

Adolescent Health

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Objectives

1. Define adolescent age: World health organization definition
2. Understand adolescent's physiological and behavioral characteristics
3. Recognize the importance of adolescent health
4. Determine adolescent health problems: physical, psychological and social problems
5. Recognize common adolescent health problems in Saudi Arabia: from best available evidence-based studies
6. Understand the comprehensive approach to common adolescent health problems in primary health care
7. Understand the role of family, school and community in adolescent health care

1-Definition of adolescents

WHO defines 'Adolescents' as individuals in the 10-19 years age group. While 'Young People' covers the age range 10-24 years

Question No.1

‘Adolescents’ age group according to WHO:

A- 15 to 24

B- 10 to 16

C- 10 to 24

D- 10 to 19

Question No.2

‘Which of the following is the leading cause of death of adolescents world wide according to WHO:

- A- Suicide
- B- Injuries
- C- Interpersonal Violence
- D- Infectious

Question No.3

‘Which of the following educational stage students in Saudi Arabia are more prone to the habit of smoking:

- A- elementary school
- B- middle school
- C- high school
- D- college

Question No.4

‘How much physical activity should children and young people aged 5 to 18 do to keep healthy?’

A-30 minutes

B-60 minutes

C-90 minutes

D-120 minutes

Question No.5

‘Establishing an “Anti-smoking Program” is considered as a role of:

- A- Family.
- B- School.
- C- Community.
- D- None of the above.

Saudi Arabia



DEMOGRAPHICS

Total Population	34,140,662
Adolescent Population (10–19 years)	4,817,758
Life expectancy at birth (years), males	74
Life expectancy at birth (years), females	77
Proportion of population below the international poverty line	(no data)
Percentage of youth (15–24 years) not in education, employment or training	16

Sources: ILOSTAT 2015, UN Population Division 2015

SEXUAL AND REPRODUCTIVE HEALTH

Adolescent fertility rate (births per 1,000 females, 15–19 years) 10
Source: UN Population Division, 2015

Percentage of women aged 20–24 who were married or in a union before age 18 (no data)
Source:

Percentage of young men aged 18–29 who experienced sexual violence by age 18 (no data)
Source:

Percentage of young women aged 18–29 who experienced sexual violence by age 18 (no data)
Source:

Percentage of females aged 15–49 years who have undergone female genital mutilation / cutting (no data)
Source:

Proportion of males 15–49 years who consider a husband to be justified in hitting or beating his wife (no data)
Source:

Proportion of females 15–49 years who consider a husband to be justified in hitting or beating his wife (no data)
Source:

HIV/AIDS

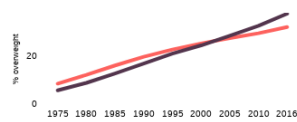
	Males	Females
Number of adolescents aged 10–19 years living with HIV	(no data)	(no data)
Number of new HIV infections among adolescents aged 10–19 years per year	(no data)	(no data)

Source:

ADOLESCENT HEALTH RISK FACTORS

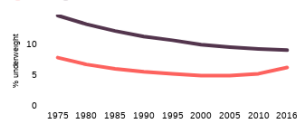
Trends in overweight (10–19 years)*

● Female ● Male



Trends in underweight (10–19 years)**

● Female ● Male



* BMI more than 1SD above the median of the WHO growth reference

** BMI more than 2SD below the median of the WHO growth reference

Source: NCD-RIS-C, 2015

Insufficient physical activity

	Males	Females
Prevalence of insufficient physical activity among school going adolescents aged 11–17 years	(no data)	(no data)

Source:

Cigarette smoking

	Males	Females
Percentage of students who smoked cigarettes on one or more days during the past 30 days	13	5

Source: Global Youth Tobacco Survey, 2010, 13–15

Alcohol use

	Males	Females
Percentage of current drinkers	3	2
Percentage of heavy episodic drinking	0	0

Source: WHO Global Information System on Alcohol and Health, 2016

Drug use

	Males	Females
Percentage of students who ever used marijuana	(no data)	(no data)

Source:

Violence

	Males	Females
Percentage of students who were in a physical fight one or more times during the past 12 months	(no data)	(no data)

	Males	Females
Percentage of students who were bullied on one or more days during the past 30 days	(no data)	(no data)

Source:

Saudi Arabia

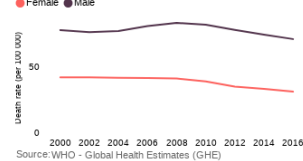
MORTALITY

Number of adolescent deaths, males	1,746
Number of adolescent deaths, females	742

Source: WHO - Global Health Estimates (GHE), 2016

TRENDS IN MORTALITY

● Female ● Male



Source: WHO - Global Health Estimates (GHE)

TOP 5 CAUSES OF DEATH

Male, 10–14 years:

Drowning, Congenital anomalies, Leukaemia, Road injury, Interpersonal violence

Female, 10–14 years:

Congenital anomalies, Lower respiratory infections, Leukaemia, Road injury, Interpersonal violence

Male, 15–19 years:

Drowning, Congenital anomalies, Self-harm, Road injury, Interpersonal violence

Female, 15–19 years:

Congenital anomalies, Lower respiratory infections, Self-harm, Road injury, Interpersonal violence

Source: WHO - Global Health Estimates (GHE), 2016

TOP 5 CAUSES OF DISABILITY-ADJUSTED LIFE YEARS (DALYS)

Male, 10–14 years:

Congenital anomalies, Skin diseases, Childhood behavioural disorders, Anxiety disorders, Road injury

