IFMSA Policy Document
Adolescent Health

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Policy Commission

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Policy Statement

Introduction:
Adolescence is a critical stage in the life course, it is a unique developmental period in an individual's life. Defined by the World Health Organisation (WHO) as ages between 10 to 19, this period represents an important stage which is vulnerable to specific conditions and risks due to the rapid change of social behaviours and process of brain maturation. The WHO reports an estimated 3000 adolescent deaths per day by largely preventable causes. The healthy wellbeing of an adolescent is recognised as a human right under the United Nations (UN) Convention of the Rights of the child. The global mobilisation to tackle adolescent health is a recent initiative and is now recognised globally as a key factor in the road to achieve the UN Sustainable Development Goals by 2030.

IFMSA Position:
The IFMSA sees adolescence as a key period of physical, cognitive, emotional and social development, so believes in the need for extended measures to protect and care for the health of adolescents during this crucial period in an individual's life.

Call to Action:
Therefore, IFMSA calls

Governments to:

- Support the development of incorporated care and education for young people with chronic illness who find it difficult to adapt to standard living environments
- Promote public health strategies using a variety of platforms, e.g. advertisements, social media and through education to promote positive adolescent health
- Ensure that teachers and the education sector can recognise adolescent health issues, especially those concerning mental health
- Ensure equitable and accessible health services, promotion and prevention strategies to all adolescents
- Make adolescent health and rights related topics a political and financial priority in international health and development discussions
- Ensure active and meaningful input from adolescents and members of society in the development of all policies and programs related to adolescents
- Address the underlying factors which affect adolescent health and wellbeing but are not limited to access to education, poverty and wider societal/cultural norms. Use an interdisciplinary, systematic and evidence based approach to ensure an integrated strategy to respond and prevent adolescent health related issues.
- Create spaces in the community specifically for adolescents that can engage them positively to reduce engagement in criminality and educate them
- Create spaces that are well-lit and safe to reduce risk of violence
- Provide health education to adolescents including comprehensive sexuality education include information on safe digital use
- Increase financial protection to cover the services needed by adolescents and to include them as part of universal health coverage
- Take inspiration from the initiative, Accelerated Action for the Health of Adolescents (AA-HA!) from WHO and other partners to better target the challenges of adolescents across countries
- Provide HPV vaccine for adolescents, girls and boys, to prevent various cancers
- Strengthen public awareness of drowning and highlight the vulnerability of adolescents and provide basic education regarding water safety
- Allow an easy access for obtaining contraception such as condoms to prevent sexual transmission of the HIV virus and sterile needles and syringes for intravenous drug users
- Provide a free screening for STI's especially for HIV.
- Set a minimum age for buying and consuming alcohol, tobacco and others legal drugs in the

country (for example cannabis).

Universities & Medical Schools to:

- Ensure there is adequate teaching on key adolescent health issues in medical school curricula
- Provide specific teaching on communicating with adolescents and if possible, incorporate specific OSCE stations on adolescents, rather than the paediatric and adult-health divide
- Increase their students' awareness of the issue of chronic disorders in adolescents; not only the care of the illness itself but also include the areas of quality of life and social integration
- Train medical students to commit to providing dignified, non-discriminatory and culturally sensitive healthcare services to all adolescents

IFMSA National Member Organizations (NMOs) and Medical Students to:

- Identify stakeholders and work actively on advocating for topics relating to adolescent health
- Create and contribute to awareness and education campaigns and activities on adolescent health and rights related topics

Healthcare sector to:

- Establish a coordinated approach to education while in hospital and support patients in their schooling
- Provide a clear pathway and guidance for the transition of care from paediatric care to adult care facilities
- Screen for mental health conditions in all vulnerable adolescents and take these as seriously as physical health conditions
- Screen for lifestyle habits (e.g. drugs, cigarettes/e-cigarette, condom less sex) and use of technologies, sexting and mood related changes at the absence of technologies.
- Acquire evidence-based knowledge pertaining to adolescents health including physical and mental health
- Incorporate health promotion, disease prevention, and youth development throughout the health system and within the community.
- Commit to providing dignified, non-discriminatory, adolescent-friendly healthcare services which include screening for STIs, pregnancy, distress or questions over gender, sexual orientation, body complexes
- Include adolescents in the design, delivery and provision of adolescent services
- Invest in providing health services for adolescents that consists of a coordinated approach

