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# **Intentional Injuries and Violence**

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# Lecture Topics

- ◆ Describing and quantifying other injuries not covered in previous classes
- ◆ Describe in more detail the issues related to intentional injuries



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## Section A

*Describing and Quantifying “Other”  
Injuries*

# Injuries

- ◆ Throughout the course, we have presented and discussed cases of:
  - Traffic injuries, occupational injuries, home and recreational injuries, etc . . .
- ◆ But along with the above, there are still other cases that are rarely thought of or presented in the context of injuries

# Disasters

- ◆ “Any disruption of human ecology that exceeds the capacity of the community to function normally”
  - Natural: Earthquakes, floods, cyclones, typhoons, hurricanes
  - Man-made: Explosions, radiation, chemical toxins
  - Both (e.g., earthquake in area with poor construction)

# Others:

- ◆ Late effects
- ◆ Medical errors
- ◆ Violence and abuse



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## Section B

*Describing and Quantifying  
Intentional Injuries*

# Intentional Injury

- ◆ “Injury resulting from interpersonal or self-inflicted violence”
- ◆ “It includes homicide, assault, suicide and suicide attempt, sexual assault, and violence among family members and intimate partners”

*Source: National Committee for Injury Prevention and Control. Injury Prevention: Meeting the Challenge. Supplement to the American Journal of Preventive Medicine, Oxford University Press: Volume 5, Number 3, 1989*

*Continued*

# Intentional Injury

- ◆ Many persons working in the injury field use the term "violence" instead of intentional injury
- ◆ What warrants discussion is whether "intentional injury" means that the intent was to injure or simply that the intent was to commit a particular behavior that then resulted in an injury

*Source: National Committee for Injury Prevention and Control. Injury Prevention: Meeting the Challenge. Supplement to the American Journal of Preventive Medicine, Oxford University Press: Volume 5, Number 3, 1989*

# Violence

- ◆ “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, mal-development, or deprivation”

# Classification of Violence

- ◆ The standard classification in the International Classification of Diseases includes the following major categories:
  - Various types of assaults, including homicide
  - Operation of war
  - Legal interventions
  - Intentional self harm
  - Injury event of undetermined intent

# Sources of Data

- ◆ Same as other injuries
  - National databases
  - Hospitals
  - Police
  - Registries
  - Newspapers

# Newspapers: Viable Source for Intentional Injuries?

- ◆ Newspaper accounts of assaults, homicides, suicides, and rapes occurring in Jefferson County, Alabama compared to similar data from government agencies between January 1991 and December 1991
- ◆ Newspaper greatly **“underreported,” suicides, rapes, and assaults**

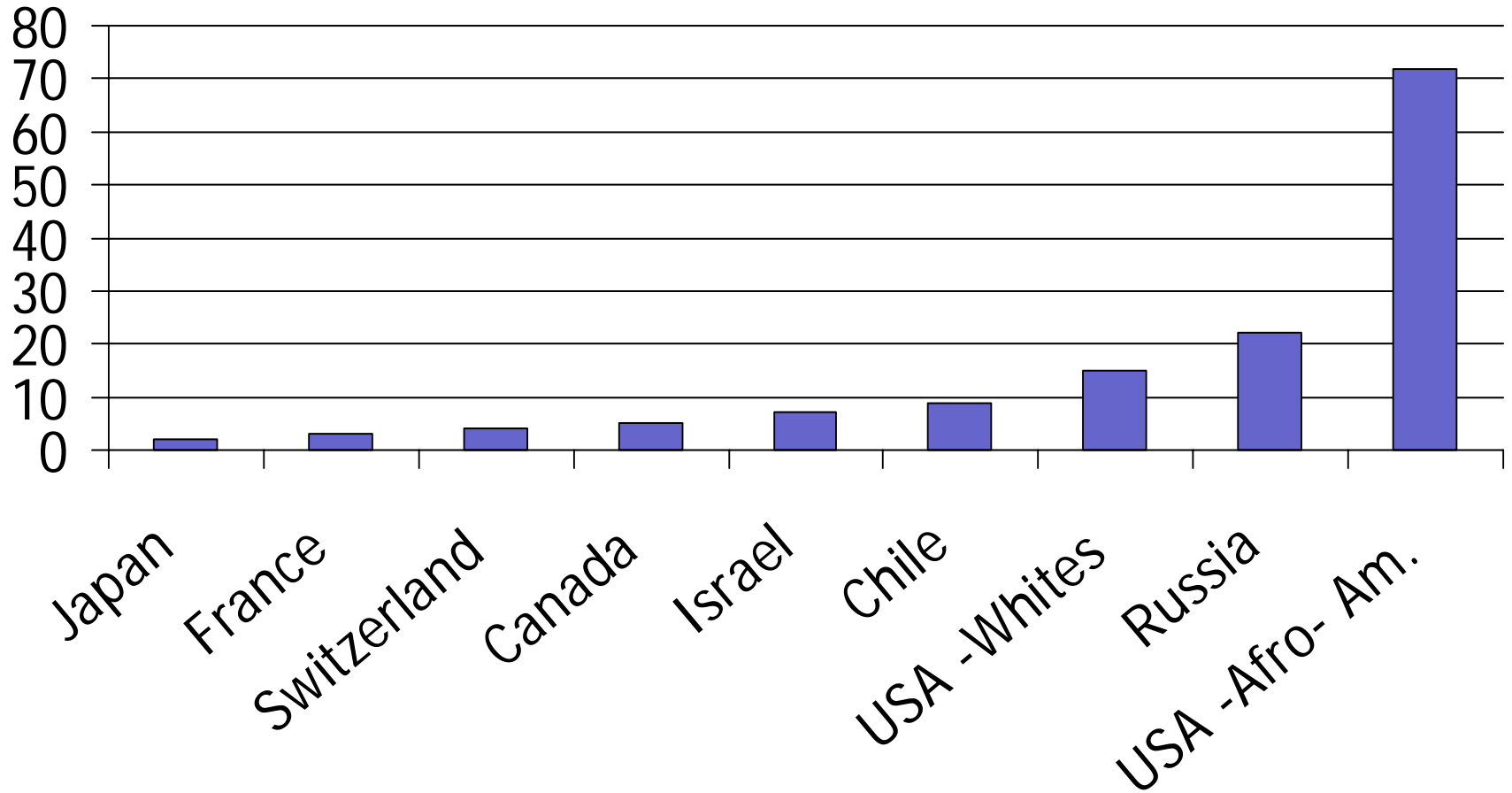
# Newspapers: Viable Source for Intentional Injuries?

