EPIDEMIOLOGY OF MOOD DISORDERS

Outline

- Introduction
- Descriptive Epidemiology
- Correlates
- Social Factors
- Comorbidity
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Introduction

- Mood: *pervasive and sustained emotion or feeling tone that influences a person's behaviour and colours his/her perception of being in the world.*

- Mood disorders: large group of psychiatric disorders in which pathological moods and related vegetative and psychomotor disturbances dominate the clinical picture.

Introduction

- **Unipolar depression:** with only major depressive episode
- **Bipolar disorder:** with both manic & depressive episodes or only manic episodes
- **Hypomania:** episode of manic symptoms that doesn't meet criteria for manic episode lasting for < 7 days
- **Cyclothymia:** Hypomanic symptoms frequently occurring for ≥ 2 years, not fulfilling criteria for manic episode or depressive symptoms for depressive episodes

Introduction

- **Dysthymia:** Depressed mood lasting for ≥ 2 years, not fulfilling criteria for major depressive episode

- Cyclothymia and dysthymia are less severe form of bipolar disorder and major depression

Introduction

Types of Bipolar disorders:

- **Bipolar I:** at least one manic episode lasting at least a week along with multiple episodes of major depression

- **Bipolar II:** at least one hypomanic episode along with multiple episodes of major depression

Descriptive Epidemiology

Landmark studies conducted:

- WHO World Mental Health Surveys (WHO WMH)-**BPD-I = 0.6%,BPD-II = 0.4%**

- National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)- **BPS-2.4 %BPI – 3.3% ,BPII – 1.1%**

- Great Smoky Mountains Study **-0.2 %**

- National Comorbidity Survey-Adolescent supplement (NCS-A)-**2.9 %**

- Canadian Community Health Survey-**3.8 %**

- TRacking Adolescents' Individual Lives Survey (TRAILS) study, Netherlands

Lifetime Prevalence Rates of Depressive Disorders

Disorder	Prevalence	
	Range	Average
MDD	5-17%	12%
Dysthymic Disorder	3-6%	5%
Minor Depressive Disorder		10%
Recurrent Brief Depressive Disorder		16%

Lifetime Prevalence Rates of BPD-I, II, Cyclothymia and Hypomania

Disorder	Prevalence
BPD-I	0-2.4%
BPD-II	0.3-4.8%
Cyclothymia	0.5-6.3%
Hypomania	2.6-7.8%

World Health Organization

WHO- The proportion of the global population with depression (2015) estimated to be 4.4%.

❑ Depression is more common among -females (5.1%) than males (3.6%).

❑ Suicide accounted for close to 1.5% of all deaths worldwide.

❑ Suicide occurs throughout the lifespan and was the Second leading cause of death among 15-29year olds globally in 2015.

NMHS

❑ Nearly 1% of the population reported high suicidal risk.

❑ The prevalence of high suicidal risk was more in the 40-49 age group (1.19%), among females (1.14%)

