the ages 10-24 years of age represent some 33 % of Kenya's 45 million inhabitants (PRB, 2016) (Figure 6). A young demographic can offer great economic potential, but only if there is adequate investment by families and governments to ensure high levels of health, appropriate education, and sufficient economic opportunities. Moreover, this window of opportunity will last less than 30 years (Chatterjee & Kibaru-Mbae, 2015) and due to the high dependency rate in Kenya, there are not enough resources to invest in adolescents. A key way to tackle this challenge is to decrease the fertility rate and population growth by empowering women with family planning, based on a strategy of implementing measures and policies to delay marriage and childbearing by five years. Research shows this can best be achieved by investing in women's education and effective family planning resources (Gribble, 2012).

Key Take-Aways

Macro Level

- Kenya has a large demographic of young people.
- This could be an economic dividend if young people were skilled and able to find jobs.
- There is a window of opportunity of less than 30 years for Kenya to address the gap in skills and employment opportunities in order to reap the benefits of the demographic dividend.
- Adolescent health cannot be viewed as separate from wealth (it is linked to poverty elimination).

As we discussed earlier (p. 24), youth unemployment heavily affects Kenya's economy. Approximately 800,000 young Kenyans enter the labor market every year and youth unemployment is estimated to be as high as 35%, compared to the overall national unemployment rate of 10%. Furthermore, 80% of unemployed Kenyans are below 35 years old (Business Call to Action, 2016) and 90% of all unemployed young people lack vocational skills that would allow them to contribute to the job market. The situation in Kenya reflects the wider global picture, worldwide young people are three times less likely to be formally employed than adults and the situation is worsening. Youth unemployment is one of the most pressing socioeconomic challenges faced by developing economies (The World Bank, 2015). It leads to poorer health outcomes and an increase in crime, prostitution, and civil unrest. Unable to meet their daily needs, many female adolescents resort to prostitution with large numbers engaging in unprotected sex. In the coastal region (around Mombasa) as many as 30% of adolescent girls, some as young as twelve years old, are engaged in sex work (Niles, 2008). This adds to the problems of unwanted pregnancies, the spread of sexually transmissible diseases and early school dropout.

However, while this is a global challenge, sub-Saharan Africa is particularly affected. It has the world's most youthful population and this situation is projected to persist for decades. In Kenya, there is both rapid population growth (2.7% per year) and rapid urbanization (4.4% per year) – a process highly disruptive for youth, as we have described earlier in this document (p. 24). Today, 25% of the population lives in urban areas and there is growing urban poverty with 56% of the urban population living in slum settlements (Muiya, 2014) (Mohammed, 2015).

In 1948, the country's population stood at 5.4 million, in 2012 it was 41 million, and it is projected to reach of 94 million by 2050. The rapidity of this growth is what drives the negative implications for employment and very high dependency ratios (Muiya, 2014). It is why Kenya has placed job creation at the top of its national priorities.

This booming population particularly affects women and slum dwellers. Unemployment is 10 percentage points higher amongst young women than amongst young men aged between the ages of 15 to 25. In the slums, most incomegenerating opportunities are low-paying informal jobs. Slum dwellers with limited skills and opportunities face stigmatization and are trapped in a cycle of poverty, poor health, and an unsafe and unhealthy living environment.

Clearly, health cannot be disconnected from wealth, and health and socio-economic wellbeing have to be addressed as an integrated goal.





Figure 6 Kenya Population Pyramid – Source: CIA World Factbook 2014

Analysis and what needs to be done

Stakeholder engagement

Meaningful adolescent engagement and mobilization

Globally, health systems have failed to effectively address adolescents as a healthcare target group with common issues and interests. It is only recently that the WHO called for a stronger focus on adolescent health in a report "Health for the World's Adolescents" (WHO, 2014).

The biggest challenges in adolescent health are how to reach adolescents, how to stimulate their interest in health and wellbeing, and how to change their behaviors and circumstances.

