

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)

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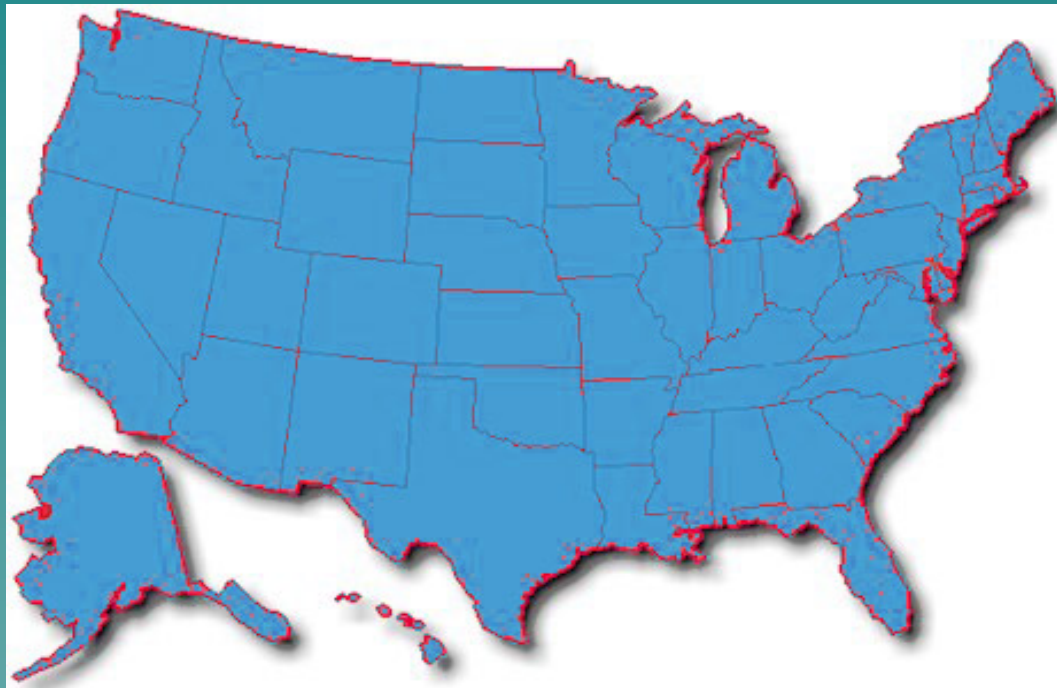
NATIONAL EPIDEMIOLOGIC RESEARCH PROGRAM