- ◆ Reporting of **firearm injuries** substantially “**exceeded**” their actual occurrences
- ◆ Newspaper neither a **reliable nor valid** source for **intentional injury** surveillance

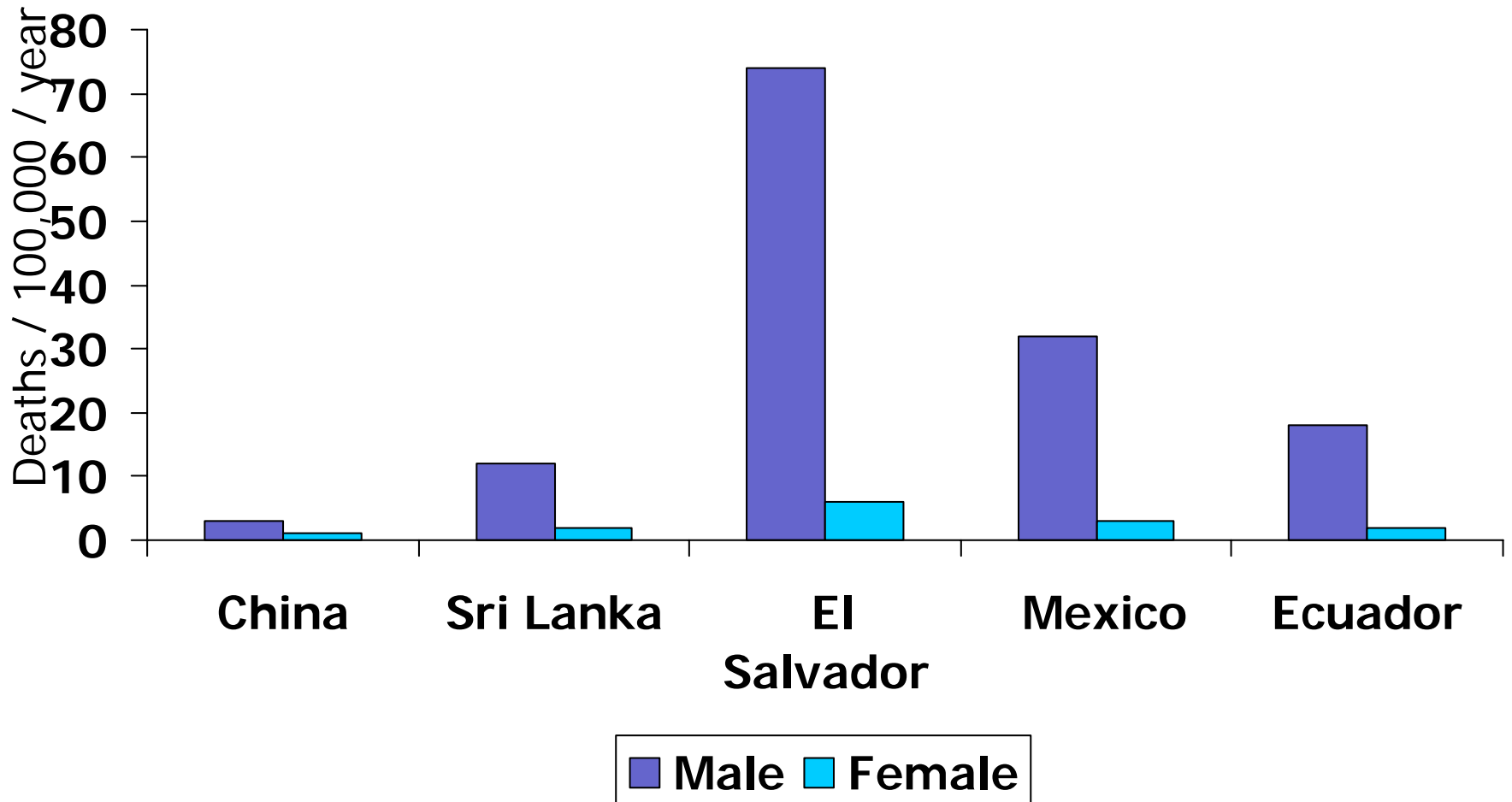
# **Homicides: The Deadly Result of Violence**

# Adjusted Male Mortality from Homicides: Selected Countries

*Rates / 100,000 pop. 1989–1991*



# Reported Rates of Homicide in Various Developing Countries



# Violence in the Americas

- ◆ In the Americas, death by violence exceeds the number of deaths for any other cause in the five to twenty-four age group (PAHO, 1990)
- ◆ In certain countries such as El Salvador, homicide and assault has been reported as the leading cause of death (Lang, 1989)