Female, 10–14 years:

Iron-deficiency anaemia, Skin diseases, Childhood behavioural disorders, Anxiety disorders, Migraine

Male, 15–19 years:

Congenital anomalies, Depressive disorders, Anxiety disorders, Road injury, Interpersonal violence

Female, 15–19 years:

Iron-deficiency anaemia, Depressive disorders, Anxiety disorders, Migraine, Road injury

Source: WHO - Global Health Estimates (GHE), 2016

GENERAL POLICIES RELATED TO ADOLESCENT HEALTH

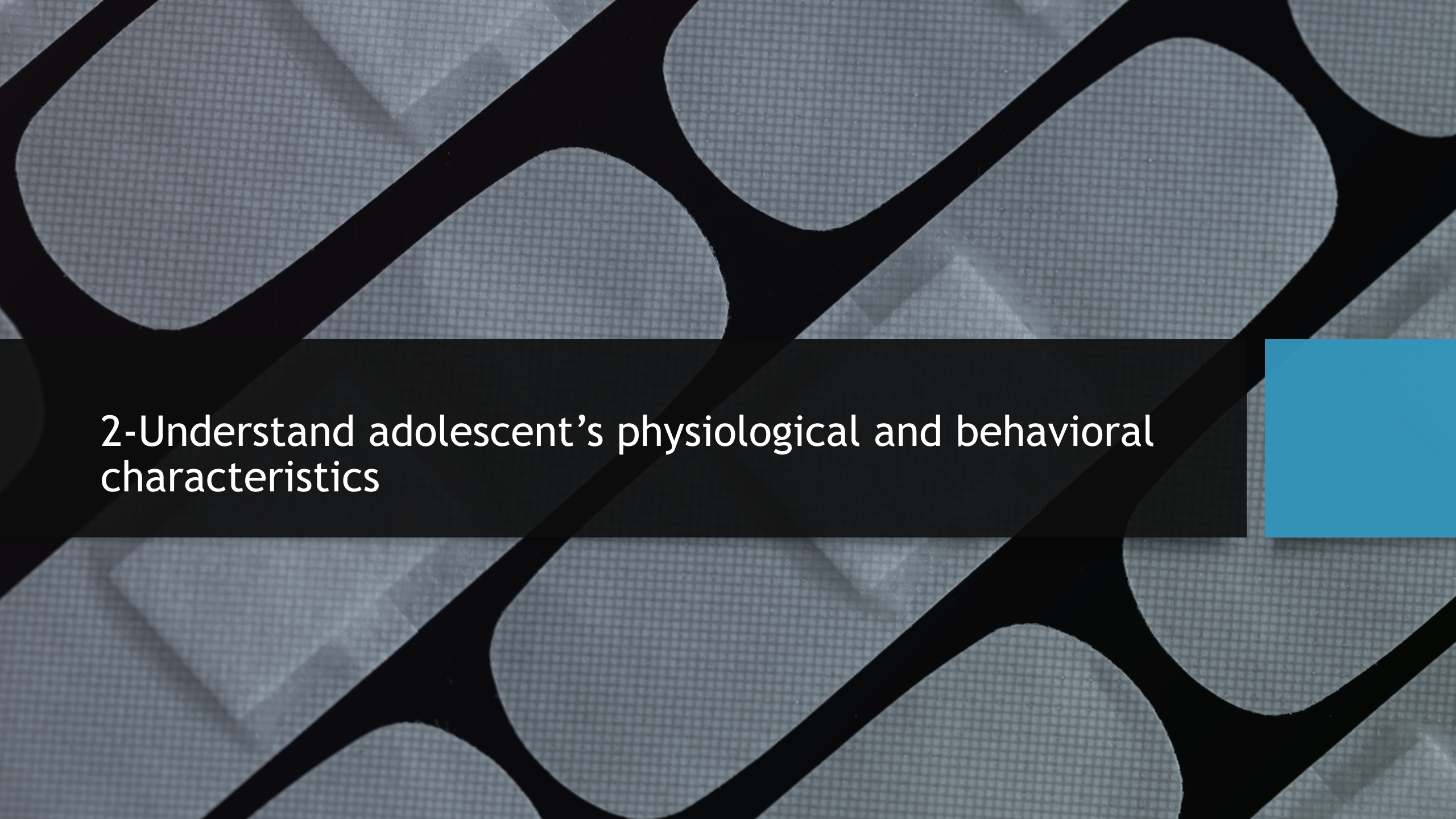
National policies/guidelines that specifically address adolescent health issues	✗	2018
National standards for delivery of health services specifically for adolescents	✗	2018
National standards for health promoting schools	✓	2018
National adolescent health programme with a regular government budget allocation	✗	2018
National policies / guidelines that specify competencies of health workers in adolescent health	✗	2018

Sources: Global Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey

TOPIC-SPECIFIC POLICIES RELATED TO ADOLESCENT HEALTH

National regulation on marketing of foods and beverages high in sugar, salt and fat to children	✗	2018
National policies to prohibit sales of tobacco products to minors	✓	2018
National regulation on marketing of alcohol to adolescents	✗	2018

Sources: Global Reproductive, Maternal, Newborn, Child and Adolescent Health Policy Survey



2-Understand adolescent's physiological and behavioral characteristics



Adolescence is a time of enormous transition as children move through the teenage years and into adulthood.