NIAAA
National Institute on Alcohol Abuse and Alcoholism

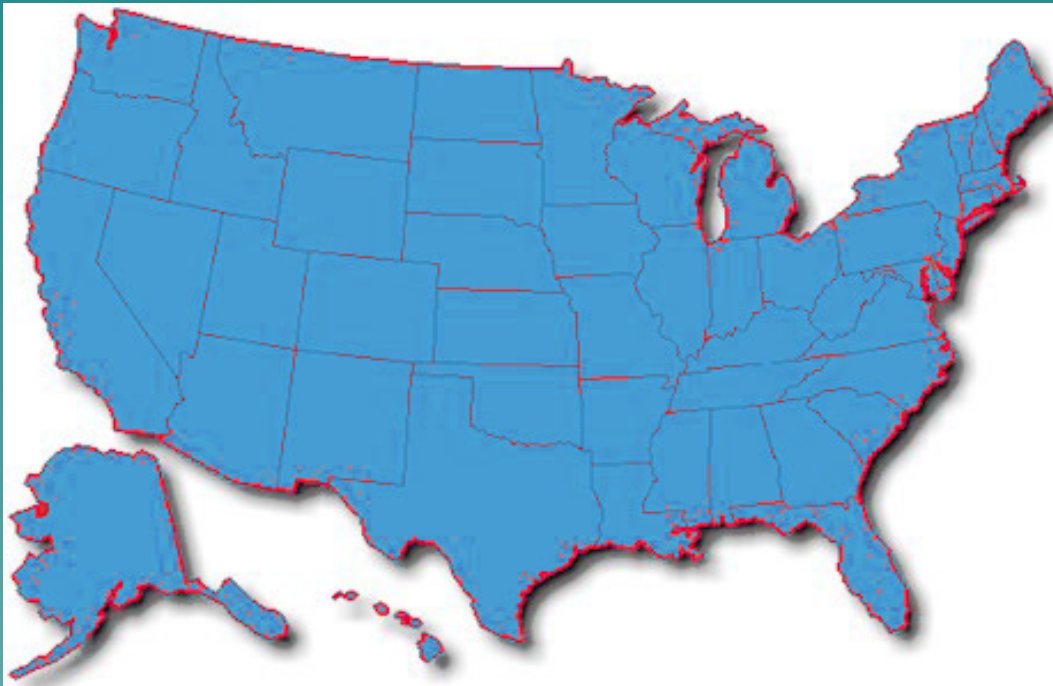
2016

Waves 1 and 2 National Epidemiologic Survey on Alcohol and Related Conditions 2001 – 2002 and 2004 – 2005



- ◆ 3-year prospective survey
- ◆ N= 43,093 (Wave 1),
34,653 (Wave 2)
- ◆ Household and group quarters
participants
- ◆ Response rate: 81% (Wave 1),
87.6% (Wave 2)
- ◆ Oversampling of Blacks,
Hispanics, young adults

National Epidemiologic Survey on Alcohol and Related Conditions -III 2012 - 2013



- ◆ Cross-sectional survey
- ◆ N= 36,309
- ◆ Household and group quarters participants
- ◆ Response rate:
Household: 72%; Respondent: 84%
- ◆ Oversampling of Blacks, Hispanics, Asians

Unique Aspects of the NESARC Surveys

- ◆ The first national surveys to assess:
 - DSM-IV pathological gambling
 - DSM-IV / 5 Axis II personality disorders
 - Incidence of DSM-IV substance use, mood and anxiety disorders

Unique Aspects of the NESARC Surveys

- ◆ Largest alcohol and psychiatric comorbidity surveys ever conducted in the U.S. and, in fact, worldwide.
- ◆ The sample size of the NESARC surveys, with their high data quality in terms of response rates, coverage and precision of the survey estimates, allowed for the:
 - Assessment of current (past year) alcohol, drug and psychiatric disorders
 - Examination of rates of disorder by important sociodemographic and socioeconomic variables (e.g., sex, race-ethnicity)
 - Assessment of associations between specific psychiatric disorders rather than aggregate categories of disorder (e.g., any mood disorder)

Unique Aspects of the NESARC Surveys

- ◆ Included nationally representative samples of college students.
- ◆ Included a larger proportion of Blacks and Hispanics/Latinos (and Asians – NESARC-III) than any other survey conducted in the United States.



NIAAA
Alcohol Use Disorder and
Associated Disabilities
Interview Schedule — DSM-IV
Version (AUDADIS-IV) and
DSM-5 Version (AUDADIS-5)



Unique Aspects of the AUDADIS-IV and AUDADIS-5

- ◆ First psychiatric assessment instruments to differentiate between substance-induced and independent disorders using DSM-IV or DSM-5 definitions for:
 - Major depression
 - Manic disorder
 - Dysthymia
 - Hypomania
 - Panic disorder (with and without agoraphobia)
 - Generalized anxiety disorder
 - Social phobia
 - Specific phobia

Unique Aspects of the AUDADIS-IV and AUDADIS-5

- ◆ There are generally no skip-outs in the AUDADIS, that is, all symptom questions related to AUDADIS diagnoses are asked of all appropriate respondents. This allows researchers to form categorical diagnoses or continuous symptom scales to represent severity of each disorder. Dimensional models of psychiatric disorders may be more informative in studies where statistical power is limited, as it often is in studies of gene-gene or gene-environment interaction.