In discussing necessary actions, many authors refer to 'engagement'. However, there are many different definitions in the literature, with studies referring to 'involvement', 'participation', or 'volunteering' rather than engagement. A Canadian study phrased it as follows: "youth engagement is the meaningful participation and sustained involvement and 'absorption' of a young person in meaningful activities that create a link with the outside world" (Centre of Excellence for Youth Engagement, Canada, 2003). To be successful, this engagement process and activities should be designed with a specific purpose in mind, rather than 'hanging out' with one's peers' or enjoying activities together in an unstructured way.

These findings are very much in line with those from our expert interviews and adolescent workshops. Programs with meaningful shared goals that go beyond the personal interests of the individual reduce selfish and hedonistic behavior. At the same time, they increase empathy and resilience by building a strong social support network of trust.

Two good examples in Kenya are Dance4Life and Orangelink. These use recreation and sport to engage young people in health education and sexual reproductive health awareness. They train coaches to act as mentors who not only teach sport, but also act as trusted advisors to adolescents on topics such as sexual and reproductive health and rights, hygiene, and life skills. These programs have proved effective in delaying the start of sexual activity among adolescents. Plus, it has been shown that social support reduces drug and alcohol abuse amongst adolescent boys. This lowers the rate of unplanned teen pregnancies, and can decrease the risk of young people contracting sexually transmissible diseases such as HIV. Very importantly, it leads to fewer early dropouts from school, while also creating social networks among the genders that foster friendship, mutual understanding, and reduced violence by cultivating better communication and life skills. Furthermore, such life skills, including better communication, empathy, self-control, planning and self-esteem, have a positive effect on the academic performance of participants (Centre of Excellence for Youth Engagement, Canada, 2003).

Programs are particularly effective where adolescents are trained to become 'peer educators'. Such roles provide a sense of purpose and establish young people as role models. This in turn has a positive effect on their behavior and that of their peers. Overall, these programs create opportunities to develop leadership skills and generate a high level of commitment to positive relationships and good behavior.

These observations underscore the importance of wellstructured, socially, and emotionally rewarding programs that engender a sense of accomplishment in the adolescents who participate. Creating a peer environment where young people can have a positive influence on each other is valuable in two ways. It strengthens their sense of social responsibility and helps in avoiding the negative effects often associated with unstructured environments. As discussed above (p. 25), certain experts that we interviewed described how youth centers 'disintegrated' into sources of delinquency because they failed to establish well-structured programs. This allowed 'delinquent' leaders to quickly fill the vacuum.

Creating **adolescent health facilities** that appeal to young people

We have already touched on the image problem of health facilities amongst adolescents (p. 17). Some typical observations arising from our research with young people are:

- They do not like to go to hospitals full of sick people and queues of pregnant mothers.
- They do not like the drab interiors of cream, white or grey found in hospitals.
- They do not like scary posters with threatening messages on the walls they would prefer art and graffiti.
- They feel that hospital staff are rude and not friendly towards young people.
- Staff do not explain the processes, and young people often feel lost. Sometimes the rooms are not clearly marked.
- They do not like the long waiting times. It may not be clear how the queuing system works, and it often seems unfair.
- $\cdot\;$ The toilets are often dirty, even if the hospitals are clean.
- They fear injections and dislike the uncertainty of not knowing what may happen to them.
- They fear doctors with lab coats, and would prefer staff that are friendly and dressed informally.
- There is no way for them to give input or feedback, and even questions are not welcome.
- They would love to have access to the Internet or to be able to play games with other adolescents or listen to music while they wait.
- Many young people do not have money for travel or food

 the availability of some free or affordable snacks would
 make a big difference.

These observations highlight the challenges associated with developing health facilities for adolescents. Ideally, adolescent-friendly health facilities need to be separate from existing health facilities, but that would be impractical and possibly too costly. A good compromise may be to create a room or rooms in the same compound, or in very close proximity to existing facilities. Adolescents should be involved in their creation and encouraged to customize these rooms, with the freedom to shape the experience and activities available. These rooms would serve as a first 'catchment' area, where adolescents could receive counseling and interact with staff who have the necessary affinity and skill to deal with young people. Such rooms could offer a variety of appealing activities from 'fun' health education and to skills-building and entertainment.

