



# Behavioral Health Trends in Ohio

October 2017 • Volume 4 • Number 1



## Featured Research Topics:

- Family-School Alliances for Behavioral Health Care
- Social Connectedness and Youth with SED and/or Autism
- The Ohio Wage Match Project
- Gambling among College Students

## Welcome to the “Behavioral Health Trends in Ohio” e-Journal

### Behavioral Health Trends in Ohio, the e-Journal

**Behavioral Health Trends in Ohio** (BHTO) is the new incarnation of Current Research Trends, the first eJournal published in 2012 by the Office of Quality, Planning and Research (QPR) at the Ohio Department of Mental Health and Addiction Services (OhioMHAS). Using a fresh approach, the new e-Journal continues to feature research and evaluation studies associated with Ohio’s public behavioral healthcare system.

Periodically, the e-Journal will include human-interest stories about various personalities, places or issues affecting the public behavioral healthcare spectrum. Through the e-Journal, QPR circulates up-to-date information about behavioral healthcare outcomes data, policy matters, treatment debates and evidence-based best practices.

Feel free to submit your articles for publication in the *Behavioral Health Trends* e-Journal. To properly format the article, please refer to the **Manuscript Submission Guidelines** on the back inside cover of this document. The **Manuscript Submission Guidelines** are also posted on the OhioMHAS website at <http://mha.ohio.gov>. Feel free to also send QPR notifications about research grants, future conferences, staff workshops and publication opportunities to be shared with our readership. To inquire about submitting articles for the e-Journal submissions, contact Helen Anne Sweeney at 614-466-9981 or send an email to: [OQPR-OhioMAS@mha.ohio.gov](mailto:OQPR-OhioMAS@mha.ohio.gov)

#### *Disclaimer*

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### Office of Quality, Planning and Research

Researchers in the Office of Quality, Planning and Research (QPR) identify, investigate and evaluate questions of importance to the OhioMHAS and to the state’s public behavioral health system. QPR’s activities inform department planning priorities, service disparities and quality of care concerns.

QPR supports high quality, cost effective public mental health and addiction services for consumers, families and communities. It does this by providing outcomes analyses, decision support, and quality improvement and planning activities by managing and collecting data through the Ohio Behavioral Health System. QPR staff coordinate the Ohio Substance Abuse Monitoring (OSAM) Network and regularly release drug trend data. QPR Staff are also involved in research projects that focus on gambling, suicide prevention, supported employment, housing, continuum of care, systems of care strategies targeted to teens, transitional age youth adults, and incarcerated populations.

Also, QPR administers the Screening, Brief Intervention and Referral for Treatment (SBIRT) which is a continuum of care strategy. SBIRT assists providers in reducing morbidity and mortality of consumers being treated with substance abuse disorders through early intervention and integration of medical and behavioral health approaches. SBIRT also promotes greater understanding about the importance of adherence to best and promising evidence-based practices used to integrate physical and behavioral healthcare.

#### **Sanford Starr, MSW, LISW-S**

Deputy Director, Office of Quality, Planning & Research

#### **Kraig Knudsen, PhD**

Chief, Bureau of Research and Evaluation  
Editor-in-Chief

#### **Helen Anne Sweeney, MS**

Manager, Data Analysis and Research  
Managing Editor

#### **Shirley Bowen, MA**

Publications Specialist 2



**John R. Kasich**, Governor  
**Tracy J. Plouck**, Director

Ohio Department of Mental Health and Addiction Services  
30 East Broad Street, 8th Floor  
Columbus, Ohio 43215  
(614) 466-8651 voice  
(614) 752-9696 TTY  
Fax (614) 466-9928

# Behavioral Health Trends in Ohio

Ohio Department of Mental Health and Addiction Services ● Office of Quality, Planning & Research

## Table of Contents

<b>Moving Research into Practice</b> .....	4
<i>Tracy Plouck, Director, Ohio Department of Mental Health and Addiction Services</i>	
<b>Behavioral Health Research in Ohio</b> .....	5
<i>Kraig Knudsen, Chief, OhioMHAS Bureau of Research and Evaluation</i>	
<b>Agency in Focus: Frontline Services...</b>	
Housing Retention and Critical Time Intervention in Cuyahoga County.....	7
<i>Scott Wingenfeld, MPA • Caleb Dixon, LPC</i>	
<b>Policy, Program and Practice...</b>	
Care Coordination and The Family-School Alliance Among Children Involved In Ohio's Behavioral Health System On IEPS .....	13
<i>Richard R. Massatti, PhD, Carol Carstens, PhD</i>	
<b>Quality Improvement...</b>	
Ohio Wage Match Project.....	27
<i>Robert J. Gitter, PhD, Kwok Tam, MS, Helen Anne Sweeney, MS</i>	
<b>Research and Development...</b>	
Social Connectedness in Families of Children and Adolescents with Serious Emotional Disturbance and Autism Spectrum Disorder.....	35
<i>Carol Carstens, PhD</i>	
Community College And University Student Gambling Beliefs, Motives And Behaviors.....	39
<i>R. Thomas Sherba, PhD, MPH • Beth Gersper, MPA</i>	
<b>Save the Date: Behavioral Health Conferences, Workshops and Events</b> .....	57
<b>Manuscript Preparation Guidelines for Behavioral Health Trends in Ohio</b> .....	61





## Moving Research into Practice

Promoting sound behavioral health in school-age youth has been a goal among educators and clinicians for generations. From implementing in-school substance use prevention programming to championing the rights of juvenile offenders with mental illness, the work of the behavioral health field made healthy childhood development a priority.

The National Alliance on Mental Health (NAMI) reports that one in five American children lives with a mental health issue and, left untreated, can affect their ability to learn and develop. The National Institutes of Health (NIH) has found that many mental health disorders found in adults were present during childhood and that the earlier those disorders would have been addressed, the more successful the treatment could have been. And the Centers for Disease Control and Prevention (CDC) advises that parents and doctors should work closely with children's teachers, coaches and therapists to diagnose and treat childhood behavioral health symptoms as early as possible with the most current evidence-based strategies available.

OhioMHAS seeks, through the collaboration of its various offices, other state agencies, institutes of higher learning, local K-12 school systems, the private sector and our vast network of mental health and substance use treatment providers to identify issues of importance in the area of childhood behavioral health, lead studies, build infrastructure and provide services to Ohio's youth. In addition, our Community Family Partnership Team continues to encourage involvement of Ohioans with a lived experience of a mental health and/or substance use disorder, and their families, in training and recovery opportunities.

The department has initiatives that address the needs of children from the womb through the transition into adulthood. Our Maternal Opiate Medical Supports (MOMS) initiative connects pregnant women dealing with substance use disorder with clinical and legal supports. It has received recent praise at the federal level. OhioMHAS also offers support to Ohio's youngest citizens through the Early Childhood Mental Health initiative. Through a network of consultants, it trains parents and caregivers of young children in the skills to help their children develop into mentally healthy individuals.

For the fifth year, OhioMHAS announced Strong Families, Safe Communities grant awards to Ohio regions that have identified gaps in the continuum of care for its youth.

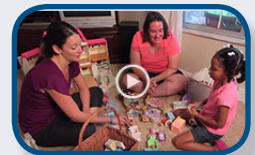
The initiative is cosponsored with the Ohio Department of Developmental Disabilities and identifies families with youth who are at risk to themselves and others due to behavioral health issues, and helps them find resources before a crisis occurs.

This spring many activities supported and celebrated our work. Ohio joined more than 1,100 communities throughout the nation in celebrating the annual National Children's Mental Health Awareness Week. The 2017 focus was the need to integrate behavioral health and primary care for children and young adults with mental and/or substance use disorders. Nearly 2,000 Ohio students and adult supporters converged on the Ohio Statehouse lawn for our annual "We are the Majority" drug-free youth rally, hosted by the Ohio Youth-Led Prevention Network, Prevention Action Alliance and OhioMHAS. During that rally, officials unveiled the winners of the *Start Recording & Start Talking* video contest, entered by 130 students in grades 6-12 who used their creative talents to promote a drug-free lifestyle among peers.

I hope you feel as encouraged by our department's undertakings as I do, especially with regard to improving youth wellness. Moreover, I hope you will assess with a critical eye areas in need of further study and action. When considering a topic for research, be mindful of how clinicians, educators, parents, community members and others might apply our research findings in practical, real-world settings.

*Tracy J. Plouck*, Director

Ohio Department of Mental Health and Addiction Services



OhioMHAS provided grants to six county boards to create innovative early childhood themed videos. The videos illustrate critical best practices that have guided and informed professionals engaged in early child development, treatment and consultation.

Find **Best Practice** and **Grow Power** videos at <http://mha.ohio.gov/Default.aspx?tabid=277> and on YouTube at <https://youtu.be/uAXpouR6Lac>



Dear Colleagues:

Welcome to the fourth volume of *Behavioral Health Trends in Ohio*, the Ohio Department of Mental Health and Addiction Services' (OhioMHAS') electronic journal. As you can see, we

made a slight change to the name and look. These changes were made after the summer of 2016 when the editors of the journal decided to engage in a "Kaizen" process to improve the journal's offerings and streamline the editorial process. For those unfamiliar with the Kaizen process, it is a strategy where employees at all levels of an organization work together to improve efficiency and increase quality. Using the Kaizen process, we combined the talents of the editorial and production staffs. These staff members reviewed all aspects of the e-Journal process in order to make substantial and sustainable improvements. A Kaizen event typically requires several tasks, including:

- Setting goals
- Providing the necessary background for participants
- Reviewing the current state and related data
- Developing plans for improvements
- Implementing improvements
- Reviewing and fixing what isn't working
- Reporting results and determining any necessary follow-up.

To give you a little background, OhioMHAS has a history of tracking on-going behavioral health research mainly in the biennial publication, *New Research in Mental Health (NRMH)*, a very large compendium about the various studies funded to enhance Ohio's public behavioral health system. Then in 2010, in response to feedback from the field, we moved away from the paper-back compendium

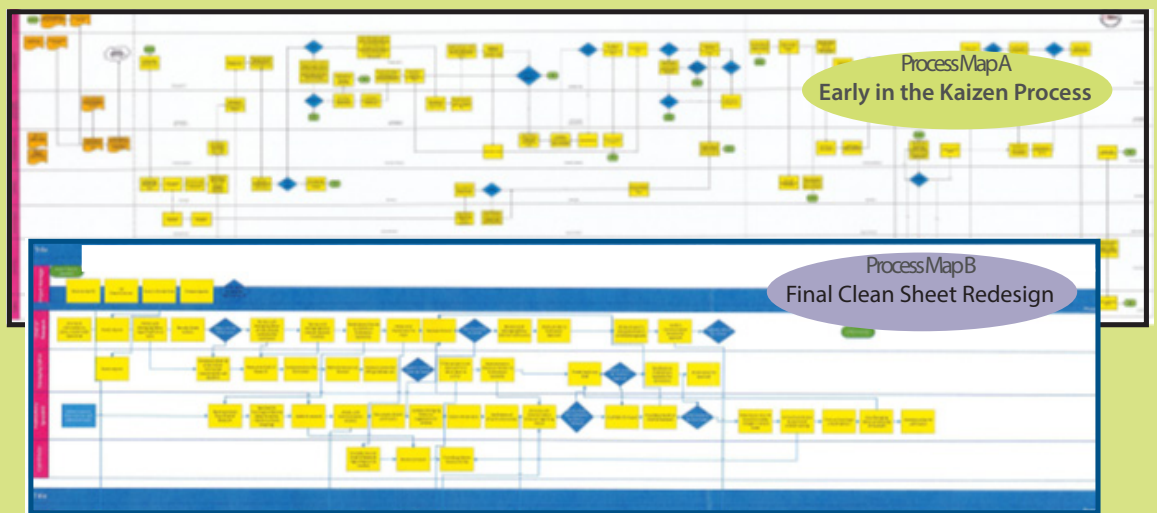
to the e-journal format, thinking that this format would enable us to circulate research findings more frequently. Last year, however, we realized that we were not quite meeting our goals and needed to improve our planning and production processes. We realize that the e-journal had not sufficiently evolved with the mission and vision of the new department. The Kaizen process allowed us to appraise the current journal in a critical way and better align it with Department and consumer needs.

In our case, Lean Ohio guided us through the Kaizen process. Initially, as you can see in "Process Map A" of Figure 1, our staff identified the many steps we took originally to produce the e-journal. The Kaizen method guided us through a review of each step in order to determine whether to revise or eliminate it. With dogged determination, we wanted to uphold the department's nearly 40-year legacy of disseminating research information. However, we were committed to doing it more effectively and efficiently. In the end, we appreciated having undergone the Kaizen process because it helped us to streamline the process and to clarify the process. We developed new standards for soliciting and editing articles and organizing the e-journal. We are very proud of our work, and feel that the team has breathed new life into the process.

The results? Our publication time went from 18 months to six months, the number of critical decision points within the process was cut in half (from six to three), the number of loop-backs went from eight to two, and our reworks of the submitted articles went from an average of 12 to only two! You can find additional information about Kaizen at: <http://lean.ohio.gov/LeanKaizen.aspx>

**Figure 1**  
**Kaizen Process Maps**

Although it is impossible to follow each step identified in our Lean Ohio/Kaizen Process Maps, you can see that the top "Process Map A" framed in black has considerably more yellow boxes and blue decision points than the lower "Clean Sheet Redesign" or "Process Map B".



I will not go into the logistical changes that ultimately helped the editors. However, I do want to discuss the content changes that we believe will provide value to both professional providers and consumers of behavioral health services in Ohio. First, we have changed the name from *Current Research Trends* to *Behavioral Health Trends in Ohio* to reflect the expanded purpose of the journal. In this regard, the journal will feature research and evaluation studies, and also shine light on the great work occurring throughout Ohio on behalf of individuals with behavioral health disorders. In this issue, Scott Wingenfeld and Caleb Dixon shine the spotlight on Frontline Services in Cuyahoga County.

