ADOLESCENCE

- "Adolescence is the phase of life between childhood and adulthood, **from ages 10 to 19**. It is a unique stage of human development and an important time for laying the foundations of good health".

- "Adolescents experience rapid physical, cognitive and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them".

- "Despite being thought of as a healthy stage of life, there is significant death, illness and injury in the adolescent years. **Much of this is preventable or treatable"**.

- "During this phase, adolescents establish patterns of behavior (related to diet, physical activity, substance use, etc…) that can protect their health and the health of others around them or put their health at risk now and in the future".

- https://www.who.int/health-topics/adolescent-health#tab=tab_1

To grow and develop in good health, adolescents need information, including:

1. Age-appropriate comprehensive sexuality education (Biological Growth and Development).

2. Opportunities to develop life skills (Increased pressure and search for self).

3. Health services that are acceptable, equitable, appropriate and effective.

4. Safe and supportive environments.

5. Opportunities to participate in the design and delivery of interventions to improve and maintain their health.

https://www.who.int/health-topics/adolescent-health#tab=tab_1

- **WHO defines adolescents as individuals between the ages 10-19 years.**

1. Early Adolescence   : 10 – 13 years

2. Middle adolescence : 14 – 16 years

3. Late adolescence   : 17 – 19 years

1. Early adolescence (10 to 13 years):

- Early adolescence is focused on growth and pubertal changes.

- The rate of growth increases.

- They start initiating independence from the family, and desire for privacy.

- There may be a clash between the wish for their autonomy and parental authority.

Middle Adolescences (14 to 16 years):

• Emotional separation from parents and strong peer group identification; exploratory/risk-taking

• The peak of the height velocity curve is seen

➢Peak height velocity (PHV) is a period in childhood where maximum rate of growth occurs. It is otherwise known as the Growth Spurt. It indicates hormonal, physiological and anatomical changes in the body bringing a child into adolescence.

Figure 8.1 Peak velocity height curve for girls and boys showing the increase in stretch stature (height) expressed in units of centimetres per year.

From http://www.brianmac.co.uk/ltad.htm

➢ it usually occurs around 13–15 years of age for boys and 11–12 years of age for girls

• The timing for this is influenced by genetic factors and nutritional status.

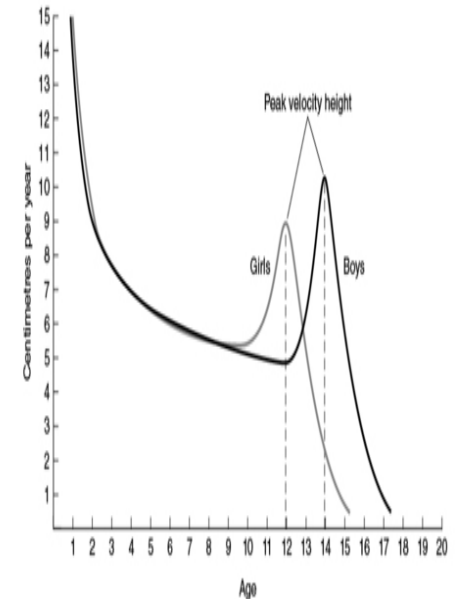• Any chronic illness can delay puberty.

Late Adolescence (17 to19 years):

- The body approximates the young adult and development of secondary sexual characteristics is completed.

- Career decisions are finally traced.

- The child gradually returns to the family.

- The adolescent acquires a more stable identity and improved performance in higher-order cognitive processes such as planning and critical thinking.

➢ The brain undergoes a process of maturation during adolescence, which enables the adolescent to think in a more abstract, complex and faster manner.

➢ the prefrontal cortex, is one of the last brain regions to mature. It is the area responsible for planning, prioritizing and controlling impulses.
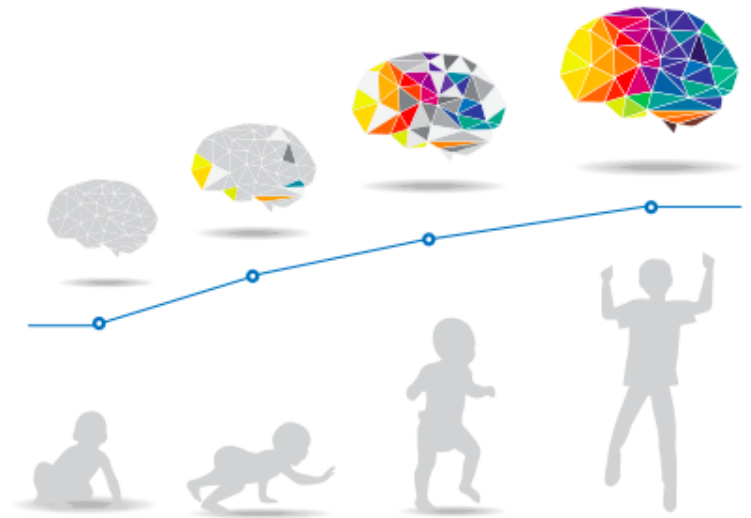
The brain reaches its largest size in the early teen years but continues to mature well into the 20s.