Effective involvement and cooperation between multiple stakeholders

The issues raised in this document highlight the complexity of adolescent health and wellbeing, which spans a multitude of underlying issues. They also underscore the conclusion that no single stakeholder can solve the issues alone. A wide range of stakeholders need to participate, and stakeholder engagement should be a combination of both top-down (MOH, health policy, healthcare professionals, business, etc.) and bottom-up (adolescents, parents, community leaders, community volunteers, NGOs, local entrepreneurs, schools, training institutes and universities).
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Framing the meta-issues to create tangible goals and actions

'HELPERS' – our meta-issues framework to improve adolescent health and wellbeing

Through our research, we explored the layers of the WHO ecosystem model for determinants of adolescent health more deeply. In doing so, we discovered a multitude of issues related to each level. In order to prioritize issues and make them actionable, we propose the following **framework** that summarizes the **key adolescent health and wellbeing** issues that need addressing.

The acronym 'HELPERS' (Health, Education, Leadership, Participation, Employment, Rights and Social support) provides a memorable way to frame the meta-issues around adolescent health and wellbeing, and is a useful framework for organizing key actions and goals (Figure 7). Our framework leverages a previous study on Adolescent Sexual and Reproductive Health (UNFPA, 2014).



Figure 7 'HELPERS' a framework of meta-issues related to adolescent health and wellbeing.

Goals and actions to address the 'HELPERS' meta-issues

Health

- Create an integrated health discipline for adolescent health
- Create a more integrated and systematic approach to the collection of data and enable evidenced-based strategies for adolescent health
- Provide accessible health services that appeal to young people
- Create better health awareness amongst adolescents and motivate healthier behavior

Education

- Provide education and opportunities to learn vocational skills that are in demand
- Provide better support for adolescents (especially girls) to prevent them from dropping out of school

Leadership

- Develop and activate youth leadership, and give adolescents enablers, roles, and responsibilities to improve their own health and wellbeing
- Actively involve community leaders in the adolescent health program
- Hold leaders responsible for actions

Participation

- Create better adolescent engagement and better feedback
 mechanisms in health services
- Develop better social and cultural opportunities for adolescents to cooperate, participate, compete, develop, and enjoy their adolescent years. This should include activities such as sports, self-defense, dance, music making, art, and entertainment
- Engage parents and teachers in programs to develop better parenting and teaching skills.

Employment

- Develop entrepreneurship and create employment opportunities
- Create local initiatives to improve environmental conditions and infrastructure, and turn these into local employment opportunities

Rights

- Create awareness and training on sexual and reproductive health and rights amongst adolescents and community members
- Create better rights awareness and protection against
 abuse for adolescents
- Establish effective community mechanisms to ensure transparency and feedback for local politicians to influence policy
- Promote gender equality and address social attitudes about gender

Social Support

- Create cultural change to abandon harmful traditions (such as FGM)
- Create effective treatment and social support strategies for dealing with key diseases such as HIV, addiction, mental disorders, early pregnancy, abortion, etc.
- Provide better life skills training and strengthen support networks for adolescents
- Develop effective counselors and stigma-free support systems

Most of the issues above are interrelated, and addressing single issues will always have a limited impact. Thus, we recommend meta-programs that coordinate efforts and address all of the above issues simultaneously.

Re-imagining adolescent health, wellbeing, and development: a model for implementation

As previously mentioned, re-imagining adolescent health, wellbeing and development calls for a combination of top-down and bottom-up activities (p. 31). The proposals here leveraged our insights and are intended to open a discussion with various stakeholders and to gauge interest in funding and initiating a demonstration program.