International organisations and non-governmental organisations (NGOs) to:

- Promote the empowerment of adolescents to enable them to affirm their rights and speak out on issues relating to their health and rights
- Create a coordinating body to provide guidance to countries on how to address adolescent health issues
- Acquire evidence-based statistics knowledge pertaining to adolescent health and rights
- Research into the effectiveness of interventions to improve adolescent health
- Organise and/or participate in campaigns to raise awareness about adolescent health, gather public support for advocacy actions and develop community-led activities in order to promote the health of adolescents

Position Paper

Background information:

The adolescent period is defined as the onset of physiological normal puberty to when an adult identity and behaviour is accepted, which may differ according to the country or culture [1]. The World Health Organisation (WHO) defines adolescents as those people between 10 and 19 years of ages [2]. The world has never been as young as it is now, with about 1 in 6 people in the world between the ages of 10 and 19, or 1.2 billion people. [16] This transition period of childhood to adulthood marks biological changes that occur following puberty [1]. These developments include certain key processes of maturation of the brain. Despite the brain reaching approximately 90% of its adult size by age six, major components of the brain continue to undergo dynamic changes [3]. This may explain the change of behaviours that occur during adolescence, such as increased independence-seeking behaviours, risky behaviours and emotional reactivity. Hence, there is an increased likelihood of harm such as injury, depression, anxiety, drug use, and addiction [4]. As a result, this unique period of life leaves individuals vulnerable to specific health issues.

In 2015, African and South-East Asian low and middle-income countries (LMICs) made up two-thirds of the proportion of global adolescents deaths and Disability Adjusted Life-Years (DALYs). Regional mortality rates among adolescents were highest in LMICs in Africa, followed by LMICs in Eastern Mediterranean. The leading causes of mortality were road traffic injuries among men and lower respiratory diseases and maternal conditions among younger and older females respectively.

The protection of adolescents was granted under the United Nations (UN) Convention on the Rights of the child which refers to individuals under the age of 18 [7]. Article 24 outlines the right of a child to achieve the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. It also outlined that appropriate measures must be taken to diminish mortality and to provide necessary medical assistance and health care.

Previously, the acknowledgement of adolescence health has been largely absent in international attention, priority, investment and policy, as adolescents have not been recognised as a vulnerable population. For example adolescent health was ignored in the millennium development goals and as a result of this adolescent health has improved more slowly than that of children under 5 years old [66]. However, following the Global strategy for Women's, Children and Adolescent's Health (2016-2030), there is now some global mobilisation to tackle adolescent health issues [6]. To achieve overall success of the UN Sustainable Development Goals, adolescence health is integral to the strategy. According to a 2014 report by the WHO, 3000 adolescents die every day from largely preventable diseases [6].

The World Health Organisation (WHO) published recommendations on adolescent health [5]. These outlined recommendations that focused on sexual health, non-communicable diseases, violence, and mental health.

Adolescence is a unique formative stage of development which requires special attention. To ensure good well-being, positive physical, sexual, neurological and psychosocial health and development needs must be met [6]. Furthermore, adolescence can be seen as a second window of opportunity in which we can consolidate on the impact of improved child health and address current inequalities resulting in a triple dividend of benefits for adolescents now, for their future adult life, and for the next generation of children [8]. This policy brief outlines the main areas of focus in adolescence health.

Discussion:

1. Non-Communicable Diseases/Chronic Illness

Non-communicable disease and chronic illness is an important issue surrounding the health of adolescent populations. They rank highly in the concerns of young people when surveyed about which health topics worry their age group most [9]. Adolescents across the world are living with challenging conditions such as cancer, asthma, and type one diabetes mellitus during what is a period of rapid growth and

neurodevelopment in their lives. Asthma is known to be one of the top five ranked causes of years lost to disability (YLDs) in 10-14 year olds according to the World Health Organisation [9] and with the incidence and prevalence of chronic illness only increasing, in both the most developed as well as developing countries, they are set to become one of the highest causes of mortality by 2020 [10]. Unfortunately, due to a lack of high-quality epidemiological research focusing specifically on this age group, the prevalence of chronic conditions among adolescents is difficult to ascertain. There is also large variability in the methodology and definitions used surrounding chronic illness in young people [10]. More dedicated research in this area is needed to adequately assess the health needs of young people.

