



Community Medicine

Summary

Slide # 9

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&

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Injury and Violence

Injury Definition

- Is the unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy or from the absence of such essentials as heat and oxygen.

Two types of injuries:

1. *Unintentional injuries*

*Judged to have occurred without anyone intending that harm be done

Examples: injuries resulting from car crashes, falls, drowning, and fires

2. *Intentional Injuries*

*Judged to have been purposely inflicted either by self or another person

Examples: assaults, intentional shootings and stabbing, homicides and suicides.

Some Important numbers about injuries:

- Everyday violence and injuries kills **14000** people
- Globally **5 million** people die each year as a result of injuries
- Injuries account for **9%** of the world's deaths nearly **1.7 times** the number of deaths that result from 1. HIV/AIDs, 2. Tuberculosis, and 3. Malaria, combined.
- Globally of injury-related death:
 - 24%** → due to road traffic crashes
 - 16%** → due to suicide
 - 14%** → due to falls
 - 10%** → due to homicide
 - 7%** → due to drowning
 - 2%** → due to wars and conflict

Question: what are the forms of injuries?

Answer: 1. Suicide 2. Homicide 3. Car crashes 4. Falls and burns 5. Poisonings 6. Drowning etc....

General Model for injury control:

| Monitor | Identify | Intervene | Evaluate |
|-----------|--------------|-----------|----------|
| Incidence | Risk Factors | | |
| Identify | Social | | |
| Morbidity | Genetic | | |
| Mortality | Environment | | |
| Costs | | | |

- ❖ What is the difference between incidence and prevalence?

Incidence → number of new cases in a specific time (for example: number of the newly cases of breast cancer in 2014)

Prevalence → number of cases of Breast Cancer (for example: in 2014 that include the new cases that occurred in 2014 in addition to the cases that occurred before 2014.

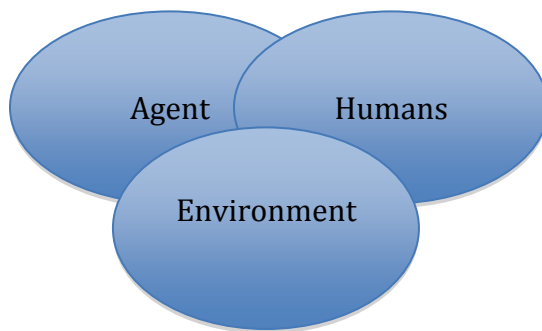
Epidemiological Model

1. Host → Humans

2. Agent → Virus or Energy vehicles

3. Environmental → Physical, social

1. So in any area there are many agent that causes damage injure to humans (for example → virus, bacteria, or vehicle or any agent that causes injury to humans)
2. Also there are some environmental causes that may result in injury to humans. (For example)
 - Countries allow people to **drink** drive while drinking
 - Rainy weather could aid in car crash.
3. Human also can damage himself by drinking alcohol during driving.



Haddon Phase- Factor Matrix

→ It is a method to study an accident and underlying the causes that led to that accident dividing them to per-event/ event/ post event causes

Haddon Phase-Factor Matrix

Motor vehicle crash

| Phase | Host (Human) | Vector (Vehicle) | Physical Environment | Cultural Environment |
|------------|-----------------------------------|--|---|---|
| Pre-Event | Alcohol Experience Judgment | Brake status Tires | Nigh, Rain Icy road | Acceptance of Drinking and Driving |
| Event | No seat belt | No air bag | Tree too close to road, No guard rail | Speed limits Enforcement of seat belt |
| Post-Event | Physical condition | Fuel system integrity Cell Phone | Distance of emergency response | Support for Trauma systems, |

Risk analysis → steps that required when an accident is frequently occurring → for example: car accident crashes

Risk analysis includes:

Risk assessment

- Hazard identification
- Hazard characterization
- Exposure Assessment
- Risk characterization

Risk Management

- Risk evaluation
- Option Assessment
- Option Implementation
- Monitoring and review

Risk Communication

*****Injury Control Strategies *****

1. Preventing creation of the agent:

*Stop production of the agent before it can present a hazard

*Examples: 1. Highly toxic pesticides 2. Fireworks

2. Reducing the amount of the agent:

*Identifying a hazard and reducing its presence in an environment

*Examples: Reduce speed limits

3. Preventing release of the agent:

*Reduce exposure by deterring it from entering the environment

*Examples: 1. Ban very speedy cars 2. Make bathtubs less slippery

4. Modify the rate or distribution of the agent:

*Altering the mechanism by which energy is transferred to the host

*Examples: 1. Adjust the design 2. Require automobile seatbelts and airbags 3.