The proposed model has three complementary modules:

Module 1 – Integration of adolescent health as a healthcare discipline

Although Kenya already has a youth-friendly health services policy in place, most of the health knowledge is still scattered across many disciplines, with a lack of clear coordination (as articulated in our expert interviews). Creating an integrated discipline or platform for adolescent health is an overdue necessity. Such coordination would allow many health disciplines to establish integrated approaches to improve adolescent health. The idea was mentioned during an interview with a representative from the Kenya Ministry of Health.

This coordination could take the form of a virtual platform (an Adolescent Health Institute) that connects the various stakeholders (Figure 8). In this way, they can start to build shared knowledge repositories, discuss adolescent health cases and issues between disciplines, cross-refer, and even co-create documents to shape future policy.

The Ministry of Health may have to act as the catalyst for this. Other stakeholders such as the WHO and UNFPA could play a role as advisors, while private companies could help to provide software to manage, analyze and share data generated on such a platform.



Figure 8 Illustrative model for a 'virtual' Adolescent Health Institute

Module 2 – Capacity building for adolescent health counseling

A key top-down requirement is to remedy the lack of qualified and motivated adolescent counselors. It is crucial not only to provide the budget and training, but also to handpick talented people with the right mindset, empathy, and skills to connect with adolescents. Many adolescent health problems initially manifest as behavioral problems and talking to a counselor may be the first way in which a young person opens up about their problems and finds support and treatment.

The Kenyatta National Hospital has already established an excellent and highly successful youth friendly health services clinic. It has also started discussions to support the training of counselors in a number of counties including Kiambu, Kisumu, Nairobi and Mandera (Figure 9). Its experience in training youth health counselors and operating youthfriendly centers would be invaluable in scaling more such centers in other counties. In addition, a digital training platform with training tools could support and accelerate this. Interviews with the leadership of Kenyatta National Hospital Youth Friendly Health Services Center indicated that they are very willing to discuss this possibility in more detail.





Module 3 – Engagement center and program for Adolescent Health, Wellbeing, and Development

The third module is an engagement center and program for Adolescent Health, Wellbeing, and Development. Essentially, this would consist of youth-friendly health facilities in combination with an effective adolescent engagement program to improve adolescent health, wellbeing, and development in communities as outlined in our 'HELPERS' framework.

Importantly, our interviews revealed that it is best to host such programs and facilities in close proximity to existing primary care facilities. This allows for cost-effective sharing and utilization of resources. As such, this approach can help to make an adolescent health, wellbeing, and development programs more affordable and sustainable, and even income-generating. Bringing adolescents closer to primary care facilities through the adolescent engagement program would also enable effective referral and collaboration. This would also make health services more accessible and attractive to young people.

A pragmatic approach may be to extend local primary care facilities with two to three additional rooms as follows: One large room that can be used for a variety of engagement activities (as shown in Figure 10), as well as one or two smaller rooms for counseling of individual adolescents or small groups of adolescents.

The fact that many primary care centers are in reach of local communities, is a bonus, but it does not mean that adolescents will necessarily use the facilities, unless it is youth-friendly and appealing to them. A strong engagement program is therefore a key factor to bridge the potentially negative perception that adolescents may have of health care facilities. An engagement program has to start with the interests and challenges recognized by adolescents and inspire them to participate. It is important that the additional rooms are aesthetically distinct from the the adjacent primary care facility, and that the atmosphere should appeal to young people. It should not look like a clinical health environment. Its purpose is to put young people at ease and it should be inviting enough that they encourage their friends and peers to visit.

It should also have a separate entrance. It should preferably be branded separately from the primary care facility. It is better if this extension is positioned as a center for adolescent well-being, development and health.

In this model, selected primary care facilities can be extended to play a pivotal role in adolescent health, well-being and development. The close involvement of county and local community stakeholders is essential for the success of this model.

One or two trained counselors could work with NGOs, local community leaders, youth leaders from the community and the county MOH to draft a program for adolescent and community engagement.