Physical

Cognitive

Emotional

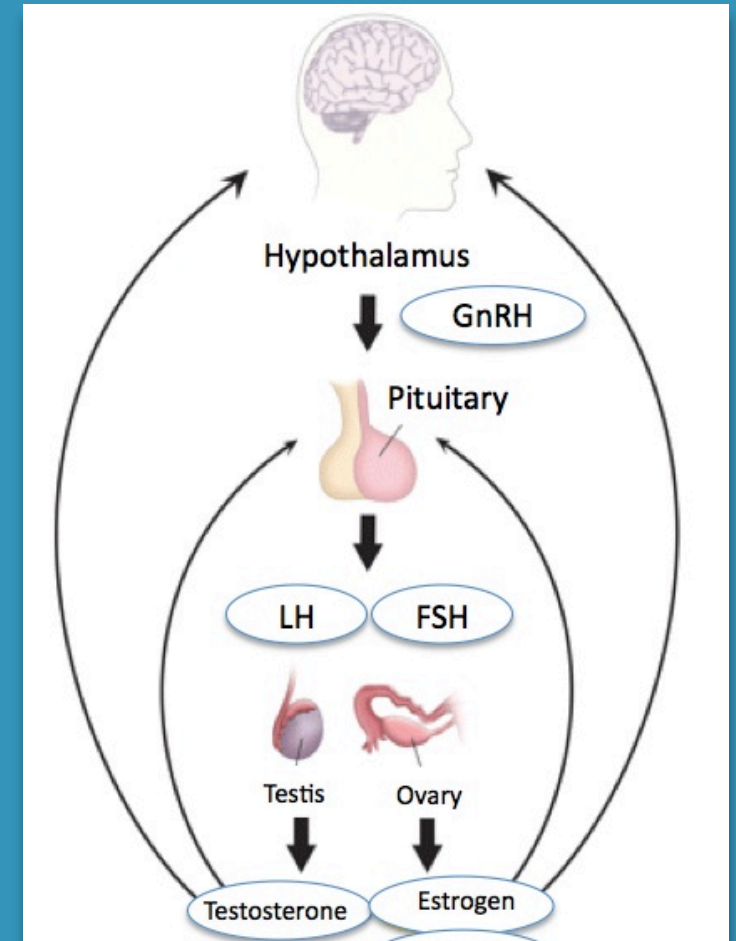
Behavioural

Morals and values

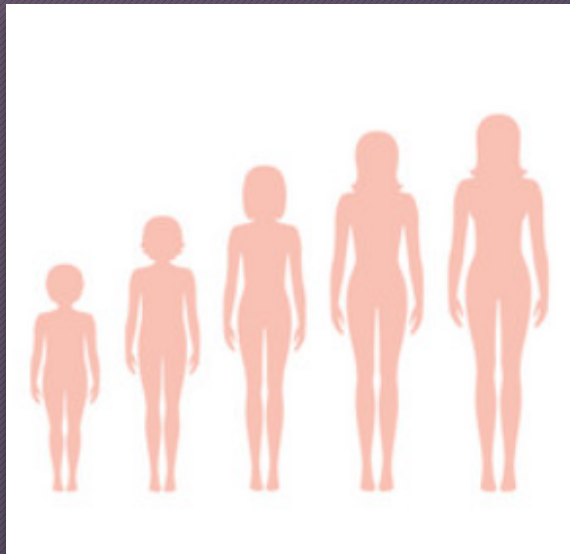
Physical

Hormonal changes and development:

- During childhood the levels of FSH and LH in the body are low. This is thought to be due to the slow cycling of the GnRH pulse generator in the hypothalamus. Approximately a year before the first physical changes of puberty can be seen there is a rise in the pulsatile release of FSH and LH from the pituitary gland. This is thought to be as a result of the GnRH pulse generator being released from CNS inhibition. The rise in FSH stimulates an increase in oestrogen synthesis and oogenesis in females and an increase in sperm production in males. The rise in LH stimulates an increase in production of progesterone in females and an increase in testosterone production in males

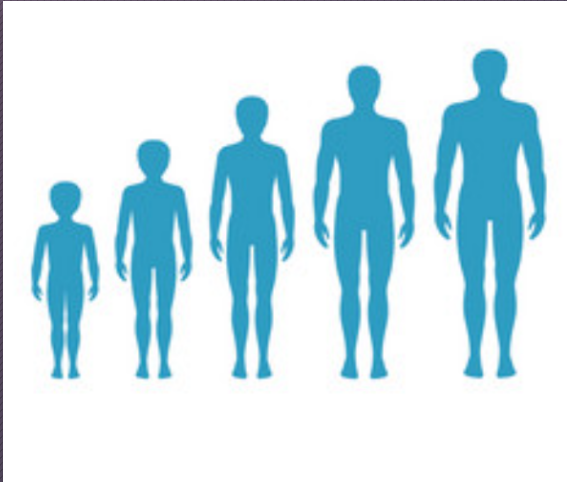


Physical (female)



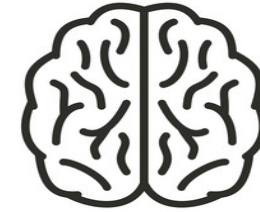
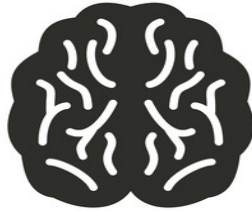
- Change in shape and height.
- Females fat appears on their body. For example, breasts become fuller and hips grow wider.
- Females typically experience their first menstruation (or period) during adolescence.
- Growth of pubic and body hair.