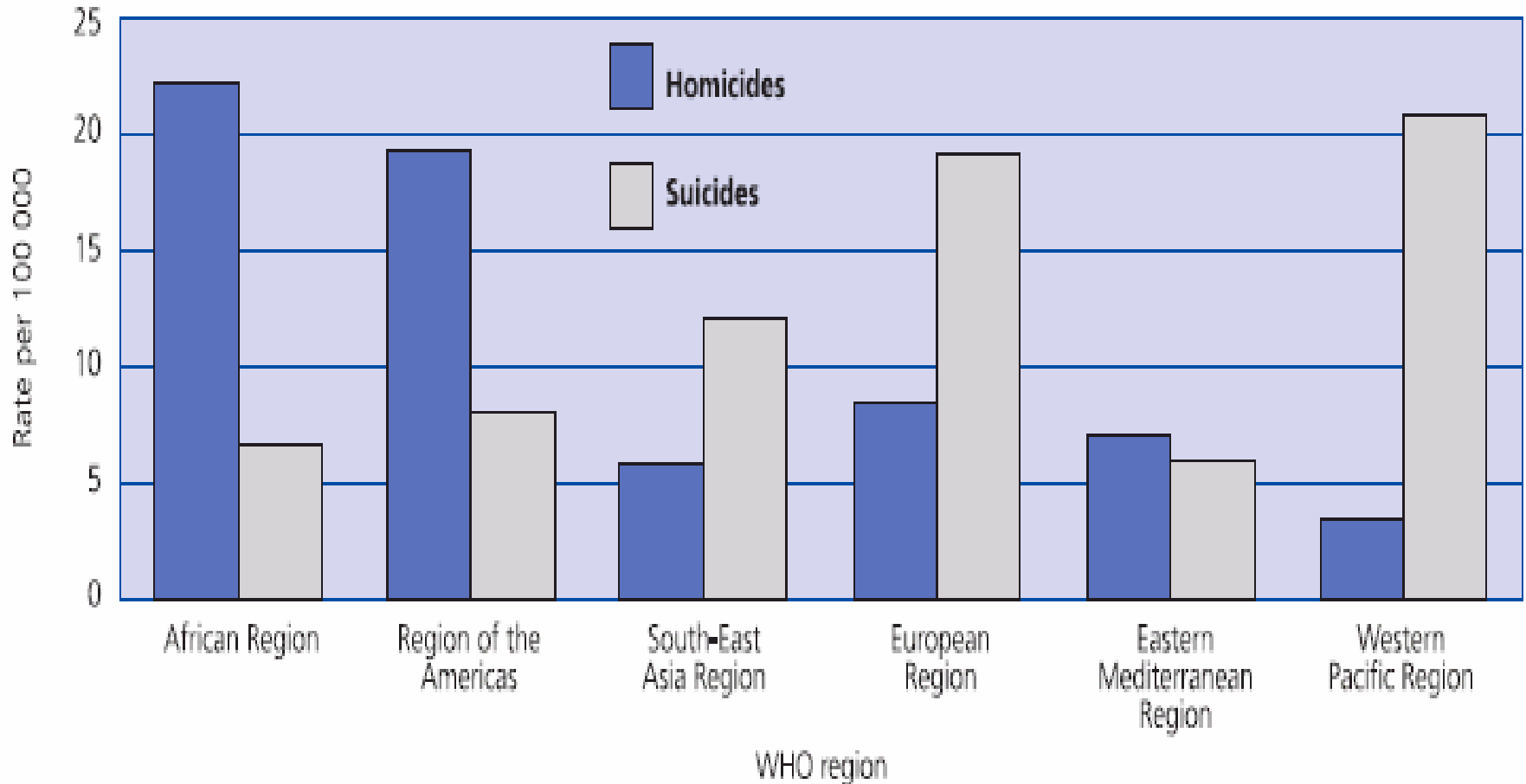
# Violence in the Americas

- ◆ Afro-Americans in the U.S. have one of the highest homicide rates in the world
- ◆ In 17 of the 27 countries that reported to the WHO during the 1980s, homicide was among the five leading causes of death (PAHO)

# Violence in Columbia

- ◆ In 1990, accidents and violence accounted for one-quarter of all deaths
- ◆ In 1995, **homicide** was the number one cause of deaths and years of potential life lost
- ◆ More than one out of every five families have lost a family member due to **homicide**

# Homicide and Suicide rates by WHO regions, 2000



- ◆ WHO, World report on violence 2002

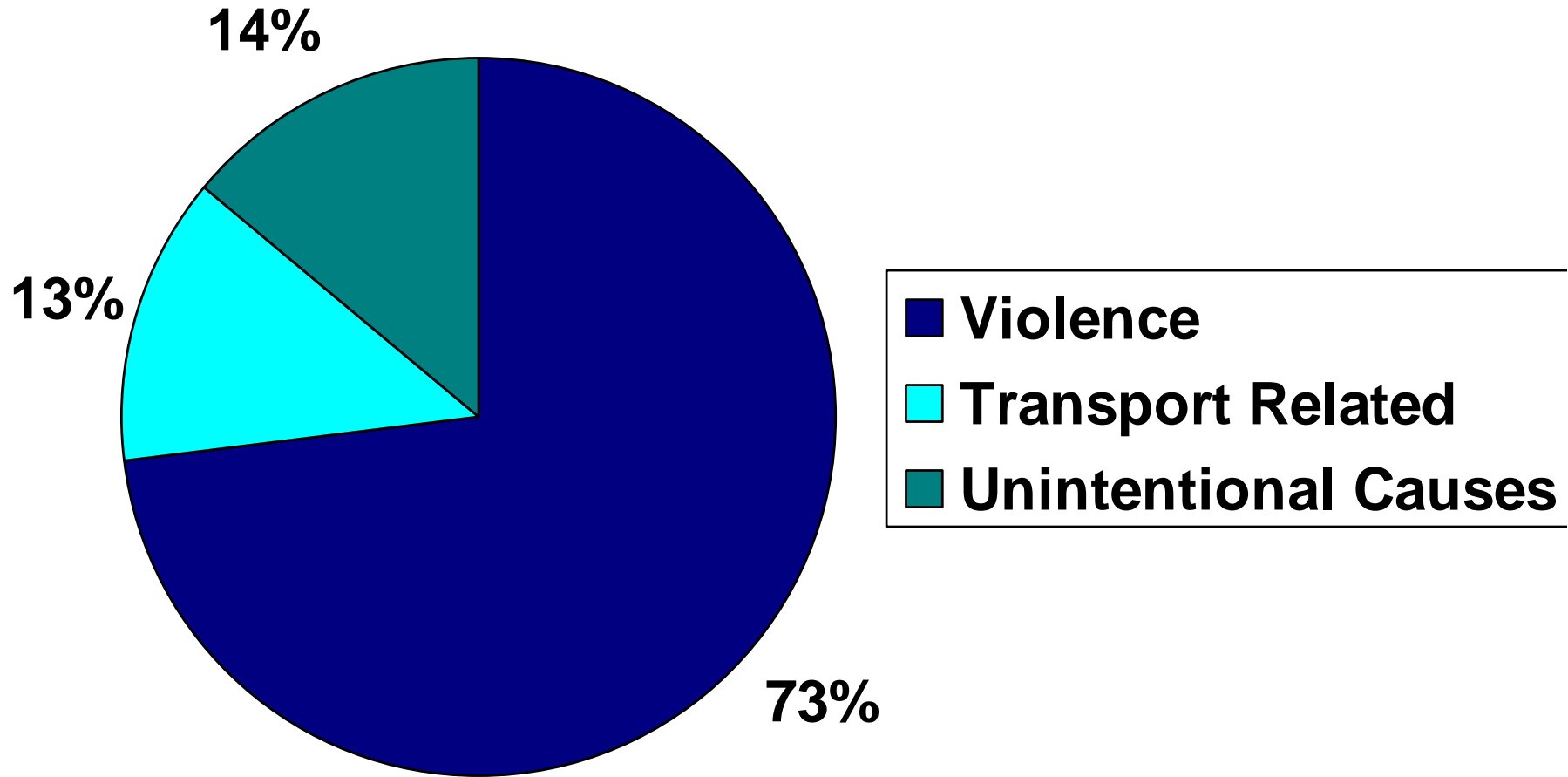
# *Violence in South Africa*

- ◆ Violence accounted for 50% of all new cases seen in hospitals in Johannesburg (Buchart, 1991)
- ◆ Preponderance of **males, colored, black,** and **aged 25–34 years** (van der Spuy, 1993)
- ◆ 10% of cases were related to organized conflicts between political groupings
- ◆ In the remaining 90%, the **motives** differed with **gender** (Buchart, 1991)

# *Violence in South Africa*

- ◆ In **males**, **20%** of the violent incidents were attributed to **attempted robberies** while the remaining **80%** were attributed to **ill defined arguments and quarrels**
- ◆ In **females**, approximately **40%** of the incidents were related to **arguments**, most frequently among intimates (Peden, 1993)
- ◆ In **Cape Town**, **60%** of violent cases were clinically judged to be **alcohol related** (Van de Spuy, 1993)

# Contribution of *Violence* in Injury Deaths in South Africa



# Characteristics of *Female* Homicide Victims in Bangladesh

- ◆ According to a survey among Bangladeshi women aged 10–50, **5.3% of all injury deaths attributed to homicide**
- ◆ Out of these homicides:
  - 87% were married
  - 96% resided in villages
  - 70% were poor or lower middle class
  - 50% were illiterate
  - 68% were aged 10-29 years

# Political Violence

- ◆ State terrorism has been a major source of violent injuries in many areas of the Middle East, Central America, Africa, and Asia (Chomsky, 1991)
- ◆ Serious underreporting of homicides from state terrorism often occur
- ◆ In Nicaragua, about 1% of persons suffer from physical disability mostly as a result of violence (Garfield, 1989)

