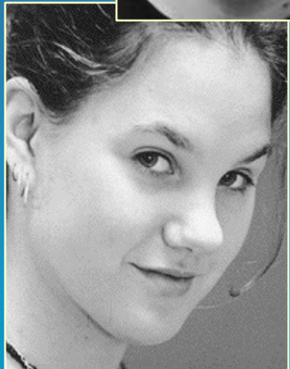
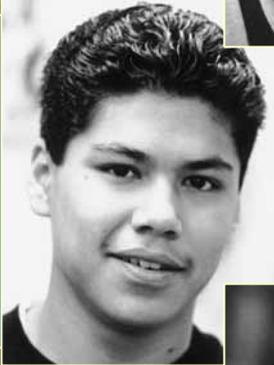
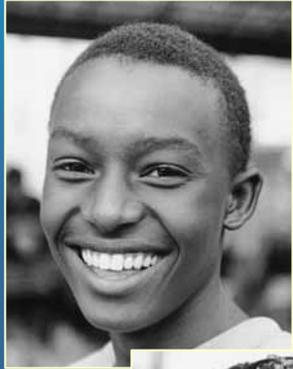


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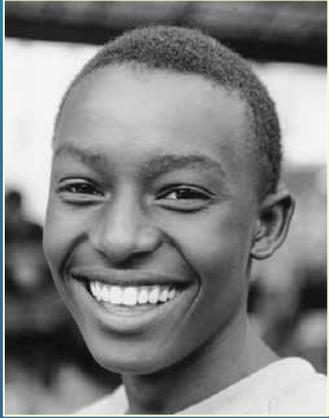
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# Trends in International Adolescent Health



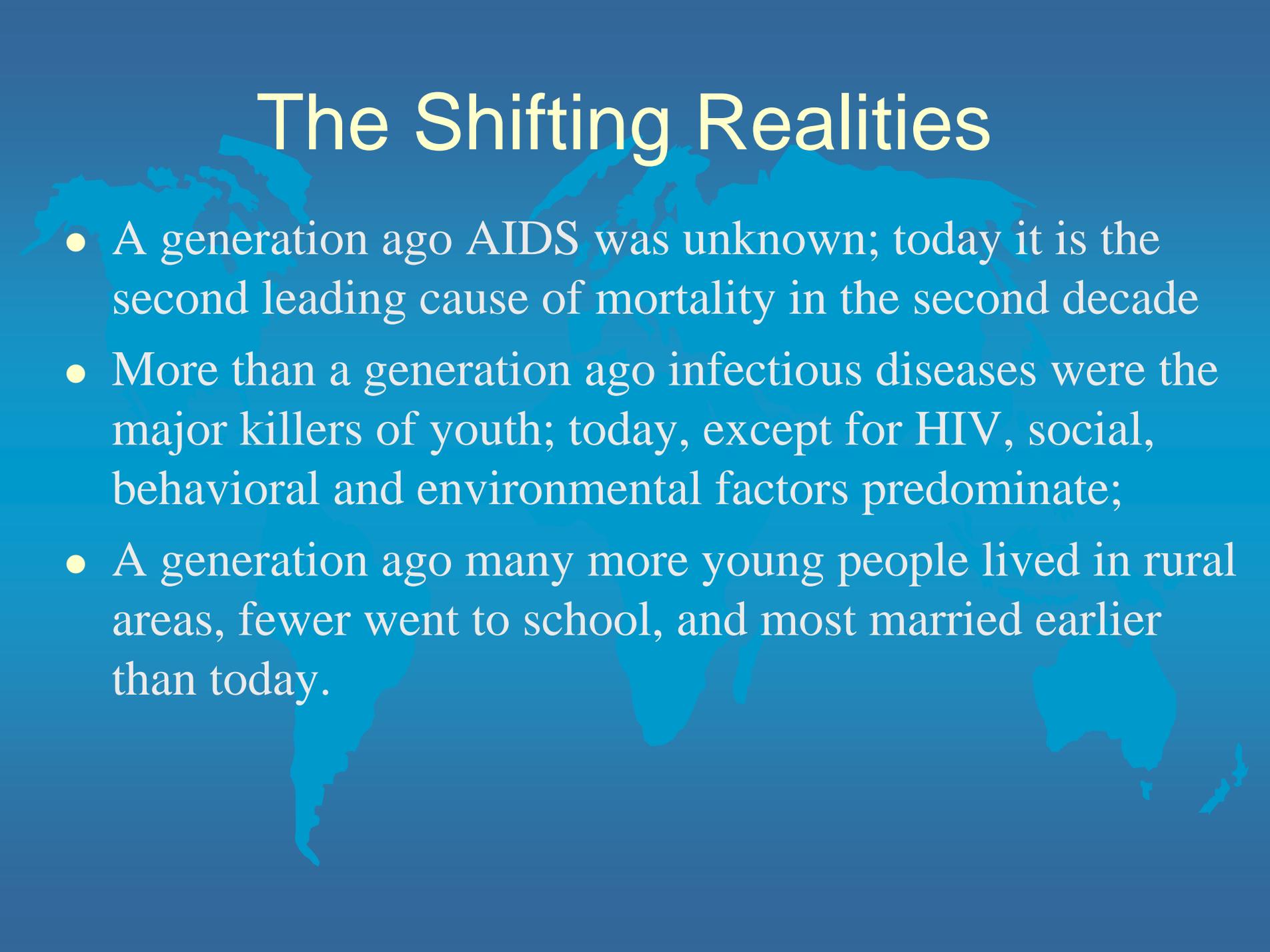
Robert Blum, M.D., M.P.H., Ph.D.  
Professor and Chair  
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Johns Hopkins Bloomberg School Public Health