Physical (male)



- Males' shoulders become broader and their muscles get bigger.
- Penis and testicles also grow, males will begin to experience erections and ejaculations, both voluntary and involuntary(during sleep)
- Males' voices also deepen during this time
- Growth of pubic, body and facial hair

Cognitive



- **Growing new brain cells.** Adolescence is one of the few times in which the brain produces a large number of cells at a very fast rate.
 - **Strengthening connections.** The connections between brain cells are what enable the information stored in the brain to be used in daily life. The brain strengthens these connections.
 - **Enhanced learning.**
 - **Abstract thinking.** Young children mostly understand only things that can be seen or touched. They may understand a portion of abstract ideas, such as love, justice, or fractions.
 - **Advanced reasoning.** Children generally have limited reasoning that focuses on the information at hand. In contrast, adolescents can predict the results of their actions by using logic to imagine multiple options and different situations.
 - **Metacognition** thinking about thinking, enables youth to reflect on how they came to an answer or conclusion.
- skill also helps adolescents think about how they learn best and find ways to improve how they absorb new information.
- Adolescence is an ideal time in a person's life to gain and maintain new skills and learn new things.**

Emotional



- Shows strong feelings and intense emotions. Hormone changes also effect the mood and heighten their emotions , These characteristics together mean that teens are more easily swayed by emotion and have difficulty making decisions that adults find appropriate.
- **More sensitive to other people emotions.**
- **More self-conscious** : especially about physical appearance. Adolescent self-esteem is often affected by appearance, or by how teenagers think they look. As they develop, they might compare his body with those of his friends and peers.
- **Acting without thinking.:** decision-making skills are still developing.

By managing their own emotions, adolescents can establish positive goals and gain foresight into how their emotions can influence their goals and futures. To improve their ability to manage emotions, adolescents must first learn to recognize and describe strong, complex emotions.

Behavioral

- **Expanding their social circles** : As their social circles expand, adolescents spend less time with their families and may focus more on their peers.
- **Expanding their social roles** : Adolescents may assume new roles, such as taking on a leadership position in school, on a team,
- **Searching for identity**. For example, trying out new or different clothing styles, art, friendship groups and so on.
- **Seeking more independence** : they might want more responsibility, both at home and at school. Getting a part-time job, choosing subjects to study at school, are all normal steps towards independence.
- **Thinking more about 'right' and 'wrong'** : as they moves towards adulthood, they will have a stronger sense of his own personal values and morals.

Moral



- **Seeing the world in shades of gray.** Adolescents begin to understand that not every question has a clear-cut answer.
- **Understanding the reasons behind rules.** Abstract thinking means adolescents can sense more fully how rules are related to ideas such as justice.
- **Forming their moral code.**
- **Becoming more interested in big questions.** As part of establishing their values, adolescents may think more about what is right and what is wrong, what their role should be in the world.

The background features a light blue grid pattern overlaid with a pair of black-rimmed glasses. A dark grey horizontal band is positioned across the middle of the image, containing the text. A solid blue square is located in the bottom right corner.

3-determine adolescent health problems according to physical, psychological and social aspect.

Key facts

- Around 1.2 billion people, or 1 in 6 of the world's population, are adolescents aged 10 to 19, More than 1.1 million of them died in 2016, over 3000 every day, mostly from preventable or treatable causes.
- Road traffic injuries were the leading cause of death among adolescents in 2016. Other major causes of adolescent deaths include suicide, interpersonal violence, HIV/AIDS and diarrhoeal diseases.
- Half of all mental health disorders in adulthood start by age 14, but most cases are undetected and untreated.
- Globally, there are 44 births per 1000 to girls aged 15 to 19 per year.

Leading cause of death for adolescents

1 Injuries

2 Suicide

3 Interpersonal Violence

4 Infectious Diseases

- The leading cause of death for 15-19 year-old girls globally is **complications from pregnancy and childbirth**

A-physical problems

1-Injuries

- Unintentional injuries are the leading cause of death and disability among adolescents. In 2016, over 135 000 adolescents died as a result of road traffic accidents.
- Drowning is also among the top 10 causes of death among adolescents - nearly 50 000 adolescents, over two thirds of them boys, are estimated to have drowned in 2016.

2-Violence

- It causes nearly a third of all adolescent male deaths in low- and middle-income countries of the WHO Region of the Americas.
- Globally, nearly one in three adolescent girls aged 15 - 19 years (84 million) has been a victim of emotional, physical and/or sexual violence perpetrated by their husband or partner.

A-physical problems

3- Other infectious diseases

- Thanks to improved childhood vaccination, adolescent deaths and disability from measles have fallen markedly
- Diarrhoea and lower respiratory tract infections are estimated to be among the top 10 causes of death for 10-19 year olds. These two diseases, along with meningitis, are all among the top five causes of adolescent death in African low- and middle-income countries.

4- Undernutrition and obesity

- Many boys and girls in developing countries enter adolescence undernourished, making them more vulnerable to disease and early death.
- At the other end of the spectrum, the number of adolescents who are overweight or obese is increasing in low-, middle- and high-income countries.

B-Psychological problems

Mental health

Depression is one of the leading causes of illness and disability among adolescents, and suicide is the second leading cause of death in adolescents. Violence, poverty, humiliation and feeling devalued can increase the risk of developing mental health problems.

Building life skills in children and adolescents and providing them with psychosocial support in schools and other community settings can help promote good mental health.

C-Social problems

1-Alcohol and drugs and Tobacco

- Harmful drinking among adolescents is a major concern in many countries. It reduces self-control and increases risky behaviours, such as unsafe sex or dangerous driving.
- It is an underlying cause of injuries (including those due to road traffic accidents), violence and premature deaths.