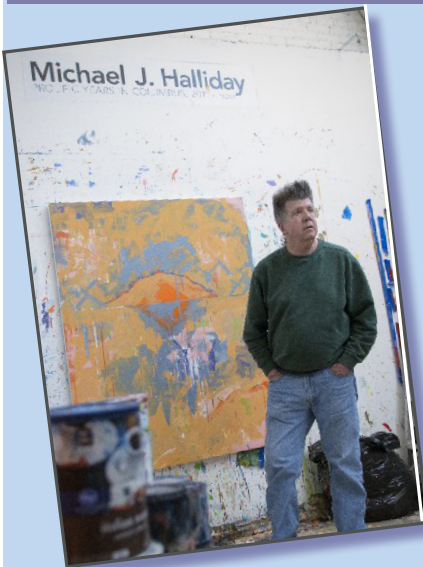
Second, there will be a section that addresses matters of *Policy, Program and Practice*. This section will discuss relevant policy and program issues occurring in Ohio that could affect directly practice to the consumers of our services. In this issue, the *Research and Development* section explores how the field is moving forward not only in addressing mental health and substance use but also gambling specifically among college students. Finally, there will be a section dedicated to exploring *Quality Improvement* efforts across the state. This section will present ongoing quality activities at various organizations and showcase successful efforts to improve quality of services. In this issue, two articles focus on quality.

It is our hope that you will find our new and improved *Behavioral Health Trends in Ohio* a great place to receive new information, as well as one in which you can share your own successes. Feel free to download our Manuscript Preparation Guidelines on our website at <http://mha.ohio.gov/Default.aspx?tabid=305>

Enjoy our inaugural edition of *Behavioral Health Trends in Ohio*, and while we have much work to do, we are very excited about the journal's future. We also hope that you will take time to explore the body of work produced by the artists featured in each issue of *Behavioral Health Trends in Ohio*. Additionally, we are pleased to recognize Michael Halliday, a nationally reknown professional artist from Columbus, Ohio; and Priscilla Miller of Artists First group in St. Louis, MO. Both Mr. Halliday and Ms. Miller allowed us to use their art to enhance the e-Journal. We also wish to thank Myken Pullins of the Fresh Air Gallery and Alex Orear of Artists First for helping us secure permissions to enhance this e-journal with original artwork. So, do not hesitate to send your comments or manuscripts to me.

*Kraig Knudsen*, Chief,  
Bureau of Research and Evaluation  
[Kraig.Knudsen@mha.ohio.gov](mailto:Kraig.Knudsen@mha.ohio.gov)

## On the Cover: *Untitled* by Michael J. Halliday



A native of Columbus Ohio, Michael J. Halliday, has been making "art" all of his life. A graduate of The Ohio State University (OSU), In the mid-1970s, Halliday left Ohio and settled into a bohemian lifestyle on the West Coast. The move westward proved to be transformative and sometimes self-destructive.

Halliday's work recalls the "Conceptual Art"

that dominated California in the 1970s. Conceptual Art was unconventional and experimental. Unfortunately, Halliday suffered personal and emotional set-backs and for a time he abandoned painting altogether. In 2010, Halliday returned to

Columbus, the place he considers his intellectual home. Once again, he tapped into the legacy of those who had inspired him as a student at OSU. Today, the OhioMHAS Office of Quality, Planning and Research is honored to introduce new audiences to Halliday's large-scale abstract paintings, one of which appears on the cover of this e-Journal. Halliday is a resilient professional artist who has lived through recovery and prevention. His approach to painting has lessons for living in the way he develops large color fields on canvases from small collages and drawings. He describes his approach,

*"Color is very important in my work, and I rely on my intuition and visual acuity in deciding which colors I will use in a given motif. Once in progress, I allow the painting to have a life of its own. I do not attempt to deny the fluid nature of the medium, but rather let it speak for itself; for it is the fluid, dynamic, sensual, and subtle nature of paint that is the driving force behind my work"*

For information, contact Mr. Halliday at 614.551.7782 or by email: [dochalliday47@gmail.com](mailto:dochalliday47@gmail.com)

## AGENCY IN FOCUS: FRONTLINE SERVICES “HOUSING RETENTION AND CRITICAL TIME INTERVENTION IN CUYAHOGA COUNTY”

SCOTT WINGENFELD, MPA<sup>1</sup> • CALEB DIXON, LPC<sup>2</sup>

<sup>1</sup>Ohio Department of Mental Health and Addiction Services • <sup>2</sup>FrontLine Services

**Corresponding author:** Scott Wingenfeld, MPA,  
OhioMHAS, Office of Quality, Planning and Research,  
30 E. Broad Street, 8th Flr., Columbus, OH 43215  
E-mail: Scott.Wingenfeld@mha.ohio.gov

### Abstract:

In 2014, the Ohio Department of Mental Health and Addiction Services (OhioMHAS) secured Substance Abuse and Mental Health Services Administration (SAMHSA) funding for the Cooperative Agreement to Benefit Homeless Individuals (CABHI) grant. One of five original grantees, FrontLine Services in Cuyahoga County, Ohio connected over 200 chronically homeless individuals diagnosed with either serious mental illness, substance abuse issues, or co-occurring disorders to permanent housing. Due to the recurrent homelessness that this population typically experiences, clients also received Critical Time Intervention services, a model of case management specifically designed to help clients adapt to and maintain stable housing. Data collected throughout the program showed that 93.2% of this population retained housing after six months and 94.1% over a 12 month period. In addition to staying housed, they were also more likely to receive mental health and/or substance abuse treatment, gain employment/enroll in job training programs, and increase their overall monthly income.

### Keywords:

Behavioral Health, Homelessness, Housing, Funding

In 2014, the Ohio Department of Mental Health and Addiction Services (OhioMHAS) secured Substance Abuse and Mental Health Services Administration (SAMHSA) funding for the Cooperative Agreement to Benefit Homeless Individuals (CABHI) Grant. CABHI is one of several SAMHSA initiatives intended to connect chronically homeless individuals diagnosed with either substance abuse, mental health, and/or co-occurring disorders to permanent housing. Homeless veterans were also prioritized for housing. OhioMHAS policymakers chose to implement the Housing First approach for its proven success in housing these particular populations. Housing First focuses on the most vulnerable homeless individuals and prioritizes placement in permanent housing before their other needs are addressed. Research shows the stabilization that immediate housing provides can better facilitate desired outcomes in treatment of mental health and substance abuse issues (Pearson, Montgomery, & Locke, 2009). In addition to linking chronically homeless individuals into permanent housing, Ohio opted to use CABHI funding to train grantees and provide case management in the Critical Time Intervention (CTI) model.

### INTERVENTION

An evidence-based practice, CTI is a case management program designed specifically to prevent recurrent homelessness in people with severe mental illness leaving outdoor homelessness, shelters, hospitals and other institutions (Silberman School of Social Work, Hunter College CUNY, 2014). SAMSHA required grantees to set a target number of clients to house and provide proof of available housing units in order to re-

ceive funds. Typically a nine month intervention, CTI is delivered by a caseworker and is spread out among three phases, each lasting about three months. It utilizes motivational interviewing strategies and focuses on emphasizing empathy, avoiding argumentation, and promotion self-efficacy among clients (Herman, Conover, Felix et al., 2007). Fidelity to the model is monitored by a third-party, which looks at number of elements, such as caseload size, number of visits, and client-led decision making ([www.criticaltime.org/cti-model](http://www.criticaltime.org/cti-model)).

Several studies have found CTI to lead to significant reduction in recurrent homelessness among similar high risk populations. One study sampled a group of men with a serious mental illness diagnosis that were released from an on-site psychiatry program in a homeless shelter ( Susser et al., 1997). These individuals were released from inpatient care to community housing and given either the usual service opportunities or CTI. According to Susser et al., the experimental group receiving the CTI was found to average three times fewer homeless nights over the course of the 18 month follow-up period than the control group receiving the usual service opportunities. Another study conducted by Kapsrow and Rosenheck (2007) focused on homeless veterans with mental illness leaving Veteran's Affairs (VA) inpatient care. Two cohorts were studied, one without CTI services and another receiving the model. The findings showed a significant improvement in mental health outcomes and housing. The treatment cohort had 19.0% more days housed over the one year follow-up and 14.0% fewer days in institutional settings. Measures of the Addiction Severity Index (ASI) were also significantly lower than the cohort that did not receive CTI.

## PROGRAM DESIGN AND IMPLEMENTATION

Ohio's CABHI Program was designed to end chronic homelessness in the five Ohio counties with the highest rate of chronic homelessness. In each of those five counties, a provider agency is responsible for offering homeless outreach, enrolling the chronically homeless individuals that meet the qualifications of the program, and connecting them to a permanent housing unit. Careful consideration is given to each client's choice regarding their preference of housing placement (e.g. location, unit type, sober housing, etc.). Then, prior to the clients signing a lease, they are matched with a caseworker, and contact is made. During this stage, referred to as Pre-CTI, the trust-

ing client-patient relationship is formed. Assistance with reading and comprehending the guidelines of the lease are often provided. Once paperwork is completed and the lease is signed, the client begins Phase One of the process.

Phase One is referred to as the transition phase, in which a client's support network is developed. Referrals to the appropriate mental health or substance abuse services, benefits, and neighborhood resources are made. Caseworkers make frequent home visits and provide basic assistance with many of the challenges that come with moving into a new home. Typically, recurrent homeless individuals, such as the ones targeted by CABHI, have difficulty maintaining their transition during this period. Consequently, this phase is the most time-intensive since the client-provider relationship is being formed. Success in connecting with the client and building the support network are crucial to the client's positive outcomes in the CABHI program. This phase usually lasts anywhere from one to three months.

Phase Two moves into the monitoring and strengthening period of the CTI process. Assessing the client's skills and strength of the support network is the primary goal of this phase. The caseworker spends less time with the client but is available to help mediate conflicts between client and other caseworkers or between the client and landlord. Long term goals are discussed as the caseworker begins to encourage the client to take more responsibility for his/her own care and success. This phase typically lasts between four and six months.

Phase Three is the point when a client is becoming ready to terminate CTI services with a fully formed support network in place. It is referred as the transfer of care, where the caseworker steps back and enacts the plan for the client's long term goals. At this point, all parts of the support network should be independently sustainable. There is a final meeting to review the progress made, celebrate the successes, and formally terminate services. The transfer of care can take place between seven and nine months in the process but could occur later depending on the individual's level of functioning.

## DATA COLLECTION METHODS

As required by SAMHSA, each client must complete the Government Performance and Results Act (GPRA) National Outcomes Measures (NOMs). Each client housed and receiving CTI support is interviewed at three separate oc-



casions during his/her time in the CABHI program which are the lease signing, follow-up between five and seven months after being housed, and at discharge or 12 months after being housed. This pre-test post-test design allows program staff to observe significant change over time in various areas of interest, such as housing retention, drug and alcohol use, mental health symptoms, linkage to services and benefits, quality of life, and functioning. Data were collected via face-to-face interviews and entered into the online OhioMHAS Portal developed for this grant.

## LOCAL SERVICE PROVIDER

FrontLine Services, a behavioral health provider in Cuyahoga County, Ohio was selected as one of five grantee sites to be part of the CABHI program. FrontLine Services adapted a pre-existing housing outreach program, Bridges to Housing (B2H), to implement the goals of the program. Now implementing CTI, B2H aims to prevent recurrent homelessness by bridging the gap between homeless services and housing services and extending this linkage over a period of approximately nine months.

Each case manager is a mediator between the client's concerns and available social services. The case manager takes into account a client's vulnerabilities, skills, resources, and motivation when considering the community resources available, given each particular clients' needs and desires. The community's vocational rehabilitation possibilities, employment, psychiatric care, physical health care, and social services are all considered, according to how appropriate they would be for the client. Along with CTI, B2H emphasizes treatment intensity, stages of change, motivational interviewing, harm reduction, housing first, SSI/SSDI Outreach, Access, and Recovery (SOAR) and supported employment. In this process, the case manager must be active, focused, supportive, empathic, flexible but consistent in his/her approach to assist the client. The case manager should foster autonomy while remaining available to the client and deal with treatment refusal by meeting the client where they are - both literally and metaphorically.

## CLIENT DEMOGRAPHICS

Referencing Table 1, the reader can observe that the chronically homeless individuals housed by FrontLine Services were mostly male (61.4%) and over 35 years (70.0%), with

**Table 1. Client Characteristics**

Client Characteristics	Number	Percent
<b>Co-Occurring Disorder</b>		
Yes	33	47.1%
No	11	15.7%
Unknown	26	37.1%
<b>Gender</b>		
Male	43	61.4%
Female	25	35.7%
<b>Age</b>		
≥35	21	30.0%
<35	49	70.0%
<b>Race</b>		
African American	47	61.1%
White	18	25.7%
Asian	*	
Refused or missing	*	
<b>Veteran Status</b>		
Yes	10	14.7%
No	58	82.9%
<b>Employment</b>		
Employed, full or part time	*	
Unemployed, not looking for work	16	22.9%
Unemployed, looking for work	18	25.7%
Unemployed, disabled	28	40.0%
Other	*	
<b>Education</b>		
Less than High School	19	27.1%
High School or Equivalency	25	35.7%
Some College	*	
College Degree (Assoc. or BA)	10	14.3%
Vocation/Technical School	*	

\*Cell size less than 10

an average client age of 43. Of the clients screened for co-occurring mental health and substance use disorders, 33 (47.1%) screened positively, while 11 (15.7%) did not. Also, 37.1% were not screened at intake. The racial breakdown of the sample is 61.1% African American, and 25.7% White. Ten clients (14.7%) were identified as veterans and having served in the armed forces. The majority (71.1%) of

FrontLine's clients came from homeless shelters, or were identified as homeless and living on the street. Education levels varied significantly among clients, with 27.1% having less than a high school education and 35.7% having earned a high school diploma or equivalency degree. About 14.3% held a bachelor's degree or higher post-secondary education.

### *John* – A Case Study

Measuring the success of a housing program often relies heavily on data, specifically outputs and numbers served. However, looking at the deeper impact a program may have had on a particular individual can provide indicators of success that data sometimes cannot. One client's story, a man we will refer to as 'John', provides a resonant case study to go along with the data. John has a long history with FrontLine Services and first began receiving services in 2009 from the PATH Outreach program. After years of chronic homelessness living on the streets of downtown Cleveland, John began contemplating living in a permanent supportive housing site.

Then, during a recent winter, John was hospitalized in a psychiatric unit. Seeing an opportunity to intervene, a B2H case manager advocated for the supportive housing property manager and program coordinator to interview John while he was hospitalized. He was also able to complete his housing application while hospitalized. Some questioned his ability to maintain his housing by stating that he frequently slept outside or in car and would not be able to live in a home-like environment. He did not have income, ate out of trash cans daily, and most importantly—was not taking prescribed medications. The concerted advocacy efforts and trust built during the pre-CTI phase was integral to John eventually being housed.