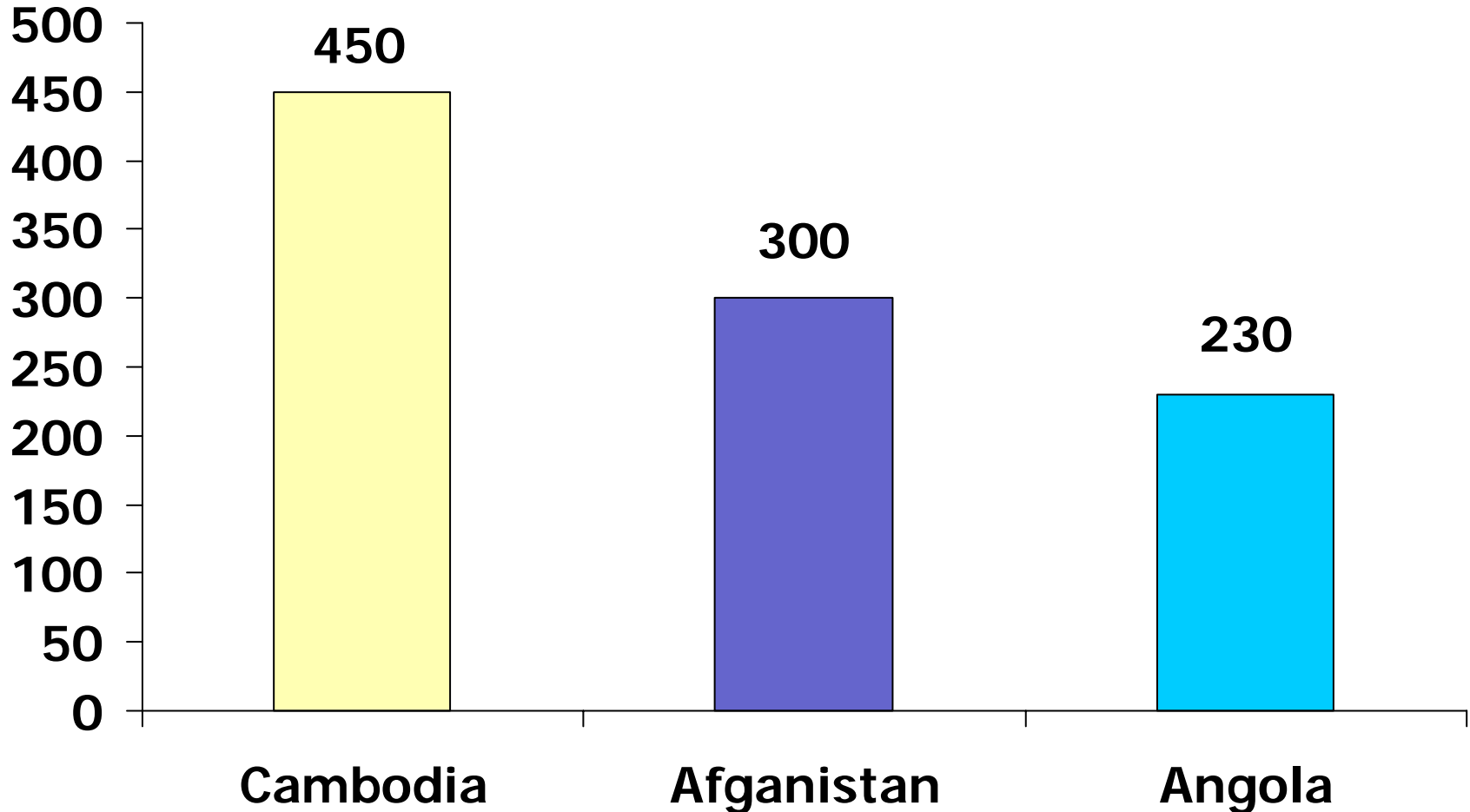


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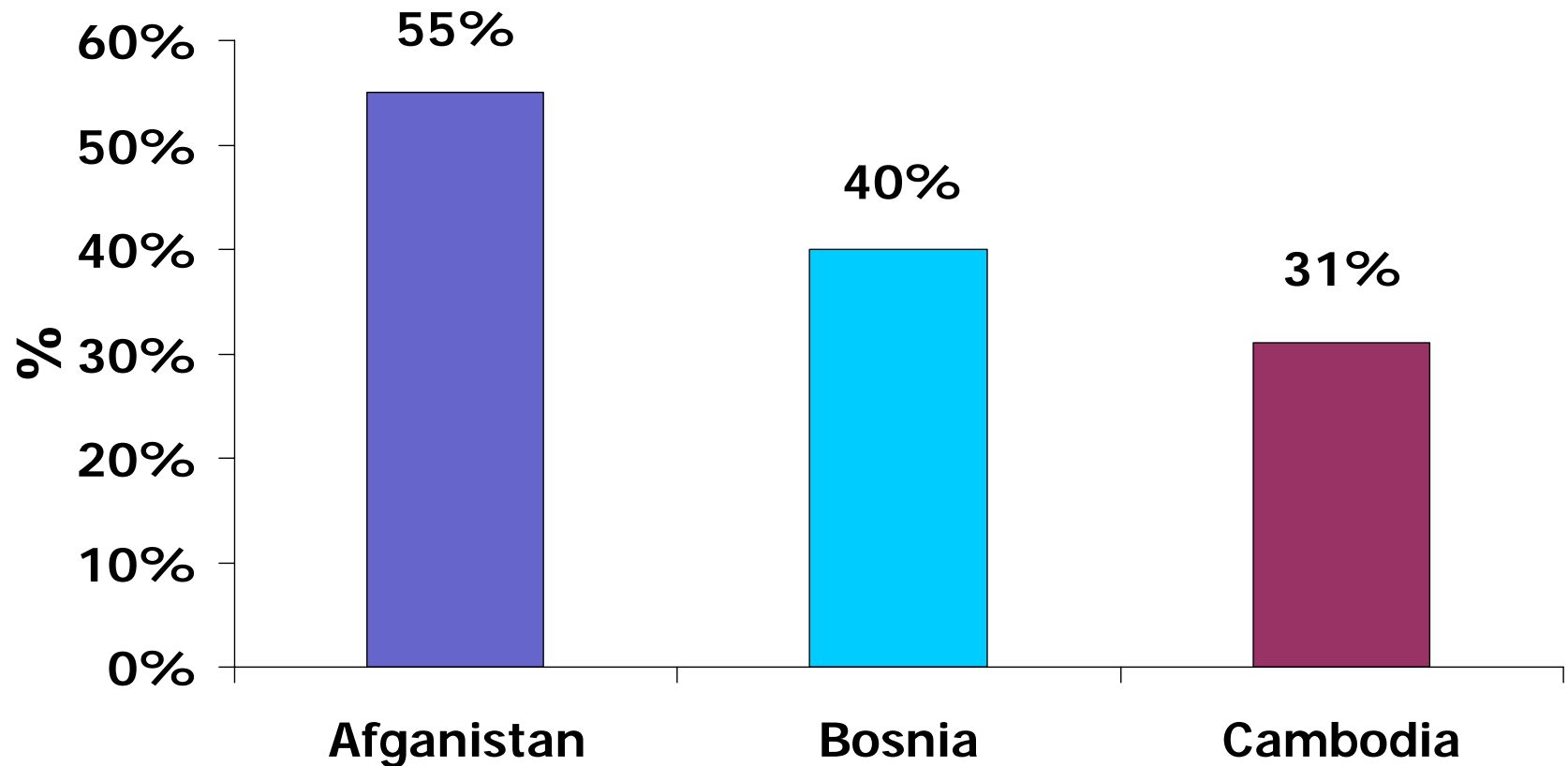
## Section C