Adolescent Health and Development



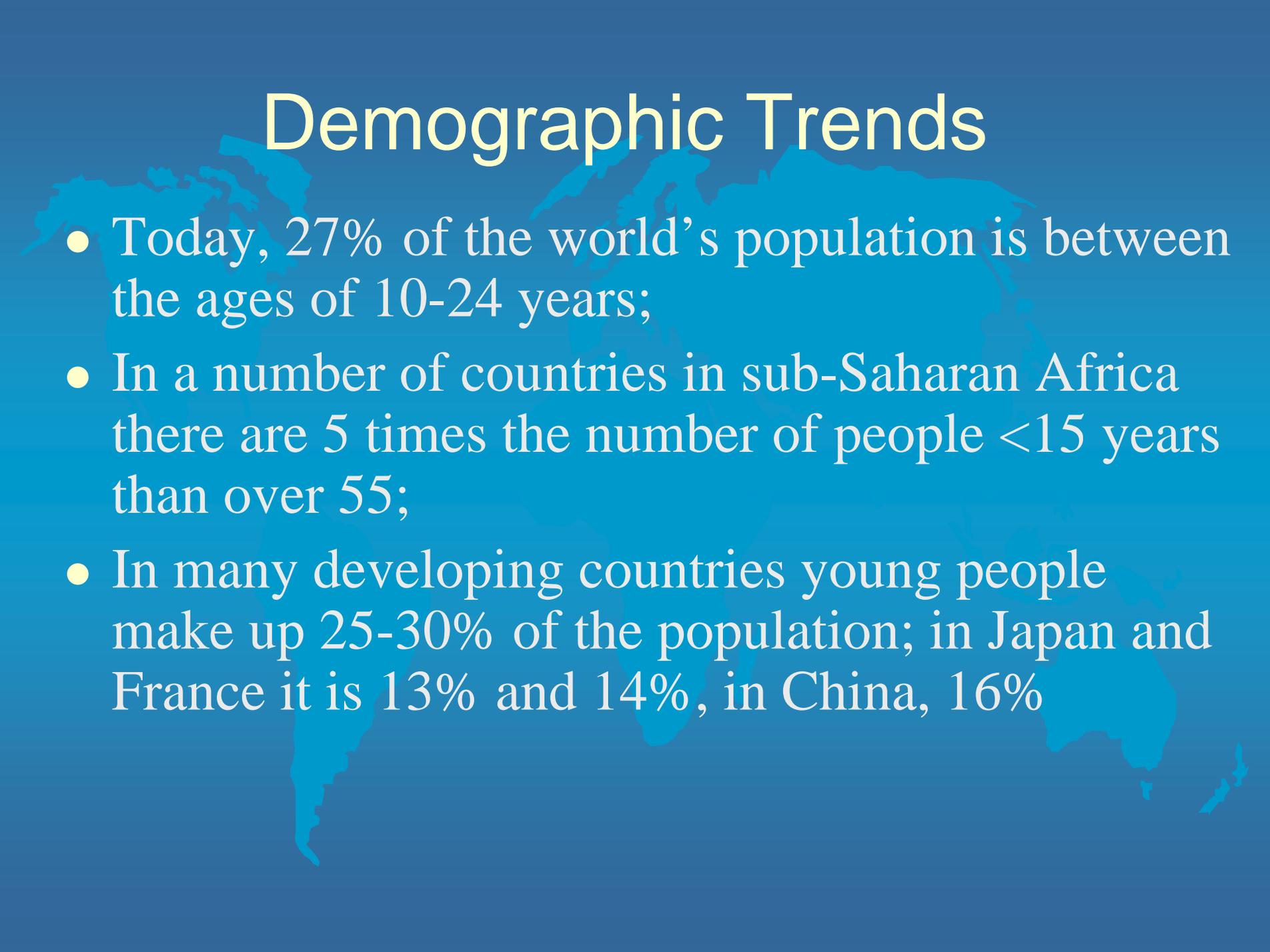
# Social and Demographic Trends

# The Shifting Realities



- A generation ago AIDS was unknown; today it is the second leading cause of mortality in the second decade
- More than a generation ago infectious diseases were the major killers of youth; today, except for HIV, social, behavioral and environmental factors predominate;
- A generation ago many more young people lived in rural areas, fewer went to school, and most married earlier than today.

# Demographic Trends

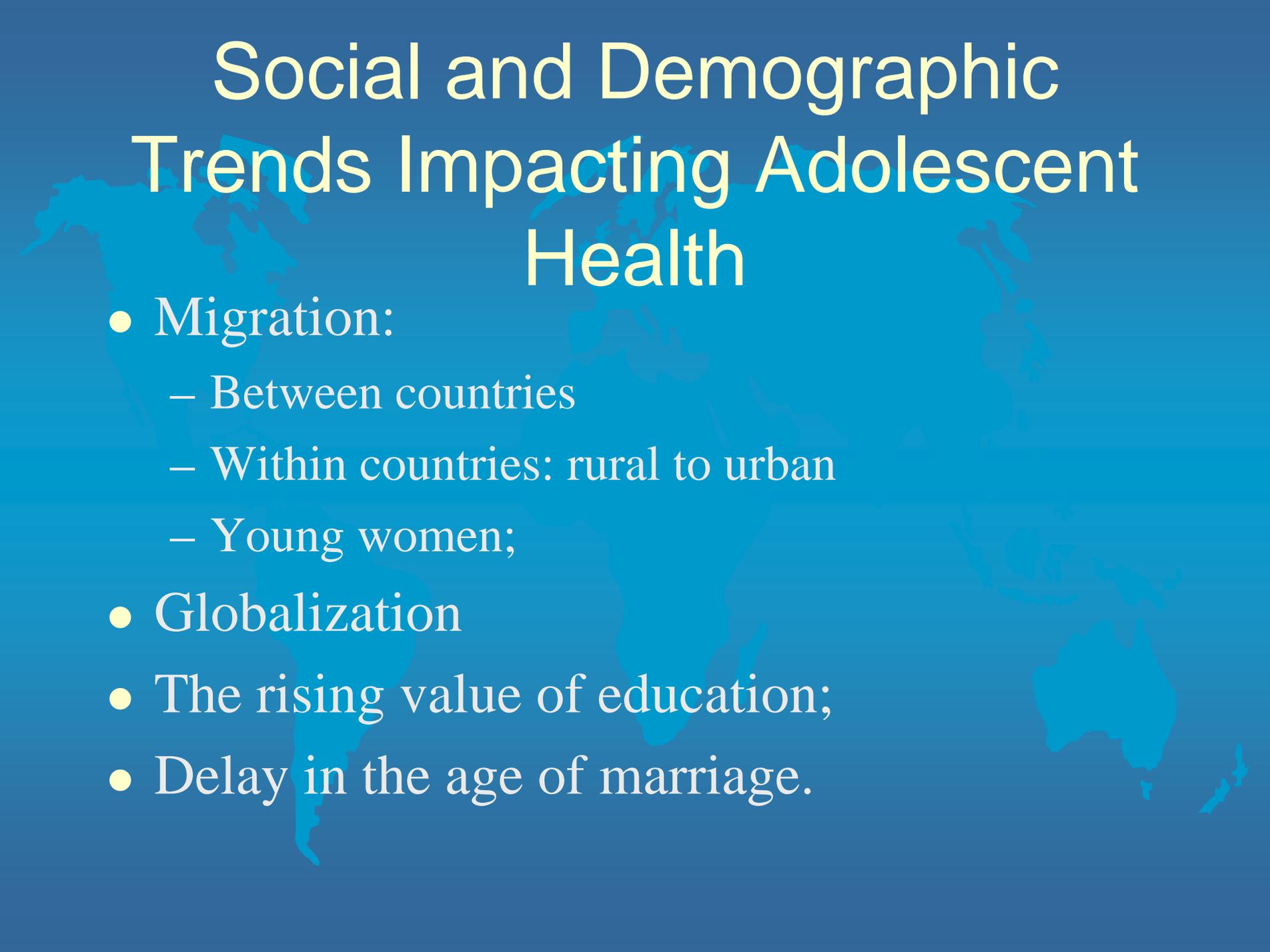


- Today, 27% of the world's population is between the ages of 10-24 years;
- In a number of countries in sub-Saharan Africa there are 5 times the number of people <15 years than over 55;
- In many developing countries young people make up 25-30% of the population; in Japan and France it is 13% and 14%, in China, 16%

# Population of Young People by Region

| • REGION     | • YEAR 2000 | • YEAR 2025 |
|--------------|-------------|-------------|
| • THE WORLD  | • 1,663     | • 1,796     |
| • Africa     | • 256       | • 401       |
| • Asia       | • 1,031     | • 1,048     |
| • N. America | • 64        | • 65        |
| • S. America | • 155       | • 163       |
| • Europe     | • 149       | • 109       |
| • W. Pacific | • 7         | • 8         |