Major Findings from the National Epidemiologic Survey on Alcohol and Related Conditions

Organized Around the Major Purposes of Epidemiology



Purposes of Alcohol, Drug and Psychiatric Epidemiology

- ◆ To determine the psychiatric wellbeing of the population by measuring dimensions and distributions of psychiatric disorders in terms of prevalence, incidence and disability.
- ◆ To identify subgroups of the population needing special attention in terms of prevention/intervention (including comorbid subgroups).
- ◆ To identify changes over time in the distributions of psychiatric disorders.
- ◆ To understand the working of substance abuse and mental health services in terms of treatment need.
- ◆ To study the natural history of psychiatric disorders.
- ◆ To inform future genetic research.

Determine the Psychiatric Wellbeing of the Population



Twelve-month Prevalence: Findings from the Wave 1 NESARC and NESARC -III

Psychiatric Disorders	Wave1 NESARC (2001-2002) Prevalence (%) DSM-IV	NESARC-III (2012-2013) Prevalence (%) DSM-5
Substance Use Disorder		
Any Alcohol Use Disorder	8.5	13.9
Any Drug Use disorder	2.0	3.9
Marijuana use disorder	1.5	2.5
Opioid use disorder	0.4	0.9
Mood Disorder*		
Major depression	7.1	11.5
Dysthymia	1.8	3.7
Bipolar I	1.7	1.4
Bipolar II	1.2	0.5
Anxiety Disorder		
Panic disorder	2.1	3.1
Agoraphobia	-	1.5
Social phobia	2.8	2.9
Specific phobia	7.1	5.9
Generalized anxiety disorder	2.1	5.3
Posttraumatic Stress Disorder	4.5	4.7

* Mood disorder prevalences are non-hierarchical

Lifetime Prevalence: Findings from the Wave 1 NESARC and NESARC –III

Personality Disorder	Wave1 NESARC (2001-2002) Prevalence (%)	NESARC-III (2012-2013) Prevalence (%)
Cluster A		
Paranoid	4.4	-
Schizoid	3.1	-
Schizotypal	3.9	6.3
Cluster B		
Antisocial	3.6	4.3
Borderline	5.9	11.4
Histrionic	1.8	-
Narcissistic	6.2	-
Cluster C		
Avoidant	2.4	-
Dependent	0.5	-
Obsessive-compulsive	7.9	-



Findings from the Wave 1 and 2 NESARC

One-Year Incidence

Disorder	Incidence (%)
Any alcohol use disorder	1.7
Alcohol abuse	1.0
Alcohol dependence	1.7
Any drug use disorder	0.3
Any drug abuse	0.3
Any drug dependence	0.3
Any mood disorder	2.2
Major depressive	1.5
Bipolar I	0.5
Bipolar II	0.2
Any anxiety disorder	1.6
Panic	0.6
Social phobia	0.3
Specific phobia	0.4
Generalized anxiety	1.1

Note: One-year incidence of lung cancer, 0.06; stroke, 0.45; cardiovascular disease, 1.5.



Identify Subgroups of the Population Needing Special Attention



Findings from the Waves 1 and 2 NESARC Sex and Race-Ethnic Subgroups

Disorder	Sex		Race-Ethnic Subgroups (White = RG)			
	Male	Female	Black	Hispanic	Asian	Native American
Substance use disorder						
Alcohol abuse	↑		↓	↓	↓	-
Alcohol dependence	↑		↓	↓	↓	↑
Drug abuse	↑		↓	↓	↓	↑
Drug dependence	↑		↓	↓	↓	↑
Mood disorders						
Major depressive disorder		↑	↓	↓	↓	↑
Bipolar I	-	-	-	↓	↓	↑
Anxiety disorders						
Panic						
With agoraphobia		↑	↓	↓	↓	↑
Without agoraphobia		↑	↓	↓	↓	↑
Social phobia		↑	↓	↓	↓	↑
Specific phobia		↑	-	↓	↓	-
Generalized anxiety		↑	↓	↓	↓	-

- Rates not statistically different from reference group.