Chronic illnesses can be broadly defined by 3 characteristic features; they are prolonged in their duration, they do not resolve spontaneously, and they are rarely cured [11]. When considering the scope of the issue it is important to view the patient holistically. It has been shown that adolescents with chronic conditions are just as or even more likely to partake in risk taking behaviour as their peers. Furthermore, these children are more exposed to bullying, have fewer contacts with peers, and are predisposed to more mental health and emotional issues than their healthy counterparts [12]. They are placed in a very unique situation compared to their peers and faced with morality and the responsibility of self-management of often complex conditions. This puts a responsibility on healthcare providers to properly support these patients, understanding the factors affecting treatment adherence and focusing on the prevention of health risk behaviour [12].

1.1 Education and Chronic Conditions

It has been shown that positive school environments promote adolescent health and prevent health- risk behaviour [12]. This is pertinent as severe chronic conditions often result in the need for frequent hospitalisation, making absenteeism an issue for these young people. All efforts should be made by the healthcare team to coordinate with in-hospital teachers or to have in place a means of establishing a link with teachers or classmates to support the patient with their schooling.

For some adolescents with severe chronic conditions, especially those encompassing severe mental and physical disability, it may be more appropriate to offer education in a specialised facility. The development of specialized centres that allow for an integration of health care and education should be supported by local governments [10].

1.2 Adolescent Care Setting

Adolescents represent a unique epidemiological and social group and therefore require dedicated healthcare guidelines and specific approaches. The setting in which adolescents are cared for should be modified appropriately to reflect this stage between childhood and adulthood. There should be age appropriate information allowing the patient to become more involved in their health. The team should be trained on integrated and coordinated health interventions in order to meet the holistic needs of the patient; care of not only the illness but also anticipatory guidance and motivational interviewing surrounding the health risk behaviour we know adolescents face [9]. Patients should, where possible, be involved in the decision making surrounding the design of the community or hospital facility, in line with the United Nations convention on the Rights of the Child (article 12) which outlines the importance of youth participation in all matters affecting them, including their health [13]. This empowers the young person to engage with the service and helps to avoid any discomfort or alienation that may occur as a young person in a setting that is more suited to infants and young children [14]. Improving patient experience is integral to improving quality of care.

1.3 Transition of care from paediatrics to adult care setting

For those young people with chronic illness the transition from paediatric care to adult care settings is a major life event and an important step in ensuring best practice and continuing quality of care [15]. This transition will have an impact on how the patient goes on to manage their health in adulthood and their engagement with health services throughout their life. This is an immensely important event in the life of the patient and must be recognised as not only an administrative task but as part of wider transition from dependent child to independent adult [15]. Physicians should anticipate common fears and concerns of adolescents and early on in the process discuss the benefits of transfer to adult- oriented care [16]. Health care facilities should have a clear pathway outlined for this transition and all members of staff should be aware of it. There should

also be coordination with community care professionals who can supervise the transition [9].

2. Nutrition and Health Related Behaviour

In 2016, the World Health Organisation found that worldwide over one in six adolescents aged 10–19 years was overweight [17]. Childhood obesity is multifactorial, associated with unhealthy eating and low levels of physical activity, but the problem is much more complex than that and implicates wider society. The issue is not solely limited to children's behaviour but also to social and economic development and policies in agriculture, infrastructure, food processing, distribution and marketing, as well as education; meaning we all have a social responsibility to tackle this epidemic [18].

Many children in developing countries enter adolescence undernourished, making them more vulnerable to disease and early death [17]. Nutrition is essential, as it is the leading risk factor contributing to many of the predominant causes of adolescent death. Furthermore, Nutrient requirements including those for energy, protein, iron, calcium, and others increase in adolescence to support adequate growth and development. In settings where dietary intakes are suboptimal, anemia and micronutrient deficiencies are high. Additionally, premature pregnancy can halt linear growth and increase the risk of adverse birth outcomes. Therefore, nutritional deficiencies, suboptimal linear growth, and undernutrition are major public health problems for adolescents [65].