# Social and Demographic Trends Impacting Adolescent Health



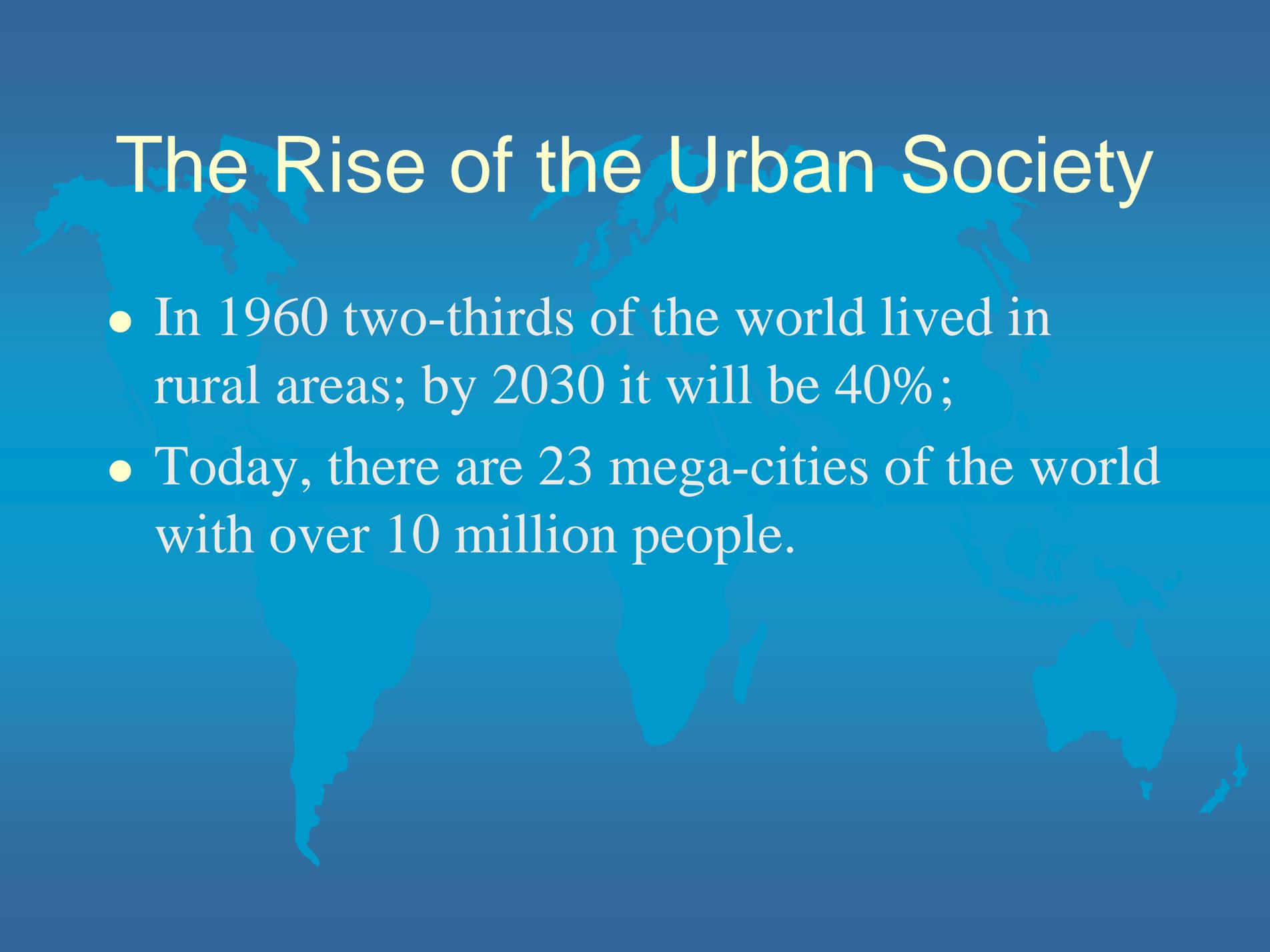
- Migration:
  - Between countries
  - Within countries: rural to urban
  - Young women;
- Globalization
- The rising value of education;
- Delay in the age of marriage.

# Factors that Influence Migration



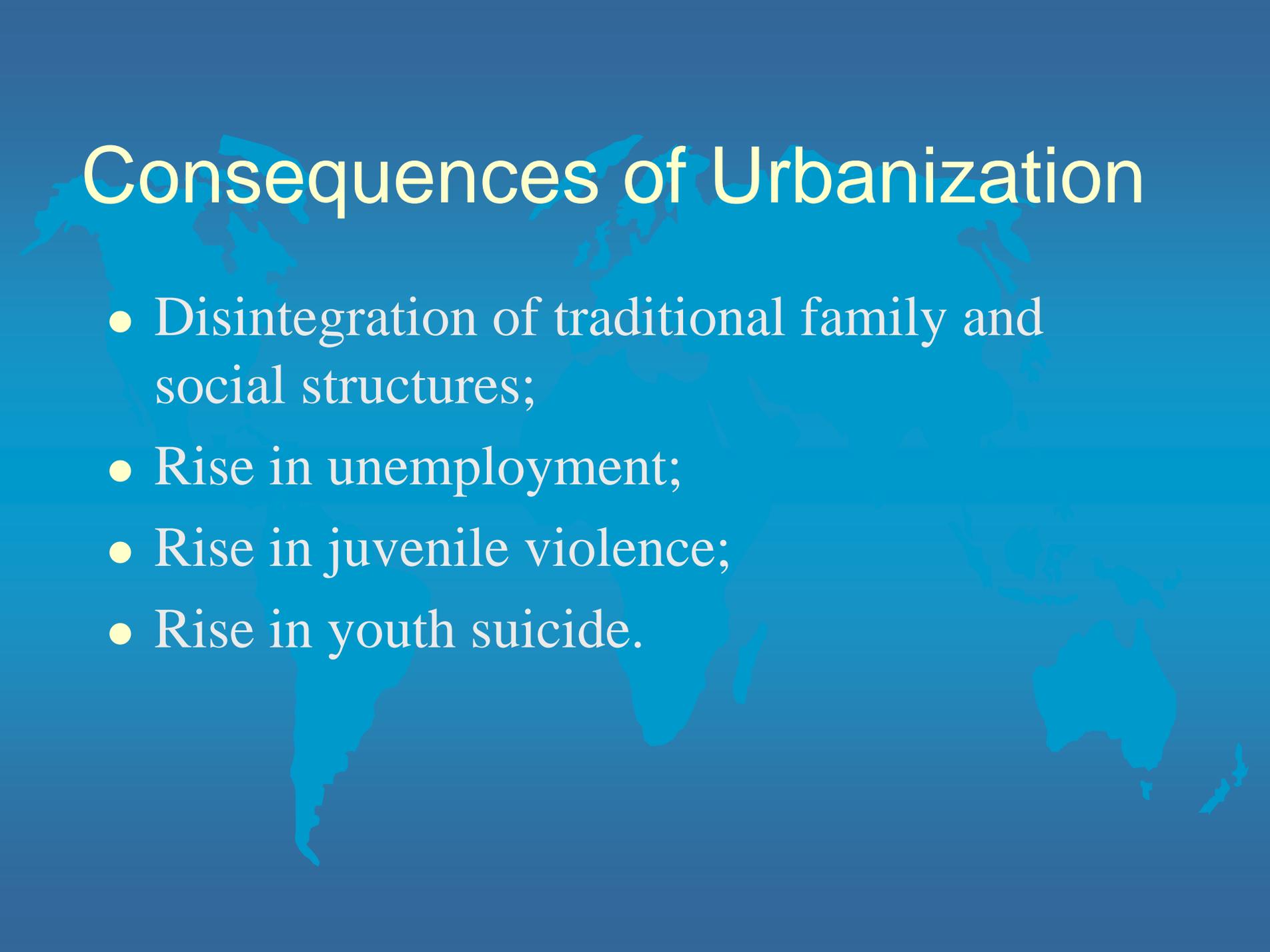
- Income disparities between and within regions;
- Labor and migration policies of countries;
- Political conflicts; natural disasters; war;
- Environmental degradation (e.g., loss of farmland);
- “Brain-drain.”

# The Rise of the Urban Society



- In 1960 two-thirds of the world lived in rural areas; by 2030 it will be 40%;
- Today, there are 23 mega-cities of the world with over 10 million people.