John successfully completed all the necessary paperwork and signed a lease upon leaving the hospital. However, moving into independent housing within a month of hospitalization brought new challenges, many of which he was ill-equipped to handle. During Phase One, he rarely stayed/slept at his apartment, choosing instead to remain outside. B2H staff worked with him extensively around his mental health symptoms, eventually convincing him to try an intramuscular psychotropic medication, i.e., a shot. Every two weeks, B2H staff canvassed the downtown area to find John and accompany him to the agency for his medication. Due to his symptoms, John was unable to sit in the lobby; so, B2H staff would stay with him to ease his anxiety. John

struggled with losing his keys and as a result began experiencing conflict with the security guard at his apartment building. Security guards were growing tired of unlocking his apartment. On the rare occasion when he did stay at his apartment, he struggled to maintain a clean and sanitary unit, which prompted B2H staff to focus their energy on assisting John with cleaning and with learning the skills to clean independently.

During Phase Two of the CTI, John began connecting more with the onsite supportive services staff. Also, John had his benefits reinstated. Even though he did not want to enter the Social Security Administration office, he was trusting enough to allow his B2H case manager to become his authorized representative, which ultimately led to the reinstatement of his income. With the assistance of a payee, he pays his rent and receives weekly allowances. John had previously acquired all food items out of trash cans in the downtown area or from others giving him their leftovers. The excitement that he expressed during his first shopping trip to the grocery store was remarkable. He was able to pick out items that he wanted to eat and drink and stopped picking food out of trash cans. B2H staff worked with the property manager to share concerns about the way the security guard treated John. The property manager agreed to place a copy of John's key at the security desk where it was kept secure while he was out of the building. This copy of the key allowed John to come and go as he pleased. Meanwhile, he started to recognize when he was due for his medication and began entering the treatment agency lobby independently to seek his medication.

John has made significant progress since being housed. John has been receiving medication consistently, on a bi-weekly basis, for approximately seven months with only a few doses missed. Considering the symptoms that he was previously experiencing, this consistent adherence to a medication regimen was a major accomplishment.

Entering the third and final phase of CTI, the ultimate goal was to root John to a community support network, allowing the fullest possible engagement of John in his community. Through an understanding of both the practical and emotional issues common during this vulnerable transitional time, B2H case managers made interventions that were both sensitive and effective. He now regularly seeks assistance from onsite case managers. He began displaying the ability to engage appropriately with others. He is able to express his needs in a more productive manner and has more insight into his symptoms and be-

haviors. He has even apologized for some of his previous actions, such as yelling at a staff member, months prior. He has made major progress thus far, and FrontLine Services staff members have been able to deliver services in an effective, efficient manner.

## DATA OUTCOMES

Alongside success stories like the one in this article, measuring the CABHI Program's ability to provide permanent, long-term housing to the targeted population of chronically homeless individuals is essential to sustaining the program. In each of the first two years of the CABHI Program, FrontLine Services exceeded its targeted number of clients, housing 170 homeless individuals, 40 more than expected. With another 30 served so far in Year Three, with a recent increase in funding from an Enhancement Grant, FrontLine Services is on pace to house almost 300 homeless individuals by the end of the CABHI grant funding cycle in October, 2017. Each of these individuals has also received CTI from a team of FrontLine Services social

workers trained specifically in the CTI case management model.

In addition to the primary objective of linking the targeted population to permanent housing, housing retention was identified as a vital outcome of the CABHI Program. As chronic homelessness was a primary requirement for eligibility into the CABHI Program, no clients were considered stably housed at the time of enrollment. Intake data, however, was sometimes collected after an individual had been stably housed. (Refer to Table 2) and explains why 17.1% of the clients reported being housed at intake. Of the 224 individuals housed and receiving CTI from FrontLine Services, 119 were surveyed in the acceptable follow-up range of five to seven months. Among those 119 surveyed, 98.4% reported they were currently housed in an apartment or home they rent or own. A majority of CABHI clients remain in the program and receive CTI services; however, 70 individuals were discharged and surveyed upon leaving the program. Of those discharged from the CABHI program, 64 (94.1%) reported they were still currently housed in an apartment or home they rent or own.

**Table 2. Outcomes Change**

	Intake	Six Month Follow-up	Discharge (12 Months)
<b>Housing Status</b>			
Own/Rent Apartment or Home	12 (17.1%)	55 (93.2%)	64 (94.1%)
Couch Surfing	*	*	*
Homeless (Outdoors)	*	*	*
Homeless (Shelter)	42 (60.0%)	*	*
Institution	*	0 (0%)	*
<b>Alcohol/Drug Use</b>			
Any Alcohol Use	30 (43.5%)	31 (52.5%)	26 (37.7%)
Any Binge Alcohol >	*	*	*
Any Illegal Drug Use	15 (21.7%)	13 (22.0%)	11 (15.7%)
<b>Monthly Income/Benefits</b>			
Average Total Income	\$423	\$539	\$508

Other outcome measures, such as alcohol and illegal drug use, showed significant improvement after housing and intervention. As presented in Table 2, clients reporting any alcohol use in the past 30 days decreased from 43.5% to 37.7%. Binge alcohol use, however, increased slightly by 4.2%. Illegal drug use dropped from 21.7% to 15.7% of clients reporting any illegal drug use in the past 30 days. Enrollment in school or job training programs and employment both remained a challenge for clients, although a slight improvement was evidenced between enrollment and six months. The sample size contains too few cell sizes to include the actual numbers. Clients were also asked to report their income from any potential source, such as wages, disability, social security, retirement, etc. Upon enrolling in the program clients reported an average monthly income of \$423. After six months of housing and CTI services, the average monthly income increased to \$539. Upon discharge, however, income dropped to \$508 a month.

## DISCUSSION

While data are still limited due to the ongoing nature of the project, preliminary results indicate positive outcomes for FrontLine Services' CABHI implementation. The data as well as anecdotal accounts of participants show significant positive impact on their lives in many of the domains CABHI was designed to address. The B2H Program is on pace to exceed the targeted number of homeless individuals housed. Also, FrontLine Services has been able to implement CTI successfully with several identified outcomes indicating significant improvement among clients. These findings could be enhanced with a more rigorous study analyzing results with a control group of similar chronically homeless individuals that did not receive CTI services. This design could be implemented in the future to better present the case for providing CTI to this population of individuals. Follow-up post discharge or 12 months to determine longer term housing stability could also provide a stronger evaluation of the CABHI Program.

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# CARE COORDINATION AND THE FAMILY-SCHOOL ALLIANCE AMONG CHILDREN INVOLVED IN OHIO'S BEHAVIORAL HEALTH SYSTEM ON IEPs

RICHARD R. MASSATTI, PHD • CAROL CARSTENS, PHD

Ohio Department of Mental Health and Addiction Services

**Corresponding author:** Richard R. Massatti, PhD, State Opioid Treatment Authority, Ohio Department of Mental Health and Addiction Services, 30 East Broad Street, 36th Flr. Columbus, Ohio 43215-2556. Tel. (614) 752-8718. E-mail: [Richard.Massatti@mha.ohio.gov](mailto:Richard.Massatti@mha.ohio.gov)

## Abstract:

Children with emotional disturbances face numerous challenges in their education. Typically, these children are on individualized education plans (IEPs) to individualize a more beneficial educational path for the child, but these efforts are not always met with success. This study examines two key concepts hypothesized to relate to child educational outcomes: care coordination between the school and behavioral health services and the alliance between the family and school. Parents of children with an IEP were identified through the 2015 Youth Services Survey for Families and then solicited to participate in an additional study with 199 parents returning a survey. Results indicated the Assessment of Collaboration in Education was highly reliable ( $\alpha = .98$ ) with a two-factor structure that corresponded to the hypothesized factors. Generally, parents of children with IEPs experienced a strong family-school alliance but much weaker care coordination with behavioral health services. Institutions with school-based mental health services scored significantly higher on care coordination and family-school alliance domains. The new tool developed from this effort can be used for future evaluation efforts to understand these relationships over time. Results from ongoing evaluation may lend themselves to policy proposals to strengthen these domains.

## Keywords:

Care coordination; Individualized Education Plan; Behavioral health; Early childhood mental health; Emotional disturbances.

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## INTRODUCTION

The Individuals with Disabilities Education Act (IDEA) ensures that parents of children with disabilities have the opportunity to collaborate with professionals in their children's education (Individuals with Disabilities Education Improvement Act, 2004). An individual education program (IEP) is the core component of this collaboration effort, and it directs many facets of children's education including goal and objectives, placement, and programming. The IEP team facilitates the effort with the parent. This team typically involves at least one regular education teacher, one special education teacher, a qualified, knowledgeable representative of the school district, an official who can interpret the IEP evaluation results, other professionals who have expertise with the child (e.g., behavioral health practitioners), and the child when appropriate (OhioDOE, 2015a).

Children and youth with emotional disturbances (ED) are one of the key groups identified to receive IEPs, which ensures they are receiving tailored services to meet their developmental and functional goals (OhioDOE, 2015b). Children with ED may experience a variety of long-term conditions that make them at-risk for poor academic outcomes including learning disabilities, inappropriate externalizing or internalizing behaviors, or one or more diagnosable behavioral health disorders (OhioDOE, 2012; Stephan, Weist, Kataoka, Adelsheim, & Mills, 2007). Educational institutions that partner with providers of behavioral health services on-site can improve academic outcomes

(e.g., performance and classroom behavior) and behavioral health outcomes (e.g., severity of illness and management of symptomology), while children of schools that do not provide or partner with these services are at risk for delinquency, drop out, and expulsion (DHHS, 2003). In 2014, over 93,000 ED children and youth received services in Ohio's public behavioral health system. Nearly half (49.6%; 46,347) were estimated to be on IEPs (Carstens, 2015).

Several factors are hypothesized to promote successful outcomes on an IEP for children with ED. An alliance between the educational staff and the child's caregivers can help caregivers feel like they have ownership and involvement with educational staff (Lazicki-Puddy, 2006). Caregivers should feel like partners in this process with a firm understanding of their role in their child's education. To this end, caregivers should participate in the planning of the IEP (e.g., goal formation) and be involved with its implementation process (Friesen & Koroloff, 1990; DeChillo, Koren, & Schultze, 1994). Educational staff also should be honest and open about the progress of the child so that caregivers have a high degree of satisfaction with IEP efforts (Jivanjee & Friesen, 1997). Coordination of care between the school, treatment provider, and youth is also important to successful IEP outcomes (Lazicki-Puddy, 2006). Coordination can involve the integration of mental health treatment goals into the IEP and modification of assignments (e.g., changing assignment deadlines) when the child is experiencing periods of extreme stress. Key to the coordination process should be the involvement of behavioral health staff with educational staff so that all parties are informed about the child's progress. Care coordination can even involve an intervention package that combines child treatment (e.g., cognitive behavioral techniques and social skills training) along with expert consultation for school staff to improve their management of child behaviors (Hoagwood & Erwin, 1997; Rones & Hoagwood, 2000).

While studies have been conducted on IEP satisfaction, very little research has been done to evaluate IEP satisfaction among the families of children and youth with ED. The few available studies typically represent specific therapeutic programs (Brannan, Sonnichsen, & Hefflinger, 1998; Lazicki-Puddy, 2006) or evaluation efforts (Rouse, MacCabe, & Toprac, 1995). No study has evaluated care coordination efforts between educational institutions and school-based or non-school-based behavioral health treatment from the parents'/guardians' (parent)

perspectives. This study builds upon previous research to address gaps in the literature and addresses potential needs in Ohio's system of care. Through examining the family-school alliance and care coordination, this study will take a first look at these complex relationships and begin to understand how parents of children with ED feel about their experiences. This study will also have the added benefit of developing a tool to monitor these relationships over time that can be distributed as an add-on component of the Ohio Department of Mental Health and Addiction Services (OhioMHAS) yearly satisfaction survey.

### *Theoretical Background*

An alliance between the family and other members of the IEP team is critical to the child's success. A family-school alliance can be defined as a relationship between parents and the IEP team that encourages effective communication, partnership in IEP development, trust, understanding of policies and regulations, and an ongoing commitment to follow through on the IEP objectives. Effective communication is a necessary component of the IEP process that upon which families and IEP staff can build a sound relationship (Fish, 2006, 2008; Lake & Billingsley, 2000; Plunge & Kratochwill, 1995; Pruitt, Wandry, & Hollums, 1998). Communication strategies should be of quantity and quality that they keep the parents engaged in the process. Parents should feel like they are partners in IEP development and able to ask questions about each step. To this end, parents should have a clear understanding of their role and the roles of each of the IEP team members. Moreover, all communication strategies should display the empathy to meet the parents where they are and seek to understand the unique dynamics of each individual child and family (Johnson & Duffett, 2002; Pruitt, Wandry, & Hollums, 1998). Any problems that arise in the child's education should be dealt with fairly. The IEP team should be able to look objectively at the situation and handle any conflict well (Lake & Billingsley, 2000). Positive communication strategies should be employed that discuss the child's strengths and not just their weaknesses (Fish, 2008; Polloway, Bursuck, & Epstein, 2001; Weishaar, 2010).

Along with effective communication and a sense of partnership, trust between the family and IEP team is another key component of the family-school alliance (Lake & Billingsley, 2000; Lytle & Bordin, 2001; Wellner, 2012). Trust will enable families to feel confident about the day-to-day relationship between the school and the child and give

them a sense of security that the school will do what is in the child's best interest. The family-school alliance can also be strengthened when the parents have an understanding of the policies and regulations that govern the IEP process (Daughtery, 2015; Fish, 2006; Plunge & Kratochwill, 1995). Parents often report high levels of satisfaction when they become knowledgeable about policies and regulations because it helps them establish realistic expectations and may help them avoid costly litigation (Daughtery, 2015). Finally, there is a need for the IEP team to follow through on the IEP objectives established by the team (Fish, 2006). Seeing these objectives through will promote a sense of trust and display the school's commitment to deliver the best possible care so the child has a greater likelihood of academic success.