*Landmines and Suicides*

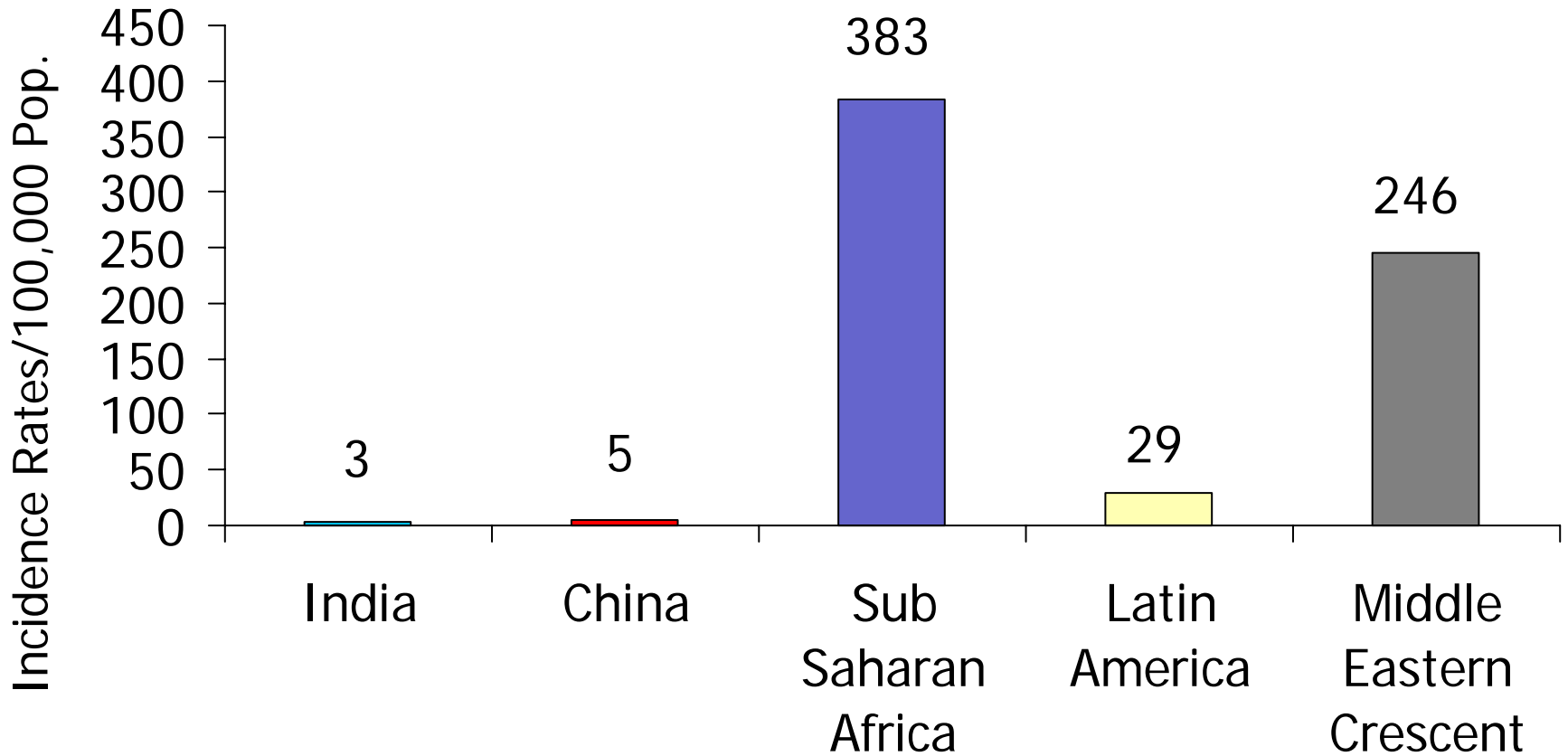
# Prevalence/100,000 Pop. of *Amputees* from Land Mines