Findings from the Waves 1 and 2 NESARC

Age, Income, Education, Marital Status

Disorder	Age		Income		Education	Marital Status
	18-29 (65+ = RG)	30-44	<\$20K (≥\$70K = RG)	\$20-35K	<HS (Coll.+ = RG)	Sep./ Wid./ Divorced (Married = RG)
Substance use disorders						
Alcohol abuse	↑	↑	↑	↑	↑	↑
Alcohol dependence	↑	↑	↑	↑	↑	↑
Drug abuse	↑	↑	↑	↑	-	↑
Drug dependence	↑	↑	↑	↑	↑	↑
Mood disorders						
Major depressive	↑	↑	↑	↑	-	↑
Bipolar I	↑	↑	↑	↑	↑	↑
Anxiety disorders						
Panic						
With agoraphobia	-	↑	-	-	-	↑
Without agoraphobia	↑	↑	-	-	-	-
Social phobia	↑	↑	↑	↑	-	-
Specific phobia	↑	↑	↑	↑	-	-
Generalized anxiety	-	↑	↑	↑	-	- (↑)

- Rates not statistically different from reference group.

Summary of Comorbidity Findings Waves 1 and 2 NESARC

- ◆ Over 200 published papers addressed comorbidity
 - Comorbidity between pairs of disorders is the rule, not the exception.

However, associations between disorders is reduced (or eliminated when models include other psychiatric disorders as covariates, suggesting a more complex set of relationships than can be determined by examining disorders in a pairwise fashion.

Summary of Comorbidity

Findings from the Waves 1 and 2 NESARC (Transdiagnostic Domains)

- ◆ Structural equation modeling indicated two latent dimensions underlying psychiatric comorbidity:
Externalizing and Internalizing:
 - Internalizing (distress, fear): encompassing major mood and anxiety disorders.
 - Externalizing (impulse-related disorders): encompassing substance use disorders, antisocial personality disorder
- Recent evidence supports a third dimension, Thought Disorder (bipolar I disorder, schizotypal and borderline personality disorders).
- These studies suggest value in investigating comorbidity (etiology) via transdiagnostic domains rather than individual disorders.