Coordination of care between the school and behavioral health care provider is also essential for academic success, and integration of mental health services into schools has been recommended in numerous reports (US DHHS, 1999, 2003; US DOE, 2002). Like the family-school alliance, coordination efforts imply that a team is available to help the child on his/her journey and also acknowledges that the team should facilitate behavioral health care for the child in the context of an academic environment. For example, the child's behavioral health care provider(s) should proactively partner with the IEP team to keep team members informed about changes in the child's symptoms and treatment. Likewise, the IEP members directly involved in the child's education should provide information to the behavioral health care provider when the child experiences changes in behavior, functioning, and development. When necessary, care coordination also means that team should refer the child and family for additional services. These services may include traditional avenues, like occupational and speech therapy, and non-traditional avenues, like helping families obtain safe and stable housing and food security. McDonald et al. (2007) define care coordination as:

*The deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities, and is often managed by the exchange of information among participants responsible for the different aspects of care (p 41).*

While not directly stated in the definition, a core assumption is that the educators on the IEP team be familiar with the child's mental health condition (Fish, 2006; Pruitt, Wandry, & Hollums, 1998). In other words, educators should be able to understand the diagnosis and the implications of the diagnosis to the academic setting. They should be able to recognize when the child is experiencing mental health symptoms, monitor changes in these symptoms over time, and be able accurately to communicate any changes to the treatment team. Educators should also have plans in place to address the child's behavioral health needs when the child is in distress. These plans may involve the provision of emotional or academic supports as well as the creation of academic accommodations, like offering flexible due dates and alternate test formats.

## METHODOLOGY

### *Questionnaire Development*

OhioMHAS needed a reliable, valid, and practical instrument with which to measure the family-school alliance and care coordination experience of children with ED in order to understand whether there were any needs in these areas. Items were developed based upon a review of the literature and feedback from staff at the OhioMHAS, the Ohio Department of Education, and experts in the field to answer the following two questions:

1. To what extent do parents feel there is an alliance between themselves and school staff?
2. To what extent do parents feel there is care coordination among school staff, behavioral healthcare providers, and themselves?

To operationalize the definition of family-school alliance, this questionnaire adapted 10 items from two existing instruments (Lazicki-Puddy, 2006; Family Voices, 2008) that were thought to best capture the nuances of the alliance. Adapted items dealt with parent's perception of the partnership between the family and school, concern on behalf of the school for the child's success and the family's input into the process, and issues about communication between the family and school. Typically, items that were incorporated from other instruments underwent slight revisions to make them more appropriate for this context. Other items about the family-school alliance were added based upon an iterative feedback process with other education department officials and experts in the field.

Operationalizing care collaboration was much more difficult because there were no instruments that adequately captured mental health care coordination in school settings. OhioMHAS staff developed these items during brainstorming sessions, review of the general literature on care coordination, and an iterative feedback process with experts in the field. Items were included that emphasized coordination of care between the school and behavioral health care provider. Questions covered the parent's perception that school staff involved with the IEP understood that the child's mental health needs the appropriate behavioral health specialists were members of the IEP team, mental health goals and objectives were part of the IEP, and the necessary supports and accommodations were provided on as needed basis.

The development process resulted in a 31-item instrument called the Assessment of Collaboration in Education (ACE). The first 17 items measured the family-school alliance domain, and items 18 through 28 measured care coordination domain. Respondents were asked to report on the frequency that school staff involved in the IEP displayed each behavior ranging from (1) "Never" to (5) "Always." A "Don't Know" response was also added to the questionnaire for parents who were not sure how to respond. The final questions asked whether mental health services were provided in the school, whether the child attended preschool, whether emotional or mental health issues were identified during preschool, whether the child had ever been expelled from preschool, and the name of the school district of the child's preschool and current school.

#### *Participant Recruitment*

Administration of the 2015 Youth Services Survey for Families (YSS-F) asked parents of children with ED about their satisfaction with services. For the purposes of this study, children were defined as having ED if they had at least one behavioral health diagnostic claims and any inpatient service in the last three years or four or more hours of at least four visits with any outpatient service (e.g., assessment, crisis intervention, individual counseling). A random sample of 8,000 children stratified by race and geographic type was drawn from a universe of over 87,000 children from the state's billing database. Stratification of geographic type was based upon the addiction mental health services board area into the following five groups: Appalachia (13 boards), rural (12 boards), suburb (12 boards), small city (6 boards), and major metropolitan (7 boards). Racial minorities were

over-sampled in an effort to obtain adequate representation. The final question on the 2015 YSS-F asked if parents wanted to provide additional feedback on their child's IEP experience, and 405 parents agreed to participate in this study. The IEP survey was mailed out in three waves with reminder notifications issued four weeks after the mailing and a second administration of the survey to the sample at eight weeks. Survey participants were given the option of responding by mail with a pre-paid business envelope, by phone over a toll-free line, or via an internet survey website.

#### *Data Analysis*

Quantitative data were entered into SPSS 22.0 and then merged with existing client information from the OhioMHAS Community Services Data Warehouse to incorporate demographic variables (i.e., child's sex, race, ethnicity, and age) as well as diagnostic variables (i.e., top seven most common diagnoses over the past year). Results were analyzed through simple cross tabulations (e.g., frequencies on sex, race, and diagnosis variables) and inferential analyses (e.g., independent samples t-test). In cases where an independent samples t-tests had a statistically significant Levene's test, the team utilized the t-values, degrees of freedom, and p-values associated with assumption of unequal variances to determine the significance of the test. The psychometric properties of the instrument were also evaluated by examining the reliability using Cronbach's alpha. A preliminary investigation of construct validity was performed through exploratory factor analysis which replaced missing values with the variables mean value. A maximum likelihood extraction was chosen because items were relatively normally distributed (Fabrigar, Wegener, MacCallum, & Strahan, 1999) although most exhibited a negative skew. An oblique rotation was preferred over an orthogonal rotation because the team hypothesized the underlying latent variables to be correlated (Costello & Osborne, 2005).

## RESULTS

For the sample, a completed or partially completed survey was returned by 199 parents (49.1%) that received a mail packet (Table 1). Additionally, 29 surveys were returned as undeliverable. Four surveys were returned after the closing of the survey deadline and were excluded from the results. A majority of survey subjects were male (70.9%) and White (66.7%). Children had a variety of diagnoses, the most prevalent of which was attention deficit-hyperactivity disorder.



Children in this sample were also likely to have behavioral disorders like oppositional defiant and disruptive behavior disorders (28.6%) and mood disorders (28.1%). Parents of older children were somewhat more likely to participate with nearly 60.0% of the sample having children aged 11 and older. Respondents were most likely to live in a major metropolitan area (43.2%), but many also lived in small cities (21.1%). Fewer respondents lived in suburbs (15.1%), Appalachia (14.1%), or rural areas (6.5%).

**Table 1. Demographic Characteristics of Sample (N = 199)**

<i>Variable</i>	<i>N (%)</i>
<b>GENDER</b>	
Male	141 (70.9%)
Female	58 (29.1%)
<b>RACE</b>	
White	132 (66.3%)
Black and Other†	65 (32.7%)
<b>DIAGNOSTIC CATEGORY††</b>	
Adjustment Disorder	42 (21.1%)
Attention Deficit Hyperactivity Disorder	111 (55.8%)
Anxiety Disorder	32 (16.1%)
Oppositional Defiant/ Disruptive Behavior Disorder	57 (28.6%)
Mood Disorder	56 (28.1%)
Autism Spectrum Disorder	19 (9.5%)
All Other Disorders Diagnosed in Childhood	24 (12.1%)
All Other Disorders	38 (19.1%)
<b>GRADE</b>	
Kindergarten (Ages 4-7)	33 (16.6%)
Elementary School (Ages 8-10)	51 (25.6%)
Middle School (Ages 11-13)	48 (24.1%)
High School (Ages 14-17)	67 (33.7%)
<b>REGION</b>	
Appalachian	28 (14.1%)
Rural	13 (6.5%)
Small City	42 (21.1%)
Suburban	30 (15.1%)
Major Metropolitan	86 (43.2%)

†Black persons were combined with persons of other race for this table alone because the cell size of person of other race was <10; the percentage does not add to 100 due to some missing responses.  
 ††Diagnosis could appear in one of seven diagnostic variables. Diagnostic categories are not mutually exclusive.

A majority of children (43.7%) received mental health services in the school setting with other parents reporting their children did not receive services in the school setting (26.1%) or expressing uncertainty about their children receiving services in the school setting (30.2%). Parents also indicated most children attended preschool (73.9%), but a smaller percentage said that emotional or behavioral issues were identified during preschool (43.7%). Chi-squared analysis showed children with Autism Spectrum Disorder diagnoses ( $\chi^2 = 3.972, p = .046$ ) and Anxiety Disorder Diagnoses ( $\chi^2 = 4.779, p = .029$ ) in any of the seven diagnostic categories were more likely to have emotional or behavioral issues identified in preschool. Chi-squared analysis did not reveal that children were more likely to have these issues identified if they were of a particular sex, race, age group, primary diagnostic category, or lived in a specific geographic type. Of the 118 parents that said their children attended preschool and answered the question on expulsion, 13.6% said their children had been expelled from preschool. Chi-squared analysis showed children with Mood Disorder Diagnoses in any of the seven diagnostic categories were more likely to be expelled from preschool ( $\chi^2 = 4.749, p = .029$ ). Chi-squared analysis did not reveal that children were more likely to be expelled if they were of a particular sex, race, age group, primary diagnostic category, or lived in a specific geographic type.

Table 2 shows the average item response frequency for each ACE question. Generally, items related to the family-school alliance (FSA) were more highly rated than items associated with care coordination (CC). Scale averages were 3.9% FSA vs. 13.7% CC for “Never;” 7.5% FSA vs. 13.5% CC for “Rarely;” 16.5% FSA vs. 18.8% CC for “Sometimes;” 21.9% FSA vs. 18.3% CC for “Very Often;” 50.2% FSA vs. 35.8% CC for “Always.” Most questions related to the family-school alliance show staff involved in the IEP frequently engage in these positive behaviors. Two items stand out as being rated more negatively than other items on the family-school alliance scale. Nearly one-quarter of parents said school staff “Never” or “Rarely” contacted them when their child was doing well. In similar fashion, almost 16.0% of parents said school staff “Never” or “Rarely” offered convenient appointments with IEP members when problems arose. Several items on the care coordination scale were also more likely to be answered negatively. Between 32.0% and 37.0% of parents felt school staff “Never” or “Rarely” connected them with community resources to meet their child’s needs, included mental health treatment goals in their child’s IEP, followed through with mental

**Table 2. Percent of Respondents Answering In Each ACE Category†**

How often do school staff involved in the IEP ...		Never	Rarely	Some- times	Very Often	Always
FAMILY-SCHOOL ALLIANCE	partner with you to make decisions about your child's education?	4.1%	6.1%	20.3%	24.9%	44.7%
	explain your role in your child's IEP?	4.6%	6.6%	12.2%	18.8%	57.9%
	explain the role of each staff member on the IEP team?	4.7%	7.3%	15.1%	22.4%	50.5%
	discuss the best educational choices for your child?	2.5%	7.1%	17.7%	19.7%	53.0%
	display a commitment to your child's success?	2.0%	6.6%	14.7%	21.8%	54.8%
	focus on your child's strengths?	2.6%	9.2%	14.4%	25.6%	48.2%
	solicit your input when developing your child's IEP goals (e.g., attendance, grades, social functioning)?	3.0%	7.1%	12.2%	22.3%	55.3%
	value your ideas about your child's success?	2.0%	3.5%	17.2%	21.2%	56.1%
	seriously consider your concerns about your child's education?	2.6%	7.7%	15.3%	17.9%	56.6%
	respectfully resolve any disagreements you might have about your child's education?	1.6%	8.0%	18.1%	23.4%	48.9%
	answer your questions about your child's education?	1.0%	2.5%	16.8%	24.4%	55.3%
	review the IEP with you on a regular basis?	4.1%	11.7%	12.2%	21.4%	50.5%
	contact you when your child is doing well?	11.2%	12.8%	26.0%	16.8%	33.2%
	promptly contact you when problems arise (e.g., change in behavior, attendance, grades, social functioning)?	4.6%	11.2%	17.3%	21.4%	45.4%
	offer convenient appointments with IEP members when problems arise (e.g., early mornings, evenings, weekends)?	8.2%	7.7%	16.4%	22.6%	45.1%
honestly communicate to you about your child's academic progress?	3.6%	8.2%	18.9%	18.4%	51.0%	
follow through with your child's academic IEP goals?	3.6%	4.6%	16.3%	29.1%	46.4%	
CARE COORDINATION	understand your child's mental health needs?	5.2%	9.4%	22.0%	25.7%	37.7%
	recognize your child's mental health symptoms?	6.2%	10.8%	22.7%	25.3%	35.1%
	connect you with community resources to meet your child's mental health needs?	17.3%	18.3%	20.4%	17.8%	26.2%
	include your child's counselor, social worker, or other therapist in IEP planning and ongoing review?	11.2%	10.7%	18.9%	17.3%	41.8%
	include mental health treatment goals in your child's IEP?	18.8%	16.7%	14.1%	16.7%	33.9%
	follow through with mental health treatment goals in your child's IEP?	16.4%	15.9%	18.5%	15.3%	33.9%
	communicate regularly with your child's counselor, social worker, or other therapist about your child's education?	19.3%	17.6%	16.6%	12.8%	33.7%
	allow your child's counselor, social worker, or other therapist to observe your child in the classroom?	28.9%	11.4%	15.7%	10.8%	33.1%
	provide emotional or physical supports when your child experiences mental health problems?	9.1%	15.1%	19.4%	18.3%	38.2%
	accommodate your child academically when mental health problems arise (e.g., flexible due dates, test format)?	6.6%	10.4%	23.1%	18.1%	41.8%
adjust IEP goals if your child experiences long-term mental health problems?	11.3%	11.9%	15.5%	23.2%	38.1%	

†Missing values excluded from the analysis; values may add to greater than 100% due to rounding error.

health treatment goals in their child's IEP, and communicated regularly with their child's counselor or other behavioral health support professional. Just over 40.0% of parents said that school staff "Never" or "Rarely" allowed their child's counselor, social worker, or other therapist to observe their child in the classroom.

