

# Sex, Gender & Vulnerability

V FORUM of WOMEN, HEALTH  
and GENDER  
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# Sex differentials in health

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- ◉ Due to genetic sex
- ◉ Or gendered socialization
- ◉ Not purely academic – but on the argument that gendered causes of death and disability are amenable to social change

# Definitions

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**Sex:** developmental differentiations due to inherited sex chromosomes (46,XX vs 46,XY karyotypes)

**Gender:** constellation of social expectations, responsibilities & obstacles in response to your phenotype

# Global Burden of Disease

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## Disability-adjusted life years (DALYs)

- sum of healthy years lost to early death or disability
- without age-weighting
- Not discounted
- DALY [0,0]

Limited by epidemiology, disability weights

# Top 10 causes of disease or disability for males, females (2002)

Males (all ages)		Females (all ages)	
	DALYs (mill)		DALYs (milli)
Lower respiratory infections	99	Lower respiratory infections	98
HIV	78	HIV	74
Diarrhoeal diseases	72	Diarrhoeal diseases	67
Ischemic heart disease	65	Malaria	53
Low birth weight	59	Low birth weight	51
Other unintentional injuries	49	Ischemic heart disease	50
Malaria	47	Cerebrovascular disease	48
Cerebrovascular disease	46	Other infectious diseases	45
Road traffic accidents	45	Birth asphyxia & trauma	35
Birth asphyxia & trauma	44	Unipolar depressive disorders	33

# Males lose twice female DALYs

Condition	Female DALYs	Male DALYs	Female / Male DALYs
War	9,3	1,1	8.2
Gout	4,2	0,5	7.4
Alcohol Use Disorders	14,8	2,6	5.6
Road & Traffic Accidents	45,1	9,5	4.7
Violence	27,5	6,8	4.0
Other Intentional Injuries	0,5	0,1	3.9
Drug Use Disorders	6,0	1,6	3.7
Lymphatic Filariasis	6,2	2,1	3.0
Mouth & Propharynx Cancers	4,7	1,9	2.4
Lung Cancer	15,2	6,7	2.3
Liver Cancer	9,4	4,2	2.2
Drowning	13,9	6,8	2.1
Bladder Cancer	1,9	0,9	1.9

# Females lose twice male DALYs

Condition	Female DALYs	Male DALYs	Female / Male DALYs
Breast Cancer	11,7	0,0	263.7
Gonorrhoea	2,9	0,2	10.9
Chlamydia	2,9	0,3	10.9
Trachoma	2,5	0,8	3.0
Migraine	8,8	3,1	2.8
Post-traumatic stress disorder	1,9	0,7	2.6
Rheumatoid Arthritis	4,3	1,7	2.5
Panic Disorder	3,6	1,8	1.9
Alzheimer & Other Dementias	12,8	7,2	1.8
Osteoarthritis	15,6	9,2	1.7
Other Musculoskeletal Disorders	3,5	2,1	1.7
Fires	12,8	8,2	1.6
Unipolar Depressive Disorders	32,5	21,1	1.5

# Gendered Vulnerabilities

Male gender vulnerabilities	Female gender vulnerabilities
Falls	Fires
Drowning	Trachoma
Road traffic accidents	Blindness (in part)
Self-Inflicted injuries	? Panic disorders
Lung Cancer	? Depressive disorders
Drug use disorders	? Post-traumatic stress disorders
Alcohol use disorders	? Insomnia
Cirrhosis of the liver	? Migraine
Bladder cancer (in part)	
TB (in part)	