# Prevalence of mental disorders (NMHS 2015-2016)(Weighted Percent)
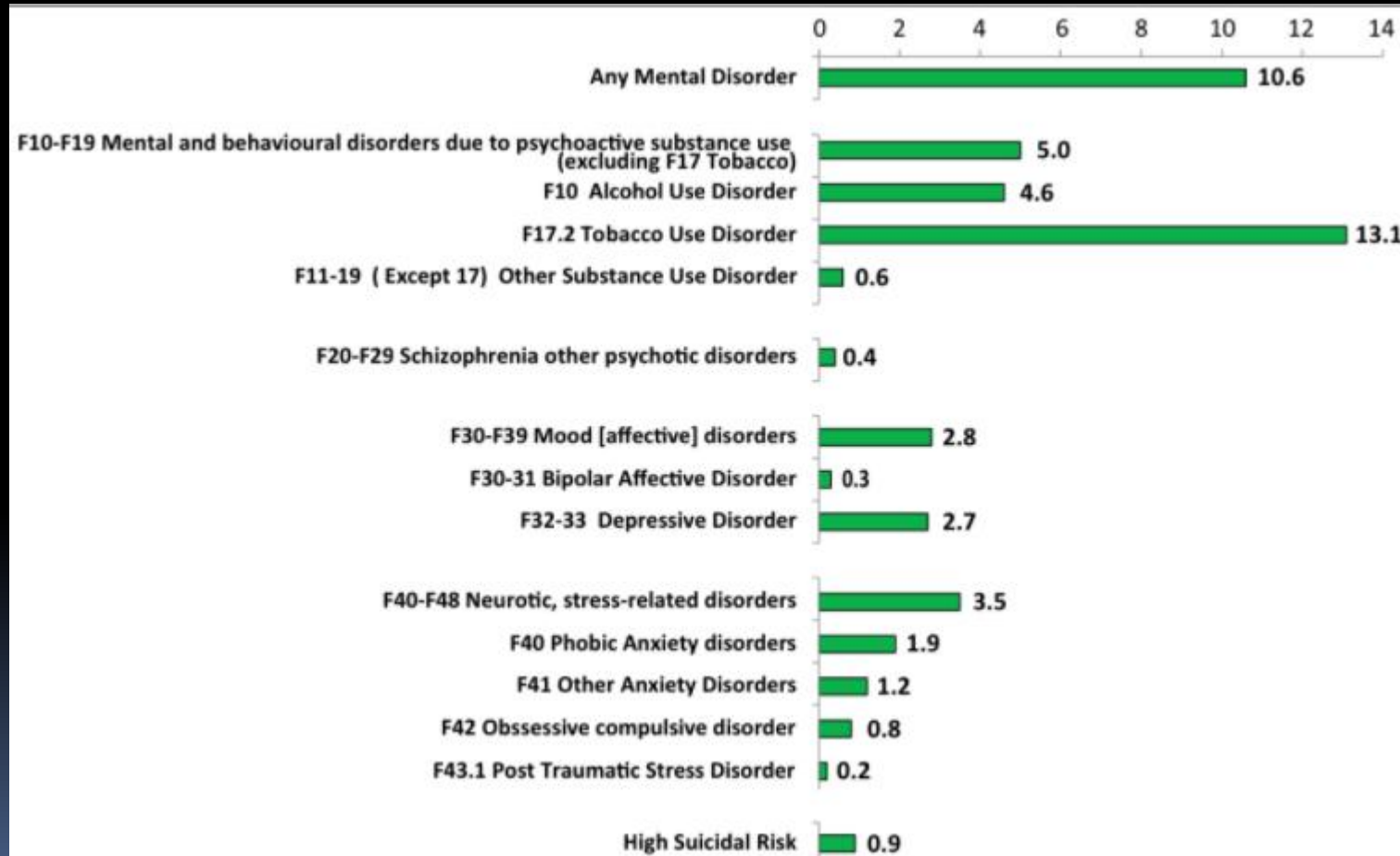
Global Burden of Disease Study 1990–2017.

Prevelence-

- Depressive disorders- 3·3% (3·1–3·6), Male- 2·7% (2·5–3·0) Female- 3·9% (3·6–4·3)

- Bipolar disorder- 0·6% (0·5–0·7), Male- 0·6% (0·5–0·7) Female- 0·6% (0·5–0·7)

- Significant, but modest, correlation between the prevelence of depressive disorders and suicide death rate at the state level for females (r^2=0·33, p=0·0009) and males (r^2=0·19, p=0·015).