#### *Location of Mental Health Services*

ACE scores frequently differed by whether or not mental health services were provided at the school (Table 3). Of the 139 persons responding to the question, a majority (62.6%) said that mental health services like group counseling and individual therapy were offered at the school. The ACEs composite total score showed that children with school-based mental health services had higher total scores across the items ( $t(137) = -4.151, p < .001$ ). Similar trends occurred for total scores for the family alliance ( $t(137) = -2.777, p < .001$ ) and care coordination subscales ( $t(137) = -5.391, p < .001$ ). Scores for individual items were higher for children with school-based services on 23 out of 28 (82.1%) items. While individual items were significantly different on both scales, the difference was greatest for items on the care coordination scale. Schools with on-site mental health services always performed better on each of these questions (select examples of typical responses follow). Only 18.6% of parents whose children had on-site mental health services said IEP staff "Never" or "Rarely" connected them with community resources to meet their child's mental health needs; whereas, 56.0% of parents whose children did not have on-site mental health services said the same ( $t(134) = -4.172, p < .0001$ ). Likewise, nearly 55.0% of parents whose children did not have on-site mental health services said their IEP team "Never" or "Rarely" included mental health treatment goals in their child's IEP as opposed to 17.6% of parents whose children had on-site mental health services ( $t(134) = -4.963, p < .0001$ ). Children's counselors, social workers, and other therapists were also more likely to be allowed to observe a parent's child in the classroom for schools with on-site mental health services compared to those without (56.5% vs. 21.0% respectively;  $t(120) = -4.059, p < .0001$ ).

#### *Exploratory Analysis of Psychometric Properties*

The ACE showed promising psychometric properties; however, these results are exploratory in nature because the sample size ( $N = 199$ ) was less than the recommended sample size for reliability ( $N \geq 300$ ) and factor analyses ( $N \geq 400$ ). Cronbach's alpha for the full 28-item scale was .980

( $n = 113$ ). It was nearly as high for the family alliance ( $n = 160; \alpha = 0.967$ ) and care coordination subscales ( $n = 124; \alpha = 0.973$ ).

Results from several preliminary tests determined that all 28 items were appropriate for exploratory factor analysis. Each item significantly correlated with one another and displayed effect sizes above the suggested minimum value of 0.3 (range 0.414-0.914). The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.959 and was above the suggested minimum value of 0.6. Bartlett's Test of Sphericity that did not indicate the correlation matrix as an identity matrix ( $\chi^2(378) = 4002.85, p < .0001$ ). The anti-image correlation matrix had diagonal values over and above the recommended value of 0.5 (range 0.935-0.981). Finally, the communalities indicated that each variable had a high proportion of shared variance explained by the factors (range 0.582-0.872).

Table 4 shows the ACE pattern matrix factor loadings. The exploratory factor analysis was performed with maximum likelihood extraction and direct oblimin rotation ( $\delta = 0$ ). Results showed a three-factor solution best explained the underlying factor structure. The third factor was dropped after further examination of the pattern matrix because it was cross-loaded on the second factor. Only two variables loaded on this factor at minimal levels (i.e., 0.40), and the third factor most likely represented a trivial factor (Gorsuch, 1983).

The remaining factors corresponded to the hypothesized factor structure and were labeled family-school alliance and care coordination. Items that loaded less than 0.500 could be removed to condense the scale. However, a larger sample size is still needed to validate this preliminary pattern matrix.

**Table 3. Independent Samples t-test for item- and Scale-level Differences by Provision of Mental Health Services at the School**

		Services Provided at School (n=87)		Services Not Provided at School (n=52)		
How often do school staff involved in the IEP ...		Mean	SE	Mean	SE	p
<b>FAMILY-SCHOOL ALLIANCE</b>	partner with you to make decisions about your child's education?	4.13	.123	3.73	.172	0.056
	explain your role in your child's IEP?	4.22	.131	3.92	.167	0.163
	explain the role of each staff member on the IEP team?	4.24	.124	3.79	.172	0.032*
	discuss the best educational choices for your child?	4.35	.111	3.79	.163	0.004**
	display a commitment to your child's success?	4.33	.115	3.98	.149	0.070
	focus on your child's strengths?	4.29	.111	3.69	.164	0.003**
	solicit your input when developing your child's IEP goals (e.g., attendance, grades, social functioning)?	4.37	.109	3.87	.165	0.008**
	value your ideas about your child's success?	4.40	.108	3.98	.144	0.021*
	seriously consider your concerns about your child's education?	4.33	.114	3.80	.168	0.009**
	respectfully resolve any disagreements you might have about your child's education?	4.18	.117	3.83	.158	0.075
	answer your questions about your child's education?	4.40	.096	4.12	.136	0.083
	review the IEP with you on a regular basis?	4.19	.130	3.63	.192	0.018*
	contact you when your child is doing well?	3.85	.142	3.02	.191	0.001**
	promptly contact you when problems arise (e.g., change in behavior, attendance, grades, social functioning)?	4.20	.128	3.67	.164	0.013**
	offer convenient appointments with IEP members when problems arise (e.g., early mornings, evenings, weekends)?	4.14	.140	3.50	.185	0.006**
	honestly communicate to you about your child's academic progress?	4.21	.122	3.69	.175	0.013**
	follow through with your child's academic IEP goals?	4.34	.097	3.71	.173	0.002**
<b>CARE COORDINATION</b>	understand your child's mental health needs?	4.08	.127	3.33	.172	0.001**
	recognize your child's mental health symptoms?	4.05	.124	3.20	.173	0.000***
	connect you with community resources to meet your child's mental health needs?	3.63	.137	2.64	.202	0.000***
	include your child's counselor, social worker, or other therapist in IEP planning and ongoing review?	4.13	.132	3.02	.207	0.000***
	include mental health treatment goals in your child's IEP?	3.89	.153	2.65	.200	0.000***
	follow through with mental health treatment goals in your child's IEP?	3.90	.147	2.65	.197	0.000***
	communicate regularly with your child's counselor, social worker, or other therapist about your child's education?	3.88	.153	2.54	.200	0.000***
	allow your child's counselor, social worker, or other therapist to observe your child in the classroom?	3.67	.147	2.50	.228	0.000***
	provide emotional or physical supports when your child experiences mental health problems?	4.14	.125	3.02	.178	0.000***
	accommodate your child academically when mental health problems arise (e.g., flexible due dates, test format)?	4.12	.125	3.30	.185	0.000***
	adjust IEP goals if your child experiences long-term mental health problems?	4.03	.141	3.02	.214	0.000***
<b>Family Alliance Total Score (Items 1-17)</b>	<b>70.84</b>	<b>1.75</b>	<b>63.01</b>	<b>2.15</b>	<b>0.006**</b>	
<b>Care Coordination Total Score (Items 18-28)</b>	<b>41.71</b>	<b>1.34</b>	<b>30.15</b>	<b>1.62</b>	<b>0.000***</b>	
<b>Composite Total Score</b>	<b>112.55</b>	<b>2.98</b>	<b>93.17</b>	<b>3.42</b>	<b>0.000***</b>	

\*p &lt; .05; \*\*p &lt; .01; \*\*\*p &lt; .001

Table 4. ACE pattern matrix†

Item	Factor	
	1	2
<b>Family-School Alliance</b>		
answer your questions about your child's education?	.935	
display a commitment to your child's success?	.866	
partner with you to make decisions about your child's education?	.863	
follow through with your child's academic IEP goals?	.813	
solicit your input when developing your child's IEP goals (e.g., attendance, grades, social functioning)?	.804	
explain your role in your child's IEP?	.795	
respectfully resolve any disagreements you might have about your child's education?	.782	
honestly communicate to you about your child's academic progress?	.774	
review the IEP with you on a regular basis?	.756	
explain the role of each staff member on the IEP team?	.755	
value your ideas about your child's success?	.729	
seriously consider your concerns about your child's education?	.728	
focus on your child's strengths?	.719	
discuss the best educational choices for your child?	.715	
offer convenient appointments with IEP members when problems arise (e.g., early mornings, evenings, weekends)?	.605	
promptly contact you when problems arise (e.g., change in behavior, attendance, grades, social functioning)?	.439	
contact you when your child is doing well?	.412	
<b>Care Coordination</b>		
include mental health treatment goals in your child's IEP?		-1.059
follow through with mental health treatment goals in your child's IEP?		-1.021
communicate regularly with your child's counselor, social worker, or other therapist about your child's education?		-.792
provide emotional or physical supports when your child experiences mental health problems?		-.739
allow your child's counselor, social worker, or other therapist to observe your child in the classroom?		-.677
connect you with community resources to meet your child's mental health needs?		-.635
include your child's counselor, social worker, or other therapist in IEP planning and ongoing review?		-.626
accommodate your child academically when mental health problems arise (e.g., flexible due dates, test format)?		-.606
adjust IEP goals if your child experiences long-term mental health problems?		-.599
recognize your child's mental health symptoms?		-.525
understand your child's mental health needs?		-.480

†Maximum likelihood extraction with direct oblimin rotation (13 iterations). Only values above .320 are displayed.

## DISCUSSION AND POLICY IMPLICATIONS

This study examined family-school alliances and care coordination for parents of children with emotional disturbances receiving services in the public behavioral health system. The ACE was developed as part of the study because no reliable and valid instrument existed to measure these constructs among this population. Findings from this study indicate the presence of two distinct factors on the ACE that correspond to the theoretical factors originally proposed. Generally, parents believed school staff involved in the IEP frequently engaged in behaviors that promoted family-school alliances and care coordination. However, there were distinct differences when results were analyzed by factor and by child demographics.

Receipt of mental health services occurred within the school for some children (62.6%) and outside of the school for other children (37.4%). This finding is close to previous research that suggested most (75.0%) children received mental health services in school settings (Burns et al., 1995). However, it is difficult to make a firm conclusion about whether children were receiving mental health services in a school setting given that an additional 60 parents either expressed uncertainty about the location of mental health services or did not answer the question. Parents who were not sure about whether their children received services in the school may indicate several things, such as a lack of engagement with treatment or a lack of communication between school staff and parents. OhioMHAS knows these children were billed for services through our Community Behavioral Health Services billing system, but it cannot tell exactly where the services occurred. No matter the reason, the uncertainty among some parents indicates there is significant opportunity for care coordination between the off-site mental health professionals and the school system.

A child's diagnosis predicted school identification of problems in preschool and expulsion from the preschool. Parents of children with Autism-Spectrum Disorders and Anxiety Disorders were more likely to have emotional or behavioral issues identified in preschool. Education professionals may be more likely to notice these disorders because criteria for these disorders, like developmental delays and externalizing behaviors, are easily identified in preschool children and commonly captured on standardized instruments (Levitt, Saka, Romanelli, & Hoagwood, 2007). Expulsion rates for children appeared high

in this sample, which has been found in other studies of children with emotional and behavioral problems (Gillman, 2005; Gilliam & Shahar, 2006). Of the children who ever attended preschool, nearly 14.0% had been expelled at some point. Only three children were preschool age in the study, one of which had been expelled. Parents of children with Mood Disorders were more likely to say their children were expelled from preschool than parents of children with other disorders. These findings point to the importance of targeting evidence-based and other promising interventions to children dealing with mental health issues and educational staff that may be unprepared to deal with those complex conditions. Literature reviews on the addition of early childhood mental health consultation (ECMHC) in educational settings show how important this intervention can be for educational institutions (Brennan et al., 2008; Perry et al., 2010). ECMHC models aimed at children and families have shown reduction in child externalizing behaviors like inattention and aggression (Perry et al., 2010). While ECMHC models directed toward programs and educational staff has been less rigorously studied, some studies indicate these models helped participants to increase self-efficacy in handling emotional disturbed children, lower job-related stress, and improve sensitivity (Brennan et al., 2008).

Several interesting findings appeared when examining the ACE's subscales. Items on the family-school alliance scale were rated more highly than items on the care coordination scale. In other words, parents were 3.5 times more likely to respond "Never" to a question on the care coordination scale than the family-school alliance scale. When responses were analyzed at the scale- and item-level, parents indicated that questions about family-school alliances and care coordination occurred much less frequently when the child was not provided school-based mental health services. This finding was especially pronounced for items on the care coordination scale. This finding is plausible because access to a school-based mental health professional would facilitate many of the themes within the care coordination domain (e.g., connecting a family to community resources, including mental health treatment goals in an IEP). However, even schools with one or more school-based mental health professionals experienced problems. Approximately 15.0% to 20.0% percent of parents whose child had access to a school-based mental health professional still responded that a particular care coordination item "Never" or "Rarely" occurred. This finding likely indicates significant variation in school-based

mental health care. Some programs may adhere to evidence-based models with standardized treatment regimens while others may provide less rigorous treatment models. As Atkins et al. (2010) suggest, true integration of mental health treatment into school-based settings will require significant commitment to a common set of priorities (e.g., using indigenous persons and resources to promote change and actively involving parents).

Individual items on both scales also stood out because the behavior associated with the items appeared to occur infrequently. On the family-school alliance scale, parents of children with ED pointed out that school staff associated with the IEP were less likely to contact them when their child was doing well. Communication of child progress is just as important as communication of child deficits and/or problems. Parents of children with ED need to hear about their child's progress because positive communication serves to reinforce the gains being made and encourage further child development. A high proportion of parents also said school staff "Never" or "Rarely" offered convenient appointments with IEP members when problems arose. This finding is troubling because the best time to address a problem behavior is soon after its initial occurrence. It would be difficult for the parents to have a complete understanding of the issues without meeting school staff and difficult for the child to feel any resolution until that meeting takes place.

Several items on the care coordination scale were also more likely to be answered negatively. Between 32.0% and 37.0% of parents felt school staff "Never" or "Rarely" connected them with community resources to meet their child's needs, included mental health treatment goals in their child's IEP, followed through with mental health treatment goals in their child's IEP, and communicated regularly with their child's counselor or other behavioral health support professional. Just over 40.0% of parents said that school staff "Never" or "Rarely" allowed their child's counselor, social worker, or other therapist to observe their child in the classroom. While schools without school-based mental health providers performed the worst on these questions, some schools with these services performed poorly, likely due to programmatic variation. Possibly respondents answered some questions negatively due to extenuating circumstances (e.g., few available community resources to which to refer the children or parent's lack of awareness about behavioral health staff visiting a classroom). Nonetheless, each of

these areas highlights an opportunity for further investigation and potential improvement. Whether or not the schools have school-based mental health providers, they may want to consider working toward further integrating these services into their school and/or partnering with off-site mental health providers. School staff involved in the IEP may want to work toward care collaboration involving topics like the integration of mental health treatment goals in their child's IEP and communicating regularly with the child's mental health provider for the best chance at successful IEP outcomes (Lazicki-Puddy, 2006).