Identify Changes Over Time



Changes Over Time Using Wave 1 NESARC as Time 1 and NESARC-III as Time 2

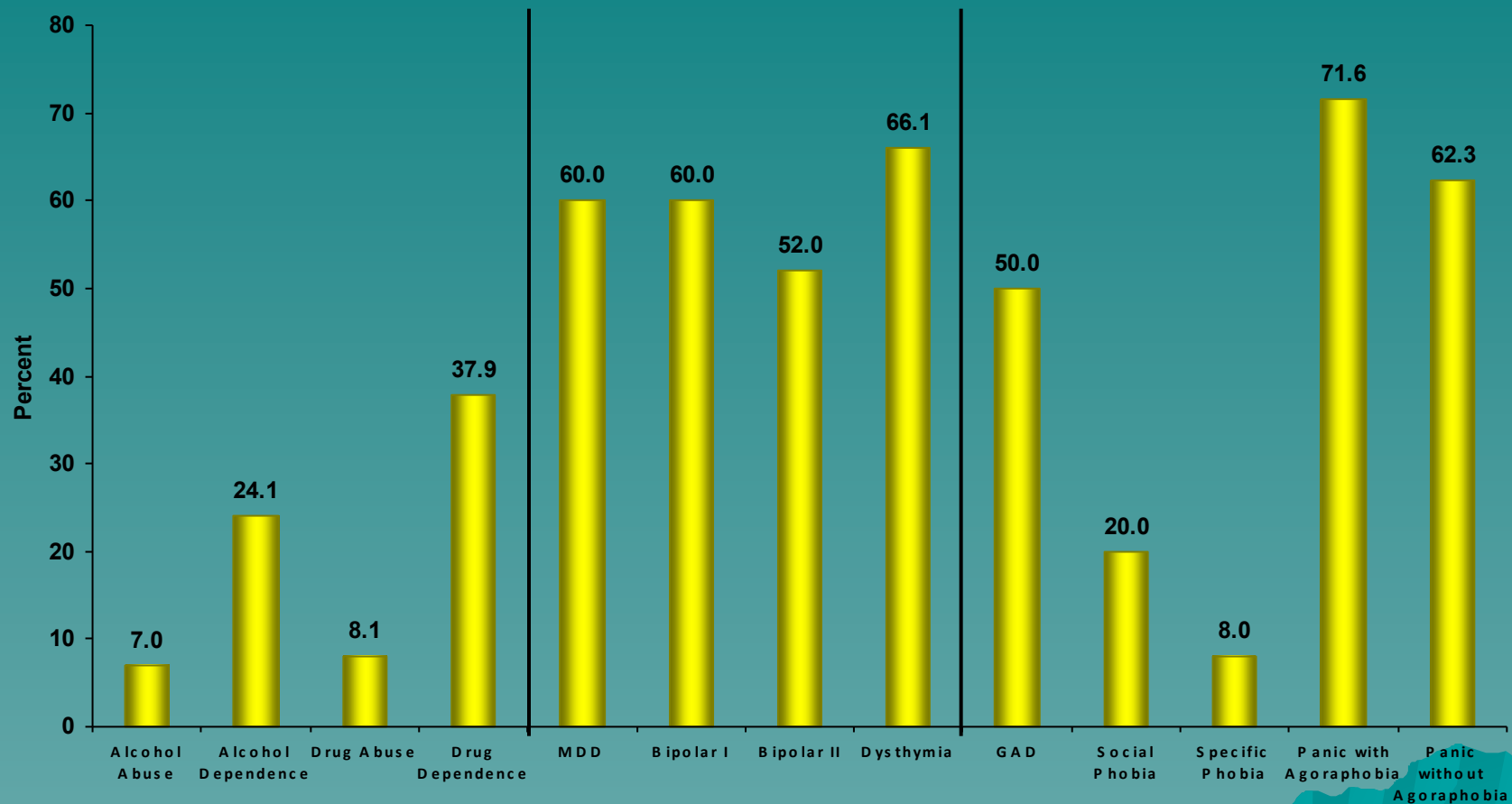
	Wave 1 NESARC (2001-2002)	NESARC-III (2012-2013)
	DSM-IV	DSM-IV
Alcohol use disorder	8.5	12.7
Marijuana use disorder	1.5	2.9
Opioid use disorder	0.4	0.8

- Increases in consumption/use.
- U.S. economic downturn in 2008.
- Growing legalization of marijuana for medical and nonmedical purposes and more permissive attitudes towards its uses