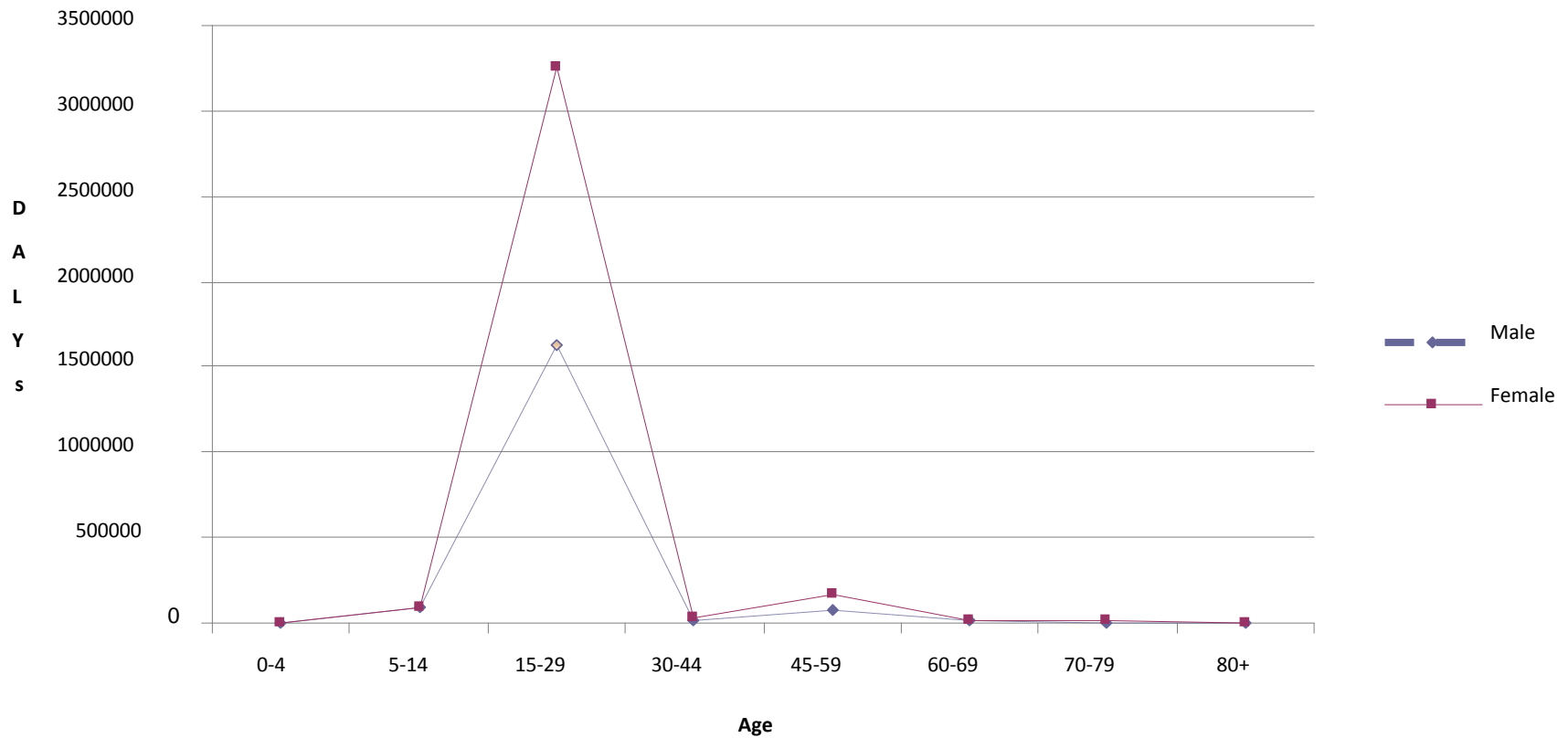
# Disparate clusters

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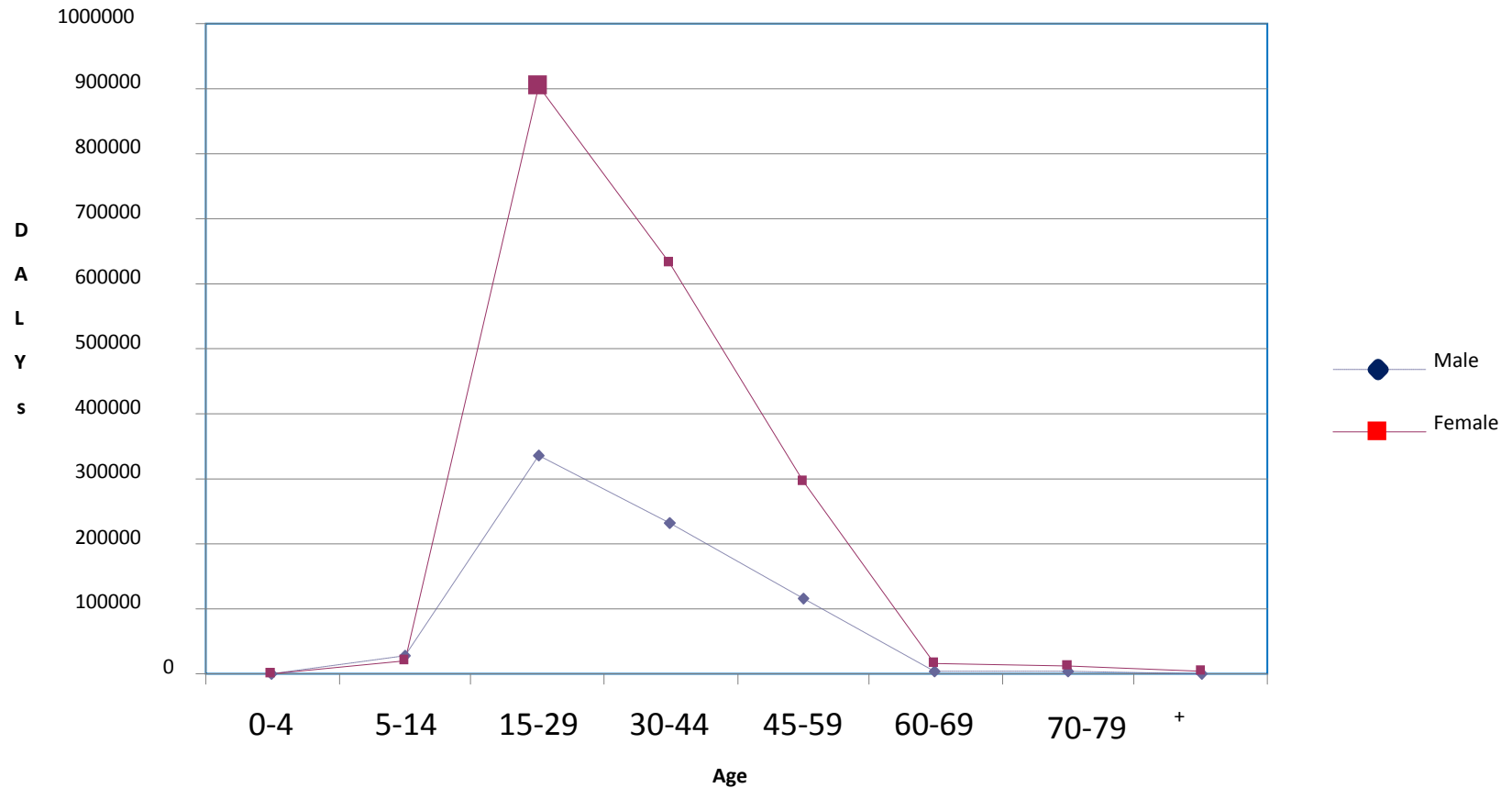
- Depression
- Panic disorder
- PTSD
- Insomnia
- Interpersonal violence
- Alcohol
- Drug disorders
- Smoking disorders

Differential diagnoses?