The first layer '**engagement and development**' is crucial as this will bring adolescents closer to healthcare services and encourage them to participate.

The second layer is **counseling and awareness**. This is an essential step in creating deeper awareness and understanding of health behavior and health issues. Local youth leaders and adolescent volunteers need be closely involved in co-creating the relevant programs and in ensuring that the experience of using the facility will appeal to young people. In essence, young people should have a strong feeling of ownership. There should be a sense of shared leadership (among youth leaders and other stakeholders) to ensure the vision of the service is secured for the long-term.

Adolescent Health, Wellbeing and Development centers could be operated by a joint leadership forum and the program would strive to create a dynamic program that fulfills the goals outlined in the HELPERS model. Much of the content of the program be offered free of charge, with sponsorship from donors or government funding. However, there should also be scope for local entrepreneurs to offer training classes and entertainment at reasonable prices. This income could help to sustain and further develop the centers, and generate opportunities for local wealth creation. Ultimately, such Adolescent Health, Wellbeing and Development centers would lower the barriers of access to health services for adolescents.

The adjacent primary health care facility will continue its regular operations but will closely collaborate with the 'Adolescent Health, Well-being and Development Center' to be responsible for covering the layers of **Early Diagnosis** and **Treatment and Referral** (Figure 10).



Figure 10 Collaboration between multiple stakeholders to improve Adolescent Health Wellbeing and Development. Primary health care centers and Adolescent Engagement Centers form the pivot of the service offering.

Recommendations



The next steps

There is a large and growing need to improve adolescent health in Kenya and other developing countries. Adolescent health is a complex topic, linked to general wellbeing, education, life skills and development. It will require a multi-stakeholder intervention with a highly coordinated program to succeed.

As a next step, three complementary platforms that systemically address adolescent health, wellbeing, and development have to be created (Figure 11). For this, there is a need for deep and sustained collaboration between multiple stakeholders (government, Ministry of Health, donors, development organizations NGOs, academia, business, and community and youth leaders).

A pragmatic start

A pragmatic way to make a start could be to create a demonstration project for an Adolescent Engagement Center for Health and Wellbeing with the participation of selected stakeholders with complementary capabilities. Key stakeholders will need to cooperate to secure the necessary funding and support an initiative that would create a demonstration program to test the proposed approach (Figure 10).

For this initiative, it is necessary to work with NGOs and local communities in the area around the test locations. Stakeholder engagement sessions will be essential to establish governance models and content for local programs. Programs need to address the actions related to the 'HELPERS' framework (Figure 7) as a way to guide the program objectives. It is important to work with the local community and other stakeholders to set out a clear baseline and objectives from the outset. The HELPERS framework together with a 'Theory of Change' (ToC) outcome mapping method can be used to achieve this. The ToC is a specific type of methodology for planning, participation and evaluation used in programs aiming to promote social change (Wikipedia, 2016). It ensures that the input, output, and outcomes of actions are transparent to all stakeholders, which leads to a transparent power distribution and responsibility sharing amongst stakeholders. It also clarifies how to monitor and evaluate outcomes, helping stakeholders to take corrective actions as necessary to ensure sustainable progress and success.

A positive impact

Adolescents are a large and important demographic who are currently under-served by health services. A program that effectively addresses adolescent health and well-being can have a strong positive impact on community prosperity and health.

Participation of adolescents in health services creates better utilization of primary care services and facilities, and by combining this with an adolescent engagement program (where many stakeholders, commercial and non-commercial can contribute), may serve to enhance income generation and financial stability of primary care centers.



Figure 11 Three proposed complimentary platforms to enable a holistic approach to Adolescent health, wellbeing, and development

Addendum

Research Approach and Rationale

The research approach of this study was primarily qualitative. We used literature research to gather existing insights in the topic area and to identify some useful published quantitative data related to adolescent health. The table below summarizes the research approach and rationale. We aimed to obtain a broad multi-stakeholder perspective of adolescent development and adolescent health that would enable us to develop impactful and scalable solutions, which leverage existing institutions, policy, stakeholders, and infrastructure as effectively as possible.

