

A Qualitative Analysis of the MAYSI-2: Screening for Co-Occurring Disorders in Adolescents

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Abstract. This study investigated the use of the Massachusetts Youth Screening Instrument (MAYSI-2) to screen for co-occurring disorders in an adolescent outpatient treatment program and to provide a preliminary assessment of those needs. The MAYSI-2 identified youth with co-occurring disorders and the results support existing recommendations for distinct screening procedures to identify emergent risk and service need. Case conceptualizations are presented and clinical implications for the screening of youth for co-occurring disorders are discussed.

Introduction

Prevalence rate estimates of mental illness among youth indicate that one in ten older adolescents aged 16 to 17 had a major depressive episode (MDE) in the past year. One in five young adults aged 18 to 25 (18.7 percent) had any mental illness (AMI) in the past year and 3.9 percent had a serious mental illness (SMI). In 2013, 3.1 percent of older adolescents had co-occurring MDE and substance use disorder (SUD); 6.4 percent of young adults had co-occurring AMI and SUD, and 1.6 percent of young adults had co-occurring SMI and SUD. Among older adolescents with MDE, 60.1 percent did not receive treatment for depression in the 2013. Among young adults with AMI, 66.6 percent did not receive mental health services in 2013. Among young adults with SMI, 47 percent did not receive treatment. Older adolescents with MDE and young adults with mental illness generally had poorer quality of life than those without mental illness (Behavioral Health Barometer Washington, SAMHSA 2014). These mental health prevalence rates underscore the need for accurate identification of mental health problems among adolescents.

Commonly documented co-occurring mental disorders among youth include conduct disorder, oppositional defiant disorder, attention-deficit/hyperactivity disorder, anxiety, and post-traumatic stress disorder (Behavioral Health Barometer Washington, SAMHSA 2014). Sixteen percent of youth who had not used an illicit drug did so following a major depressive episode, and youth who experienced serious depression were twice as likely to use alcohol as peers without serious depression. There is a debate about what presents first in a youth's life, the substance use or the mental health issues. Problems can emerge in either direction. However, undiagnosed mental health problems often lead to self-medicating with substances.

The results of the Washington State Healthy Youth Survey (2014) indicate 16% of 12th graders have smoked cigarettes in the past 30 days; 35% have drunk alcohol; and 26% have smoked marijuana. The rate of cigarette use has declined by 6% since 2002; alcohol use by 8%; while the use of marijuana has increased from 25% to 26%. It is not uncommon for youth in our area to smoke marijuana to deal with mental health issues. The rate of depressive feelings and suicide trends for 12th graders has remained steady at 31% for depressive feeling from 2002 to 2014 and 17% for those who considered attempting suicide. The rate of 39% not likely to seek help if depressed has remained steady for ten years. Statewide, 12th graders who smoke cigarettes, drink alcohol, or smoke marijuana are more likely to get lower grades in school (C's, D's, or F's) compared to those who do not use these substances. Statewide, 12th graders who have depressive feelings are more likely to get lower grades in school (C's, D's, or F's) compared to youth who are not having depressive feelings. Therefore, it is imperative to screen for the extent of substance use and mental health stress for youth in order to provide appropriate services.

In considering how to detect youth who are at risk for co-occurring disorders, it is important to keep in mind the differences between brief screening and a more extensive assessment based on

criteria established by the American Society of Addiction Medicine (ASAM), patient placement criteria (PPC) (Mee-Lee, D, 2005). Screening is an attempt to identify a subset of problems (depression, attention deficit disorder) which require an immediate response, where an assessment includes attention to the biological, psychological, and social problems and related risk and protective factors.

Thus, measures of ideation are significant, especially since youth seem to be better reporters of internal disorders (depression, anxiety, trauma) while parents tend to be better at reporting external behaviors (oppositional defiant disorder, attention deficit disorder). However, screening for ideation or thoughts is not sufficient as the measures are moderate at best. There is a need for multiple measures including self-report data from the youth.

A number of child and adolescent assessment tools produce reliable and valid scores, but many are inappropriate for routine use as screening instruments for adolescents. For example, comprehensive assessment instruments are very time consuming to administer and score and take several hours to complete by programs with limited funding and resources. In addition, the instruments often demand high reading levels and concentration and highly trained clinical staff. However, brief instruments can be very limited in scope and are often focused on a single problem like depression. The unique adolescent population renders many of the traditional clinical assessment tools not suitable for routine use in adolescent outpatient treatment programs dealing with co-occurring disorders.