# Percentage of Landmine Injuries Resulting in *Deaths*



# Comparison of Death Rates Due to War in Regions of the World

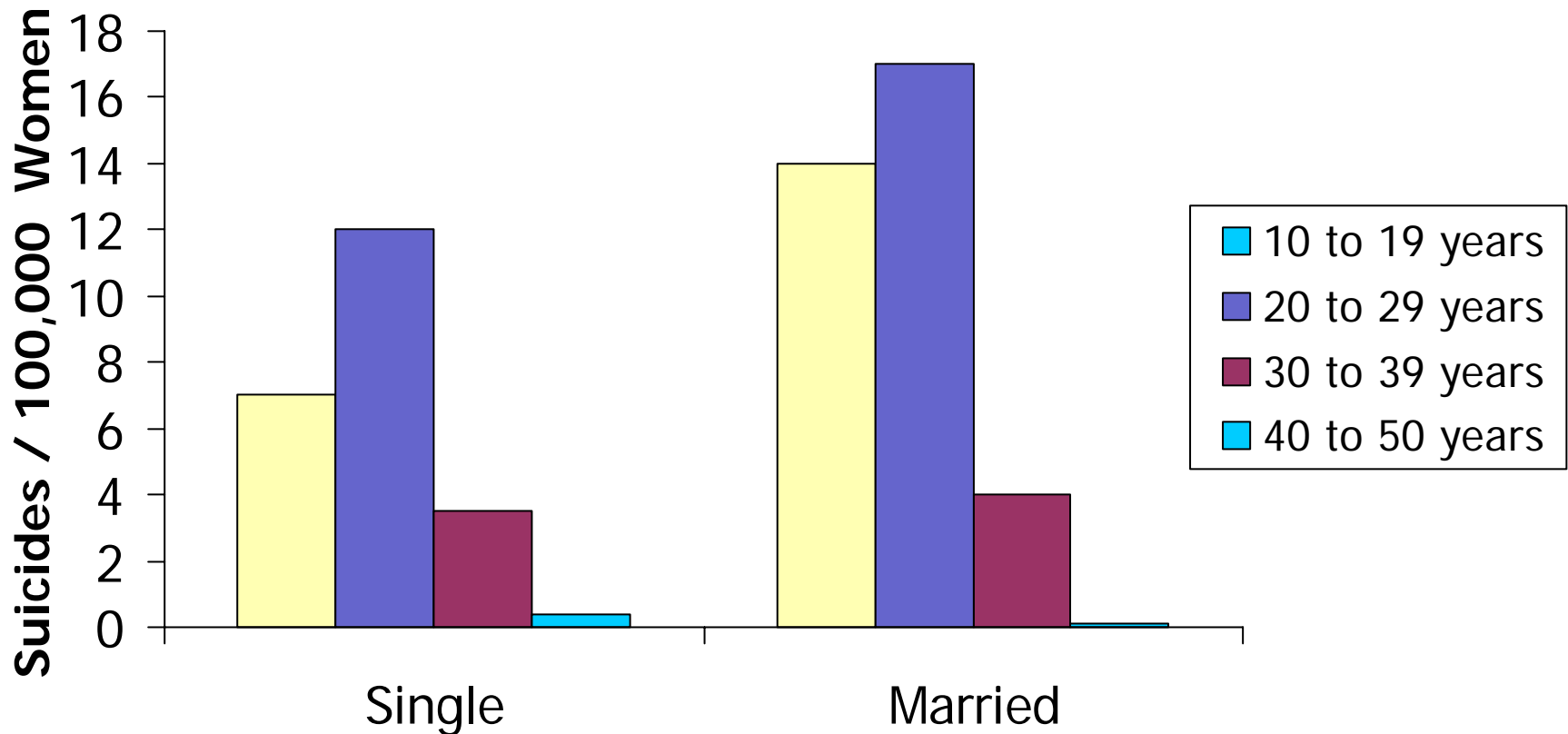


# Suicide

- ◆ “A deliberate, willful, self-inflicted, and life-threatening act resulting in death”

*Source: National Council for Suicide Prevention. Support in Suicidal Crisis, The Swedish National Programme to Develop Suicide Prevention. Modin-tryck, Stockholm, 1996*

# *Suicide Rates for Women by Age and Marital Status in Bangladesh*



# Characteristics of *Suicide* Victims in Bangladesh

- ◆ Suicide attributed to about 50% of the total deaths caused by injuries among women 10–50 years of age
  - 71% were married
  - 98% resided in the villages
  - 64% belonged to either the poor or lower middle class
  - 56% were illiterate

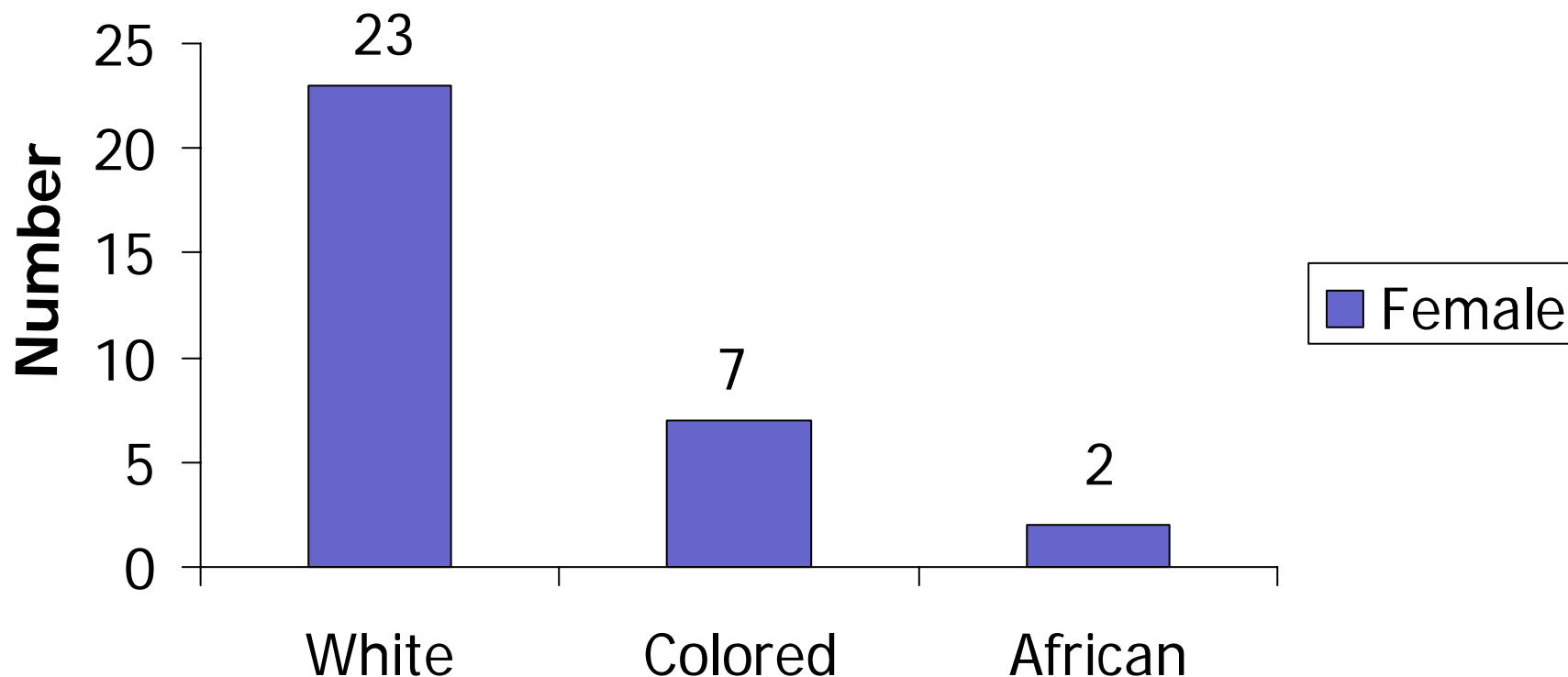
# *Suicide Attempted by Burning in Brazil*

- ◆ From 1984–1995 a total of 82 patients were admitted to a burn center in Sao Paulo with a history of attempted suicide
- ◆ **70.7% were males and 29.3% females**
- ◆ **Mortality rate was 44%**
- ◆ **Methyl alcohol was used by 87.5% of the patients to ignite the fire**

# Trends in Suicides

- ◆ In developed countries, completed suicides tend to be more common among males and attempted suicides in females (Barrs, 1997)
- ◆ This is not always the case in developing countries, where suicide rates are sometimes very high among rural females (e.g., the suicide rate in rural China among women)

# Female "Suicides" Admitted to Salt River Mortuary, South Africa, *By Race and Gender, January 1990–June 1991*





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## Section D

*Case Study on Domestic Violence  
Against Women*

# Violence Against Women

- ◆ *“Any act of gender-based violence that results in, or is likely to result in, physical, sexual, or psychological harm or suffering to women, including threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in public or private life”*

# Introduction

- ◆ Violence, including physical and sexual violence, is increasingly being recognized as an important global health problem
- ◆ Approximately 5% of the healthy years of life lost to women of reproductive age in developing countries are due to violence
- ◆ In most cases the perpetrators are husbands and boyfriends

# India

- ◆ Cultural attitudes in India also embody the notion that wives should be respectful to their husbands and should try to obey their commands
- ◆ However, the use of physical force by husbands as a means of controlling their wives is not widely sanctioned in the culture