Understand the Working of Substance Abuse and Mental Health Services



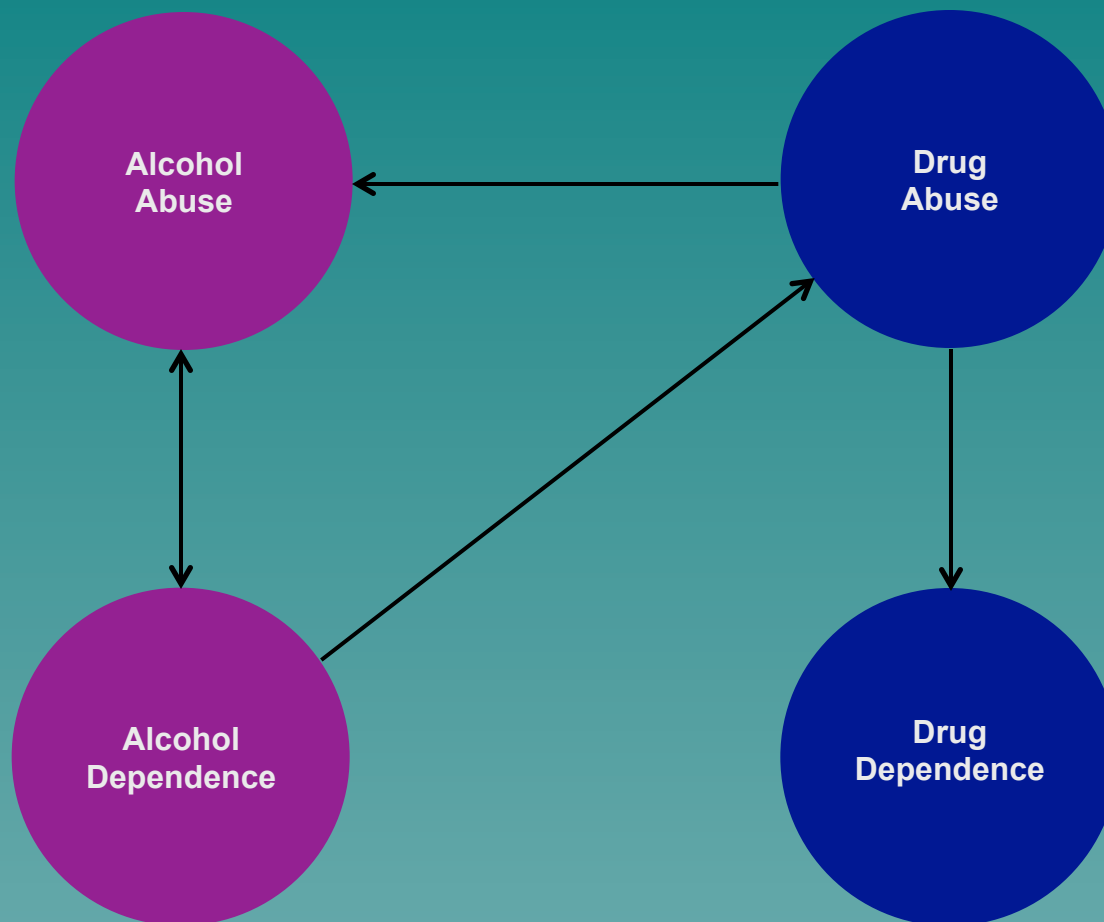
Lifetime Treatment Rates of DSM-IV Substance Use, Mood and Anxiety Disorders (Wave 1 NESARC)