Research Activity	Rationale
Literature research	The literature research explored a wide body of work on many adolescence and adolescent health related topics, including documents related to Kenyan government policy.
Adolescence symposium	The symposium aimed to bring together diverse expertise around adolescence and adolescence and adolescent health related topics to help to define the brief for the study.
Adolescent health: Expert interviews	Expert interviews allowed more in-depth exploration into specific topics around adolescence and adolescent health. They also served to enrich the depth of knowledge by offering multiple perspectives.
Community stakeholder interviews	Various community stakeholders ranging from parents, sports coaches and teachers provided rich grassroots level insights into adolescent issues and behavior.
Adolescence workshop	Two workshops (one with early adolescents and another with late adolescents) provided an intimate interaction with adolescents to explore mindsets, behaviors, motivations, and ideas for engagement.
Co-creative workshop	The co-creative workshop explored creative solutions and concepts based on key insights derived from all the research streams mentioned above. This will serve as a basis for developing a brief for a demonstration project in Kenya.

Research approach

Acknowledgements

This study would not have been possible without the support of many people. Firstly, we would like to thank the many stakeholders in Kenya ranging from health experts, government policy experts, NGOs, teachers, school headmasters, academics and entrepreneurs to other community members and adolescents who generously made their time available to be interviewed or to participate in workshops. Due to confidentiality agreements, we are not able to mention the names of research respondents. We would especially like to thank Yvonne Ochieng (Dance4Life) and Martha Karemi (OrangeLink) for their support in recruiting adolescent participants for our study. We would also like to thank Peter Karanja (OrangeLink) and Winnie Obure for guiding workshops with adolescent participants and to Patrick Oroko and Jacqueline Nganga for taking notes during the interviews and workshops. Finally, a big thank you to Prof. Frederick Iraki and USIU–Africa for hosting a symposium on Adolescent Health organized together with our colleagues from Philips Research Africa in Nairobi, as a kick-off to this study.

References

Akwara, E. a. (2015, November 16). Targeting Adolescent Sexual and Reproductive Health in Kenya . Retrieved from https://politicalmatter.org: https://politicalmatter. org/2015/11/16/targeting-sexual-and-reproductive-healthin-adolescents-and-the-young-in-kenya-by-elsie-akwara/

Ballard, P. a. (2016). ngaging youth in communities: a framework for promoting adolescent and community health. Journal of Epidemiology and Community health, 70:202-206.

Blue, L. (2012). Report: Why 40% of Donated Medical Equipment Goes Unused in Poor Countries. Retrieved from *http://healthland.time.com.*

Brand, R. and Iraki, F. (2015, 13 November). Symposium Report: Roundtable on Adolescence USIU-Africa Campus, Nairobi, Kenya.

Business Call to Action. (2016, March 2). Tackling youth unemployment in Kenya through public-private collaboration. Retrieved from www.theguardian.com: https:// www.theguardian.com/sustainable-business/2016/mar/02/ tackling-youth-unemployment-in-kenya-through-publicprivate-collaboration

Casey, B. J. (2008). The Adolescenct Brain. Annual New York Academy of Sciences, Vol 1124: 111-126.

Centre of Excellence for Youth Engagement - The Students Commision. (2003, April 8). Youth Engagement aand Health Outomes - Is there a link? Retrieved from *http://www. commissiondesetudiants.ca.*

Centre of Excellence for Youth Engagement, Canada. (2003). Centre of Excellence for Youth Engagement. Retrieved from Youth Engagement and Health Outcomes: Is there a link?: http://www.engagementcentre.ca/files/ litreview1_web_e.pdf

Chatterjee, S., & Kibaru-Mbae, J. (2015, August 20). Take advantage of demographic dividend. Retrieved from Daily Nation: http://www.nation.co.ke/oped/Opinion/ Demographic-Dividend-Youth-Kenya-Society-Population/-/440808/2840490/-/view/printVersion/-/ tabo69z/-/index.html