# Consequences of Urbanization



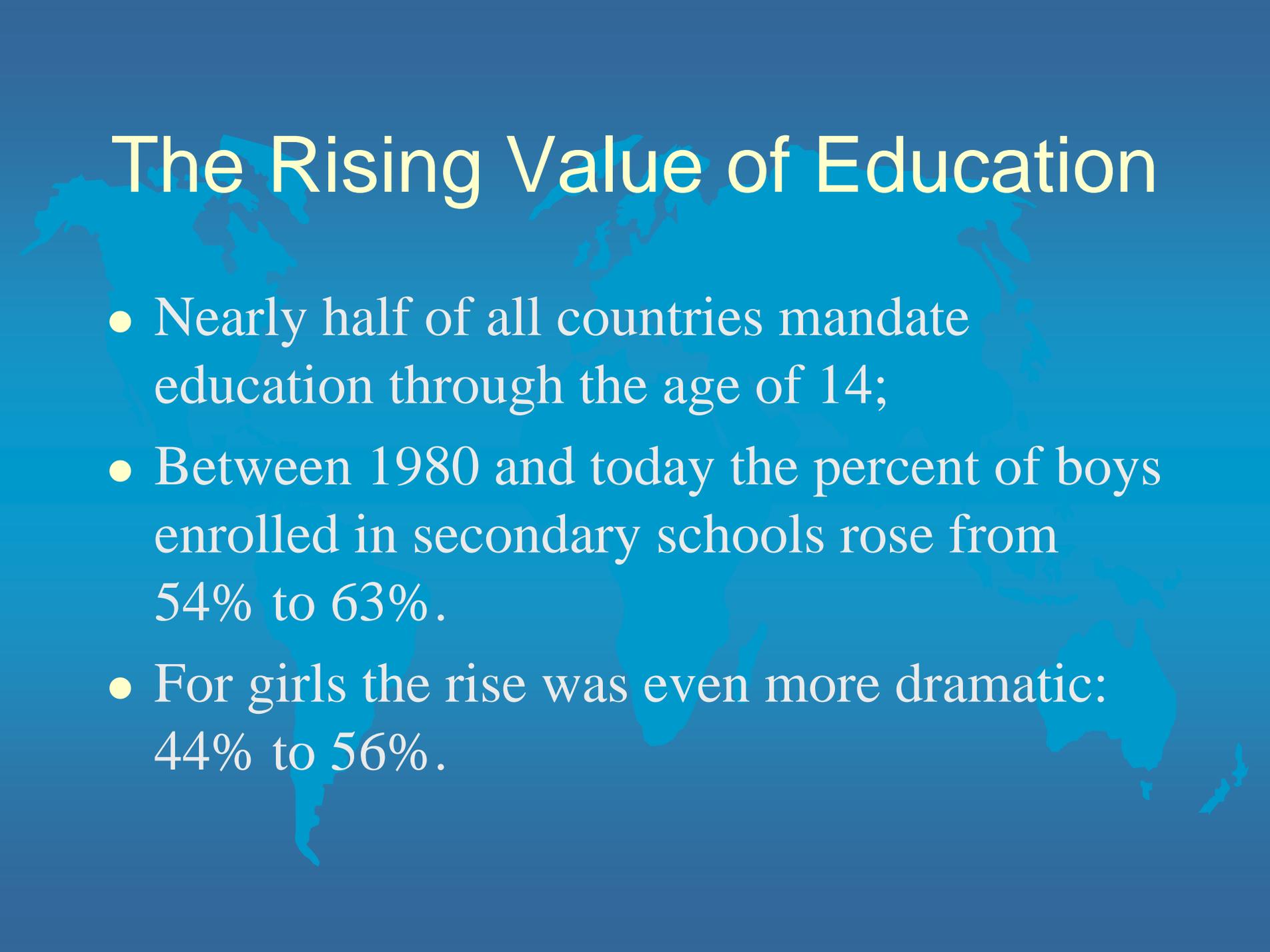
- Disintegration of traditional family and social structures;
- Rise in unemployment;
- Rise in juvenile violence;
- Rise in youth suicide.

# The Impact of Globalization



- Brings both potential risks and benefits to young people:
  - More opportunities for employment (particularly in Asia)
  - Rural youth appear unaffected; further marginalized
  - Increased clash between traditional and modern values

# The Rising Value of Education



- Nearly half of all countries mandate education through the age of 14;
- Between 1980 and today the percent of boys enrolled in secondary schools rose from 54% to 63%.
- For girls the rise was even more dramatic: 44% to 56%.

# Consequences of Education



- Delay in age of marriage;
- Rise in out-of-wedlock births;
- Rise in clandestine abortions;
- Rise in number of sexual partners with associated risks of AIDS and other STIs.

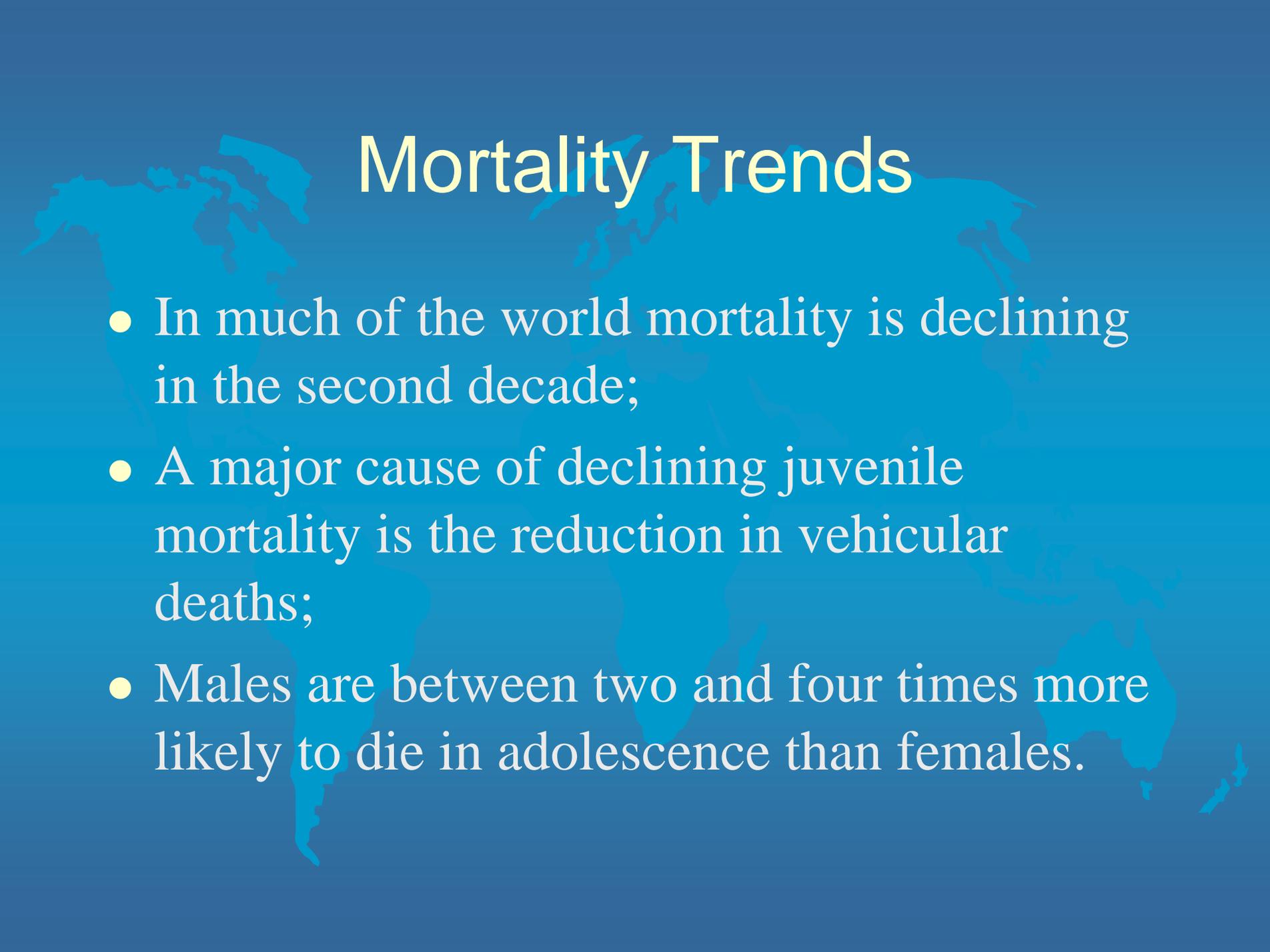


# Adolescent Mortality

# Leading Causes of Mortality among 15 to 29 year olds

- Unintentional injury;
- AIDS;
- Other infectious diseases;
- Homicide, war and other causes of intentional injury;
- Maternal mortality.

# Mortality Trends



- In much of the world mortality is declining in the second decade;
- A major cause of declining juvenile mortality is the reduction in vehicular deaths;
- Males are between two and four times more likely to die in adolescence than females.

# Unintentional Injury



- Accounts for half to 80% of all deaths in the second decade of life;
- Traffic related fatalities are the leading cause of unintentional injury;
- Boys are at higher risk;
- In many countries drowning is a major cause of unintentional injury;
- Use of alcohol and other substances is often implicated.

# HIV/AIDS



- The second leading cause of death worldwide among those 15-29 years (number 1 cause in Sub-Saharan Africa);
- Half of all people infected with AIDS acquired HIV between ages 15 and 24-- that equals 30 million young people since 1980;
- Young people often carry HIV for years without realizing that they are affected;
- Highest rates of HIV/AIDS are in Africa and the Caribbean.