2-Physical activity

- Physical activity provides fundamental health benefits for adolescents, including improved cardiorespiratory and muscular fitness, bone health, maintenance of a healthy body weight, and psychosocial benefits.
- WHO recommends for adolescents to accumulate at least 60 minutes of moderate-to vigorous-intensity physical activity daily.



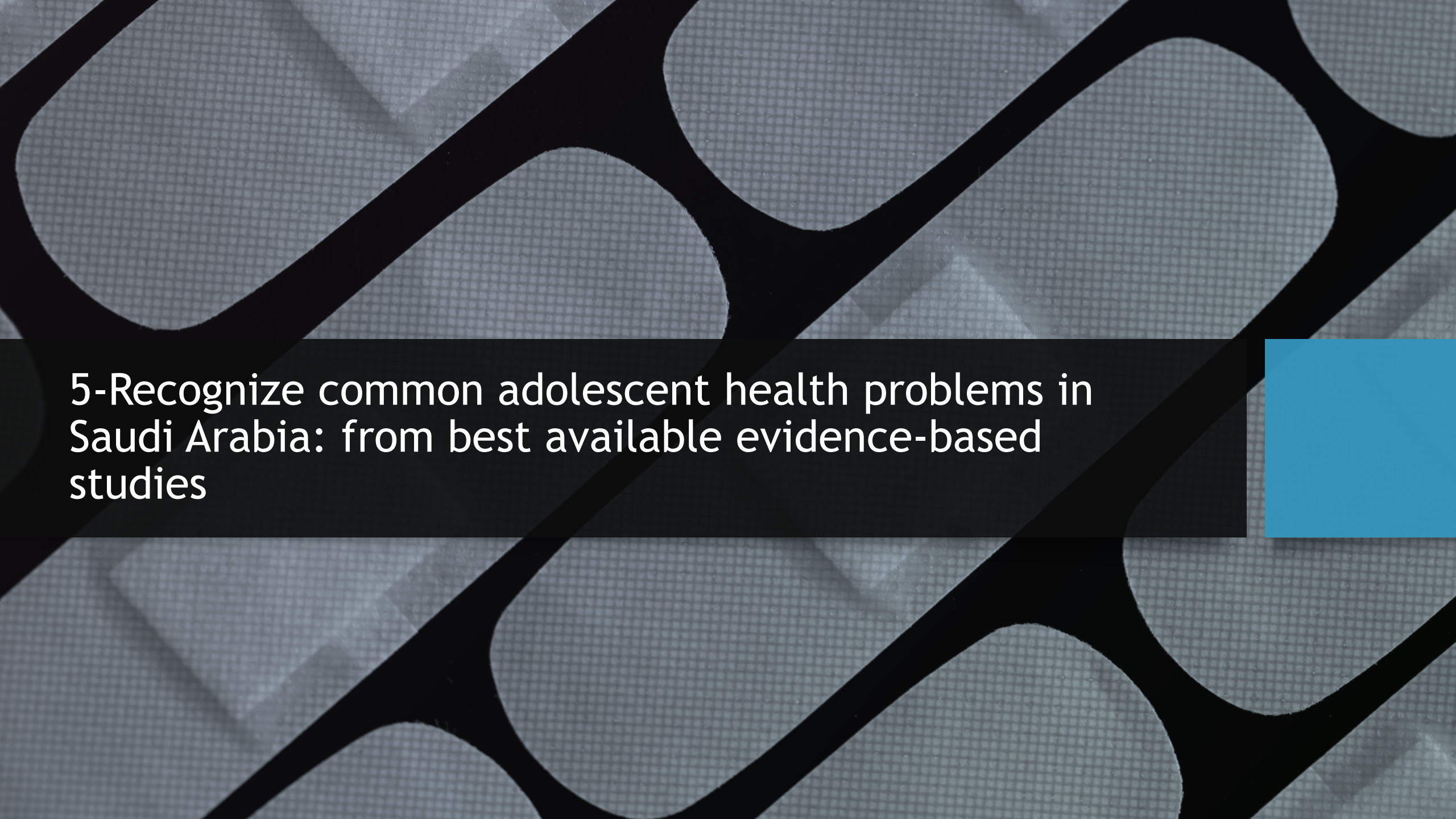
4-Recognize the importance of adolescent health

The Importance of Adolescent Health

- Adolescents (aged 10-19 years) make up one-sixth of the world's population
- **For adolescents now** - promotion of positive behaviours (e.g. good sleep habits and constructive forms of risk-taking, such as sport) and prevention, early detection and treatment of problems (e.g. substance use disorders, mental disorders, injuries and sexually transmitted infections) can immediately benefit adolescents.
- **For adolescents' future lives** - support for establishing healthy behaviours in adolescence (e.g. diet, physical activity) and reduction of harmful exposures, conditions and behaviours (e.g. air pollution, obesity, alcohol and tobacco use) will help set a pattern of healthy lifestyles and reduce morbidity, disability and premature mortality later in adulthood.

The Importance of Adolescent Health

- **For the next generation** - promotion of emotional well-being and healthy practices in adolescence (e.g. managing and resolving conflicts, appropriate vaccinations and good nutrition) and prevention of risk factors and burdens (e.g. lead or mercury exposure, interpersonal violence, early pregnancy and pregnancies in close succession) can help protect the health of future offspring.