Increased pressure

- Parents, friends, and teachers all pressure adolescents to behave in particular ways.

- Peer pressure is the strongest.

- Adolescents are particularly susceptible to **peer influence** for several reasons.

1. Adolescents look to their peers to understand social norms. They align their behavior over time with the norms of their group or the group they want to belong to – a process known as peer socialisation

2. Adolescents may find it particularly rewarding to gain social status, a potential outcome of aligning with peers.

3. Adolescents tend to be hypersensitive to the negative effects of social exclusion. They may conform to a group norm (which sometimes means taking a risk) to avoid this unpleasant social outcome.

The Search for Self

- The ability to establish personal norms and priorities is important.

- Preparing for future roles is one aspect of finding oneself.

- Anticipatory socialization is learning the rights, obligations, and expectations of a role to prepare for assuming that role in the future.

Why Adolescence?

Why Adolescence?

- Around 21% of the Jordanian population are between the age 10-19 (*DOS 2022*).

Jordan (2020)
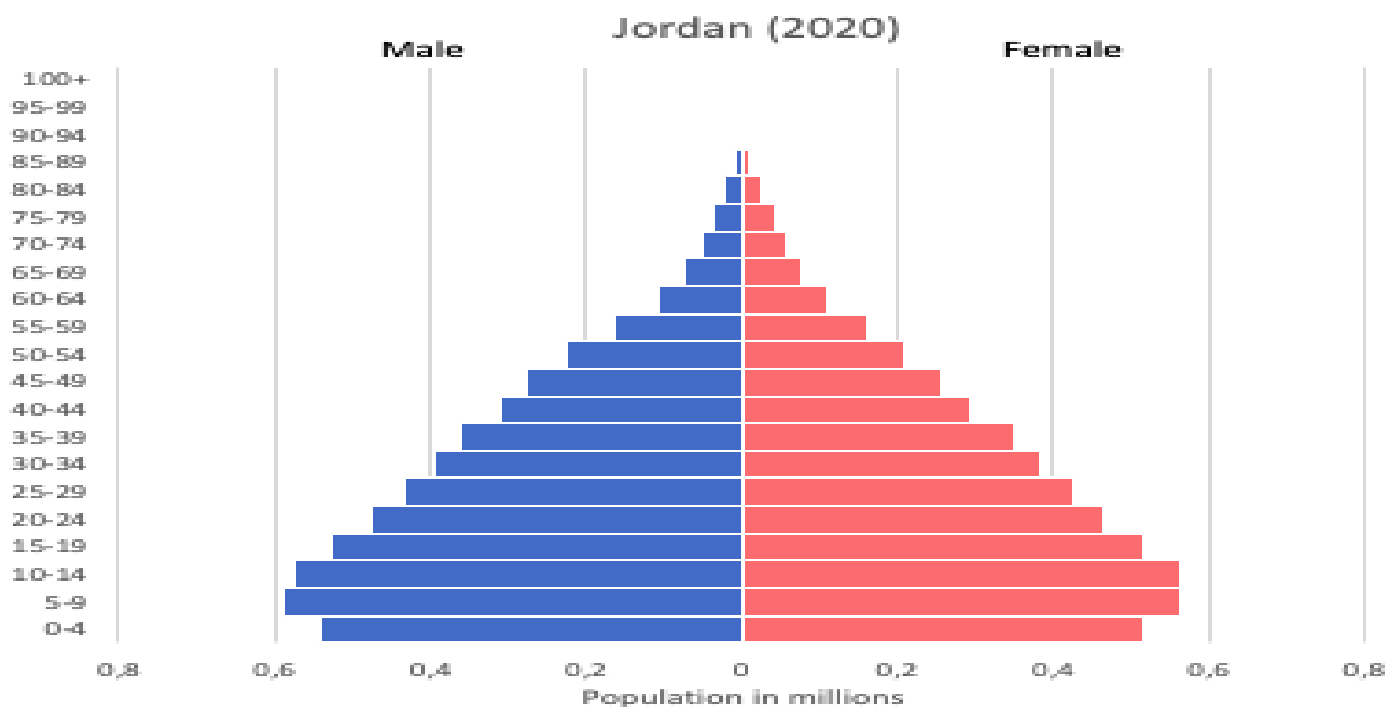
Public Health Rationale-Mortality

- Over 1.2 billion of the world's population are adolescents.