# India

- ◆ A recent large-scale survey of men in India found that the majority of men (about two-thirds) felt that wives should follow the instructions of their husbands
- ◆ However, only a minority of men (about one-quarter) felt that physically beating one's wife was justified if she disobeyed her husband

# India-Methods

- ◆ Study consisted of married men, aged 15 through 65 years, from approximately 400 villages and towns in five districts (Uttar Pradesh, India)
- ◆ A total of 8,296 eligible men were enumerated in the household listing of the study districts and 6,902 of these men (83%) agreed to complete the full male interview

# India-Methods

- ◆ Of these men interviewed, 6,632 (96%) met the conditions of living with their wives and having complete information on all of the study variables reported here

# Policy Issues

- ◆ ***What are the risk factors for domestic violence in India?***
- ◆ Which men are more likely to participate in physical violence?
- ◆ What are the implications of this study for the Indian health policy?
- ◆ What are the *non-health sector* issues that would need to be considered if interventions were being planned for this problem in India?
- ◆ Which population would you like to study for further evaluation?

# India-Results

- ◆ Almost half of the 6,632 men (46%) reported perpetrating some type of wife abuse
  - 1,112 men (17%) comprised the physical abuse only group
  - 1,476 men (22%) comprised the sexual abuse without physical force group
  - 436 men (7%) comprised the sexual abuse with physical force group

# India-Results

- ◆ Greater proportions of rural men, men of lower castes, and men of lower socioeconomic status were in each of the three abusive groups

# Policy Issues

- ◆ What are the risk factors for domestic violence in India?
- ◆ ***Which men are more likely to participate in physical violence?***
- ◆ What are the implications of this study for the Indian health policy?
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# Reproductive Health Variables of the Men by Abuse Group (N=6632)\*

Variables**	No Abuse, %	Physical Abuse Only, %	Sexual Abuse without Physical Force, %	Sexual Abuse with Physical Force, %		X <sup>2</sup> (P)
Premarital sex						
Yes (15)	33	19	36	12	☐	182.31s (<.01)
No (85)	59	17	19	5		
Extramarital sex						
Yes (4)	22	20	41	17	☐	97.90s (<.01))
No (96)	56	17	21	6		
STD before marriage						
Yes (12)	40	21	30	9	☐	59.74s (<.01)
No (88)	57	16	21	6		
STD after marriage						
Yes (13)	38	23	28	11	☐	75.61s (<.01)
No (87)	57	16	21	6		
STD Currently						
Yes (9)	36	22	32	10	☐	76.54s (<.01)
No (91)	57	16	21	6		
Contraception use						
Yes (40)	58	15	22	5	☐	11.24s (<.01)
No (60)	51	19	22	8		
Unplanned pregnancy						
Yes (11)	48	18	24	10	☐	13.41s (<.01)
No (89)	56	17	21	6		

\*X<sup>2</sup> values and associated P values were computed using SUDAAN. STD indicates sexually transmitted disease. \*\*Values in parentheses are percentages of the population. 49

# India-Results II

- ◆ Men with lower education levels were more likely to be part of the physical abuse only group and the sexual abuse with physical force group
- ◆ Greater proportions of men fell within each of the three abusive groups if they reported having **premarital sex, extramarital sex, STD symptoms, or their wives having an unplanned pregnancy**

# India-Results II

- ◆ Statistically significant relationships between male sexual behavior outside marriage and wife abuse

# Policy Issues

- ◆ What are the risk factors for domestic violence in India?
- ◆ Which men are more likely to participate in physical violence?
- ◆ ***What are the implications of this study for the Indian health policy?***
- ◆ What are the *non-health sector* issues that would need to be considered if interventions were being planned for this problem in India?
- ◆ Which population would you like to study for further evaluation?

## Logistic Regression Analyses Findings for the Reproductive Health Variables (N=6632)\*

	OR (95% CI)		
	Physical Abuse Only	Sexual Abuse without Physical Force	Sexual Abuse with Physical Force
<b>Sex outside marriage</b>			
Premarital Sex	2.21 (1.75-2.78)	3.03 (2.49-3.69)	3.63 (2.76-4.79)
Extramarital sex	2.72 (1.78-4.15)	4.31 (3.00-6.18)	6.22 (3.98-9.72)
<b>Any STD Symptoms</b>			
Before marriage	2.03 (1.59-2.58)	2.32 (1.87-2.89)	2.19 (1.61-2.99)
After marriage	2.16 (1.71-2.74)	2.23 (1.80-2.76)	3.08 (2.31-4.12)
Currently	1.77 (1.83-2.36)	2.17 (1.73-2.72)	2.43 (1.73-3.42)
<b>Contraception/unplanned pregnancy</b>			
◆ Contraception used currently	1.08 (0.90-1.30)	1.21 (1.04-1.41)	0.91 (0.70 -1.18)
◆ Any unplanned pregnancies	1.43 (1.11-1.85)	1.67 (1.33-2.10)	2.62 (1.91-3.60)