Require soft playground surfaces

5. Separating the host and agent in time and space:

*Eliminating contact between energy source and host

*Examples:

- Install pedestrian sidewalks
- Reroute high speed traffic around residential neighborhoods or slow it with speed bumps and roundabouts
- Spray pesticides at a time of day when people aren't around
- Use red light cameras

6. Separating the agent from a susceptible host by interposition of a material barrier:

*Examples:

- Install fences around pools
- Install cover guards on dangerous machinery
- Install proper guardrails
- Store handguns in a locked metal box
- Use extension cords with good insulation

7. Modifying relevant qualities of the agent:

*Examples:

- Make crib slat spacing too narrow to strangle a child
- Modify equipment by rounding sharp corners

8. Place a barrier between the hazard and the potential victim:

*Examples: Child-resistant caps on baby Aspirin

9. Strengthening the susceptible host

* Examples: Improve physical condition through proper nutrition and regular exercise.

10. Countering the injury already caused by the agent:

*Examples: Provide emergency medical care

11. Stabilizing, repairing, and rehabilitating the injured host:

*Examples: Provide of appropriate acute care and rehabilitation facilities and make them available all over the country

Proven injury prevention interventions:

- Car safety belt
- Air Bags
- Motorcycle Helmets
- Bicycle helmets
- Child resistant packaging
- Swimming pool fencing
- Smoke detectors
- Self extinguishing cigarettes

Mantra of injury prevention:

- Education
- Transformation
- Regulation
- Legislation

○ Litigation

Incidence Prevention → 5 “E’s”

1. **Epidemiology:** you can't prevent it if you don't understand it. (Data collection is key)
2. **Education:** awareness, attitudes, cultural beliefs
3. **Enforcement:** rules, life safety codes etc.
4. **Engineering:** changing the environment to make it safer
5. **Evaluation:** did the changes made in education, enforcement, and engineering have the desired outcome on incidence.

Violence

***Gender** → refers to socially constructed characteristics (which impact the health of people) of women and men such as:

1. Norms
2. Roles
3. Relationships

Gender expectations vary:

1. Between cultures
2. Change over time

Sex → biological characteristic (female/male)

Gender → mentioned above

****In addition to norms, roles, and relationships that effect health outcome of people**

Determinants of health (impact the health):

1. Income 2. Age 3. Education 4. Ethnicity 5. Sexual orientation 6. Place of residence

When these determinants intersect with gender inequality they face:

1. Discrimination
2. Health risks
3. Lack of access to resources needed for health attainment

VERY IMPORTANT NOTE: when people don't conform to established gender norms/ roles and relationships they face: 1. Stigma 2. discriminating practice 3. Social exclusion (all of which negatively impact health)

***Gender norms influence access and control the resources needed to attain optimal health including:**

- Economic → income
- Social → social networks
- Political → leadership/participation
- Information and education
- Time need to access health services

- Internal/ self confidence, self esteem

*Gender norms/roles/ relation result in difference between women and men in:

- Exposure to risk factors or vulnerability
- Household-level investment in nutrition care and education
- Access to and use of health services
- Experiences in health care setting
- In social impact of ill health

Gender Equality in health means:

That women and men across life-course and in all their diversity to have the same (Conditions & Opportunities) & to realize their full rights and potential to be healthy.

Question: one of the following is true about gender equality **Answer:** to achieve it we have to mitigate barriers

Violence against women

Includes:

1. Definition
2. Types
3. Risk factors
4. Health and consequences on women and child
5. Social and economic costs
6. Prevention and response

1. Definition: by united nations is: “any act of gender-based violence that results in or is likely to result to physical, sexual, or mental harm to women including threats of such acts, coercion, or arbitrary deprivation of liberty whether occurring in public or in private life.

2. Two types

- a. **Intimate partner:** refers to the behavior by intimate partner or ex-partner that cause physical, sexual, or psychological harm including physical aggression, sexual coercion, psychological abuse and controlling behaviors
- b. **Sexual violence:** any sexual act, to obtain a sexual act or act against a person's sexuality with coercion, regardless of their relationship to the victim (rape)

****Some important information and numbers against women****

1. Violence against women particularly intimate partner and sexual violence are major public health problems
2. **35%** of women worldwide have experienced either physical/sexual intimate partner violence/sexual violence in their lifetime.
3. Most of this violence is intimate partner violence about **30%** of women worldwide have faced this kind of violence.

4. 38% of murders of women are committed by intimate partner.
5. These kinds of violence negatively affect women's physical/mental/sexual and reproductive health.
6. Also increase their vulnerability to HIV
7. 42% of women who experience intimate partner violence reporting an injury as a consequence of this violence.