# Juvenile Suicide:

There is wide variation among countries

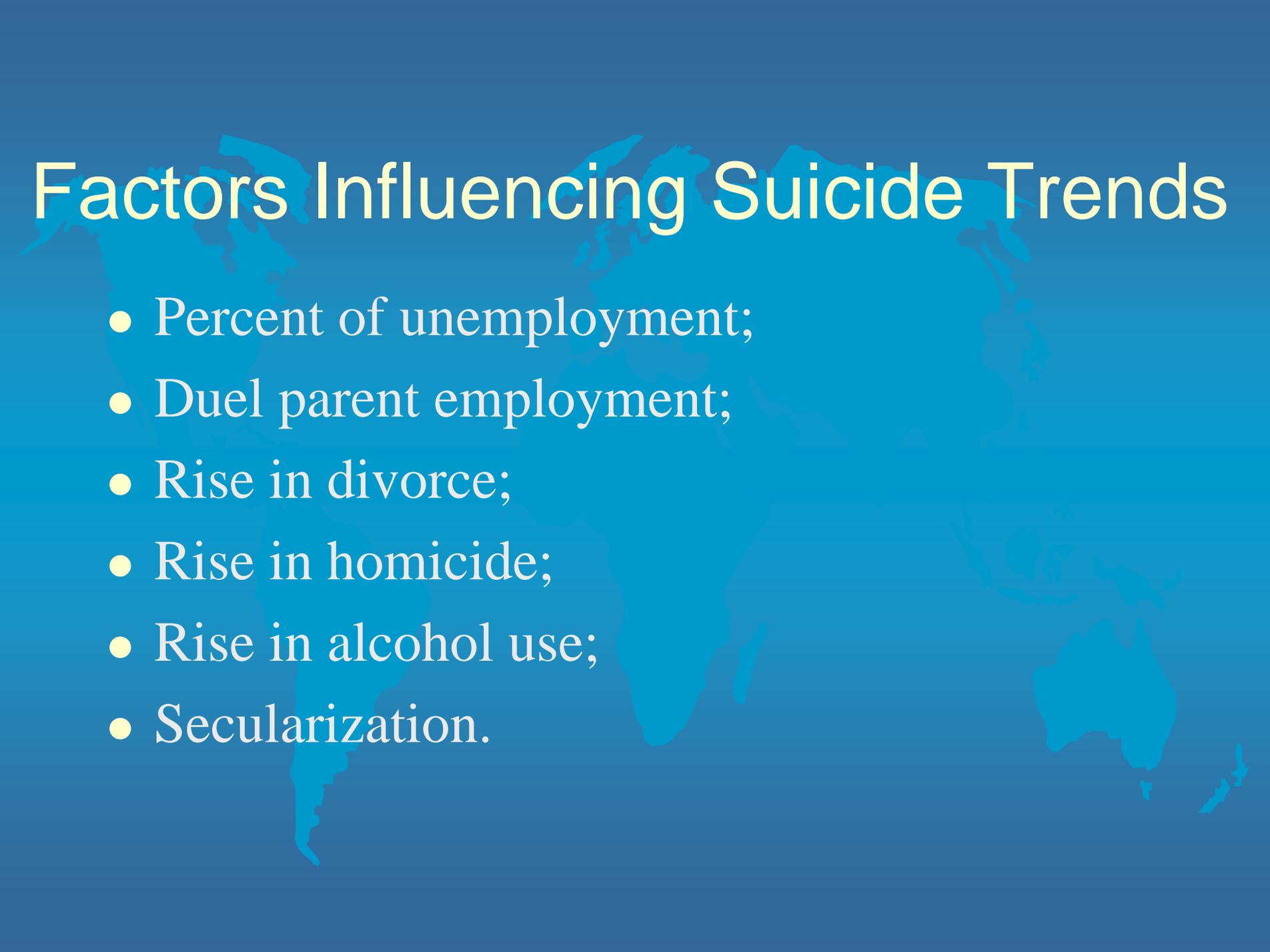
## Highest Rates

- Northern Europe
- North America
- Pacific Basin
- Far East

## Low Rates

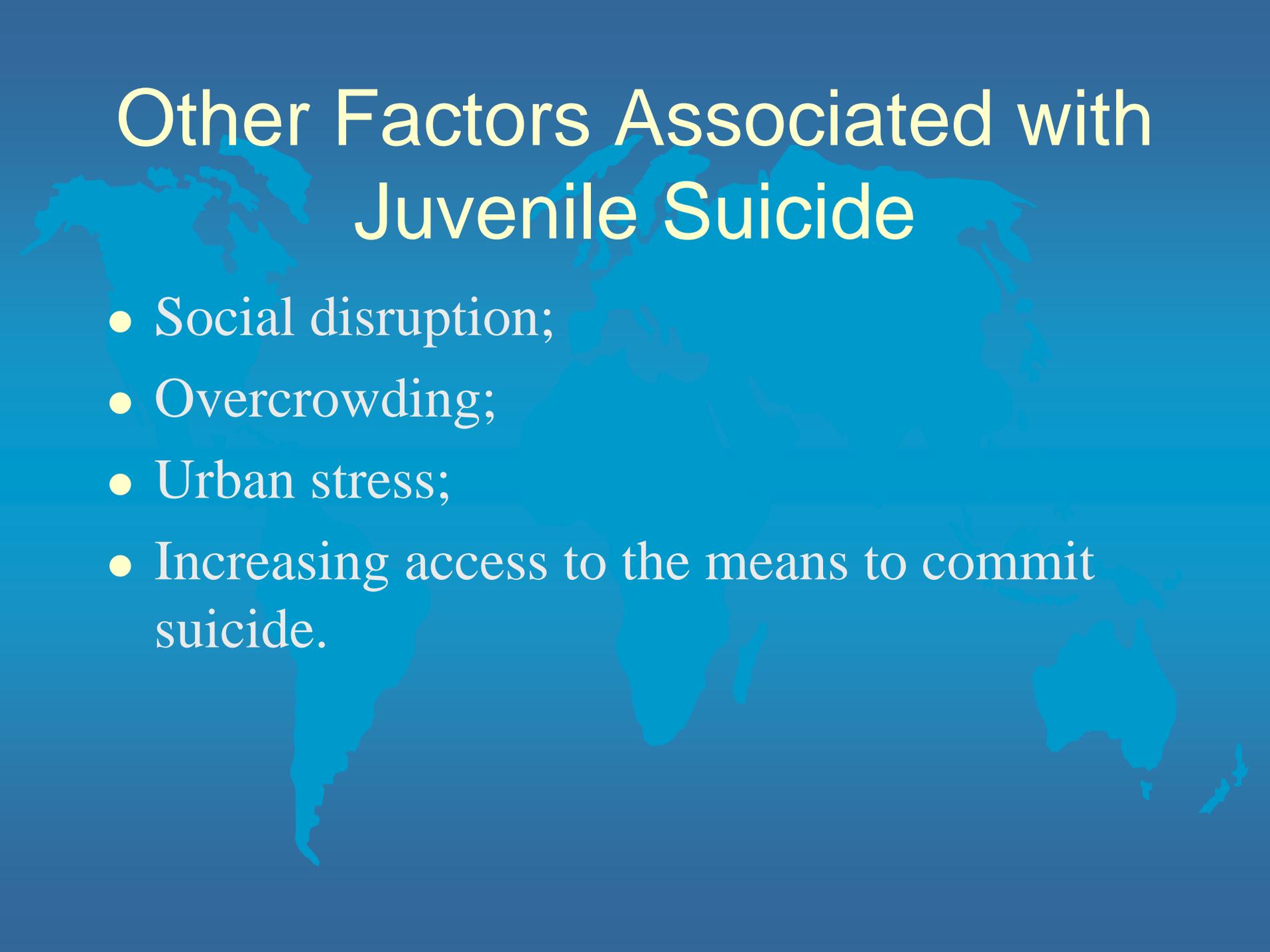
- Latin America
- Saharan Africa
- Muslim Countries
- Mediterranean Countries