5-Recognize common adolescent health problems in Saudi Arabia: from best available evidence-based studies



Common Adolescent Health Problems In Saudi Arabia

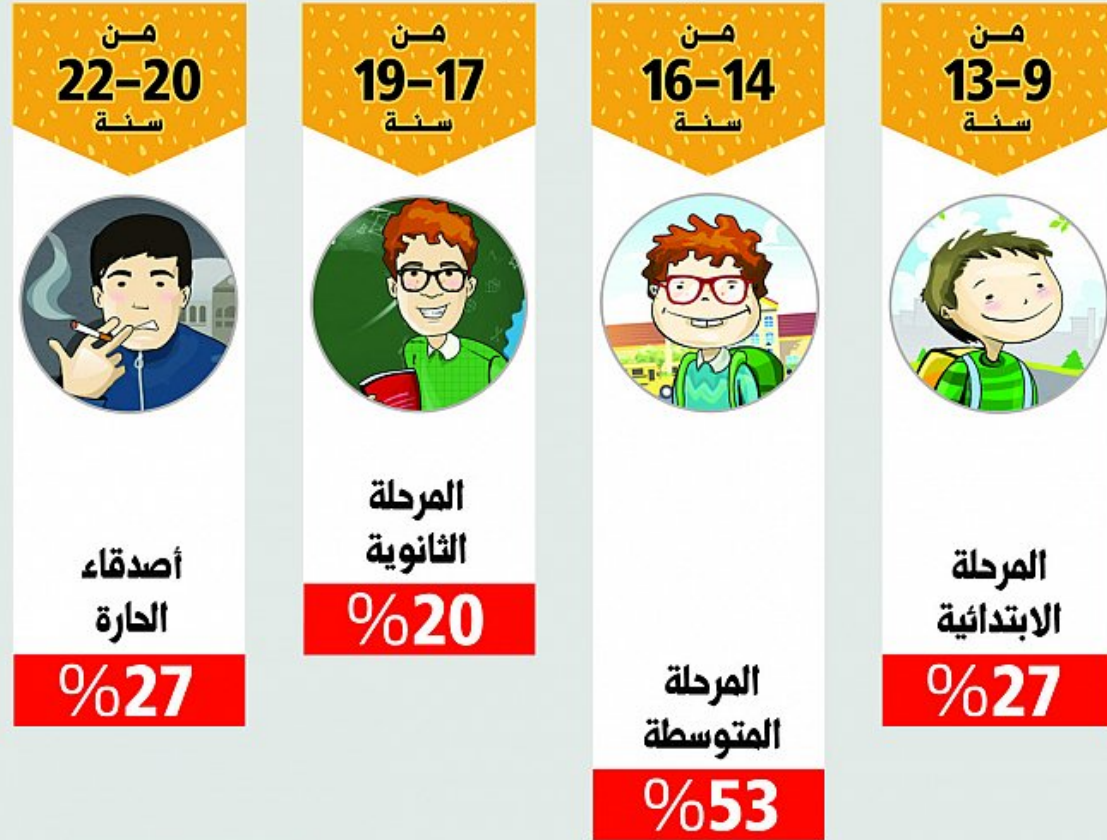


Social

Physical

Psychological

التجربة الأولى في تعاطي التدخين بين الشباب



Social:

Smoking:

A school-based cross-sectional study was carried out in the Madinah region during 2013. The overall response rate was 97.7%. The prevalence of cigarette smoking in the respondents' 3322 adolescents was 15.17%. The most important predictors were most or all friends smoking. Other significant less important factors were parental smoking, cigarette advertisement in mass media, and pocket money.