3. Risk factors: associated with intimate partner and sexual violence occur at the level of 1. Individuality 2. Family 3. Community 4. Society. These factors associated with being perpetrator of violence and some associated with experiencing violence or some associated with both.

****Risk factors for both intimate partner and sexual violence include:**

1. Lower levels of education:
 - Perpetration of violence
 - Experience of sexual violence
2. Exposure to child maltreatment
 - Perpetration and experience
3. Witnessing family violence
 - Perpetration and experience
4. Harmful use of alcohol
 - Perpetration and experience
5. Attitudes that are accepting violence and gender
 - Inequality – perpetration and experience
6. Antisocial personality disorder
 - Perpetration only
7. Having multiple partners or suspected by their partners of infidelity
 - Perpetration only

Factors specifically associated with intimate partner violence

1. Past history of violence
2. Marital discord and dissatisfaction
3. Difficulties in communicating between partners

Factors specifically associated with sexual violence:

1. Beliefs in family honor and sexual purity
2. Ideologies of male sexual entitlement
3. Weak legal sanctions for sexual violence
4. The unequal position of women relative to men

4. Health consequences: for women/children & social/economic costs

- a. For women
 1. Physical/mental/sexual/reproductive health problems and health problems for their children
 2. Homicide or suicide

3. Injury for women who faced intimate partner violence (42%) --> of women who experienced intimate partner violence have injured because of this violence
4. Unintended pregnancies which induce abortions, gynecological problems
5. Infections diseases specially sexual transmitted infections (HIV)
6. Women who had been physically or sexually abused were 1.5 times more likely to have HIV then women who has not experienced this
7. They are also twice as likely to have an abortion
8. The consequences in pregnancy also increases the likelihood miscarriage, stillbirth, pre-term delivery and low birth weight babies
9. Depression/post-traumatic stress disorder, sleep difficulties, eating disorders, emotional distress, and suicide attempts.
10. Women who experienced intimate partner violence were almost twice as likely to experience depression and problem drinking.

Important note: the rate was even higher for women who had experienced non-partner sexual violence.

11. Headaches, back pain, abdominal pain, fibromyalgia, gastrointestinal disorder
 12. Sexual violence particularly during childhood can lead to smoking/drug and alcohol misuse and risky sexual behaviors in later life
 13. Associated with
 - Perpetration of violence for males
 - Being victim of violence for females
- b. Consequences on child health
1. Behavioral and emotional disturbances
 2. Increasing the perpetration or experiencing violence later in life
 3. Higher rates of infant and child mortality and morbidity (diarrheal disease, malnutrition)
- c. Social and economic cost
1. The social and economic costs of intimate partner and sexual violence are enormous and have ripple effect throughout society
 2. Women may suffer isolation, inability to work, loss of wages, lack of participation in regular activity
 3. Limited ability to care for themselves and their children

5.Prevention and response

1. Primary prevention → by combining microfinance with gender equality training
2. High income countries that school-based programmes to prevent violence
3. To achieve lasting change it needs to enforce legislation and develop policies that:
 - Promote gender equality
 - Support women
 - Move towards peaceful culture norms
 - Response from health sector

- Sensitization and education of health and other services
- Requiring multi-sectored response

****WHO action (towards the violence against women) ****

1. Building the evidence base on the size and nature of violence and supporting countries' efforts to document and measure this violence and its consequences.
2. Strengthening research and research capacity to assess interventions to address partner violence
3. Developing technical guidance that can help in addressing intimate partner and sexual violence as well as strengthening the health sector responses to such violence.
4. Disseminating information and supporting national efforts to advance women's health and rights in addition to prevent violence against women.
5. Supporting countries' to strengthen the health sector response to violence against women, including the implementation of WHO tools and guidelines.
6. Collaborating with international agencies and organizations to reduce women's violence globally.

QUESTION: one of the following is true regarding violence against women:

- A- 10% of women worldwide have experienced physical or sexual intimate partner in their lifetime
- B- WHO has intervened to prevent violence against women
- C- Risk factors that associated with women's violence include lower levels of education
- D- B+ C
- E- None of the above

ANSWER: D

Child maltreatment:

1. Definition
2. Some Important numbers and information (scope of child maltreatment)
3. Consequences of maltreatment
4. Risk factors which lead to maltreatment
5. Types of child maltreatment and the ways to prevent them

1. Definition: referred to as child abuse and neglect, includes all forms of:

- Physical abuse
- Sexual abuse
- Neglect and negligent treatment
- Exploitation, that results in harm to child health, development, or dignity