Grisso and Quinlan (2005) developed the Massachusetts Youth Screening Instrument (MAYSI-2) to screen current symptoms of mental and emotional distress for 12- to 17-year-olds entering the juvenile justice system. The MAYSI-2 was developed to be brief and cost-effective, appropriate for a wide range of adolescents, and easy to administer, score and interpret. The MAYSI-2 can be used at any point of entry or youth placement in outpatient treatment, residential treatment or the juvenile justice system. The screening measures rely on scale cutoff scores to identify those in need of a more comprehensive evaluation or monitoring. Approximately thirty-two states were using the MAYSI-2 in the state's juvenile justice system in 2005 (Grisso & Quinlan, 2005).

Method

Sample and Procedure

The sample consisted of 34 youth referred from the local school district or juvenile court and consecutively admitted to the outpatient treatment program at the Community Counseling Institute in Tacoma, Washington between 2013 and 2014. The youth were routinely screened using the *MAYSI-2* upon admission to the outpatient treatment program, in paper and pen format, in keeping with screening practice. In addition, the *DBHR Assessment Tool*, a biological, psychological, and social assessment was given to the youth at the same time as the *MAYSI-2* during the admission process. Youths ranged from age 13 to 21 years old and the average age at

about 16½ years old. A total of 18 youth were male (53%), and 16 (47%) female. There were 14 Black/African American youth (41%), 4 Hispanic, (12%) 1 Asian American (3%) 14 White (41%) and 1 Mixed Racial youth (3%).

Non-violence charges included violation of probation, trespassing, burglary and theft. Youths completed screening measures with trained counseling staff member in a face-to-face session. Data from screening measures were entered into an SPSS database with all personally identifying information redacted, according to a procedure approved by the Internal Research Review Committee of the Substance Abuse and Mental Health Services Administration (SAMHSA). In order to ensure the safety of all youth in outpatient treatment, the agency's suicide prevention policy requires that any youth who counselors are concerned may be at risk for self-harm is placed on suicide precaution and a no-harm contract by a licensed mental health professional.

Measures

Massachusetts Youth Screening Instrument—Second Version (MAYSI-2). The MAYSI-2 (Grisso and Barnum, 2005). Designed specifically for use in juvenile detention centers, the MAYSI-2 is a brief self-report inventory used to screen for mental health and substance use disorders. It is a 52-item self-report inventory designed to be administered by staff with minimal training and designed to identify, at admission, symptoms of distress or problem behavior that could require further evaluation. The MAYSI-2 has been shown to provide good reliability and valid numerical indices of several mental health concerns on factor-analytically derived subscales for boys and girls including: Angry-Irritable (e.g., “When you have been mad, have you stayed mad for a long time”), Depressed-Anxious (e.g., Have nervous or worried feelings kept you from doing things you want to do?) Alcohol/Drug Use (e.g., Have you gotten into trouble when you’ve been high or have been drinking?), Suicide Ideation (e.g., “Have you felt like life was not worth living?”), and Somatic Complaints (e.g., “When you have felt nervous or anxious, has your stomach been upset?”). Each MAYSI-2 scale contains 5-9 items requiring a “yes” or “no” response and “yes” responses are tallied to create a total score.

Washington State Division of Behavioral Health and Recovery (DBHR) Youth Substance Use Assessment (DBHR, 2012). The Washington State Division of Behavioral Health and Recovery Youth Substance Use Assessment measure is an 18-page structured diagnostic interview gathering self-report data on the six dimensions (acute intoxication/withdrawal, biomedical complaints or problems, mental health conditions or complaints, readiness to change, relapse prevention, and environmental factors) of the American Society of Addiction Medicine (ASAM) Patient Placement Criteria (PPC). The results of the DBHR youth substance use assessment measure allows the dually-licensed (chemical dependency/mental health) clinician to render a substance use diagnosis and a provisional mental health diagnosis based on the self-report of the client and professional observation. The substance use diagnosis is based primarily on ASAM dimension five (relapse prevention) and the provisional mental health diagnosis is based on

ASAM dimension three (mental health conditions or complaints). The substance use diagnosis and the mental health diagnosis are based on DSM IV diagnostic codes. In this study, the MAYSI-2 five subscales and the DBHR substance use and mental health diagnoses were analyzed to see how well MAYSI-2 subscales corresponded to specific DBHR diagnoses, diagnostic clusters, and conditions.

Results

Controlling for gender, ethnicity, and age, we found that: 1) The MAYSI-2 effectively identified the likely presence of some disorder; 2) the MAYSI-2 was less likely in identifying specific disorders; 3) the MAYSI-2 accurately identified a history of recent and prior suicide attempts; and 4) the MAYSI-2 was more likely to identify youths with comorbid profiles than those with disorders in one or another single domain.

Identifying mental health disorders.