# Factors Influencing Suicide Trends



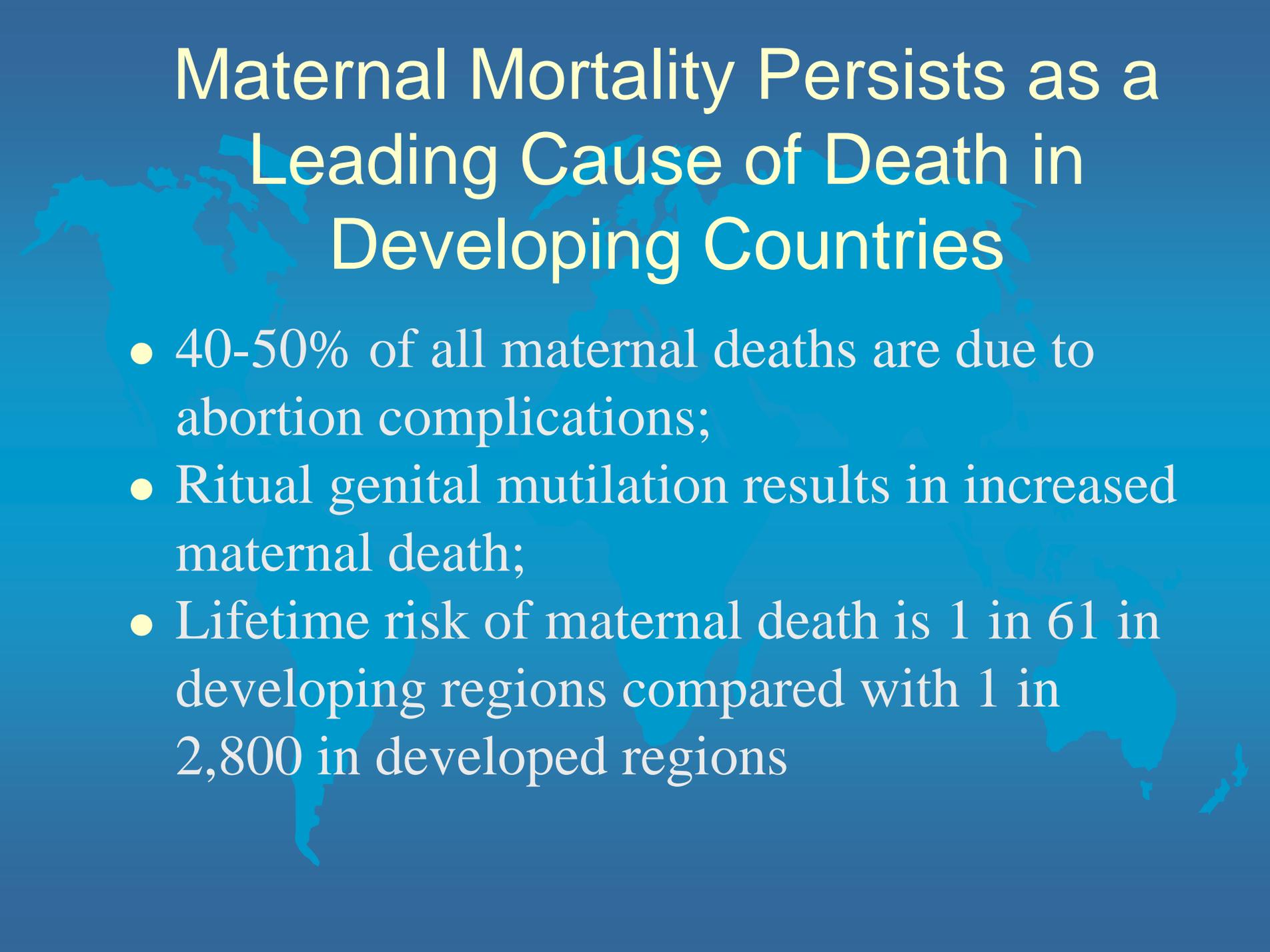
- Percent of unemployment;
- Dual parent employment;
- Rise in divorce;
- Rise in homicide;
- Rise in alcohol use;
- Secularization.

# Other Factors Associated with Juvenile Suicide



- Social disruption;
- Overcrowding;
- Urban stress;
- Increasing access to the means to commit suicide.

# Maternal Mortality Persists as a Leading Cause of Death in Developing Countries



- 40-50% of all maternal deaths are due to abortion complications;
- Ritual genital mutilation results in increased maternal death;
- Lifetime risk of maternal death is 1 in 61 in developing regions compared with 1 in 2,800 in developed regions

# Homicide is an increasing concern in many countries



- Most violent region in the world is the Americas: a third of the homicides are among adolescents aged 10-19 years;
- In Colombia, homicide accounts for 28% of all juvenile male deaths;
- In Eastern Europe and New Independent States homicide accounts for 850% excess mortality (compared with industrialized Europe).

# Morbidity Trends: A Convergence of Concerns

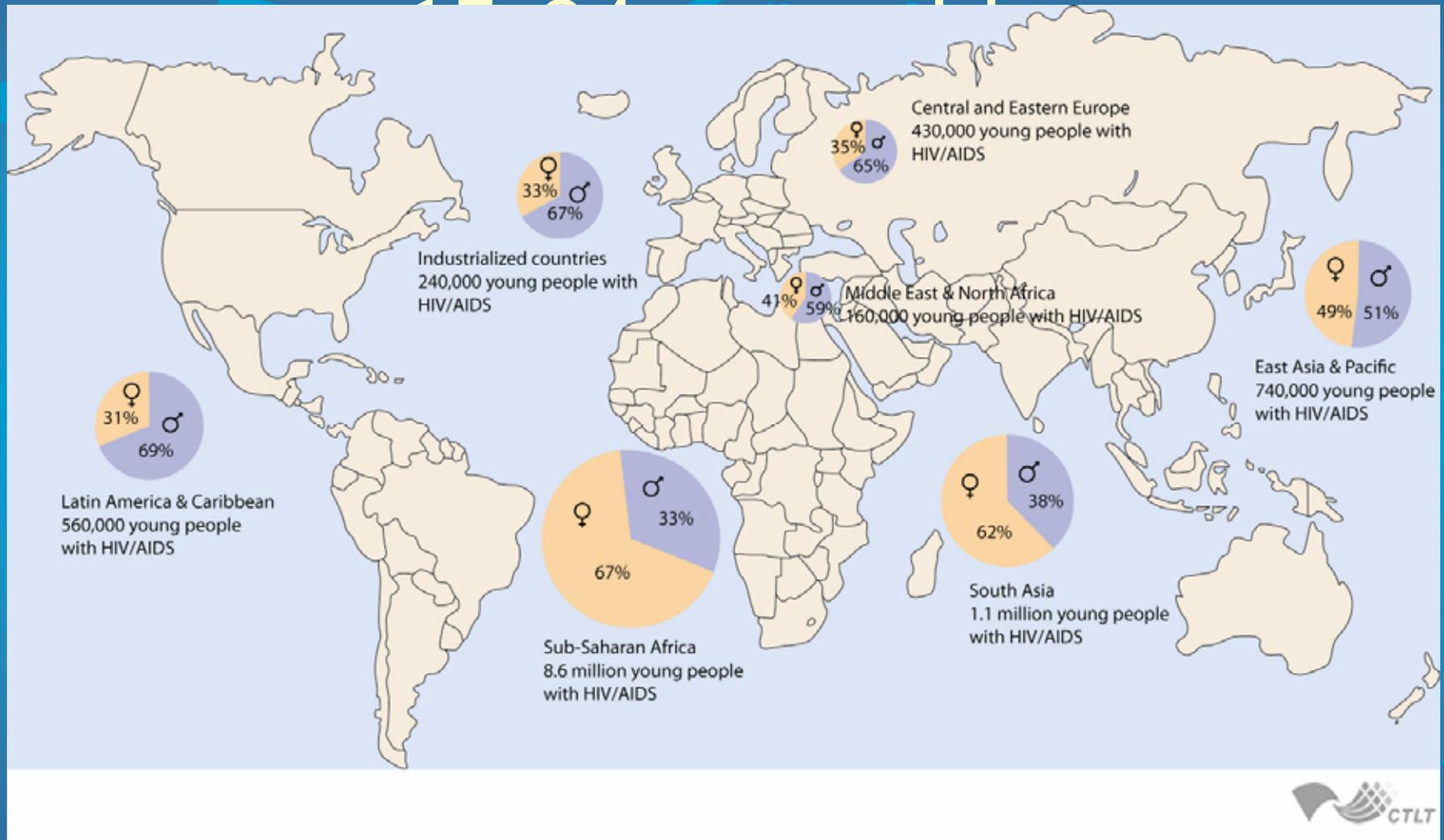


# HIV Sero-Positivity



- 12 million young people HIV +;
- Prevalence is as high as 37% of adolescent females in Botswana and Zimbabwe;
- There is vast gender and regional variations.