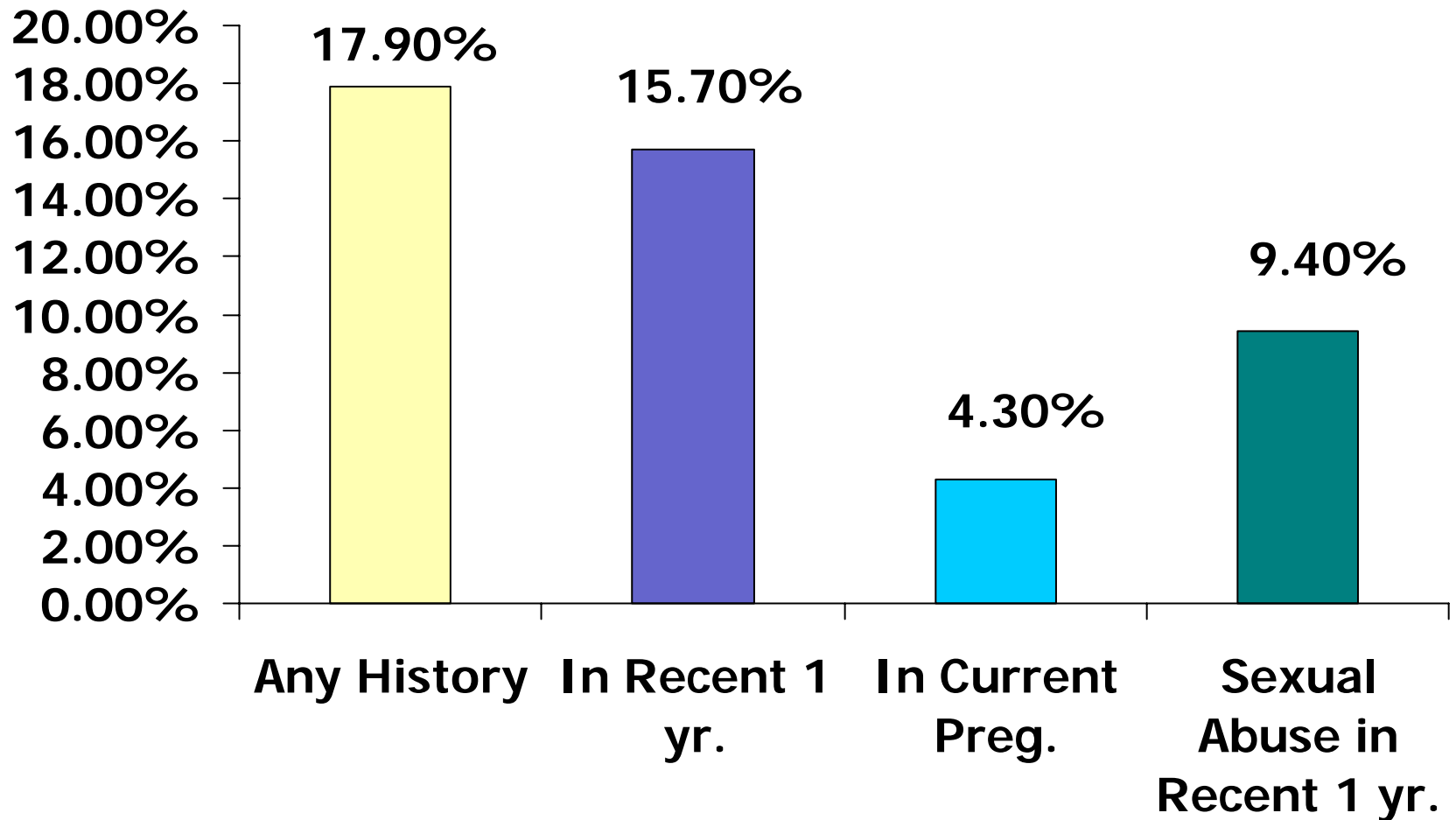
\*For all logistic regression models, the no abuse group served as the referent group. All associations (except [1] contraception use and physical abuse only and [2] contraception use and sexual abuse with physical force) statistically significant (P<.05). OR indicates odds ratio; CI, confidence interval; and STD, sexually transmitted disease.

# Policy Issues

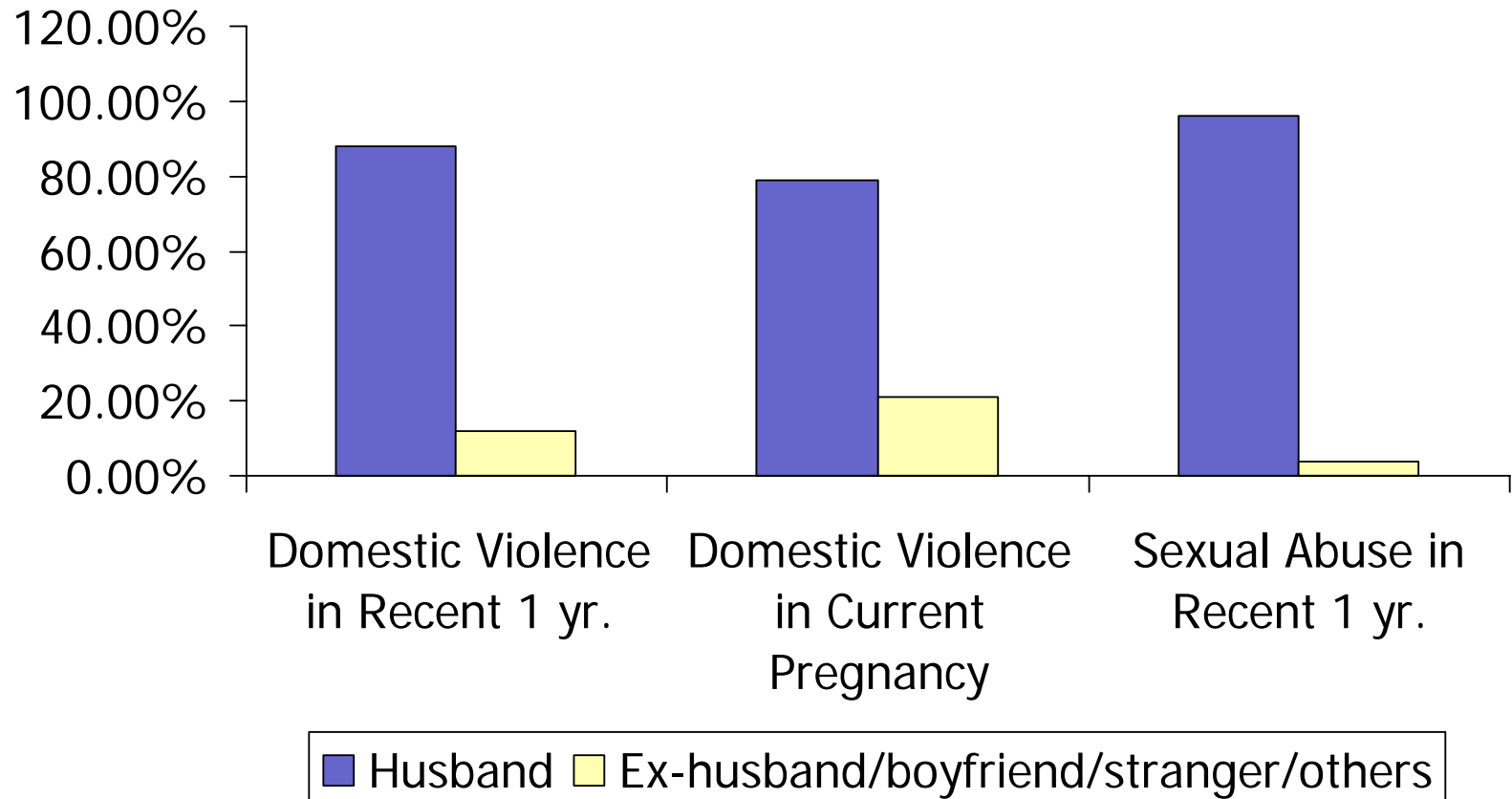
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- ◆ ***Which population would you like to study for further evaluation?***

# Incidence of *Domestic Violence*

*In a Group of Pregnant Women Attending an Antenatal Clinic in China*



# Perpetrator of Abuse of *Domestic Violence* in China



# Risk Factors for Domestic Abuse in Chinese Women

- ◆ Comparing the risk factors for women with or without a history of domestic violence in the last year showed the following differences
  - Unplanned pregnancy  $p < 0.002$
  - Unemployment among husband / partner  $p < 0.05$
  - Unemployment in women  $p > 0.05$
  - High income  $p = 0.388$

# *Domestic Violence and Health of Pakistani Women*

- ◆ Confidential interviews were conducted in 150 randomly selected women from health care facilities in Karachi, Pakistan
- ◆ **34%** reported being **physically abused**
- ◆ **15%** reported being **physically abused while pregnant**
- ◆ **72%** of physically abused women were **anxious / depressed**
- ◆ Physical abuse is a major predictor of anxiety and depression among women