Global Burden of Disease Study 1990–2017

Depressive disorders
Females
Males
Prevalence (%)
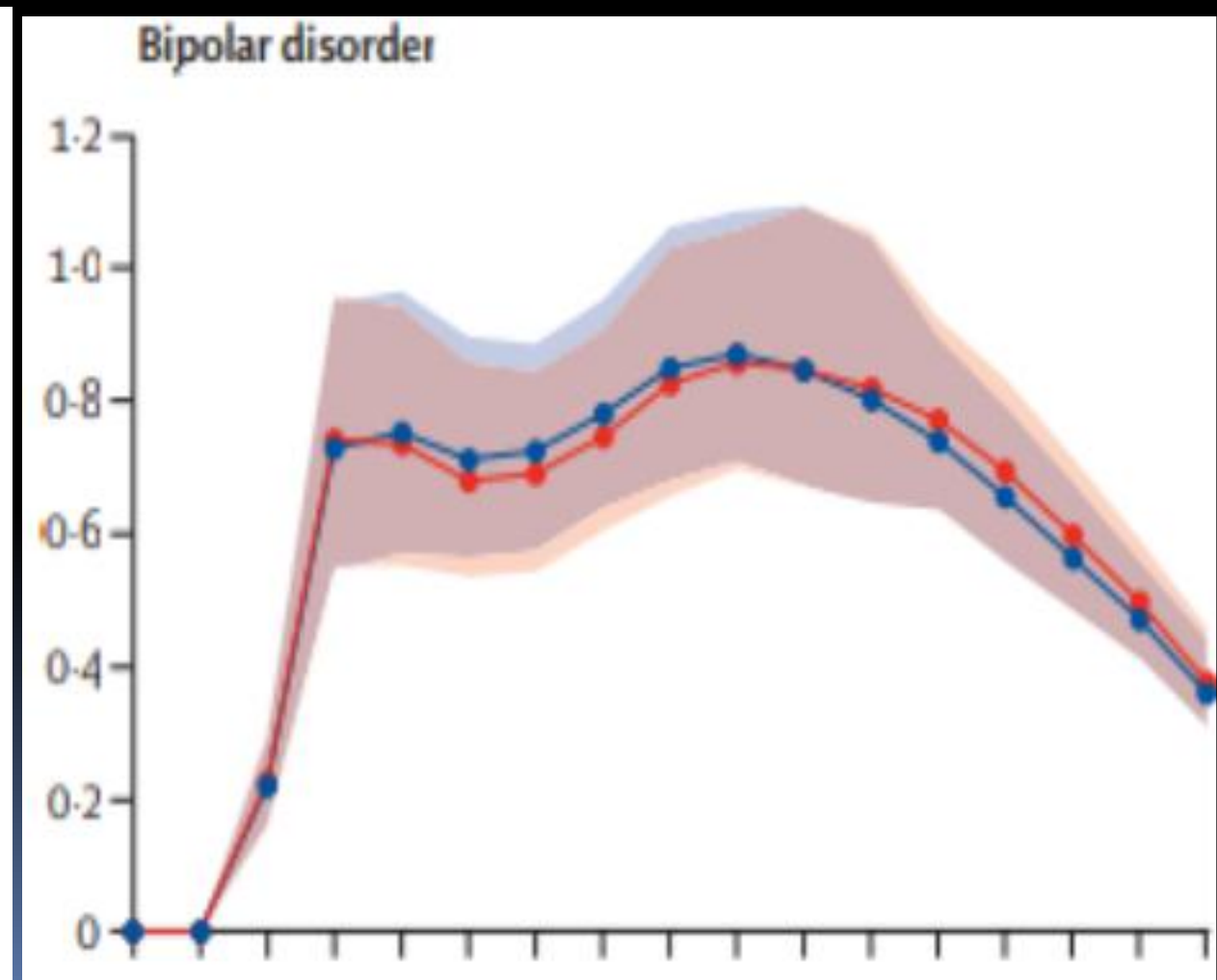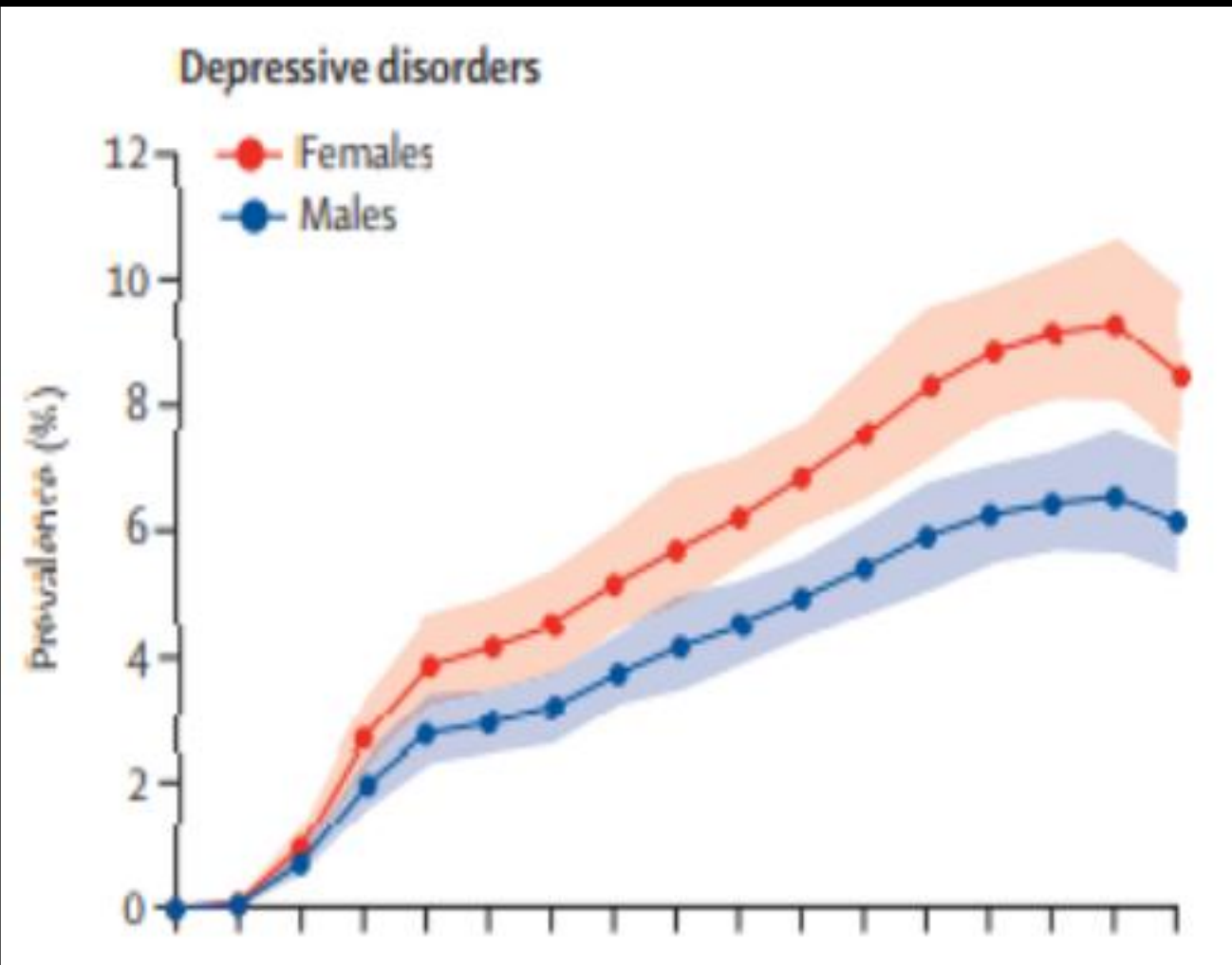
Bipolar disorder