- Only about 11% of the world's adolescents live in HICs*, while about 2/3 live in LMICs.

- In 2019 an estimated 0.9 million adolescents died. Approximately 2/3 of these deaths were in LMICs*.

- HICs : High Income Countries

- LMICs: Low & Middle Income Countries

Table 2.1. Overview of the burden of mortality and morbidity among adolescents globally and by modified WHO region, 2019

	Global	African LMICs	Americas LMICs	Eastern Mediter-ranean LMICs	Euro-pean LMICs	South-East Asia LMICs	Western Pacific LMICs	HICs
Adolescent population in millions (% of global total)	1240 (100)	249 (20)	103 (8)	129 (10)	53 (4)	362 (29)	214 (17)	131 (11)
Adolescent deaths in thousands (%)	857 (100)	321 (38)	67 (8)	104 (12)	19 (2)	244 (28)	73 (8)	29 (3)
Mortality rate (deaths per 100 000 adolescents)	69	129	65	81	36	67	34	22

Table 2.2. Main causes of adolescent mortality by sex, age, globally and by modified WHO region

■ Injuries   ■ Communicable, maternal, perinatal and nutritional conditions

Age	Males		Females	
	Cause	**Mortality rate (per 100 000)**	**Cause**	**Mortality rate (per 100 000)**
Global				
10–14 years	Road injury	9	Diarrhoeal diseases	8
	Diarrhoeal diseases	9	Road injury	5
	Drowning	4	Lower respiratory infections	3
	Lower respiratory infections	3	HIV/AIDS	3
	HIV/AIDS	3	Meningitis	2
15–19 years	Road injury	18	Tuberculosis	9
	Interpersonal violence	12	Maternal conditions	7
	Tuberculosis	10	Self-harm	5
	Self-harm	6	Road injury	5
	Diarrhoeal diseases	5	Diarrhoeal diseases	4

Public Health Rationale-Morbidity

- In 11 countries: 1/4 of the adolescent girls are underweight.

- In 21 countries: 1/3 of adolescent girls are anaemic.

- Globally, about 1.7 million adolescents are living with HIV (WHO, 2022).

- Between 40-70% ever-married girls aged 15- 19 reported that they experienced emotional, physical or sexual violence by their current or most recent husband or partner.

• In 2019 the leading risk factors for adolescent morbidity and mortality globally showed little variation by age group or by sex.

Iron deficiency, unsafe water source, unsafe sanitation, no access to a handwashing facility, low birthweight and short gestation (less than 38 weeks), bullying victimization and particulate matter pollution were among the top 10 in both age groups and sexes.

Public Health Rationale- Behaviors

Adolescence is a critical period in the human life. It affects people future habits and practice, including:

1. Use of tobacco, alcohol & illicit drugs.

2. Poor diet & Physical inactivity.

3. Mental health.

Tobacco, alcohol & illicit drugs

- A major concern in countries of all income groups.

- In HICs drug use disorders were among the top five causes of adolescent morbidity and mortality in 2019.

- Substance use and tobacco most commonly begins in adolescence.

- Associated with neurocognitive alterations → behavioral, emotional, social and academic problems in later life.

- Alcohol and drug use contribute to about 3.5 million deaths each year as well as to disabilities and poor health for millions of people.

Tobacco, alcohol & illicit drugs

- Alcohol and drug use among adolescents is associated with a wide range of negative health and social consequences. → accidents, violence and risky behaviors (such as unsafe sex and dangerous driving), injuries (including those due to road traffic accidents), and premature deaths.

- Worldwide, >1/4 of all people ages 15–19 years were estimated to be current drinkers in 2016, amounting to 155 million adolescents.

Tobacco, alcohol & illicit drugs

- Prohibiting the sale of tobacco products to minors (under 18 years) and increasing the price of tobacco products through higher taxes, banning tobacco advertising and ensuring smoke-free environments are crucial.