Overweight and obese children and adolescents are likely to remain obese into adulthood and more likely to develop further non-communicable diseases such as diabetes and cardiovascular disease at a younger age as well as experiencing an impact on their social, psychological, and academic development [19].

There is evidence that directly addressing the issues of poor academic achievement, drug and alcohol use, as well as risk taking behaviour amongst adolescents may positively impact obesity levels. Comprehensive programmes designed for young people with an emphasis on stress-reduction and wellness should be implemented in the local community [20].

Moreover, there is a positive relationship between health literacy and all health behaviour in adolescents. Education is empowerment and intervening on health literacy will help young people succeed with informed health decision making across their lifetime [21].

3. Mental Health

When considering adolescent health, it is essential to include mental health conditions, as they account for 16% of the global burden of disease and injury in people aged 10-19 and affect one in six people aged 10-19 [22].

Despite their prevalence, and the fact that half of all mental health conditions start by age 14, the majority of cases remain undetected and untreated. Consequences of not addressing these continue into adulthood and have repercussions on both physical and mental health, limiting an individual’s future opportunities, as they increase social exclusion, discrimination, educational difficulties, physical ill-health and human rights violations [22]. Thus, it is evident that promoting mental well-being in this crucial time is not only critical for well-being during adolescence but confers advantages that extend into adulthood.

Increased stressors during adolescence arising from factors not limited to, but including, the wish for autonomy, peer-pressure, exploration of sexual orientation and gender identity, technology/media and gender norms may all contribute to the increased vulnerability to poor mental health that an adolescent faces [22].

Risk factors that can exacerbate an individual’s risk beyond the normal struggles of adolescence, include home life; peer relationships; violence, especially sexual violence; and socioeconomic problems [22]. This shows how mental health also has clear ties to the other common adolescent diseases which were previously mentioned in this section.

Protective factors for positive mental health include supportive environments on a familial, school and community level [22]. If positive social and emotional habits, such as healthy sleep patterns, exercise, emotional-management and positive coping strategies and problem solving are developed in adolescence, these can be carried forward into the rest of an individual's lifespan.

3.1 Depression & Anxiety

On a global scale, depression is one of the leading causes of illness and disability among adolescents - the fourth most common for those aged 15-19 and fifteenth most common for those aged 10-14 [22]. 80% of depression begins at the start of adolescence, but several cases are neither detected nor treated [57] Anxiety also carries a large burden of disease, the ninth leading cause of illness and disability for those aged 15-19 and sixth most common cause for those aged 10-14 [22]. Emotional disorders like depression and anxiety can have large impacts on schoolwork and attendance, the knock-on effects of this then continuing the cycle of loneliness and isolation, leading to further poor mental health outcomes. At worse, depression can also lead to suicide, which will be further discussed later [22].

3.2 Behavioural disorders

Behavioural disorders such as ADHD and conduct disorder are the second leading cause of disease burden in adolescents aged 10-14 and eleventh-leading in those aged 15-19. These increase risks of future criminality [22].

3.3 Eating Disorders

Types of eating disorders include anorexia nervosa, bulimia nervosa, binge eating disorder and OSFED (other specified feeding or eating disorder). The world health organisation estimates that 70 million people worldwide have eating disorders [23] and the vast majority of these begin in adolescence [22]. Eating disorders have the highest mortality of all mental illnesses, but all too often, are still stigmatised, minimised or seen as self-inflicted [24].

3.4 Self Harm & Suicide

Suicide is the third leading cause of death in adolescents aged between 15 and 19 and in 2016, 62,000 adolescents were reported to die as a result of self-harm [22]. Importantly, this is not an issue restricted to higher-income countries, but spread evenly between different socio-economic backgrounds [22]. Risk factors for suicide include harmful alcohol use, abuse and barriers to care including stigma, financial means and waiting lists [22].

3.5 Other mental health conditions

Other mental health conditions, such as psychosis or schizophrenia, most commonly emerge in early adulthood, but also have significant implications on an individual's ability to precipitate in daily life and increase risk of human rights violations and disruptions to education [22].