Correlates of Mood Disorders

- Gender

- Age

- Race & Ethnicity

Gender

- Unipolar major depression: F:M = 2:1

- Minor depressive disorder and recurrent brief depressive disorder - more common in females (difference not so marked)

- Causes:
  - Increased stress sensitivity
  - Maladaptive coping strategies
  - Multiple social roles
  - Decreased incidence of substance use disorders
  - Prior anxiety disorders

Gender

- **Bipolar** disorders: **M:F = 1:1**
- **F>M** in cases of:
    - Bipolar II disorder
    - Mixed/dysphoric mania
    - Mixed depressive episode
    - Winter depression
    - Bipolar depression with atypical features
    - Rapid cyclers

Gender

- Higher the depressive component, higher the proportion of women

- Unipolar mania: M>F

- Difference in lifetime prevalence rates more marked than 1-year/current prevalence rates – d/t male tendency to forget previous episodes & deny negative events

- Lifetime prevalence and 1-year prevalence of major depression, dysthymia, and bipolar (I + II) disorders – higher in people with same-sex sexual behaviour

NMHS (Prevalence Gender)
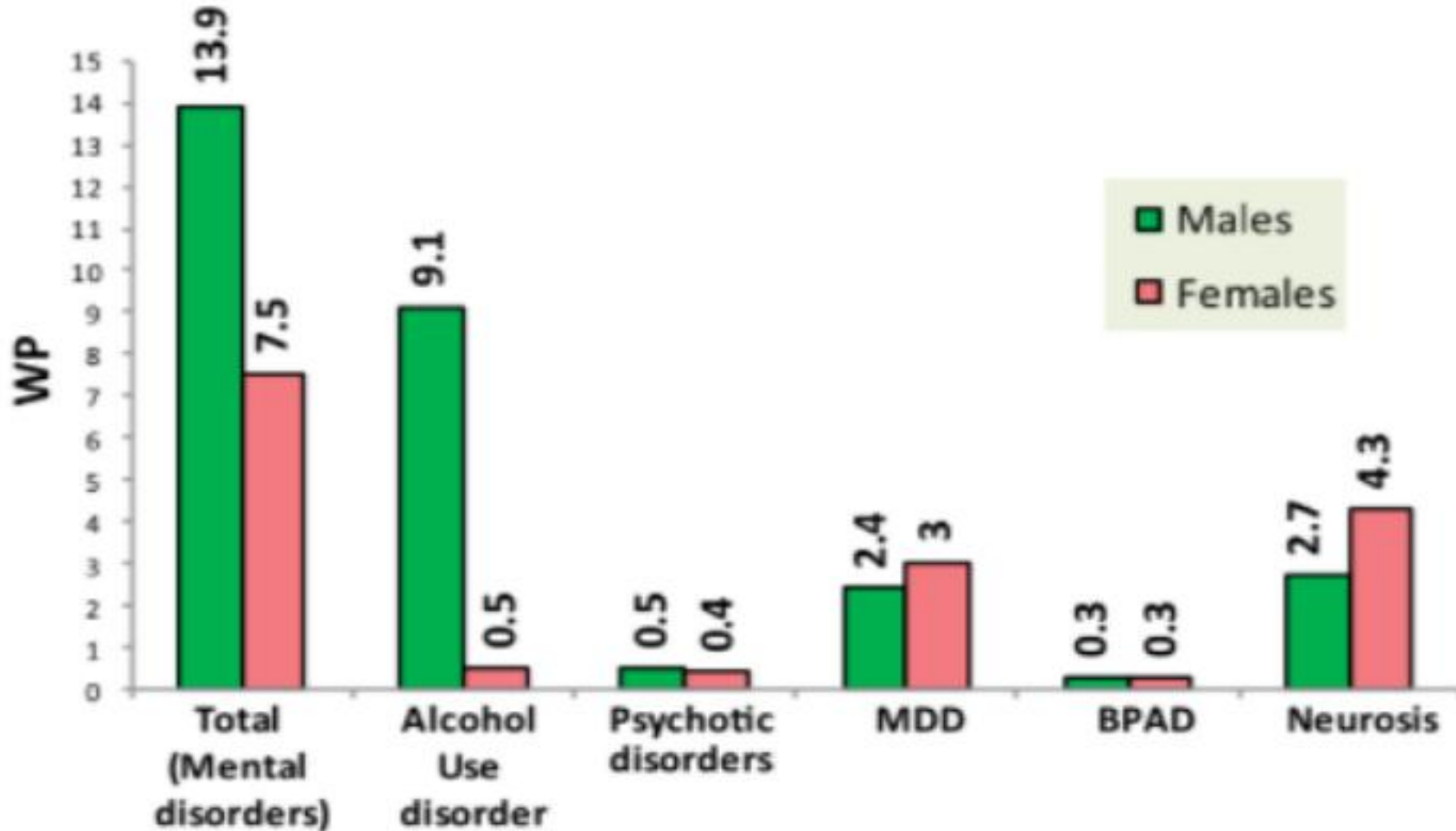
Age

- Depressive disorders: Higher lifetime prevalence in <45 yrs.
- Age of onset in recurrent unipolar MDD: 30-35 yrs.
- Single episode major depression: >35 yrs.
- Genetic predisposition decreases with age

Age

- Cause of risk in
  - Young: social stressors
  - Elderly: isolation, loss of interpersonal contacts, medical disorders, disability
- Higher F:M ratio in early-onset depression
- Probability of recurrence of MDD doesn't decrease with age

Age

- MDD – less common in old age for both sexes; opposite for minor depressive disorder
- Unipolar MDD in postpartum - slightly increased (not postmenopausal)