## LIMITATIONS

This survey provided an opportunity to test the ACE in the field, but the study has several limitations. Results are based upon responses of 199 persons and cannot be generalized to all parents of children with ED who have an IEP. For example, statistical findings about mental health setting may be accurate for this sample; they may not be accurate for similar children statewide. Results about the instrument's psychometric properties also should be interpreted with caution because the ACE is an experimental scale. Larger samples may yield different estimates of internal consistency reliability. Even the factor structure could change with a larger sample or when used with different populations. This study found the presence of two latent factors, labeled family-school alliance and care coordination, but the meaning and labels of these factors should be interpreted with caution until the instrument is tested with larger samples.

## CONCLUSION

Parents of children with IEPs, involved in the behavioral health system, appear to experience a strong family-school alliance but much weaker care coordination with behavioral health services. Research is needed to understand more about the experiences of parents and whether the trends found in this study are generalizable to the majority of parents with similar children. More specifically, are differences within school-based mental health services consistently predictive of these domains, and, if so, why? In-depth qualitative and quantitative research can help answer these important questions, so that the behavioral health system can ensure children are receiving what they need to lead healthy and productive lives.

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*Untitled* by Michael J. Halliday

Michael J. Halliday provides us with another contemplative visual testament to hope and resilience. Although named *Untitled*, Halliday's abstract expressionist painting once again recalls the Color Field Movement, and hearkens us back to the Conceptual School of Abstract Expressionism. The Color Field Movement first evolved in the 1950s and 1960s when many artists rejected the classical figurative approach to art-making. National Gallery curators argue that color field painters flood "their canvases with pure pigments; [creating] subtle variations in saturation and intensity," calling them "agents of mood and aesthetic effect. Among these artists "color is freed from objective context and *becomes the subject in itself*" (Retrieved 4/28/17: <http://www.nga.gov/education/american/abstract.shtm>). As you can see in the above illustration and on the front cover, Halliday's work embodies the essence of Color Field paintings -- large fields of flat, solid colors over unbroken surfaces and flat picture planes which deemphasize gesture and form, favoring instead, quiet expanses of parallel and/or intersecting planes of color. Contact Information for Mr. Halliday: Phone: 614.551.7782 • Email: dochalliday47@gmail.com

## OHIO WAGE MATCH PROJECT

ROBERT J. GITTER, PHD<sup>1</sup> • KWOK TAM, MS<sup>2</sup> • HELEN ANNE SWEENEY, MS<sup>2</sup>

<sup>1</sup>Ohio Wesleyan University • <sup>2</sup>Ohio Department of Mental Health and Addiction Services

**Corresponding author:** Robert J. Gitter, Ohio Wesleyan University, Delaware, Ohio 43015.  
Tel: 740-368-3536 E-mail: rgitter@owu.edu

### INTRODUCTION

The New Freedom Commission on Mental Health set the goal of having mental health care be consumer and family driven (April, 2003). This goal is intricately linked to empowering consumers and making decisions about their individual treatment and recovery plans as well as participating in developing systems of care. The Commission recognized that employment is one of the essentials that consumers need in order to be empowered and thus, recommended that mental health authorities make supported employment (SE) services and supports readily available.

In response to the New Freedom Commission's recommendation concerning SE services and supports, Ohio's State Mental Health Authority (SMHA) has worked in collaboration with local communities, behavioral health providers, and other state agencies in implementing SE services within the

**Keywords:**

Community Behavioral Health Services, Employment, Job Experience, Supported Employment, Wages.

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publicly funding behavioral health system. In 2015, the Ohio General Assembly appropriated funding in House Bill 64 to the SMHA for the purpose of developing strategies to expand SE services and supports to Ohioans who receive services within the public behavioral health system. Also, the Centers for Medicare and Medicaid approved Ohio's request to include SE as a Medicaid-covered service.

While the SMHA and its local community partners have operationalized SE services in 20 communities in Ohio, stakeholders lack information about the current and past work experience of consumers served within the public behavioral health system. This information is needed to design and target appropriate services and supports, including pre-employment services, benefits counseling, and job coaching. The purpose of this analysis is to provide stakeholders with information about current and past employment experiences of consumers who received publicly funded behavioral health services.

As O'Day and Kileen (2002) point out, unemployment is a serious issue for people who have been diagnosed with severe mental illness. Drake, Skinner, Bond, and Goldman (2014) note that people with severe mental illness represent a disproportionate share of the SSI beneficiaries. In December 2015 according to the Social Security Administration, SSI beneficiaries who were between the ages of 18 and 64 and who had a psychiatric disability comprised 28.3% of all individuals receiving SSI benefits in this time period (Social Security Administration). In comparison, it is estimated that 4.2% of the adult population has been diagnosed with a serious mental illness (National Institute of Mental Health, 2015). Drake et al., note that the SSI

statistics are not indicative of the attitudes of severely mentally ill in regards to employment. According to Drake et al., surveys about employment have demonstrated that the severely mentally ill want to work but lack the experience and/or connections to the labor force.

Research studies that have examined work experience among adults diagnosed with serious mental illness have relied on survey data. Luciano and Meara (2014) conducted one of the more comprehensive analyses of the employment status of people with mental illness by examining the 2009 and 2010 National Survey on Drug Use and Health survey results. In their analysis, they looked at employment status, income, past-year mental illness severity, past-year substance abuse disorder, health status, and socio-demographic characteristics. The study found that employment rates decreased with increasing mental illness severity; approximately 33.3% of the participants had incomes less than \$10,000. Also, adults between the ages of 18 and 25 were more likely to be employed than adults between the ages of 50 and 64. The researchers were unable to analyze employment status over time, length of employment, relationships between employment and service episodes, and types of jobs or industries of employment.

The purpose of this analysis is to analyze labor force attachment of consumers who receive publicly funded behavioral health services in Ohio. The analysis will attempt to address the following questions:

- What is the work force experience of clients prior to receiving publicly funded behavioral health services?
- What is labor force attachment of clients while receiving publicly funded behavioral health services?
- In what economic sectors are consumers likely to have worked or currently working?
- Are there employment differences among various types of communities, such as large urban and rural communities?
- Are there employment differences among various demographic components, such as age?

## PROJECT BACKGROUND

This project examines the work history profiles of individuals who are diagnosed with a behavioral health illness. We present data on the duration of work, earnings, industry of employment and various demographic characteristics of this group. Data are examined for people between the ages of 18 and 64 who received services in Ohio's behavioral health system between July 2006 and June 2012. The goal of the project is to help policymakers develop supported employment programs as well as wraparound services for these clients. Before undertaking this project, a full review and approval was sought and granted by the Ohio Department of Health Institutional Review Board.

The data for this project comes from two sources. Information on those people receiving publicly funded behavioral health (BH) services delivered by certified community-based behavioral health organizations is taken from the Multi-Community Services Information System (MACSIS) of the Ohio Mental Health and Addiction Services (OhioMHAS) Department. Publicly funded community-based BH services delivered by non-certified community based behavioral organizations and providers, such as primary care physicians and emergency departments, are not included nor are Patient Care System claims from the State-operated BH hospitals. The MACSIS data is not a sample but rather contains the population of all individuals in the publicly funded BH system. In addition to the client's name and social security number, which were used to match the person with their earnings data and later removed, there is information on the following demographic characteristics:

- Type of Board Residency (Urban, Small City, Suburban, Rural, Appalachia)
- Age Cohort Grouping (18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64)
- Medicaid Eligibility (Continuous, Partial, Non-Medicaid)
- Gender
- Race (White, Black, Other)
- Date of First and Last Claim

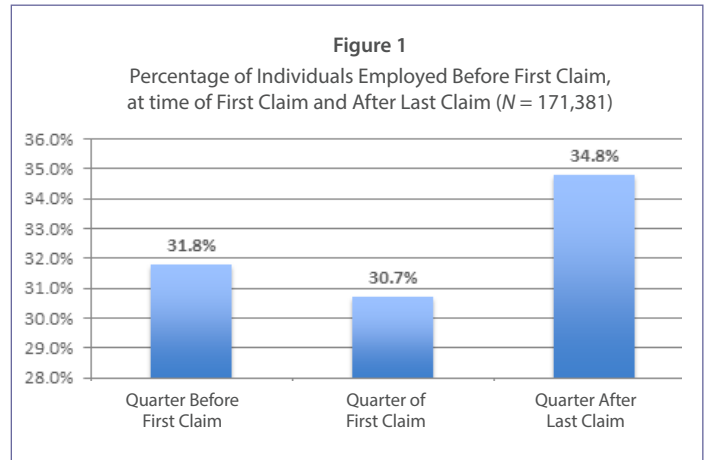
Although data are available for the period July 2006 through December 2012, only data for the time period January 2010 through June 2012 is used to facilitate matching with the other data set and view employment after the economic downturn during 2008 and 2009.

The second data source is the Ohio Department of Job and Family Services' Labor Market Information System. This data contains information on quarterly earnings and industry of employment for workers covered under the unemployment insurance system, accessed via the Ohio Longitudinal Data Archive housed at the Center for Human Resource Research at the Ohio State University<sup>1</sup>. This data set covers almost all workers in Ohio with only federal employees, contractors, or individuals with unreported earnings excluded. The Ohio State University Center for Human Resource Research matched the two data sets at the unit record level. All personally identifiable data were removed before the data was given to the Primary Investigator. The result is a data set containing background demographic information and earnings and employment information for all 171,381 individuals receiving outpatient services delivered by certified community-based behavioral health organizations.

## RESULTS

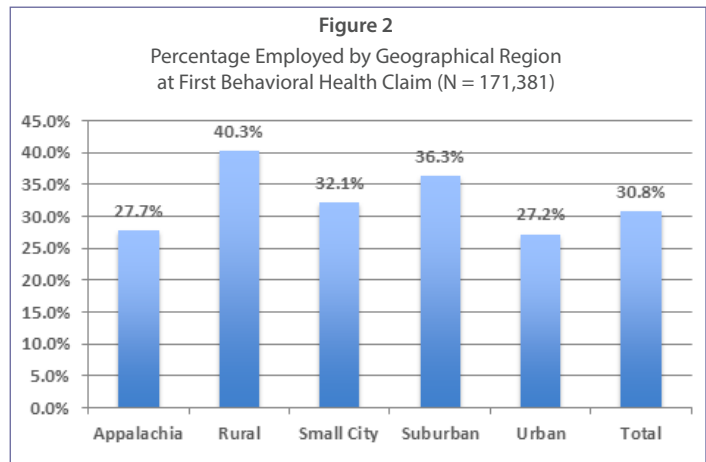
### *Employment Before and During First Claim and After Last Claim*

Unless noted otherwise, the results presented here are for people who had their first claim in MACSIS between January 2010 and June 2012. Of the 171,381 individuals included in the analysis, 52,648 or 30.7 % of these individuals were employed in the quarter of their first claim. It is interesting to note that this percentage is slightly below the 31.8 % employed in the quarter prior to their first claim. Also, these numbers are below the 34.8 % employed in the quarter after their last claim.<sup>2</sup> We see that employment is slightly lower in the quarter of the first claim and rebounds after the quarter of the last claim (Figure 1).



### *Employment by Geographic Region*

The results here and below are for all individuals at the time of their first claim. The share of individuals in the system employed varies by the geographic area where the county is located. A person in a rural county is one third more likely to be employed than those in the rest of the state (Figure 2). The employment rate is lowest in urban and Appalachian counties.

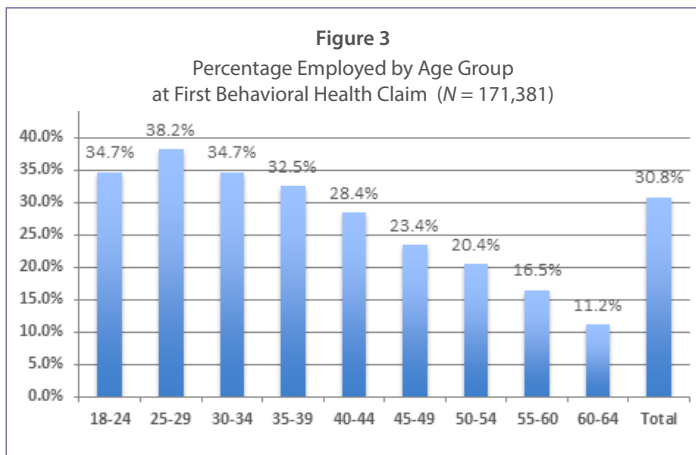


<sup>1</sup> This workforce solution was funded by a grant awarded to the U.S. Department of Labor's Employment and Training Administration. The solution was created by the Center for Human Resource Research on behalf of the Ohio Department of Job and Family Services and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use, by an organization and/or personal use by an individual for non-commercial purposes, is permissible. All other uses require the prior authorization of the copyright owner.

<sup>2</sup> Data were available on the quarter of the individual's first and last claim. If the last claim occurred in the final quarter, April through June 2012, it is impossible to determine if this was the very last claim or the most recent. As a result, the 34.8 % excludes this quarter from the calculation.

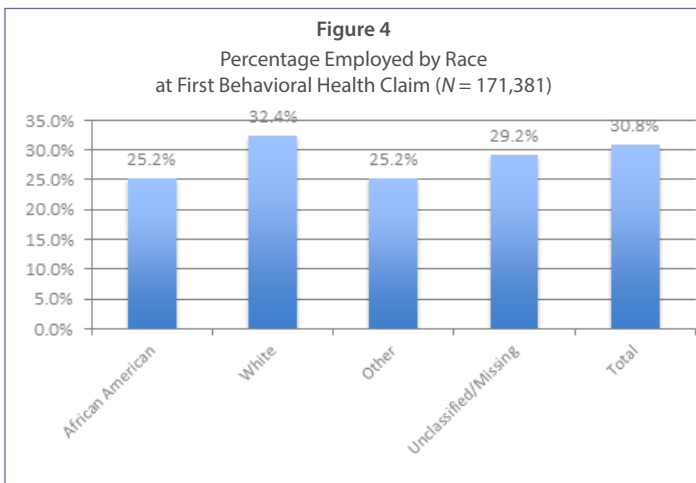
*Employment by Age*

Individuals tend to be rather young at the time of their first claim: 29.2% are ages 18-24, and another 27.5% are 25-34. Only 15.0 % are ages 50-64. The employment rates vary by age with those ages 18-39 having rates of about one third and above. We see a decline in employment rates with each age category after ages 25-29 (Figure 3).