Evidently, effective prevention, early detection and treatment of mental health conditions in adolescents must be a priority. This requires a multilevel approach in order to minimise the most vulnerable adolescents slipping through the net. Early detection and treatment must respect the rights of children and stay in line with the United Nations Convention on the Rights of the Child, for example, avoiding institutionalisation or over-medicalisation [22].

4. Infectious Diseases

While noncommunicable diseases and conditions account for the largest percentage of DALYs, infectious diseases continue to make a significant contribution, particularly in 10–14 year olds, where they are responsible for 24% of total DALYs [25].

Due to improved childhood vaccination, adolescent deaths and disability from measles have fallen significantly, e.g. in the African Region between 2000 and 2012 adolescent mortality from measles fell by 90% [17]. Yet, despite this progress infectious diseases are still a cause of mortality and morbidity among adolescents. Diarrhoea and lower respiratory tract infections (such as pneumonia – often a result of indoor air pollution from cooking with dirty fuels) are estimated to be among the top 10 causes of death for 10–19 year olds and infectious diseases are the first four ranked causes of DALYs in the African Region [25].Similarly, adolescent tuberculosis has received little attention, even though it is the leading contributor to the burden of infectious disease in young adults in multi-burden countries. [26].

Vaccination against infectious diseases has received far less attention in adolescents than in children despite adolescence being a critical time for ensuring completion of immunisation schedules (measles- rubella and hepatitis B vaccine), administering booster doses (such as diphtheria-tetanus), and ensuring primary immunisation (such as for human papillomavirus) [27].

5. Sexually Transmitted Infections (STIs)

The World Health Organization (WHO) estimates that two-thirds of all STIs worldwide occur in young people, adolescents and those in their early twenties [28]. The most common STIs affecting adolescents include gonorrhoea, Chlamydial infection, syphilis, trichomoniasis, chancroid, genital herpes, genital warts, HIV infection and hepatitis B infection [29].

Biologically, the immature reproductive and immune systems of adolescent girls translate to increased susceptibility to STIs including HIV transmission. In addition to biological vulnerability, cultural and socioeconomic factors as well as gender based inequalities, increase girls and young women ‘s risk of acquiring STIs [30].Thus, one out of four sexually active adolescent women is diagnosed with an STI every year [31]. Adolescent boys are at risk, as well. Adolescents, both females and males are disproportionately affected by HIV. In 2009, young people aged between 15 and 24 years accounted for 41% of all new HIV infections among adults over the age of 15 and it is estimated that worldwide there are five million young people (15–25 years) living with HIV [32]. Most of these young people live in Sub-Saharan Africa, most are women, and most do not know their status. Globally, young women make up more than 60% of all young people living with HIV, and in Sub-Saharan Africa that rate jumps to 72% with prevalence among teenage girls in some countries five times higher than among teenage boys [33]. Also, STIs especially HIV has huge impacts on an individual’s physical and mental health, as well as long-term social and economic implications for them, their families, and communities [34].

Adolescents often face barriers to sexual and reproductive health information such as sex education on STI prevention and acceptable and affordable STI services and so they are particularly vulnerable to STIs. Additionally, STIs are still widely connected with stigmatisation, embarrassment and denial among health workers and patients alike and can often be a taboo subject in many societies. This can be especially true for young people. Thus with regards to HIV, in some countries, comprehensive and accurate knowledge about HIV is low and HIV testing in this age group is rare [35]. Therefore, outcomes for young people with HIV are poor; an recent analysis estimated that despite a decrease in AIDS- related deaths among non-adolescents between 2005 and 2012, among adolescents (aged 10–19 years) there was a 50% increase in AIDS-related deaths, especially among boys [36]. Whilst their adolescent sexual and reproductive rights and needs may be acknowledged in theory, in practice they are still confronted with many barriers when it comes to obtaining the practical support they need to avoid problems. Thus, even those able to find accurate information about their health and rights may be unable to access the services needed to protect their health [37]. An expression of adolescents' unmet needs is the worldwide lack of sexual and reproductive health services available for them especially services related to the treatment of STIs.