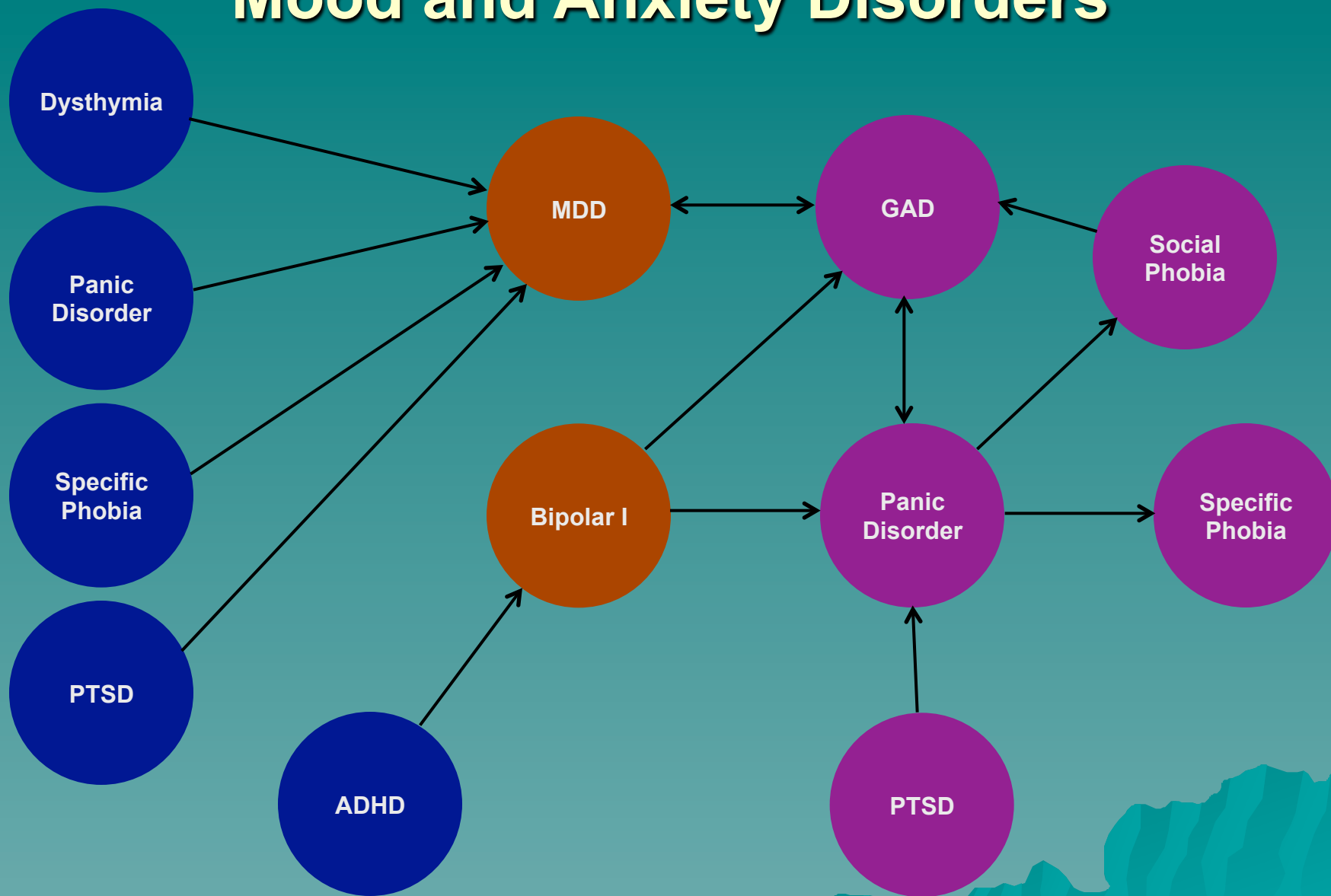
Study the Natural History of Psychiatric Disorders