# HIV/AIDS Prevalence among



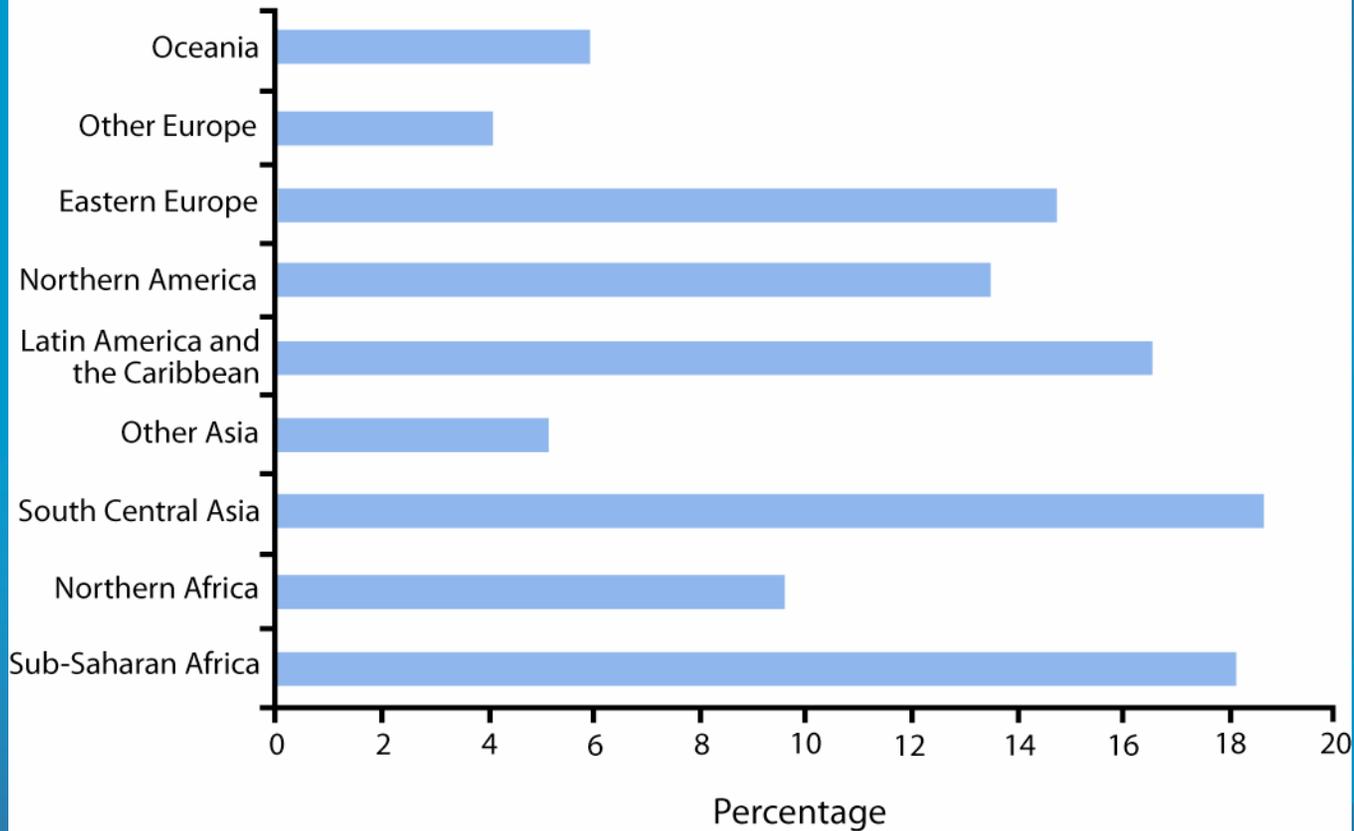
# The Age of First Sex is Declining in Many Countries

- However, early sexual initiation is particularly variable, largely due to differences in age of marriage:
  - By age 18, more than 40% of young women report having had sex in Latin America and the Caribbean; close to 60% in sub-Saharan Africa, and about 20 percent in the former Soviet Union

# Many Teens Become Pregnant before Marriage

- Among young women about to be married in Shanghai 40% have been pregnant;
- Of the 15 million young women ages 15 to 19 who give birth each year, 13 million live in developing countries (PRB, 2000)
- Thirty-three percent of women in developing countries give birth before the age of 20, ranging from a low of 8 percent in East Asia to 55 percent in West Africa (PRB, 2000)

### Percentage of All Births to Women Under Age 20 by Region/Subregion



# Abortion World-wide

- Nearly half of all abortions are clandestine;
- Unmarried young women are considerably more likely to resort to clandestine abortions and unskilled providers
- Risks of illegal abortion: sepsis, hemorrhage, cervical laceration, uterine perforation, toxic reaction to drugs used.

# Contraceptive Use

- In the last five years, DHS data show that more than 9 in 10 women ages 15-24 years know at least one contraceptive method (ORC Macro, 2004)
- Highest levels of contraceptive use are among unmarried sexually active women between 20-24 years;
- Levels of contraceptive use are still quite low among younger females; world regional averages range from 4 to 10 percent of 15-19 year olds.

# Adolescent Risk-Taking: Contraceptive Use



Percent of single  
sexually active 15-19  
year old females using  
*modern* contraception  
at last sex

## <11%

|            |       |
|------------|-------|
| Mozambique | 5.0%  |
| Malawi     | 7.0%  |
| Niger      | 8.0%  |
| Madagascar | 6.0%  |
| Haiti      | 10.0% |

## 11- 20%

|               |       |
|---------------|-------|
| Tanzania      | 12.0% |
| Liberia       | 12.0% |
| Nigeria       | 13.0% |
| Zambia        | 13.0% |
| Paraguay      | 13.0% |
| Burkina Faso  | 14.0% |
| Mali          | 16.0% |
| Côte d'Ivoire | 16.0% |
| Cameroon      | 20.0% |
| Kenya         | 20.0% |

## 21- 40%

|            |       |
|------------|-------|
| Ghana      | 23.0% |
| Togo       | 25.0% |
| Peru       | 33.0% |
| Zimbabwe   | 34.0% |
| Botswana   | 35.0% |
| Costa Rica | 38.0% |

## 40% +

|             |       |
|-------------|-------|
| D. Republic | 42.0% |
| Brazil      | 61.0% |