6. Injuries

Injuries can be classified as unintentional (accidental) injuries such as road traffic accidents, poisoning, drowning, falls and burns etc. and intentional injuries (or violence) [38]. Intentional injuries can be divided into the categories of: self-directed (as in suicide or self-harm), interpersonal (violence between individuals e.g. family and intimate partner violence) or collective (in war and by gangs) [39]. Whilst there is a lack of empirical data on mortality and morbidity among adolescents, the data that is available reveals that injury is

a major cause of death and disability among adolescents [40]. Unintentional injuries are the leading cause of adolescent death globally. In 2012, compared with other conditions, injury accounted for four of the top seven causes of death in adolescents. Injuries accounting for four of the top five causes of death among male adolescents: (1) road traffic injury, (2) self-harm (3) interpersonal violence, and (4) drowning [25]. More than 90% of fatal injuries occur in low and middle income countries. Nevertheless, injury is also a leading cause of death in high-income countries [41].

Road traffic injuries result in an estimated 330 adolescents dying every day which is over 135,000 deaths a year [17]. Furthermore road traffic injuries are among the top five causes of adolescent death in all regions, and all sexes, except among females in the African Region, (although with a mortality rate of 11 per 100,000 population, the rate of death from road injuries among adolescent females in the African Region is higher than the rates of death from this cause in any other region) [25]. Additionally, road injuries are the number 1 ranked cause of DALYs among 15–19 year olds globally. The rates are substantially higher for boys than girls in both age groups [42].

Drowning is also a major cause of global adolescent mortality and it is estimated 50,000 adolescents drowned in 2016, two-thirds of them male [17]. Drowning ranks among the top five causes of death for adolescents in all regions of the world, except the Africa Region [25]. Even so, the actual mortality rates from drowning among adolescents in the African region, whilst not in the top five cause of death, still accounts for more deaths than in all other regions. It is also an important cause of DALYs, particularly among 10–14 year old boys [43].

Known risk factors associated with injury risk include socioeconomic factors, such as family income, low parental education, single parent household, community violence, high poverty and residential instability, geographical setting (urban/rural), drugs/alcohol use, independence/risk taking behaviours, peer group, overconfidence, and novices (drivers and workers) [44].

Within the burden of injury, deaths are just the tip of the iceberg. Morbidity rates are known to be far greater than those for mortality for all injury causes [45]. Additionally, there are many concerns with injury data that tend to cause undercounting and masking of the true size and nature of the problem as less than half WHO member countries report morality data in a form adequate for the identification of injury deaths by mechanism therefore the scale of adolescent injury-related morbidity and mortality is most likely significantly greater than current data accounts for [25]. sThese injuries, which are often preventable, take a major toll not only on the individual but also on society. The cost of injury is often defined by mortality rates, but injuries also cause lifelong disabilities, psychological effects and detriment to a person's overall health and wellbeing. Thus, it can be argued that injury is one of the most under recognized major public health problems facing the world today. However, on a positive note, as injuries are preventable there is unparalleled opportunities for reducing morbidity and mortality and for realising significant savings in both financial and human terms [46].

7. Violence

Violence can be defined as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" [47].

Violence can take many forms, including physical, sexual and emotional violence, and varies in its severity from aggressive acts such as bullying and physical fighting, to more serious forms of assault such as sexual violence and homicide [48].

Every seven minutes, somewhere in the world, an act of violence results in the death of an adolescent. In 2015, 82,000 adolescents worldwide died as a result of violence. Older adolescents, aged 15 to 19 are particularly vulnerable, being three times more likely to die due to violence than younger adolescents aged 10 to 14 [49]. Furthermore, interpersonal violence ranks second globally and first in the America regions as a cause of DALYs among 15–19 year old males [25]. Additionally, more adolescent deaths result from interpersonal than collective violence. In all countries, young males are both the principal perpetrators and victims of homicide [48]. In 2015, nearly 2 out of 3 victims died of homicide, while the rest were killed by conflicts [49].

