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Background

- Persons with mental disorders such as depression are at increased risk of developing drug use disorders.
- Risk for severe secondary substance disorder is highest when the mental disorder occurs at a young age, thus children and adolescents are a vulnerable population.
- Co-occurrence of substance abuse and mental illness places youth at increased risk for suicide, homelessness, school dropout as well as poor parental and friend relationships.
- Limited data regarding the co-occurrence of substance abuse and depressive feelings among Michigan youth.

Youth Risk Behavior Surveillance System (YRBSS)

- YRBSS created by CDC to monitor the prevalence of health-risk behaviors among high school youth that contribute to leading causes of morbidity and mortality.
- Youth Risk Behavior Survey (YRBS) administered at state as well as national and local level biennially to high school students in grades 9 – 12.
- YRBSS collects data on reported drug use and depressive feelings among high school students.
- Michigan Department of Education responsible for coordinating data collection.

Purpose of Evaluation

- Examine utility of YRBSS in monitoring co-occurrence of illicit drug use and depressive feelings among Michigan youth.
- Determine current prevalence of co-occurrence of depressive feelings and illicit drug usage among Michigan youth.

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Methods

- Utilized Michigan YRBS (MiYRBS) data from 2003-2009.
- Depressive feelings defined as feeling so sad or hopeless almost every day for two weeks or more in a row that the student stopped doing some usual activities in the past year.
- Illicit drug use included marijuana, cocaine, heroin, barbiturates, inhalants, or club drugs (e.g., ecstasy) in past 30 days (current usage) or during lifetime.
- Compared MiYRBS estimates to 2009 national YRBS estimates and data from 2006-2008 National Survey on Drug Use and Health (NSDUH).
- Chi-square analysis and 95% confidence intervals were used to compare co-occurrence prevalence estimates.

Results

- Co-occurrence of past year depressive feelings and illicit drug use among Michigan youth remained relatively stable from 2003-2009 (Figures 1 & 2).
- Lifetime and current illicit drug use estimates were significantly higher among students with reported depressive symptoms (p < .0001, p < .05, respectively) (Figure 3).
- Co-occurrence estimate for 2009 national YRBS (14.2%, 95% CI: 13.1-15.3%) and 2009 MiYRBS (15.2%, 13.2-17.3%) for lifetime drug use and depressive feelings were similar.
- Michigan youth co-occurrence estimates were significantly higher in 2009 MiYRBS than 2006-2008 NSDUH. Estimate differences may be attributable to case definition variation for “depression.”

Surveillance System Attributes

Simplicity: fair (+)
- Complicated surveillance system for epidemiologists to analyze due to two-stage, cluster sample design.
- Results fairly easy for general users to access through reports and interactive CDC website that allows users to analyze data at the national, state or local level.

Flexibility: good (+)
- States granted the ability to add state-level questions to address local health concerns.
- Series of data editing procedures utilized to ensure data quality and consistency. If responses conflict logically, answers are set to missing.
- Some literature suggest these procedures bias the results toward the null.

Acceptability: good (+)
- High participation rate at the school and student level.
- Since 1997, overall response rate greater than 60% allowing data to become weighted, and thus representative of all Michigan youth.
- Item response rates for the drug and depressive symptom questions were all above 94% in 2009 MiYRBS.

Representativeness: poor (-)
- Absent students not allowed a second opportunity to take the MiYRBS.
- Students that frequently skip school are more likely to participate in risky behaviors such as alcohol and drug use, thus YRBSS systematically excludes these students, introducing selection bias.
- Results only representative of non-institutionalized youth that attend public schools in the state.

Timeliness: fair (=)
- Biennial collection prohibits the timely detection of new and emerging drug concerns.
- Since overall goal of YRBSS is to monitor leading health-risk behaviors, biennial collection is reasonable.

Stability: good (+)
- Stabile flow of financial resources from CDC since 1991.
- Wording for drug and depressive feelings questions has remained consistent over time.
- YRBSS more efficient at releasing data in a timely manner.

References

6. Centers for Disease Control and Prevention, National Center for Health Statistics, National Health and Nutrition Examination Survey and Other Surveys Used for Surveillance. 2001 (1st ed.).

Figure 1. Prevalence of past year depressive feelings and lifetime illicit drug use co-occurrence among Michigan youth, MiYRBS 2003-2009.

Figure 2. Prevalence of past year depressive feelings and current illicit drug use co-occurrence among Michigan youth, MiYRBS 2003-2009.

Figure 3. Drug use among Michigan youth with and without depressive feelings, 2009 MiYRBS.