Clayton, N. (2012, August 15). Kenya Faces Tech Skills Gap. Retrieved from The Wall Street Journal: *https://blogs.wsj.* com/tech-europe/2012/08/15/kenya-faces-tech-skills-gap/

Daily Nation. (2014, October 12). Too many graduates but where are the jobs? Retrieved from http://www.nation.co.ke: http://www.nation.co.ke/news/Too-many-graduates-butwhere-are-the-jobs/1056-2484168-5jihes/index.html Daily Nation. (2015, October 26). High dropout rates in Kenyan primary schools worrying. Retrieved from http:// www.nation.co.ke: http://www.nation.co.ke/news/education/ Primary-schools-dropout-rates-Kenya/2643604-2930304sm2nvf/index.html

Deloitte LCC. (2014). The Deloitte Consumer Review - Africa: A 21st century view. Retrieved from http://www2.deloitte. com/: http://www2.deloitte.com/content/dam/Deloitte/za/ Documents/consumer-business/za_consumer_ review_17112014.pdf

Duke SA, B. B. (2014). Testosterone and its effects on human male adolescent mood and behavior: a systematic review. Journal of Adolescent Health, 315-322.

Ginsberg, P. E. (2014). The Changing Concept of Adolescence in Kenya. Psychological Thought (Vol. 7, No. 1).

Graff, M. (2012). Kenya's Adolescent Reproductive Health and Development Policy: Implementation Progress and Barriers. Population Reference Bureau.

Gribble, J. a. (2012). The Challenge of Attaining the Demographic Dividend. Population Reference Bureau.

Karibu-Mbae, C. S. (2015, August 20). Take advantage of demographic dividend. Retrieved from *http://kenya.unfpa.org/news/take-advantage-demographic-dividend*

Khasakhala, I. L. (2013). Major depressive disorder in a Kenyan youth sample: relationship with parenting behavior and parental psychiatric disorders. Ann Gen Psychiatry.

Kihara, M. (2015). Teenage Brain and behaviour. Roundtable on Adolescence, USIU-Africa Campus, . Nairobi, Kenya: Philips.

Mohammed, A. (2015, July 10). The Star. Retrieved from Kenya: 56 Percent of Kenyans Live in Slums, UN Habitat Says: http://allafrica.com/stories/201507100185.html

Morara, A. C. (2013). Drop out among Pupils in Rural Primary Schools in Kenya: The Case of Nandi North District, Kenya. Journal of Education and Practice.

Muiya, B. M. (2014). he Nature, Challenges and Consequences of Urban Youth Unemployment: A Case of Nairobi City, Kenya. Universal Journal of Educational Research 2(7), 495-503.

Mwololo, M. (2015). Online portals: the new frontier in addressing skills gap in Kenya. Retrieved from *http://www.nation.co.ke/ifestyle/DN2/ Online-portals-addressing-skills-gap-in-Kenya/957860-*2944334-vujenm/index.html Ndiba, N. (2015). Building Insights about Healthcare in Kenya - Focus on Adolescence.

Niles, C. (2008, November 24). Poverty drives Kenyan girls into sex work. Retrieved from *https://www.unicef.org: https:// www.unicef.org/protection/kenya_46571.html*

Ntarangwi, M. (2009). East African Hip Hop - Youth Culture and Globalization. Illinois: University of Illinois Press.

Omoni, D. (2005). Teenage Motherhood in North Kisii District, Kenya (PhD Thesis). Perth: Curtin University of Technology. Retrieved from *https://profiles.uonbi.ac.ke/ omoni/publications/teenage-motherhood-north-kisiidistrict-kenya*

PATH. (2006). Research on Adolescent health in Kenya and Uganda. Path (Program for Appropriate technology in Health).

PRB. (2015). Adolescent Sexual and Reproductive Health Status Update. Population Research Bureau.