The MAYSI-2 was able to identify the likely presence of mental health disorders. All youth scored above at least one caution cutpoint on the MAYSI-2. Of all youths (N=34), 35% identified youth (12 youth) reporting depressive disorders, 35% identified (12 youth) with attention deficit disorder, 27% (9 youth) identified with conduct disorder, and 3% (1 youth) identified with bipolar disorder. Four (12%) of these youth identified two disorders.

Identifying substance use disorders.

The MAYSI-2 was able to identify the likely presence of substance use disorders. The primary substance use disorder for 34 youth was marijuana abuse or dependency at 56% (19 youth). This was followed by alcohol abuse or dependency at 41% (14 youth), with nicotine dependency at 21% (7 youth). Opiate abuse or dependency represented 9% (3 youth) and amphetamine abuse or dependence was at 3% (1 youth), with PCP dependence at 3% (1 youth) of the sample as well. All but 4 youth had more than one substance use disorder.

Ethnic Minority Disparities

According to the Preliminary Report on Race and Washington's Criminal Justice System (Gonzaga Law Review, 47, 251 (2012), the Seattle University Law Review, 35, (forthcoming 2012) and the Washington Law Review, 87, 1, (2012), in 1980, of all states, Washington State had the highest rate of disproportionate minority representation in its prisons. Today in Washington State, minority racial and ethnic groups remain disproportionately represented in all stages of the system, including arrests, charging, court, conviction and prison and jail populations, in relationship with their representation in the state's general population. For example, in 2007, African American youth comprised just under 6% of the state's population aged ten through seventeen years, but comprised about 12% of the state's juvenile arrests (There is a similar pattern of overrepresentation for Latino youth representing 11% of the state's

population, yet received 14% of juvenile dispositions, and Native American youth at 2% of the state's population yet received nearly 5% of the juvenile dispositions (Governor's Juvenile Justice Advisory Committee, Washington State Department of Social and Health Services, Title II Formula Grants Program Application: Comprehensive 3-Year Plan for FFY 2009-2011, at 13 (2009)).

This disproportionality is even greater for youth in the Washington State Juvenile Rehabilitation Administration (JRA) as the proportion of African American youth in JRA facilities is five to six times the proportion of their population in the state and Native American youth reside in JRA facilities at a rate of two times the proportion of their respective population in Washington State (Washington State Sentencing Guidelines Commission, Disproportionality and Disparity in Juvenile Sentencing, Fiscal Year 2005).

Washington State has found that African American youth receive more negative attribution assessments about the causes and connections of their offenses than white youth and these decisions and characterizations are linked to more serious and punitive sentence recommendations. Studies have shown that crimes of African American youth are commonly attributed to internal traits such as personality and attitude while white youth's crimes are attributed to their social environments such as peers, family and community. These decisions often influence probation officers' assessments about the potential of future offenses among racial and ethnic minority youth and lead to more severe sanctions. We recommend that additional investigations and data analyses take place to both assess and address the rates of disproportional racial and ethnic minority contact with the juvenile justice system.

Discussion

Success Story

VL is an 18-year old female client who was referred because of substance use and possible mental health issues. She identified with depression on the MAYSI-2, reported sexual abuse by a cousin when she was age 14 and ran away(homelessness) to live on the streets for four years becoming pregnant at age 18 and tracked down by Child Protective Services (CPS) and ordered to enter temporary housing and treatment prior to having a baby. She attended and successfully completed the special program called "A New Road" for youth with co-occurring disorders. VL was able to eliminate her substance use, continue her education toward earning a high school diploma and securing a part-time job.

ME is a 16-year-old African American male referred to "A New Road" for a charge of minor being intoxicated in public. He started using marijuana at age 13 smoking blunts (marijuana inside of a cigar) about once per month. He reported using alcohol at age 14 and drank several times lifetime. He was diagnosed with marijuana abuse and alcohol abuse (although it was more experimental). ME reported gang involvement starting at age 15 and being harassed by gang members before "they moved away". He reported loss and grief issues over the death of his

brother in a house fire and went to counseling for this trauma about two years ago. The MAYSI-2 results indicated moderate drug use and angry/irritable. During treatment, the client did not report any acute intoxication and/or withdrawal symptoms and no biomedical conditions or complications. This youth client was involved in a Church youth group and Sunday services with his family. ME attended outpatient treatment for about eleven months (from August through June) and sometimes had difficulty attending sessions because of stress at home. Although his mother had official custody (and also smoked marijuana on a regular basis), he was being raised by his grandmother who was undergoing chemotherapy for cancer. During treatment, he tested positive for marijuana use and tested negative one month prior to completion of the program and a summer move to Alabama to spend time with his dad. He was able to increase his maturity level, served as a co-leader for some outpatient groups and learned to make better decisions about drug use and people, places and situations.