For the millions of young people around the world, adolescence increases their vulnerability to human rights abuses, particularly in regards to sexuality, marriage and childbearing [49]. Whilst all adolescents may experience violence, girls have unique vulnerabilities and the consequences of these can last a lifetime. Gender discrimination, norms and practices mean young girls experience certain forms of violence, such as sexual violence, at much higher rates than boys [50]. Female adolescents are also more likely to be exposed to harmful practices, such as child marriage and female genital mutilation/cutting (FGM/C) – all of which are direct manifestations of gender inequality [50]. Millions of girls are coerced into unwanted sex or marriage, putting them at risk of unwanted pregnancies, unsafe abortions, sexually transmitted infections (STIs) including HIV, and dangerous childbirth [37].

Even though the fertility rate in this age group has declined by 11.6% over the past two decades, there are still disparities between regions. In fact, around 12 millions girls aged 15-19 years and approximately 777 000 girls under 15 years give birth each years in developing regions, unlike developed countries which have 10 millions unwanted pregnancies each year. Despite this reduction, the leading cause of death for 15-19 years old girls globally is still during pregnancy and childbirth, where 99% of deaths are in developing countries. Also teens moms have higher risk of eclampsia, puerperal endometritis and systemic infection than women aged 20-24 years old. Also the babies of adolescent mothers have higher risks of low birth weight, preterm delivery and severe neonatal conditions. The pregnancy leads to important social consequences for the young mothers such as violence from the partners/parents/peers, stigmatization, rejection, dropout [59].

The majority of young people who engage in violent behaviour, do so over a limited period of time, during adolescence, having shown little or no evidence of problem behaviour as children [51]. The factors contributing to youth violence include involvement in violent or delinquent behaviour before the age of 13 years, impulsivity, aggressive attitudes or beliefs, low educational achievement, experiencing or witnessing violence in the home, living in a community with high levels of crime and poverty, lack of supervision and monitoring by parents, and associating with delinquent peers [51]. Moreover, rates of youth violence rise in times of armed conflict and repression, and when the whole of society is caught up in social and political change or where a culture of violence prevails [48]. Among young people involved in violent behaviour, the presence of alcohol, drugs or weapons enhances the likelihood that injuries or deaths will be associated with violence [51].

Furthermore, being a survivor of violence can create many health conditions. There are some toxic behaviours which lead to medical conditions. For example being bullied can lead to various mental health disorders such as self-harm, suicidal thoughts, eating or anxiety disorders that can persist throughout the lifetime of the survivor [58].

8. Substance abuse

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs [52]. Adolescence is the peak time for initiation of substance use, with tobacco and alcohol usually preceding the use of illicit drugs [53].

Increasing alcohol consumption among adolescents is an increasing concern in many countries, with 14% of adolescent girls and 18% of boys aged 13–15 years in low-and middle-income countries are reported to use alcohol [54]. Alcohol abuse is a primary cause of injuries (including those due to road traffic accidents), violence (especially domestic violence) and premature deaths [25]. Alcohol use disorders are among the top five causes for DALYs for 15–19 year old males in various regions—the Americas, Western Pacific and Europe and in high income countries, it is the number one cause. Additionally, in high income countries drug use disorders have entered the top 10 DALYs among adolescents 15-19 years old [55].

An estimated 150 million young people use tobacco [55]. Globally, one in every 10 girls aged 13–15 years and one in every 5 boys aged 13-15 years use tobacco [54]. Whilst there have been some decline in tobacco use among younger adolescents in some countries, there are other countries in which tobacco use is increasing [25]. For example, smoking amongst 12-15 year olds is around double the percentage in Africa than in Europe. It is estimated that on average 13.6% of 12-15 year olds in LMICs are smokers, with this figure reaching as high as 44.7% in some countries [56]. Additionally, tobacco use during adolescence

increases the risk of nicotine addiction which can lead to regular and sustained tobacco use in adulthood. This is concerning as tobacco use remains one of the largest contributors to noncommunicable diseases and to early mortality among adults [54].

Substance use puts adolescents at risk of short-term problems, such as accidents, fights, unwise or unwanted sexual activity, and overdose. Additionally, adolescents are vulnerable to the effects of substance use and are at increased risk of developing long-term consequences, such as mental health disorders, underachievement in school, and a substance use disorder [57].