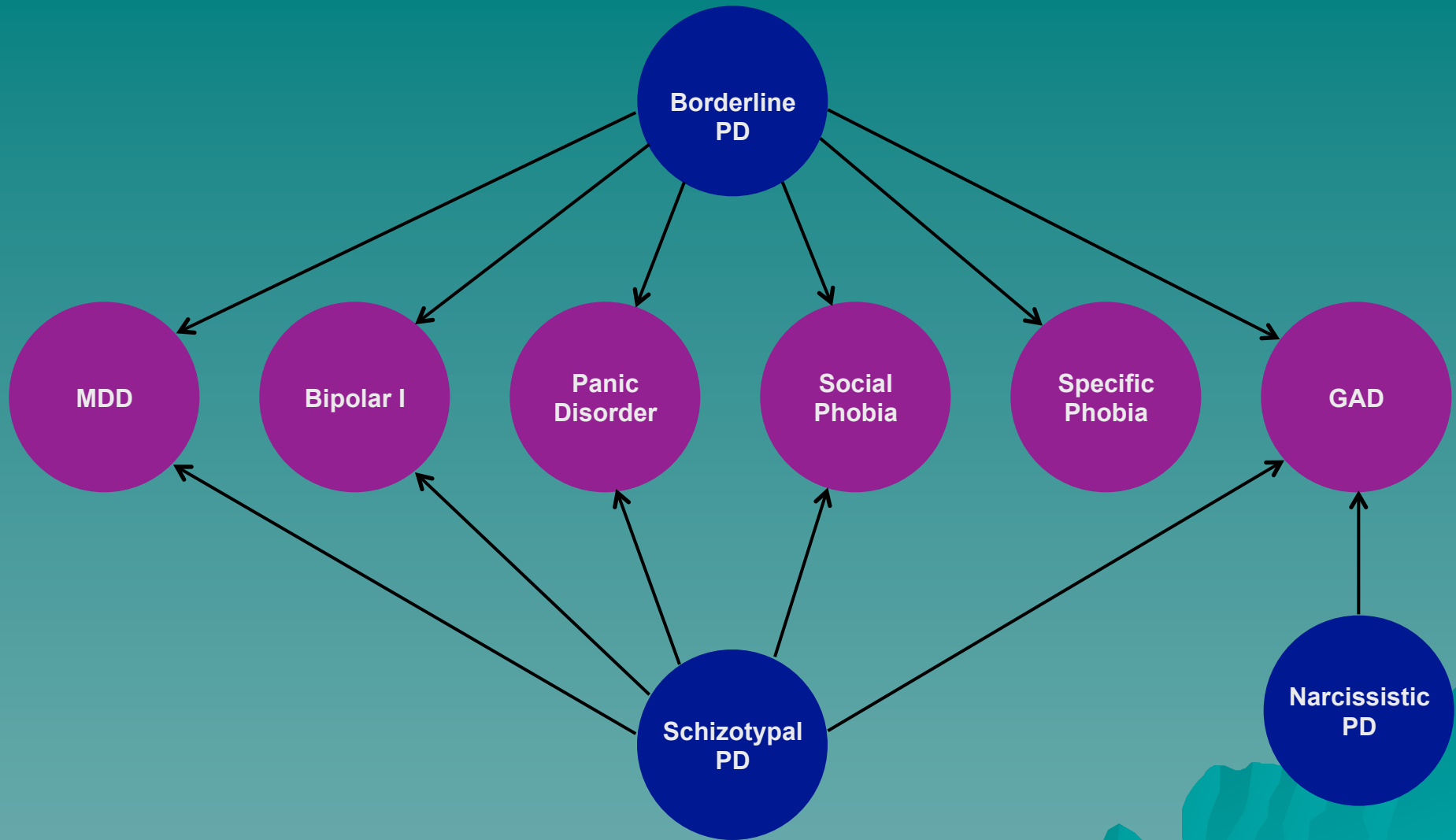
Psychopathologic Predictors of DSM-IV Substance Use Disorders



Psychopathologic Predictors of DSM-IV Mood and Anxiety Disorders



Personality Psychopathology as Predictors of DSM-IV Mood and Anxiety Disorders



Other Wave 1 and 2 NESARC Studies

- ◆ Perspective course
- ◆ Alcohol recovery
- ◆ Psychiatric disability and functioning
- ◆ Adverse childhood experiences
- ◆ Psychiatric treatment utilization
- ◆ Early onset psychiatric disorder
- ◆ Relationship between physical and psychiatric disorders
- ◆ Persistence of psychiatric disorder
- ◆ Sexual orientation and psychiatric disorder
- ◆ Screening for psychiatric disorders
- ◆ Social/contextual effects on individual psychopathology (laws and policies)
- ◆ HIV and psychiatric disorders

Conclusion - I

- ◆ Waves 1 and 2 NESARC takes its place as a culmination of third-generation epidemiologic studies in terms of rigorous sampling and measurement and in their integration of research on alcohol and drug use disorders with psychiatric epidemiology.

Conclusion - II

- ◆ The 2012-2013 NESARC-III is the first installment of a fourth generation psychiatric epidemiology survey which incorporates biological variables to examine gene-environmental interactions.
- ◆ In the NESARC-III, over 24,000 DNA samples were collected, paving the way to examine biological variables that modify (or are modified by) larger environmental factors including social norms, laws, physical environment, economic conditions, etc.
- ◆ Beyond the NESARC-III, there will continue to be a need to update prevalence, incidence, risk factors and treatment utilization data related to substance use disorders and common psychiatric disorders

A NESARC-IV could provide such information.

Inform Future Genetic Research



Laboratory of Epidemiology and Biometry

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Thank You