- Dysthymia starts in late adolescence/early adulthood; if untreated, progresses to MDD
- Dysthymia common in old age d/t adverse psychosocial and biological conditions

Age

- Age of onset of BPD: 20 yrs (Slightly higher for BPD II)
- Men - earlier onset of BPD than women (4-5yrs)
- 1st episode of mania is very rare in elderly
- Increased incidence of BPD-D after childbirth; most pts. with postpartum depression have BPD
- Family history +ve - Lower age of onset, require less stressors

Race & Ethnicity

- Less common in Blacks & Hispanics
- Paradoxical finding d/t increased psychosocial stress & other risk factors

Social Correlates

- Marital Status
- Socio-economic Factors
- Residence
- Seasonal
- Geographic Trends
- Dietary Factors

Marital Status

- Single/Divorced/Separated ↔ depression/mania; or both
- Single:
  - Never married
  - Dissolution of a difficult marriage
  - Widowhood (High risk of MDD, esp. elderly)
- Decreased depression rate in single women than married women

Marital Status

- Separation/divorce
  - Slightly common in dysthymia
  - Substantially in MDD
  - Markedly in BPD-I & BPD-II
- Mood disorder – strong predictor for future separation/divorce – distress in pt./spouses/children
- Early -ve life events – predisposing factors for mood disorders, esp. with +ve family history

Socioeconomic Factors

- Relationship between mood disorders & SE status – weak correlation

- Low SE status – low level of education, low income, poor living conditions, unemployment, homelessness

- MDD 3 times more common in unemployed

Residence

- Urban living more stressful than rural
- MDD more common in urban residents
- Rural residents: 40% lower odds of 1-year comorbidity of ≥ 3 mental disorders