- A recent international systematic review found that the use of e-cigarettes has risen; the international pooled prevalence of young people's lifetime e-cigarette use was 15.3%; current use was 7.7%
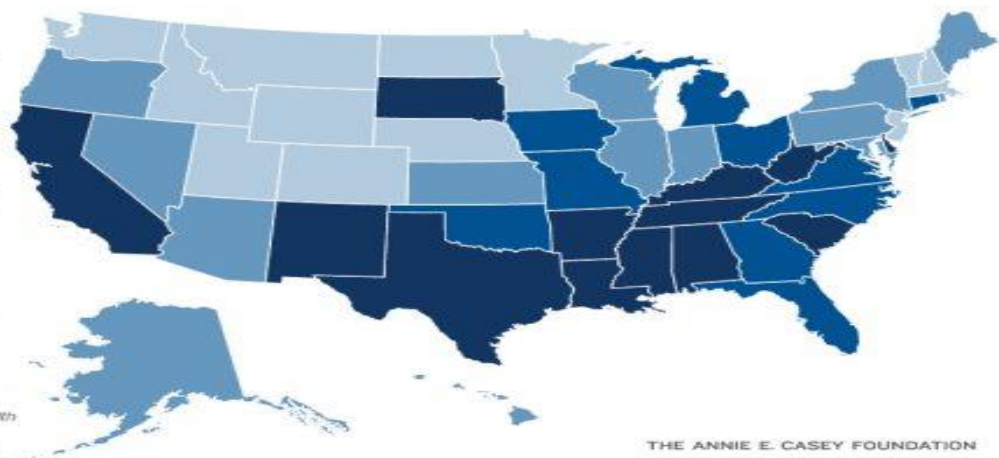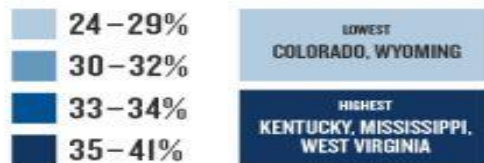
Poor diet & Physical inactivity

- Insufficient physical activity is common among adolescents in all WHO regions, and more common among female adolescents than among males

- Analysis of data (2016)involving 1.6 million students ages 11–17 years found that 81% were insufficiently physically active.

OUR CHILD IS OVERWEIGHT. I BLAME THE 'HAPPY MEAL'

BOSTON HERALD

- WHO guidelines for physical activity and sedentary behavior recommend that school-age children and adolescents limit their sedentary time, particularly their recreational screen time

- Recreational screen time (defined as time spent watching screens) is one of the reasons for the high prevalence of both insufficient physical activity and disturbed sleep.

Nationally, 1 in 3 Children Are Overweight or Obese. Highest Rates Found in the South.

Percentage of Children and Teens Who Are Overweight or Obese (2020–21)

- 24–29%
- 30–32%
- 33–34%
- 35–41%

LOWEST
COLORADO, WYOMING

HIGHEST
KENTUCKY, MISSISSIPPI, WEST VIRGINIA

Source: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, 2020–21 National Survey of Children's Health

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Poor diet & Physical inactivity

- Some of the key nutrition challenges during adolescence are malnutrition by deficit or excess and micronutrient deficiencies (such as deficiencies in iron, vitamin A or iodine).

- All these important threats to adequate nutrition may relate to socioeconomic circumstances, lifestyle, eating behaviors and underlying psychosocial factors.

- Many boys and girls in lower-income countries enter adolescence undernourished, making them more vulnerable to disease and early death.

- Iron deficiency anemia is the leading nutritional deficiency associated with adolescent morbidity.

- WHO describes overweight and obesity as one of the most serious public health challenges of the 21st century .

- Globally, in 2016 more than one in every **6** adolescents was overweight. Prevalence varied across WHO regions, from less than 10% in Southeast Asia to over 30% in the Americas.

- The wide variation across countries of overweight and obesity among adolescents may be due to differences in food quality and other health risk factors .

Mental health

- Mental health conditions are among the leading causes of illness and disability among adolescents.

- The global prevalence of mental disorders is estimated at 13.5%for 10–14-year-olds and 14.7% for 15–19-year-olds.

- Multiple interlinked social, family and individual factors have an impact on the mental health of adolescents, and the maturing brain is highly susceptible to external influences.

- Exposure to violence, poverty, stigma, exclusion and living in humanitarian and fragile settings can increase the risk of developing mental health conditions.

Thank you!