JJ is a 17-year-old African American/Japanese American female referred to “A New Road” for being charged with possession of marijuana, assault, obstructing law enforcement and resisting arrest. Her first use of marijuana was at age 13 and she moved to weekly use of about two blunts four times a week to age 17 when she came in for an assessment of substance use. Her first use of alcohol was at age 16 when she reported getting drunk on her birthday off of six drinks. JJ reported drinking about three times lifetime and drinking 1-2 mixed drinks each time. She was diagnosed as marijuana dependent and abuse of alcohol. The MAYSI-2 indicated high drug use, angry/irritable, and depressed/anxious. JJ attended outpatient treatment for about six months with irregular attendance and participation. She tested positive for marijuana use at a high level while in treatment, prior to lacking engagement and dropping out of the program. During treatment, she did not report any acute intoxication and/or withdrawal and no biomedical conditions or complications. JJ reported anger issues with her mom who she reported almost died two years ago from an overdose of pills and alcohol. She reported a history of combative behavior and being in about a dozen fights in the 10th grade at a local high school. JJ reported not wanting to continue substance use treatment once off of probation, although she reported her mom wanted her to continue. Ultimately, she lacked engagement and dropped out of treatment.

JJ is a 17-year-old African American/Native American referred to “A New Road” for being under the influence of marijuana at a local high school. He was diagnosed with marijuana abuse, alcohol abuse and nicotine experimentation and he first started using drugs at age 15. He was diagnosed with ADHD in 5th grade and his medication includes Adderall (20 mg/5mg). The MAYSI-2 indicated moderate drug use, angry/irritable, depressed/anxious, somatic complaints, suicide ideation, thought disturbances, and mild traumatic experiences. JJ attended the outpatient treatment program for two months and tested positive for marijuana on two occasions with an increase in use from one test to the next one week prior to dropping out of the program. During treatment, the client did not report any acute intoxication and/or withdrawal symptoms, and no biomedical conditions or complications. JJ expressed not believing that he had a problem with drug use and continued to use during his time in the program. The MAYSI-2 indicated a high

level of drug use, and anger/irritability. He reported that he did not have a good relationship with his mother and also had a number of close friends using drugs. He made some good progress in understanding his triggers to use drugs, but was not able to make the changes needed to stay clean and sober from substance use. His final diagnosis was marijuana abuse, alcohol abuse, and nicotine experimentation. The discharge recommendations included completing an outpatient treatment program and being re-evaluated for ADHD and the need for medication. This client dropped in two months after being discharged, but did not follow-through with an appointment scheduled for a re-evaluation.

KC is a 16-year-old White female who was referred to “A New Road” because of a probation violation for previous court charges. She reported that at age 12 she started smoking marijuana, drinking alcohol and smoking cigarettes daily, unless she was high on methamphetamine. KC reported that during the summer of her 15th year she used ecstasy regularly. Client reported that at age 16, using opiates two times, over-the-counter pills, mushrooms one time, LSD two times, inhalants one time. She reported going to inpatient treatment at age 12 for a few days at an unsecured facility in Washington State and fifty-one days out of a six-month program at a secure facility in Oregon. After the inpatient experience, she reported going back to marijuana and methamphetamine use up to the time of the referral for an assessment. KC was diagnosed with marijuana dependence, methamphetamine dependence, nicotine dependence, alcohol abuse, opioid abuse, and hallucinogen abuse. She reported current medications included Concerta (72 mg), Lithium (450 mgs twice daily) for ADHD and a Bipolar Disorder. KC also reported being diagnosed with ODD and PTSD and spending time in Echo Glen, a Juvenile Rehabilitation Administration (JRA) long-term confinement facility as she was living in a drug-dealing house and involved in gang behavior. The death of a grandparent also led to loss and grief issues as she had many unexcused absences from treatment. She ran away several times during outpatient treatment, continued to use drugs, and walked out of family sessions.

During outpatient treatment for a six-month period of irregular attendance, the client did not report any acute intoxication and/or withdrawal issues. She reported biomedical conditions/complications that included chest pains, a bladder infection, jaundice, seizures at times, asthma, chronic back pain, chlamydia, gonorrhea, scabies, and allergies to pollen and oranges. KC reported anorexia in 2010 and early 2011. The client reported being physically abused by her stepmom at age 10, raped at age 12 by a neighbor, and attempting suicide. She reported a combative history related to how she was treated and indicated homicidal thoughts about the person who raped her. During treatment, the client was not able to commit to changing drug use and related risk behaviors, lacked engagement, and was not responsive to case management and outreach efforts. The discharge summary recommendation was for inpatient treatment in a secure facility followed by outpatient treatment.

Discussion

One purpose of this study was to conduct a qualitative sampling of adolescents screened for co-occurring disorders. This study adds to the literature that has reviewed MAYSI-2 scores.

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