NMHS INDIA
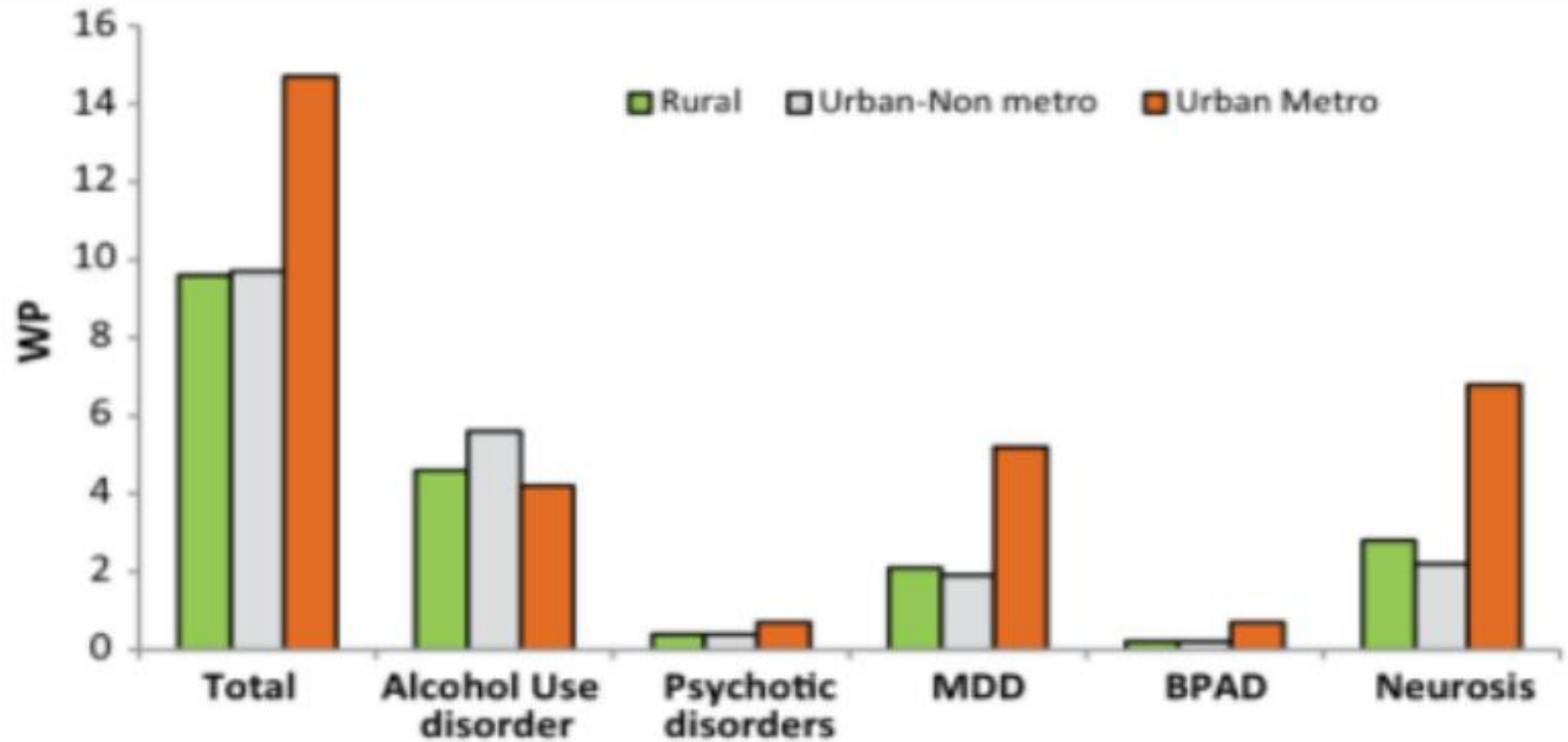
Seasonal

- **Seasonal profiles** of suicides, antidepressant prescriptions & ECT, availability of L-tryptophan ~ seasonal onset of major depression.

- Acute/chronic pharmacotherapy of mood disorders - may change seasonal pattern of depression & mania

Seasonal

- Spring & fall – peak times for depression

- Summer – peak time for mania

- Seasonal Affective Disorders (SAD) – observed in 20-25% of recurrent major mood disorders

Geographic Trends

- Areas closer to equator – mania > depression
- Northern Hemisphere – Winter depression (1-6%) more common in countries situated farther from equator; opposite for summer depression
- Weak association of SADs & latitude; climatic/genetic/social/cultural factors interrelated with daily photoperiod may play role
- MDD unrelated to geography
- Lower prevalence of MDD & BPD-I from Far Eastern countries

Dietary Factors

- Low intake of omega-3 fatty acids a/w higher rates of depression
- Inverse correlation between dietary tryptophan and national suicide rates

Psychosocial Factors

- Social Stressors
- Social Support

Social Stressors

- Association b/w acute stressors & onset progressively weakens with increasing number of episodes