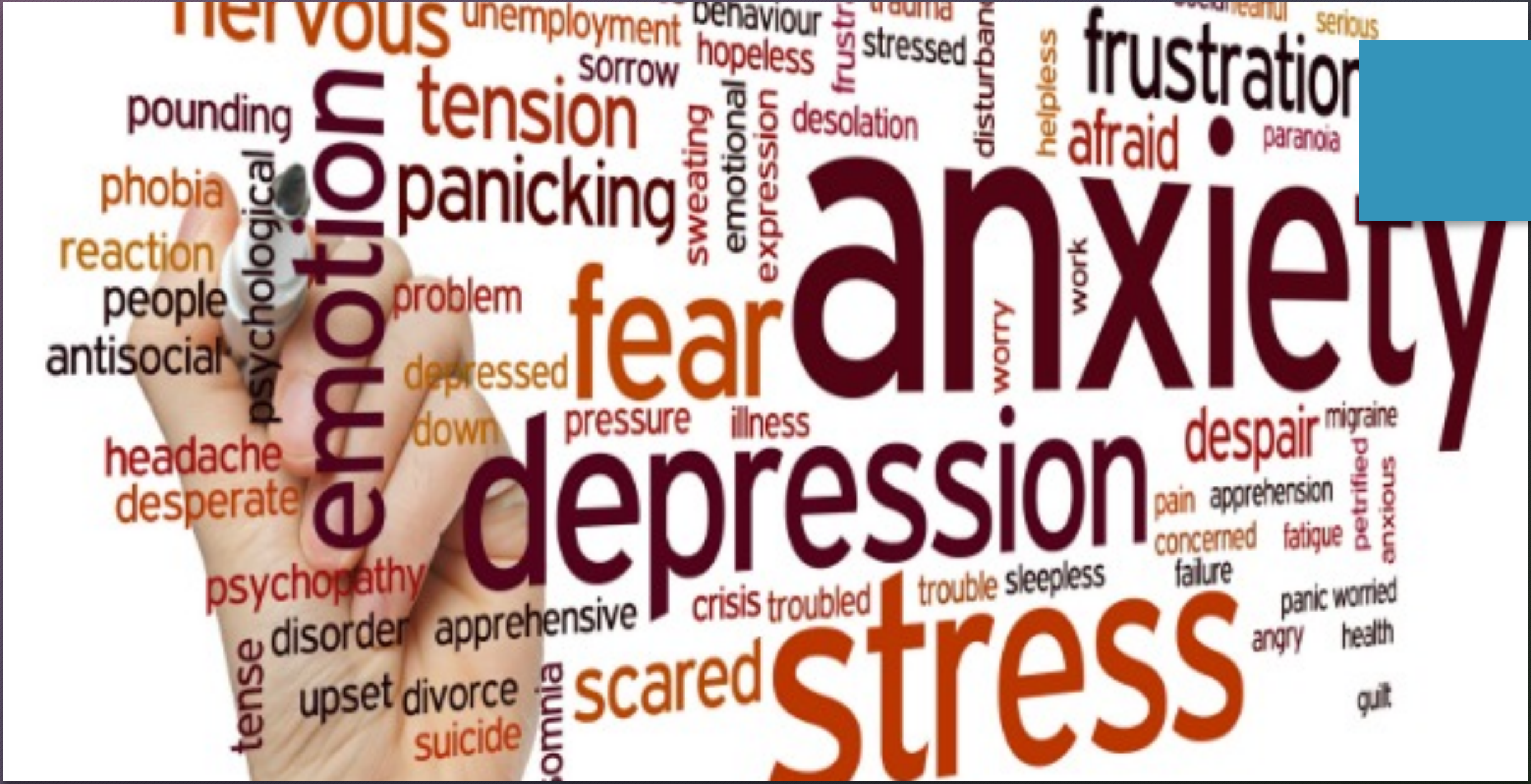
By 2022,
more children and adolescents
(aged 5-19) will be obese
than underweight
if current trends continue.



Physical:

Obesity:

- A sample was drawn from adolescent males and females enrolled in the secondary schools in three major cities of Saudi Arabia; Riyadh, Jeddah, and Al-Khobar gave that:
- The prevalence of overweight was 19.5% in males and 20.8% in females.
- While that of obesity was 24.1% in males and 14% in females.



emotion

anxiety

depression

stress

fear

tension

panicking

frustration

afraid

nervous

unemployment

behaviour

stressed

disturbance

helpless

paranoia

serious

despair

migraine

phobia
reaction
people
antisocial

psychological

problem

depressed

down

pressure

illness

worry

work

despair

pain

concerned

apprehension

fatigue

petrified

anxious

psychopathy

tense disorder

apprehensive

crisis troubled

trouble sleepless

failure

panic worried

health

upset

divorce

suicide


insomnia

scared

quit

Psychological:

- A total of 2060 cases were referred to the psychiatric consultation-liaison team King Khalid University Hospital between July 1992 and July 1998: 145 (7.0%) were below the age of 18 years. Thus 109 cases were included in this study: 46 (42.2%) children under 12 years old and 63 (57.8%) adolescents aged 12-18 years.
- **The most common diagnoses were**
 1. depressive disorder in 23.9% of the patients.
 2. adjustment disorder 10.1%.
 3. deliberate self-harm 6.4%.



6-Understand the comprehensive approach to common adolescent health problems in primary health care



Approach to dealing with adolescents

- Primary care physicians are well situated to deal with adolescents and discuss risks and offer interventions.
- **but some physicians are missing this key opportunities because:**
 1. lack of data indicating what makes up an effective physician-adolescent conversation.
 2. physician and adolescent discomfort with addressing sensitive topics.

Physicians can establish a productive relationship with adolescents through the following steps:

- Assess the individual adolescent's ability to understand the consequences of risky behavior.
- **Meet privately and raise sensitive topics.**
- Use the physician-patient relationship to personalize risk-reduction messages.
- **Assess the role of the parent.**
- Physicians should use empathic, personal messages to communicate with adolescents about these issues.

Approach to common adolescent health problems.

- we should take care about Environmental factors, including family, peer group, school, neighborhood, and social cause, because they can either support or refute young people's health.

MENTAL Health

- Building life skills in children and adolescents and providing them with psychosocial support in schools and other community settings can help promote good mental health and reduce violence.
- Programs to help strengthen the ties between adolescents and their families
- If problems arise, they should be detected and managed by competent and caring health workers and referred to psychiatry

Obesity and physical inactivity

- **Dietary management:** by Providing access to healthy foods, balanced diet and adequate intake of fruits and vegetables,
- **Physical activity:** Children and adolescents should engage in not less than 60 min of moderate to vigorous physical activity per day to achieve optimum cardiovascular health
- **Medical & Surgical Treatment**

Smoking and substance abuse

- increasing the price of tobacco products.
- **banning smoking advertising.**
- Prohibiting the sale of tobacco products to minors.
- **counseling and explain the dangers of using illegal drug.**
- Establish National programs for the awareness against smoking

ROAD TRAFFIC ACCIDENTS

- forbidding adolescents aged less than 18 years from driving.
- **Young drivers need advices on how to drive safely.**
- Increase the awareness about road safety regulations and speed limit.



7-Understand the role of family, school and community in adolescent health care



Role of Family

- Adolescents who have good communication and are bonded with an adult are **less likely to engage in risky behaviors.**
- **Parents supervision and involvement with their adolescents' activities are promoting a safe environment.**
- The children of families living in poverty are more likely to have health conditions and poorer health status, as well as less access and utilization of health care.