- Emotional abuse (emotional- ill treatment) – sometimes referred to as psychological abuse (emotional abuse =psychological abuse)
- 2. (A) Important numbers:
 - 20% of women being sexually abused as children
 - 5-10% of men being sexually abused as children
 - 25-50% of all children report being physically abused
 - International studies reveal that:
 - ❖ ¼ of adults report having been physically abused as children
 - ❖ 1 in 5 women and 1 in 13 men report having been sexually abused as a child
 - ❖ Every year, 41000 homicide deaths in children under 15 years old, these deaths incorrectly attributed to falls/ burns/ drowning

(B) Important general information:

- Global problem with serious life-long consequences
- In spite of recent surveys in several low- and middle- income countries, data from many countries are still lacking
- Child maltreatment is complex and difficult to study
- Current estimates depends on country, methods of research used and on:
 - ❖ The definition of child maltreatment used
 - ❖ The type of child maltreatment studied
 - ❖ The coverage an quality of official statistics
 - ❖ The coverage and quality of surveys from victims, parents
- In armed conflict and refugee settings, girls are vulnerable to
 - ❖ Sexual violence
 - ❖ Exploitation by combatants, security forces, members of their communities

3. Consequences of child maltreatment

There are two types of consequences of child maltreatment:

1. Long-life consequences which are:
 - ❖ Impaired physical and mental health
 - ❖ Poorer school performance
 - ❖ Job and relationship difficulties

*These lead to slowing in country's economic and social development

2. Normal consequence of child maltreatment:
 - ❖ Suffering to children and families
 - ❖ Disruption in early brain development
 - ❖ Impair to the development of the nervous and immune systems
 - ❖ Maltreated children are at increased risk for behavioral, physical, and mental health problems. **But how??** By: 1. Perpetrating or being victim of violence 2. Depression 3. Smoking 4. Obesity 5. High risk sexual behaviors → the dangerous one 6. Unintended pregnancy (result from previous point) 7. Via these behavioral and mental health consequences maltreatment can contribute to heart disease/ cancer/ suicide/ sexual transmitted diseases 8. Alcohol and drug misuse 9. Leads to economic

impact such as cost of hospitalization, mental health treatment, child welfare and long-term health costs.

4. Risk factors → are not present in all social and cultural contexts but provide an overview.

- ❖ Child
 - ❖ Parents or caregiver
 - ❖ Relationship
 - ❖ Community and societal factors
1. **Child** → a number of characteristics of child that may increase maltreatment
 - ❖ Being under 4 years old or an adolescent
 - ❖ Being unwanted or failing to fulfill the expectations of parents
 - ❖ Having special needs, crying persistently, or having abnormal physical features
 2. **Parent or caregiver** → characteristics lead to maltreatment
 - ❖ Not nurturing the child
 - ❖ Having been maltreated themselves as a child
 - ❖ Lacking awareness of child development or having unrealistic expectations
 - ❖ Misusing alcohol or drugs, including during pregnancy
 - ❖ Being involved in criminal activity
 - ❖ Experiencing financial difficulties
 3. **Relationship** → characteristics of relationships within families, intimate partners, friends and peers that increase the risk of maltreatment
 - ❖ Physical, developmental, mental health problems of a family member
 - ❖ Family breakdown or violence between other family members
 - ❖ Being isolated in community of lacking a support network
 - ❖ A breakdown of support in child rearing from the extended family
 4. **Community and societal factors**
 - ❖ Gender and social inequality
 - ❖ Lack of services to support families
 - ❖ High levels of unemployment or poverty
 - ❖ The availability of alcohol and drugs
 - ❖ In policies to prevent child maltreatment, child pornography, child prostitution, and child labor
 - ❖ Social and culture norms that promote, glorify violence, demand gender roles, diminish the status of the child in parent-child relationships
 - ❖ Social, economic, health and education policies that lead to poor living standards, or to socioeconomic inequality or instability

5. Types of child maltreatment

- Child maltreatment by parents and caregivers in children aged (0-14)
- By community settings among adolescent aged (15-18)

- Note: children → defined by the united nations as anyone age (0-18 years)

Type one can be prevented by:

- ❖ Reducing unintended pregnancies
- ❖ Reducing alcohol and illegal drugs during pregnancy
- ❖ Reducing alcohol and illicit drugs used by parents
- ❖ Improving access to pre- and post-natal services
- ❖ Providing home visitation services by professional nurses and social works to families where children are high risk of maltreatment
- ❖ Training and increasing awareness of parents on child-development/ non violent discipline and problem-solving skills

Type two can be prevented by:

- ❖ Preschool enrichment programmes to give young children an educational head start
- ❖ Life skills training
- ❖ Assisting high risk adolescent to complete schooling
- ❖ Reducing alcohol availability through enactment and enforcement of Liquor Licensing laws, taxation, and pricing
- ❖ Restricting access to firearms