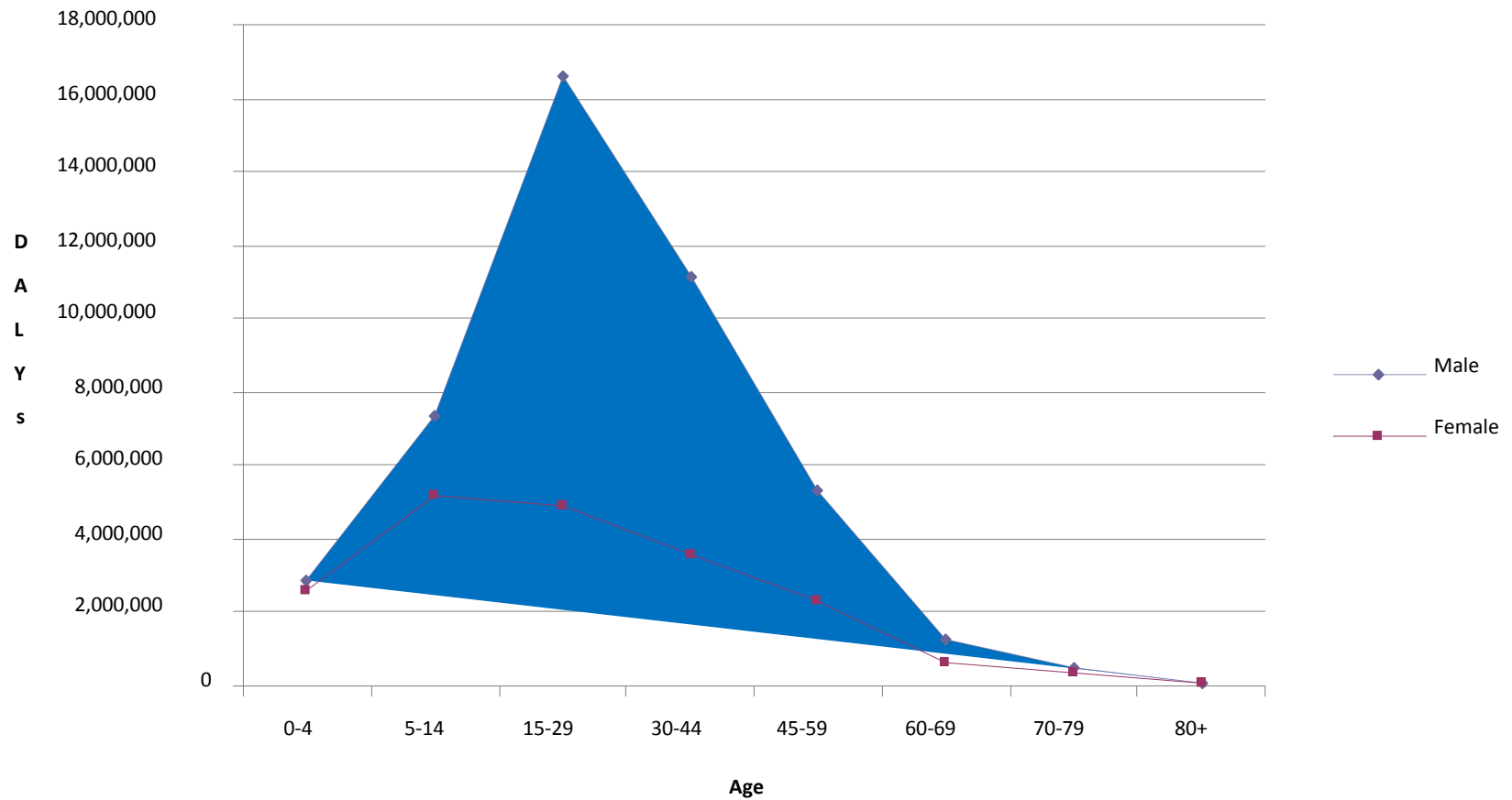
# Sex differences in global DALYs lost to panic disorder (GBD 2002)