9. Digital health

New technologies make everything more accessible and their use is ubiquitous which is why a healthy use of media is essential. The digital world can influence multiple spheres in the life of adolescents, in particular the feeling of identity and it's development, socialization, the discovery of the socio-cultural world. Research has demonstrated that moderate use of technologies (between 2 to 4 hours per day) is associated with certain cognitive and psychosocial benefits, and shows that adolescents are less sensitive to the deleterious effects of prolonged screen time (more than 6 hours per day) than young children, nonetheless excessive use or the absence of use is associated with negative effects [63]. However it depends all on the type of use and the frequency of use. Several individual factors have to be considered when speaking about the impacts of the technology and screen time on teenagers. There is not yet a clear correlation between the use of technology causing a decline in well- being or vice versa. Despite the beneficial effects found in studies, several risks must be taken into consideration. There is certainly a small but significant association between excessive screen time of more than 6 hours / day and feelings of depression in adolescents. Also a Dutch study found that teens with few or no close offline friends who only passively connected suffered from more depression and anxiety. Note that young people reporting stronger friendships did not report this effect. Frequent media multitasking was associated with lower English and math scores, lower working memory and sustained attention span, and higher impulsivity. It was even suggested that teens more prone to multitasking are the least able to learn effectively [64].

Adolescence is a pivotal time where we learn to control our emotions, regulate our impulses and where we are more vulnerable to the dangers of the internet. We see that young people with depressive and anxiety disorders divulge more information on the internet and chat with strangers and open up to them, putting them in more dangerous situations [60].

Digital use also has impacts on physical health. Some of this is positive like the development of apps which can improve physical activity but there are also negative impacts such as distractions while driving or completing physical activity that could cause fatal accidents. Research has shown that using screens can negatively affect measurable health indicators such as weight and sleep. The relationship between the risk of obesity and screen time has been demonstrated, although it varies according to several factors, some of which can be modified. Lack of sleep both in duration and in quality was noted when the patient looked at a screen, especially if the screen is in the room. This lack of sleep has negative effects associated with learning, memory, mood and behaviour [60]. In addition to the risk of obesity, there is a correlation between the use of social media and anxiety about physical appearance, complexes about body image and eating disorders in adolescents [60].

9.1 Sexting

In a 2010 study by The National Campaign to Prevent Teen and Unplanned Pregnancy, and CosmoGirl.com, one in five teenagers had posted or posted photos or videos of themselves naked or semi-naked. Suggestive messages were even more prevalent than suggestive images. The teenagers sent those messages/pictures/videos for their partner or the person they wanted to have a relationship with. The reasons for sending text messages or sexting would be part of the experimentation and self- discovery. Sending a message allows them to be social and interact without having direct contact with the person and promotes more personal interactions with that person. In the study, a proportion of the teenagers felt pressured to send these photos by their peers. Some adolescents mentioned that these messages or videos were shared with people other than the recipient.

Therefore, young people should obviously be encouraged not to post anything that would make them uncomfortable and be able to say no. One of the biggest dangers is the risk of spreading these explicit messages, photos and videos as once posted on the Internet, the sender loses control over the privacy of the content. Young people should be taught that nothing that is sent is deleted, everyone can make a copy. All, parents, friends, future employers can receive, find this content, even years later. Social, psychological, legal consequences can also be associated with the sending, receiving or transmission of suggestive images. Adolescents need to understand the implications that their decisions can have when sending these images. They can be arrested, charged and convicted of possessing and / or distributing child pornography even if it is themselves. In order to allow healthy use and offer the benefits of technology, we must offer all the tools to prevent decisions that could harm them in the future [62].

9.2 Video Games

Video games showed some relation between improvement of well-being, problem-solving skills, positive intergroup relationships, and physical activity. But this link dissipates when the time spent playing video games exceeds 50% of free time. There are negative, albeit mild, effects on overall well-being, behavioral problems, hyperactivity, as well as peer and emotional problems [60]. Excessive time spent on video games put the gamers at risk of developing a Gaming Disorder. The Gaming Disorder, which is acknowledged by the International Classification of Disease, 11 edition, (ICD), is defined as the tendency of excessive practice at the expense of other daily activities, causing a loss of control over the game. This disorder highlights a new distress and its integration in the ICD provides the patient with the support they need [61].

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