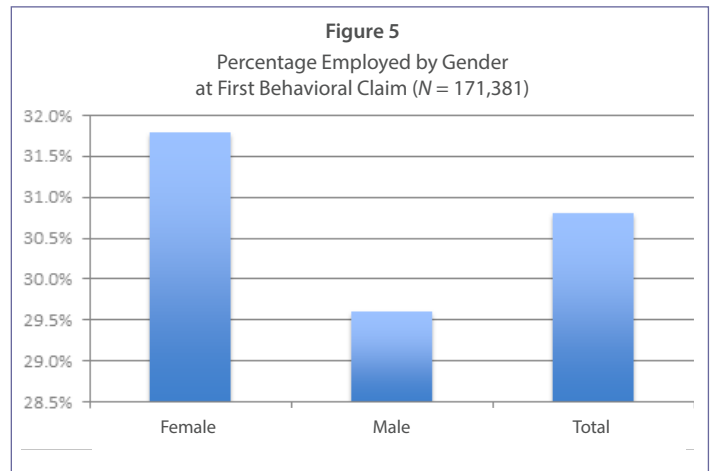
*Employment by Race*

In examining first-time claimants, over three-quarters are white (77.0%), and the vast majority of the rest are African American (19.0%) with a smattering of other races (2.0%) and unclassified and missing individuals (2.0%). Whites are more likely to be employed, 32.4 % , than African Americans and other races (Figure 4).



*Employment by Gender*

Females comprised a majority (56.0%) of employed people at the time of the first claim and are more likely than males to be employed at the time of the first claim by a margin of 31.8% to 29.6% (Figure 5).



*Employment by Medicaid Eligibility*

Medicaid status at the first behavioral claim is defined as whether Medicaid paid for all of the BH treatment, paid for part of the Medicaid treatment, or did not pay for any of the treatment. In the cases where Medicaid did not pay for services, state and local funds were used to reimburse providers. A plurality of 44.0% had all of their BH treatment paid by Medicaid. Almost as many, 41.0% had no Medicaid coverage. The remainder had their BH treatment covered in part by Medicaid and in part by non-Medicaid funding. The non-Medicaid had the highest employment rate at almost 40.0 % at the time of their first claim. Those that only had all of their treatment paid by Medicaid (24.0%) and partial Medicaid payments (27.0%) were much less likely to be employed at the time of the first claim.

*Industry of Employment*

The data set does not contain any information as to the occupation of an employee; the data set is limited only to the industry in which they work, i.e. what the employer produces. Information is available on up to five employers that a person could have during a quarter. Data for the industry of employment is based on the employer where the individual earned the most money. Four industries dominate the employment of those with a behavioral

health claim. The largest with over one-fifth of employment is the Accommodation and Food Service industry (22.0%). The second largest employing industry was Administrative Support and Waste Services (18.0%). Among the firms included here would be temporary employment agencies, janitorial services, and security services. Next are Retail Trade (16.0%) and Health Care and Social Services (15.0%). Manufacturing, which is not among the top four, is thought to be relatively strong in Ohio yet only employs 8.0% of individuals at the time of their first claim.

### *Earnings*

For those individuals who were employed at the time of their first claim, their average earnings for that quarter was \$3,049 or an annual amount of \$12,196. The earnings figure is the combined earnings from all jobs that an individual had during a quarter. Since the poverty line depends on the number of people in a household, a piece of information that is not available in the data set, it is not possible to determine whether or not the individual is in poverty. We can, however, compare the average amount the individual earned to the poverty line for a single person. This comparison will tell us whether or not the worker could earn enough on their own to escape poverty for themselves but would neither count family income from others or adjust the amount for the number of family members. We find that for those who were employed in a given quarter they earned about 11.7 % more than the poverty line for a single individual. The amount is adjusted annually for changes in prices but was approximately \$11,000 for the time period of the study. It should be noted that less than a third of first time claimants were employed, and those that are employed earned approximately \$12,000 annually. Some higher earning employees can pull up the average, and it turns out that almost 60.0% of those who were employed did not earn enough to meet the federal poverty line for a single person.

### *Number of Jobs*

Individuals could have more than one job. Five of six individuals (850%) who had worked held only one job with 13.0 % holding two jobs and 2.0% holding three or more.

### *Employment Prior to First Claim*

Employment prior to the first claim was also examined; 31.8 % of individuals were employed in the quarter prior

to their first claim. If we look at the eight quarters before the first claim, however, a pattern of sporadic employment emerges. Almost three of five people, 57.0 % were employed at least one quarter in the eight quarters prior to their first claim. Only 13.6 % were employed consecutively for all eight quarters before their first claim. The vast majority of people who worked during the eight quarters prior to their first claim, 43.4 % of the 57.0% who had worked, had at least one quarter without employment.

### *Employment by Industry by Geographical Category*

We examined employment for the five industries that employed the greatest number of workers at the time of first claim by geographical categories. For these five industries there was no substantial difference in the share of individuals for Accommodation and Food Service (22.0%) and Retail (16.0%). In looking at Administrative Services and Waste Management, which includes temporary help services and cleaning, there was a higher share employed in small cities (21.0%) and urban areas (20.0%) and a lower share in Appalachia (16.0%). The share employed in Health Services was higher in Appalachia (18.0%) and lower in the Suburban area (13.0%). The proportion in Manufacturing was higher in rural areas (14.0%) and lower in urban ones (4.0%).

In examining employment industry at the time of first claim we saw that youth ages 18-24 (32.0%) were half-and-again as likely to be employed in the Accommodation and Food Service industry as others. The youngest cohort was also more heavily represented in Retail Trade (20.0%) with the result that over half were employed in either that industry or Accommodation and Food Service. The youngest group was less likely to work in either Health Care (12.0%) or Manufacturing (4.0%) than others.

The share of those ages 55 and over employed in Accommodation and Food Services (7.0%) was less than half of the rate for all others. This group, however, was more likely to be employed in health care and social services (21.0%). Employment in manufacturing was greatest for those ages 40-60 (10.0%).

## DISCUSSION

The results of this study give us information on the employment and earning of clients ages 18-64 that were treated within Ohio's publicly funded community behav-

ioral health system. The analysis, which mainly focuses on the time period January 2010 through June 2012, provides information about work force attachment, the types of industries likely to employ consumers, employment differences among various types of communities, and employment differences for demographic factors.

According to this study's results, the majority of clients within the public behavioral health system were not employed either prior to the onset of their behavioral health services and/or while receiving behavioral health services. Some unemployment may have been as a result of the economic recession that occurred during the study period. During the study timeframe, the United States experienced the Great Recession and the onset of an economic recovery from this recession (National Bureau of Economic Resources). The overall Ohio unemployed rate ranged from a low of 6.4% in 2008 to 10.3% in 2010, falling to 7.4% in 2012 (Job and Family Services Labor Market Information). Even when the severe downturn and weak economic recovery period that occurred in the study's time frame is considered, this study's findings indicate that clients within the community behavioral health system are displaced from the workforce at a greater rate than the overall workforce.

Previous research studies have provided explanations as to why individuals with behavioral health diagnoses are more likely to be unemployed (Luciano & Meara, 2014; Cook, 2006; Wu, et al., 2005; Perkins & Rinaldi, 2002). These reasons include symptom severity, lack of jobs supports (e.g., transportation, child care), lack of effective vocational services, lack of effective clinical services, low educational attainment, inability to access supports, employment discrimination, and the effects of disability policies. The effects of disability policies may be the primary reason for clients included in this study to be unemployed and/or detached from the labor force. Perkins and Rinaldi refer to the effects of disability policies as a "benefits trap" (p. 298). This trap happens when clients may be reluctant to forgo benefits, such as Social Security disability payments and Medicaid coverage, for low-paying jobs that often do not have benefits, such as medical insurance. Study results support this supposition about disability policies being a primary reason for workforce detachment.

According to this study's results, workforce participation was almost 15 percentage points higher for clients who were not covered by Medicaid than for those clients with

Medicaid coverage. According to Cook (2006), individuals diagnosed with severe behavioral health disorders rely on Medicaid due to expensive clinical services and medications and lack of parity among private insurance. Consequently, they may be reluctant to forgo benefits, such as Medicaid coverage, for work.

Differences in workforce attachment also appear to be associated with a client's age, gender, and county of residency. As the study results indicate, clients under the age of 30 are more likely to be working than clients over 30; females are also more likely to work than males. The higher rates of workforce attachment are most likely associated with the receipt of Social Security disability payments. Fewer clients who are under the age of 30 as well as female clients receive Social Security disability payments (MACSIS). Also, older adults, as Luciano and Meara (2014) note, may be more apt to drop out of the workforce due to discrimination against older workers, particularly those with behavioral health issues.

Clients who live in rural counties had higher employment rates (40.0%) than clients in the other geographical categories. The higher rate of employment in rural areas may be linked to stigmatizing attitudes about behavioral health issues. Previous research studies (Mays, et al., 2006; Haunstein, 2007), found that rural communities tend to stigmatize individuals with behavioral health diagnoses, and as a consequence, many individuals with behavioral health diagnoses do not seek treatment. These attitudes that stigmatize individuals with behavioral health diagnoses may conversely be a motivating factor that encourages work and discourages disability benefits.

This study found that each of the following four industries hired more than 15.0% of the individuals accessing publicly funded behavioral health services in Ohio: Accommodation and Food Service (21.4%); Administrative Support and Waste Management (18.4%), Retail Trade (15.8%), and Health Care and Social Services (15.5%). Manufacturing employs 7.6% , but no other industry, such as Financial Services, employs more than 3.2%. These results do not provide information as to the exact occupation of the client, only the industry. Some jobs in these four industries require skills and education and provide high wages and benefits. The annual earnings of clients suggests that the majority working in these four industries are not employed in one of the skilled jobs. Even though the information about occupations is missing, this finding does point to underlying problems related to education



and training. First, as Cooke (2016) points out, individuals diagnosed with severe behavioral health disorders often lack the necessary education to compete for high skilled, high-paying, career advancing jobs. Second, vocational education programs may not be effective in training individuals for more skilled occupations due to resource constraints and the need for short-term positive outcomes.

The low levels of earnings of clients while receiving treatment services are consistent with other research studies (Luciano & Meara, 2014; Cooke, 2006). The levels of earnings of clients in this study would not be sufficient for a household of one to have an income over the 150.0% federal poverty income threshold. This is important as Ohio's public behavioral health system tends to serve individuals with incomes under 150.0% of the threshold.

The paucity of earnings reflect an underlying problem faced by clients in this study. These individuals live in poverty and are reliant on benefits to meet their basic needs. Research indicates poverty causes barriers, such as transportation, special clothing and equipment needed for employment, low educational attainment, lack of a social network, and access to training (Cooke, 2006; Baron & Salzer, 2002). As suggested by Cooke as well as Baron and Salzer, it is the contextual factors associated with poverty rather than the behavioral health disorder may be the primary reason that clients are unable to attain jobs that pay competitive wages.

### POLICY IMPLICATIONS

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From a system perspective, local behavioral health authorities can be instrumental in developing strategic plans with organizations external to the public behavioral health system to mitigate obstacles, such as housing, child care, and on-going training needs.

At the behavioral health organization level, findings indicate the need for benefits counseling and career planning. Benefits counseling should be expanded to clients who are not accessing disability payments about employment options. Employment services should include job coaching and mentorship services.

Further, the State Behavioral Health Authority can develop data surveillance systems to connect administrative databases for the purposes of collecting employment outcome information.

As results suggest, behavioral health authorities and behavioral health organizations need to establish relationships with employers from a variety of industries. In order to establish these relationships, the local authorities and behavioral health organizations must be able to demonstrate outcomes. Performance monitoring systems are essential in providing outcome data that can be used to promote the successes of supported employment programs.

### LIMITATIONS

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The results of this study are for individuals who are receiving treatment within Ohio's community public behavioral health system and are not necessarily generalizable to other statutes. This study is limited in that only captures data from one time period that included an economic downturn and a partial recovery period. The timeframe needs to be extended to encompass results for more years after the downturn. Also, results should be aggregated by behavioral health diagnoses to detect possible patterns due to illness severity. In addition, results should be examined to control for certain demographic and regional differences to determine if variation for geographical classifications and demographics are statistically significant.

### CONCLUSION

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In conclusion, this study examined employment patterns between 2010 and 2010 for clients who access publicly funded community behavioral health services in Ohio. Results indicate that the majority of these individuals experienced periods without unemployment prior to accessing behavioral health services and while receiving behavioral health services. Recommendations for policymakers and BHO staff include developing strategies to build relationships with employers across all industry sectors and assist clients with job training, career counseling, and job mentoring.

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## SOCIAL CONNECTEDNESS IN FAMILIES OF CHILDREN AND ADOLESCENTS WITH SERIOUS EMOTIONAL DISTURBANCE AND AUTISM SPECTRUM DISORDER

CAROL CARSTENS, PHD

Ohio Department of Mental Health and Addiction Services

**Corresponding author:** Carol Carstans, PhD, Ohio Department of Mental Health and Addiction Services, 30 East Broad Street, 8th Flr., Columbus, Ohio 43215-2556. Phone (614) 752-9705. E-mail: Carol.Carstans@mha.ohio.gov

For six years, the Ohio Department of Mental Health and Addiction Services (OhioMHAS) has administered the Youth Services Survey for Families (YSS-F) to collect information from a statewide, random sample of parents and guardians of children with serious emotional disturbances (SED). Among other things, the YSS-F measures caregiver social support with a subscale developed by the Mental Health Statistical Improvement Program at the behest of the Substance Abuse and Mental Health Services Administration (SAMHSA). This subscale is the operational definition of SAMHSA's National Outcome Measure for social connectedness in families of children and adolescents treated for SED conditions.

The operational definition of SED used by OhioMHAS for SAMHSA Block Grant reports includes the autism spectrum disorder (ASD). However, children with ASD who are seen by OhioMHAS' certified behavioral health (BH) providers typically are not treated for the ASD condition when they present for care. Research indicates the children with ASD are more likely than those with non-ASD intellectual and developmental disorders (DD) to develop comorbid psychiatric symptoms. Children with ASD in Ohio's public behavioral health system most commonly present with comorbid problems such as attention-deficit hyperactivity, anxiety, and mood disorders, which is consistent with research literature. Ohio families of children with ASD can access services through county boards overseen by the Ohio Department of Developmental Disabilities (DODD). Because children

with ASD and a comorbid psychiatric disorder can access both the DD and BH systems of care, one might assume that families of children with ASD access a richer array community supports impacting social connectedness. The present study seeks to answer the following question: Does social connectedness differ between families of children with a diagnosis in the autism spectrum and those whose children with SED who do not have this particular diagnosis?