- High genetic risk for mood disorders – develop depressive/manic episodes without –ve life events

Social Support

- Weak/lacking social support – major risk factor
- Poor social support - related to onset, relapse & recurrence of depression
- Improve coping & modify the occurrence of psychosocial stressors or the adverse consequences

Comorbidity

- Pts. at increased risk of having Axis-I disorders & vice-versa
- Mood disorders ↔ Alcohol abuse/dependence, panic disorder, OCD, social anxiety disorder, or both
- Males: substance use disorders
- Females: Comorbid anxiety and eating disorders
- Comorbidities more common in BPD (BPD-II) > unipolar MDD

Service Pattern in Adults

- Many cases remain underdiagnosed and undertreated
- 50% of pts. seek treatment; 33% receives appropriate treatment
- NESARC study: 36.8% pts sought specific treatment (Depression > Mania)
- Prevalence of MDD in primary care: ~ 10-15%; dysthymia: ~6-8%
- Paradoxically, depression with significant somatic comorbidity remain unrecognized in primary care.
- Pts. with ≥ 2 chronic physical illnesses – 4 times likely to develop severe major depression

Service Pattern in Adults

- **Females** more often seek treatment and are more drug compliant
- **Suicide paradox**: MDD more common in females, suicide more common in males
- Point prevalence of MDD in acute clinical care > 10%
- Concomitant depression increases morbidity/mortality from concurrent medical illness
- Pts. with medical disorders and depression – less compliant with treatment, take longer time to recover

Service Pattern in Youth

- **School services** - most common point of entry for children seeking services; least likely to transition to specialty mental health services.

- Fewer studies in youth on the efficacy of pharmacological therapies or individual/family therapies (Best: combination)

Covid -19 Impact On Mood Disorder

Risk factors associated with increased likelihood of suicide in bipolar disorder

- Current depressive or mixed episode
- Comorbid substance use disorder
- Comorbid anxiety disorder
- Comorbid eating disorder
- Occupational problems
- Bereavement
- Social Isolation

Secondary consequences of the COVID-19 pandemic amongst the general population

- Increased rates of depression
- Increased rates of substance use
- Increased rates of anxiety
- Increased economic disruption
- Increased social isolation

Covid -19 impact on mood disorder

- **Increased rates of suicide** in previous epidemics, such as SARS in 2003
- One of the leading causes of death among those with a diagnosis
- Demonstrated rates are approximately 20–30 times higher than in the general population.
- High prevalence of psychiatric comorbidities with bipolar disorder

    substance use disorders   } 50%

    Anxiety disorder

Covid -19 impact on mood disorder

- Insomnia
- Dysregulation of circadian rhythm
- Psychological distress.
- Consequence of life disruption
- Decreased exercise
- Use of substances and stress

Increased mood episodes

Covid -19 impact on mood disorder

- Australian population-based cohort study, the <u>COLLATE Project</u>

  - heightened psychological distress in the mood disorder group compared to the group reporting no mental disorder .

  -further elevated levels of stress and depression in respondents with bipolar disorder compared to those with a depressive disorder.

2021 Mood Disorder Survey

- The most commonly reported symptoms are changes in sleeping habits or feeling tired and low energy (51%)
- feeling excessively sad or low (42%) and excessive worrying or fear (39%).
- 50% of participants with a mood disorder reported experiencing negative impacts on personal relationships.
- 61% reported that people treat them differently after they learn of their diagnosis.
- 76% reported that people don't understand what it's like to live with a mood disorder every day.

Summary

- Epidemiological data helps examine susceptibility, onset, course & outcome of mood disorders
- MDD has highest lifetime prevalence (~17%)
- Depressive episodes more common in women; manic episodes more common in men
- Mean age of onset for MDD = 40yrs; BPD = 30yrs
- Marital status plays an important role
- MDD – increased risk of comorbidities
- COVID 19 increased risk for mood disorder

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THANK -YOU