Note: many countries lack data for single youth

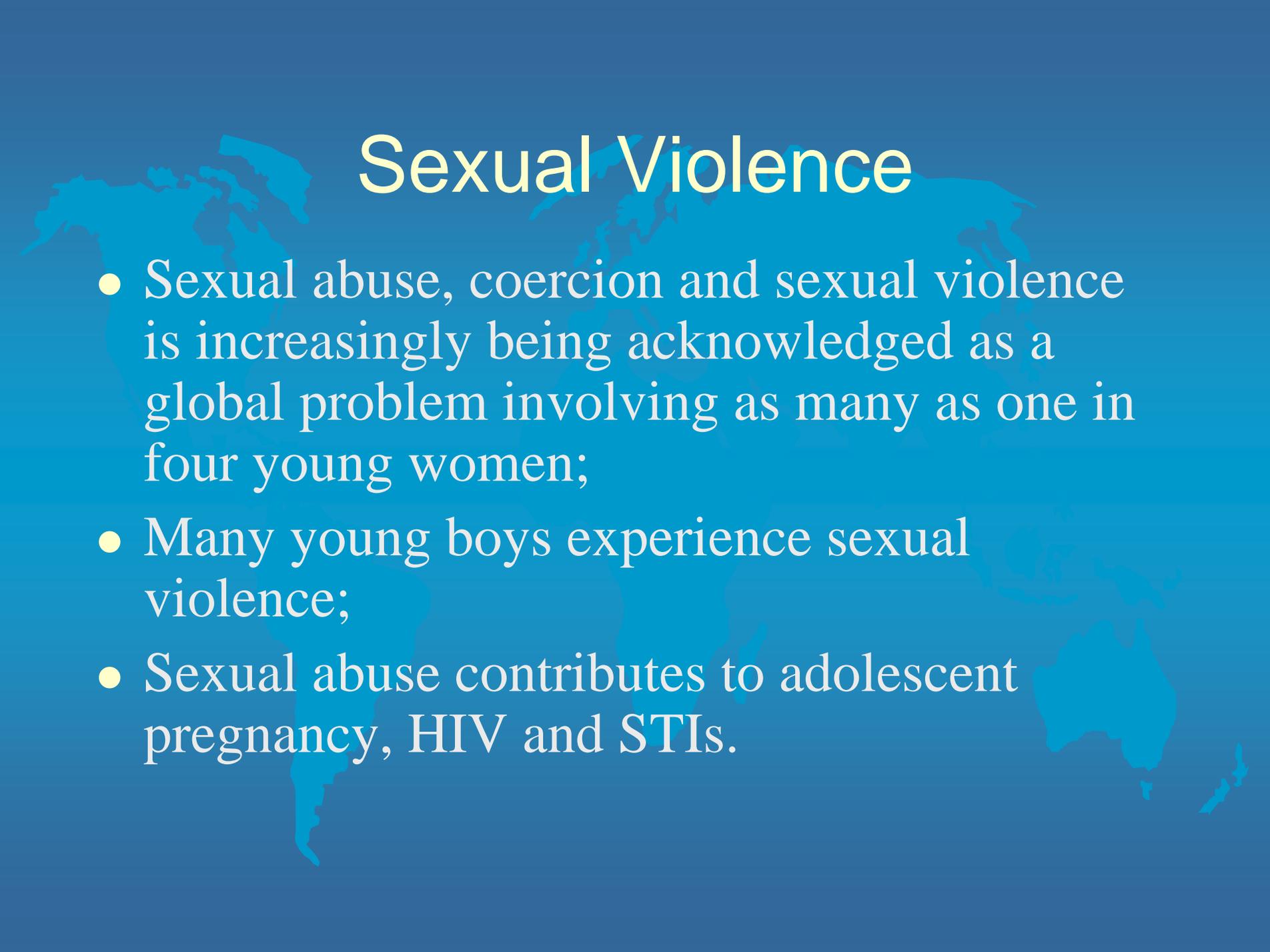
(source: PRB, *The World's Youth, 2000*)

# Barriers to Contraception



- Cost of oral contraception;
- Ineffective barrier contraception;
- Laws prohibiting contraception among unmarried women or adolescents;
- Lack of availability.

# Sexual Violence



- Sexual abuse, coercion and sexual violence is increasingly being acknowledged as a global problem involving as many as one in four young women;
- Many young boys experience sexual violence;
- Sexual abuse contributes to adolescent pregnancy, HIV and STIs.

# Alcohol rates continue to rise among youth in many countries



- In Latin America adolescent use has increased 400% over the past 25 years;
- 47% of 11th graders in Australia drink at least weekly.
- Overall, rates of alcohol use among young people tend to be lower in developing countries than developed countries

# Tobacco use persists as a major health problem among adolescents

- Across developing country surveys, 15 percent of male students and seven percent of female students are currently smoking (GYTS, 2002);
- 43% of 18-year-olds in France are regular smokers;
- For 15-19 year olds in Chile it is 28%;
- China remains the largest tobacco producer in the world.

# Developing Interventions that Work



# Reducing any Risk Factor Improves the Outcome for Teens

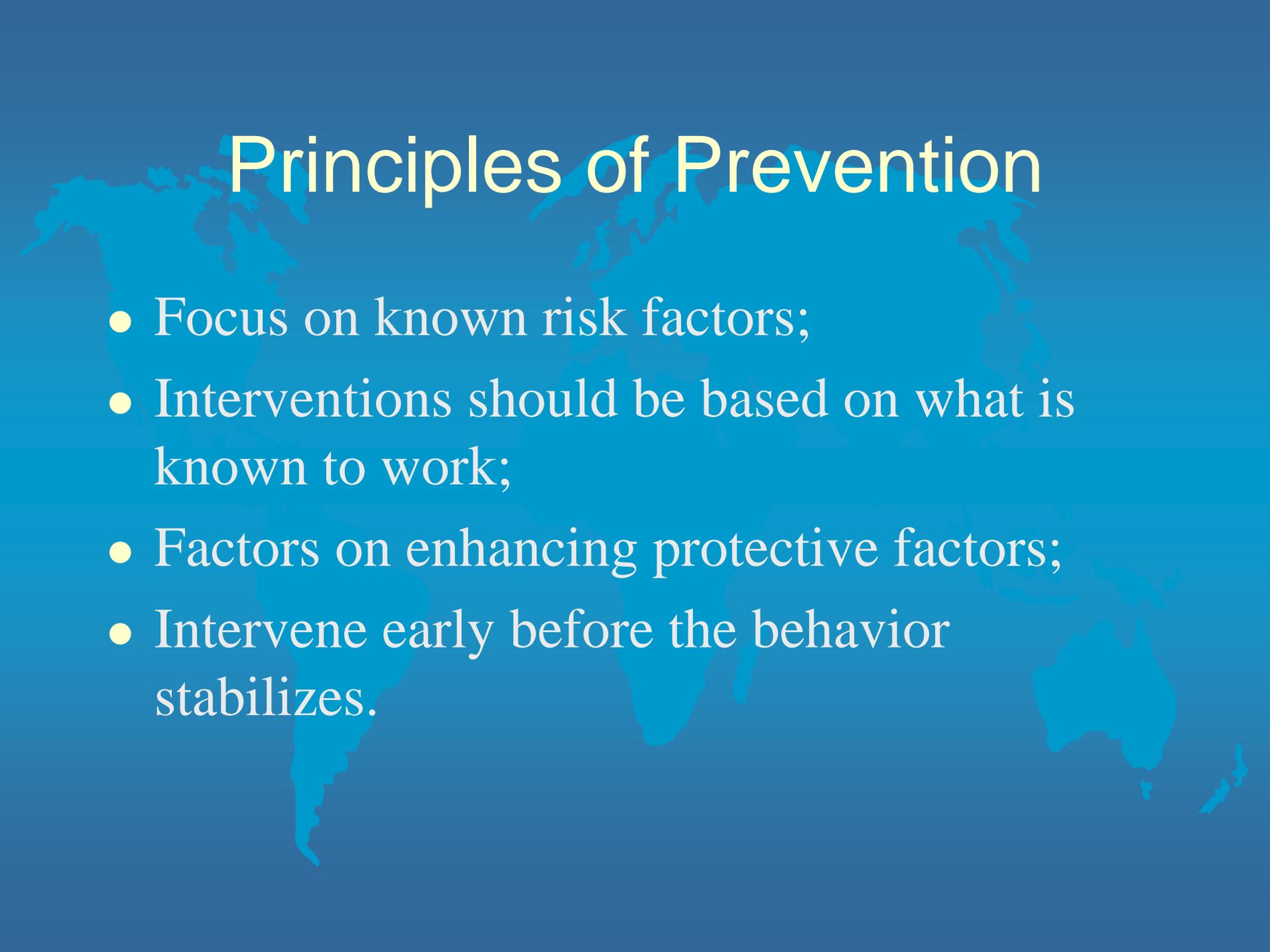
- There is no discrete risk factors for discrete problems;
- The most promising approaches are to strengthen families, provide educational enrichment and economic opportunities.





Optimally, interventions are  
multisystem: individual,  
family, school and community.

# Principles of Prevention



- Focus on known risk factors;
- Interventions should be based on what is known to work;
- Factors on enhancing protective factors;
- Intervene early before the behavior stabilizes.