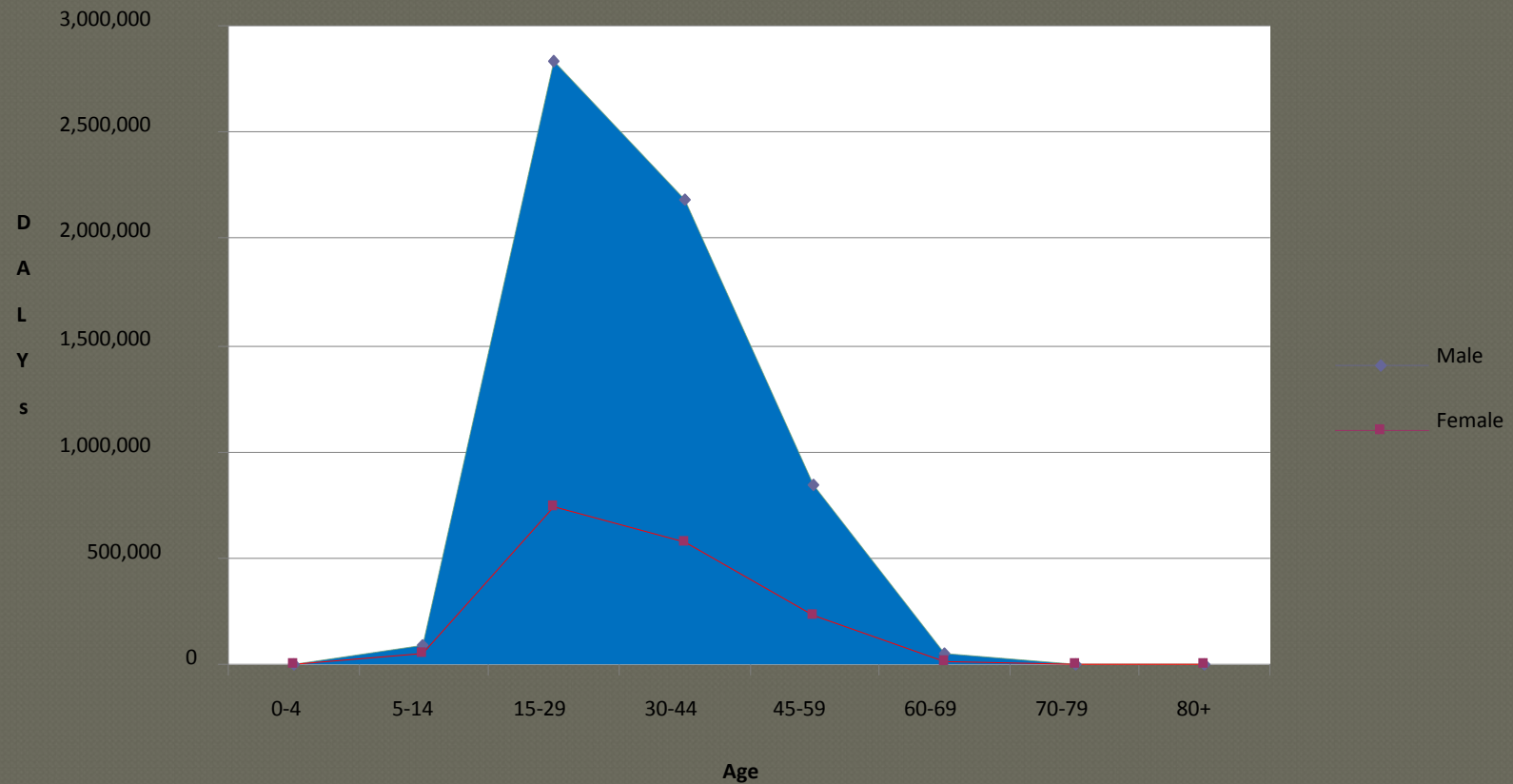
# Sex differences in global DALYs lost to post-traumatic stress disorder (PTSD)



# Sex differences in global DALYs lost to road traffic accidents



# Sex differences in global DALYs lost to drug use disorders (GBD 2002)



# Policy implications?

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- 55% decline in US male smoking
- What may be done for violent behavior, or risk-taking?
- If differentials in risk-taking are due to biologic sex... legal regulations allowed
- If not, we are socially responsible?

# Mutability of gender?

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- ◉ Swedish pre-schools since 1998
- ◉ Irish anti-smoking campaign for females 2000-2005
- ◉ loveLife billboards in RSA

Gender DALYS a best-buy for public health?