PRB. (2016). http://www.worldpopdata.org/.

SABC. (2015). Kenya's teenage pregnancy a challenge. Retrieved from *http://www.sabc.co.za: http://www.sabc. co.za/news/a/0125c3004a1832619a5edba53d9712f0/-Kenyas-teenage-pregnancy-a-challenge--20151005*

Sheng slang. (n.d.). Retrieved from Wikipedia: https://en. wikipedia.org/wiki/Sheng_slang

Starrs, A. (2017). The Trump global gag rule: an attack on US family planning and global health aid. The Lancet, Volume 389, No. 10068, p485–486.

The World Bank. (2015, October 13). Addressing the Youth Employment Crisis Needs Urgent Global Action. Retrieved from http://www.worldbank.org: http://www.worldbank.org/ en/news/press-release/2015/10/13/addressing-the-youthemployment-crisis-needs-urgent-global-action

Toolkit for Meaningful Adolescent Gril Engagement. (2014, December). Retrieved from http://coalitionforadolescentgirls. org: http://coalitionforadolescentgirls.org/wp-content/ uploads/2015/12/CAGPartnersandAlliesToolKit_10. compressed.pdf

UN - Every Woman Every Child. (2016). The Global Strategy for Woman's, Children's and Adolescents' Health. Retrieved from *http://www.who.int/pmnch/media/events/2015/* gs_2016_30.pdf

UNFPA. (2014). The Power of 1.8 Billion – Adolescents, Youth and the Transformation of the Future. UNFPA.

UNICEF. (2011). Adolescence – an age of opportunity. New York: UNICEF.

UNICEF. (2012). Progress for Children – A report card on adolescents. New York: UNICEF.

UNICEF. (2013, September 30). https://www.unicef.org. Retrieved from Kenya study looks at the growing community of young Internet users: https://www.unicef.org/ infobycountry/kenya_70525.html

WHO. (2014). Health for the World's Adolescents. Retrieved from World Health Organization: *http://apps.who.int/iris/bitstream/* 10665/112750/1/WHO_FWC_MCA_14.05_eng.pdf?ua=1

WHO. (2014). Health for the World's Adolescents. Retrieved from http://apps.who.int/adolescent/second-decade/#: http://apps.who.int/iris/bitstream/10665/112750/1/WHO_ FWC_MCA_14.05_eng.pdf?ua=1

WHO. (2014). Health for the World's Adolescents: A second chance in the second decade (Summary). Geneva, Switzerland: WHO Press.

WHO. (2015). Health in the post-2015 development: need for a social determinants of health approach. Retrieved from World Health Organization: http://www.who.int/social_ determinants/advocacy/UN_Platform_FINAL.pdf?ua=1

WHO. (2016). http://www.who.int/. Retrieved from http:// www.who.int/maternal_child_adolescent/topics/ adolescence/dev/en/

WHO. (2017). Adolescent health epidemiology. Retrieved from *http://www.who.int: http://www.who.int/maternal_child_adolescent/epidemiology/adolescence/en/*

Wikipedia. (2016, October 13). Theory of change. Retrieved from https://en.wikipedia.org: https://en.wikipedia.org/wiki/ Theory_of_change#cite_note-understanding-10

World Economic Forum. (2016, April 18). Weforum.org. Retrieved from Which are the world's fastest-growing economies?: https://www.weforum.org/agenda/2016/04/ worlds-fastest-growing-economies/

World Health Organization. (2002). http://www.who.int/en/. Retrieved from Growing in Confidence – Programming for adolescent health and development: http://apps.who.int/ iris/bitstream/10665/67187/1/WHO_FCH_CAH_02.13.pdf

Worldbank. (2016, May). World Bank Approves US\$150 Million Support for Kenya's Youth. Retrieved from www. worldbank.org: http://www.worldbank.org/en/news/pressrelease/2016/05/20/world-bank-approves-us150-millionsupport-for-kenyas-youth





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