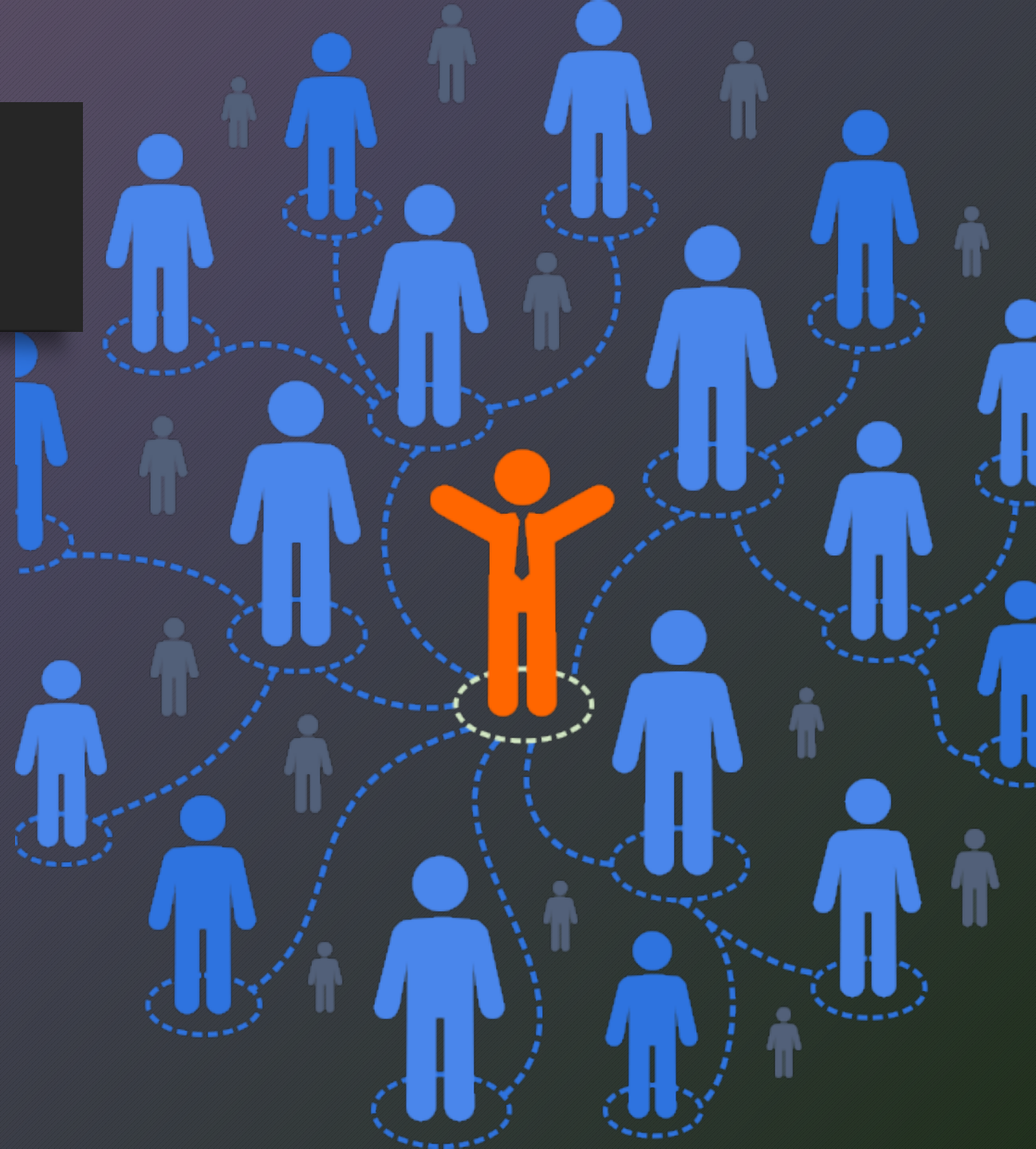
Role of School

- Student health and academic achievement are linked. Healthy students are more effective learners.
- **School health clinics for health education & counselling has an important role.**
- The school social environment affects student's attendance, academic achievement, and behavior.
- **A safe and healthy school environment protects against risky behaviors.**



Role of Community

- Antismoking program should be established, including prohibition of the sale and use of cigarettes in public places.
- **Application of firm traffic laws forbidding adolescents aged less than 18 years from driving.**
- Raising awareness of health issues for young people among the general public and special groups.
- **Supervision over media content because, adolescents who are exposed to media portrayals of violence, sexual content, smoking, and drinking are at risk for adopting these behaviors.**

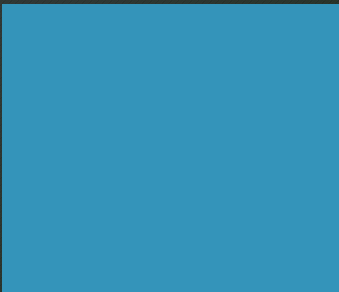


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<https://www.youtube.com/watch?v=LqFYqxNwu2c>



Question No.1

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C-90 minutes

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Question No.5

‘Establishing an “Anti-smoking Program” is considered as a role of:

A- Family.

B- School.

 C- Community.

D- None of the above.



THANK YOU FOR LISTENING



ANY QUESTIONS?

Referances

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- <https://www.hhs.gov/ash/oah/adolescent-development/explained/index.html>
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