### METHODOLOGY

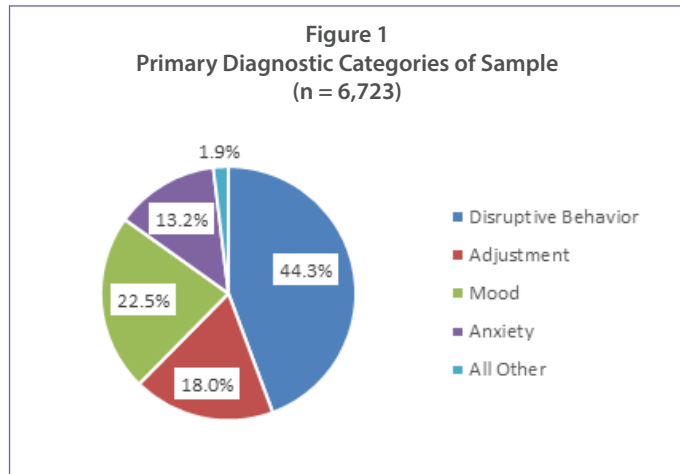
Survey administrators drew a random sample stratified by race and county/board type from the MAC-SIS/MITS billing database each year. The sample size for the youth service population was based on a power analysis for confidence intervals (CI) of +/-3 percent. Racial minorities in the child/adolescent population were over-sampled in an effort to obtain adequate representation. A total of 7,410 completed surveys were collected in the six years between 2011 and 2016. The six-year sample represents an average annual return of 1,235 surveys at an average annual return rate of 16%. Surveys were coded with unique identifiers that allowed researchers to match individual cases with administrative records. Between 90.0% and 95.0% of each year's sample received services that were covered by Medicaid, the administrative data source with client information on co-occurring developmental disorders.

Administrative data (claims) containing diagnostic codes was matched to the sample cases. Primary diagnoses were determined by identifying the most frequent diagnostic code appearing in the

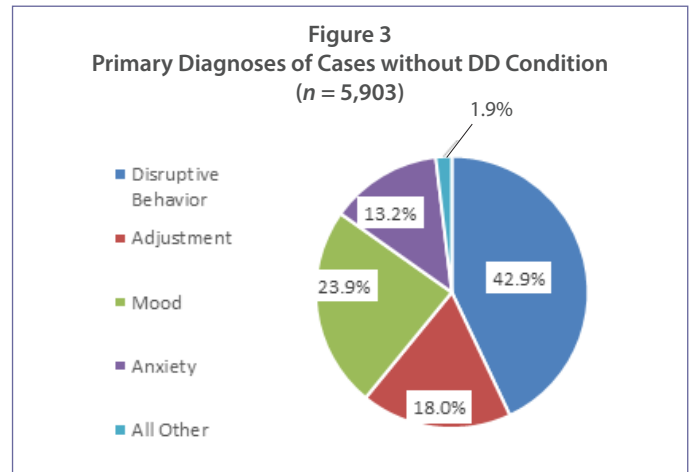
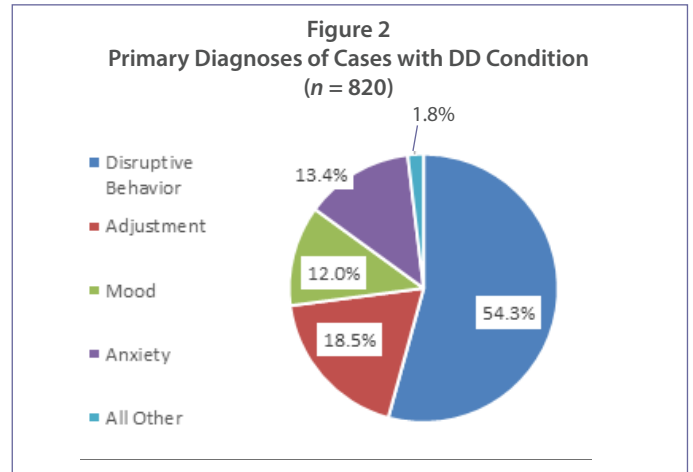
claims for a case. Codes were collapsed into the following five broad categories: Disruptive Behavior Disorders (attention deficit hyperactivity and oppositional defiant), Anxiety Disorders, Mood Disorders (bipolar and depression), Adjustment Disorders, and All Other. An ASD condition was identified by at least one occurrence of any of the following diagnostic codes in the claims data: ICD9 = 299.0-299.91 and ICD10 = F84.0-F84.9. The ASD condition was defined further as being present or not present. The variable was coded 1 = present / 0 = not present.

*Sample Characteristics*

Cases with Medicaid coverage were extracted from the annual survey files, resulting in a six-year aggregate file of 6,723 unduplicated cases for which there was a valid Medicaid identifier. About 70.0% of the sample had received services for longer than a year at the time of survey administration. The sample was 67.3 % White, 27.4% African American, 2.2% Other race, and 3.1% Unknown/Missing. Hispanic representation was 2.7%. About 40.0% were female and 60.0% were male. Geographic county/board representation was 15.2% Appalachian, 7.2% rural, 17.3% small city, 13.2% suburban, and 47.1% major metropolitan. Mean age was 11.3 years (SD 3.6 years).



Some 820 cases (12.2%) were identified as having an ASD condition. All but five of these cases had additional behavioral health diagnoses. Among 815 cases with an ASD condition plus another diagnosis, the modal number of additional diagnostic categories was three. Among the 5,903 cases without an ASD condition, the modal number of additional diagnostic categories was two. Of cases with ASD, 10.6% (n = 87) had as many as five additional



diagnostic categories, compared to only 4.4% (n = 261) of cases without an ASD condition. Figure 1 shows the distribution of primary diagnostic categories in the sample of 6,723, where 44.3% (n = 2,980) are classified with disruptive behavior disorders, 18.0% (n = 1,212) with adjustment disorders, 22.5% (1,511) with mood disorders, and 13.2% (n = 890) with anxiety disorders. The 1.9% (n = 130) with All Other diagnoses is comprised primarily of V codes, but also represents the five cases where ASD is the primary diagnosis.

Figures 2 and 3 show the distribution of diagnostic categories for the 820 cases with ASD and the 5,903 without. Comparing the cases with and without ASD, proportions are roughly equal in the Adjustment, Anxiety, and All Other diagnoses categories. Proportions are different when the Disruptive Behavior and Mood categories in Figures 2 and 3 are compared.

Table 1. YSS-F Subscale Items

	YSS-F Subscale	Items
Perception of Care	Appropriateness	Overall, I am satisfied with the services my child received. The people helping my child stuck with us no matter what. The services my child and/or family received were right for us. My family got the help we wanted for my child. My family got as much help as we needed for my child.
	Access	The location of services was convenient for us. Services were available at times that were convenient for us.
Treatment Outcomes	Family Social Connectedness	I know people who will listen and understand me when I need to talk. I have people I'm comfortable talking with about my child's problems. In a crisis, I would have the support I need from family and friends. I have people with whom I can do enjoyable things.

### Instrumentation

The YSS-F is made up of subscales that measure the parent/guardian's perception of care in addition to the social connectedness as a treatment outcome indicator. Two perception of care subscales are relevant to the present investigation into the effect of an ASD condition on the social connectedness reported by families with children treated for SED. These two perception of care subscales are the six-item appropriateness of care and two-item access to care. Table 1 lists the items found in the Appropriateness, Access, and Social Connectedness subscales.

Items in the subscales were summed and divided by the total number of items. Cases with subscales where more than one-third of items are missing were dropped from the analysis.

Table 2. Variables Predicting Social Connectedness

Model	$\beta$	$\beta$ SE	Sig.
(Constant)	2.136	.047	.000
Access Mean	.131	.013	.000
Appropriateness Mean	.369	.012	.000
Longevity	-.072	.019	.000
ASD Condition	-.081	.026	.002

### Analysis

Descriptive and inferential statistics were run on the dependent variable (social connectedness) to better understand distributions among independent variables such as ASD, service longevity, race, gender, age, access, and appropriateness. SPSS automatic linear modeling then was used to determine which variables, if any, predicted the high versus low scores on social connectedness.

## RESULTS

A multiple linear regression model was calculated to predict *social connectedness* based on *access*, *appropriateness*, *longevity*, and *ASD condition*. A significant regression equation was found ( $F(4,6192)=599.63, p < .000$ ), with an  $R^2$  of 27.9. Although ASD condition contributed only .003 to the overall change ( $R^2$ ), it was a significant probability of .002. Table 2 shows that survey respondents' predicted mean score on *social connectedness* was equal to  $2.136 + .131$  (access mean) +  $.369$  (appropriateness mean) -  $.072$  (longevity) -  $.081$  (ASD condition) where access and appropriateness are measured as mean score points, longevity is coded as 1 = more than 12 months, 0 = 12 months or less, and ASD condition is coded 0 = not present, 1 = present. A survey respondent's mean social connectedness score increased .131 points for each point increase in mean access and .369 points for each point increase in mean appropriateness. A survey respondent's mean social

connectedness score decreased .072 points for each longevity case coded 1 and decreased .081 points for each ASD condition case coded 1.

## LIMITATIONS

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An annual average return rate of 16.0% raises questions about the overall representativeness of the sample. The problem of a low return rate can be controlled somewhat when stratification groups in the sample are representative of the population, but in the case of current study's dataset, racial and geographic groups were not representative. The study sample is further biased by the selection of cases with Medicaid coverage. Between 5.0% and 10.0% of the child and adolescent service population covered by non-Medicaid sources of funding is not represented in the study. Results may not be generalizable to the population due to potential biases in the sample.

## DISCUSSION

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Although the present study is exploratory in nature, it can provide useful information for program and policy development concerned with child and adolescent service populations, family assessment of services, and family social connectedness as an outcome of treatment. The study provides an evidence-based estimate that 12.2% for the child and adolescent behavioral health service population has a comorbid ASD condition. Second, study results show the vast majority of child and adolescent service recipients with an ASD condition are treated for

a greater number of behavioral health disorders. On the face of things, those with an ASD condition are more likely to be treated for disruptive behavior disorders, but less likely to be treated for mood disorders than those without the condition. These findings suggest that child and adolescent service recipients with the ASD condition have a complex and distinct clinical profile.

That caregivers of service recipients with an ASD condition report significantly less social connectedness is an indication of just how complex and distinct their clinical profile truly may be. The greatest single predictor of high scores on social connectedness is the caregiver's perception that services were appropriate. This finding prompts the question, *What are appropriate services for families of children with mental illness and ASD?* Programs aimed at increasing the family's network of social supports are clearly indicated. In a service system with limited resources, policies are indicated that prioritize families of children with ASD conditions for social support programs.

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# COMMUNITY COLLEGE AND UNIVERSITY STUDENT GAMBLING BELIEFS, MOTIVES AND BEHAVIORS

R. THOMAS SHERBA, PHD, MPH • BETH GERSPER, MPA

Ohio Department of Mental Health and Addiction Services

**Corresponding author:** R. Thomas Sherba, OhioMHAS, Office of Quality, Planning and Research, 30 E. Broad Street, 8th Flr., Columbus, OH 43215. E-mail: Tom.Sherba@mha.ohio.gov

**Abstract:** The purpose of this study was to inform policymakers on current gambling beliefs, motives and behaviors of college students, both community college and university students, in an effort to evaluate the extent of problem gambling in the college student population. To examine differences in gambling and problem gambling between community college and university students, 398 community college and university students completed a series of gambling related surveys to capture types and frequency of gambling and to assess for gambling beliefs, motives and correlates of problem gambling as well as problem gambling treatment exposure. Students were screened for problem gambling using the Problem Gambling Severity Index (PGSI). In addition to comparative analyses of gambling differences between college types, a logistic regression model was developed to further examine significant associations of at-risk/problem gambling. Having an alcohol and/or other drug (AOD) problem and being under a doctor's care during the past 12 months because of physical or emotional problems brought on by stress were significantly associated with at-risk/problem gambling. Also significant, community college students were found to be 38.5% more likely to engage in at-risk/problem gambling than university students. Community college students experience a significantly higher rate of at-risk/problem gambling than university students (30.7% vs. 22.0%). Epidemiological data presented in this report have the potential to aid in the development of needed gambling addiction services for community college students.

**Keywords:**

Addiction, Community college, Gambling, Problem gambling, Students

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The recognition of increased gambling in special populations led to studies specific to college student gambling behaviors. Studies have reported that the majority of college students gamble; across several studies anywhere from 72-80% of students admit to gambling (Barnes, Welty, Hoffman, & Tidwell, 2010; McComb & Hanson, 2009; National Council on Problem Gambling [NCPG], 2012; Williams, Connolly, Wood, & Nowatzki, 2006). In its gambling guide for college students, the National Center for Responsible Gaming (2011) defines gambling as wagering money or an object of value, which is irreversible once placed, on a game in which outcome relies on chance, including: lottery/numbers, casino gambling, cards or dice games, betting on college or professional sports, betting on horse/dog races, Internet gambling, bingo and raffles. Several studies have identified lottery, card games and sports betting as the most frequently chosen gambling activities for students (Bhullar, Simons, Joshi, & Amoroso, 2012; Hodgins & Racicot, 2013; NCPG; Stuhldreher, Stuhldreher, & Forrest, 2007).

In a series of synthesis studies, researchers found higher prevalence rates for problem gambling among youth and college students than among the general adult population (LaBrie, Shaffer, LaPlante, & Wechsler, 2003; Locke, Shilkret, Everett, & Petry, 2013; McComb & Hanson; NCPG; Pascual-Leone, Gomes, Orr, Kaploun, & Abeare, 2011; Volberg, Nysse-Carris, & Gerstein, 2006; Williams et al.): 6-8% of college students gamble problematically compared to 2-4% of the general adult population. A meta-analyt-

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ic study of pathological gambling of over 13,000 college students found a prevalence estimate of slightly over 10% for probable pathological gambling (Nowak & Aloe, 2014). NCPG reports that youth rates for at-risk problem gambling are 2-3 times higher than adult rates.

The primary purpose of this study was to inform policy-makers on current gambling beliefs, motives and behaviors of college students, both community college and university students, in an effort to evaluate the extent of problem gambling in the college student population. As gambling opportunities continue to expand nationally and over the Internet, communities need to systematically assess prevention needs based on current epidemiological data. This study's target age of 18-25 years was chosen to align with the population of interest of many of the state's prevention collaboratives: emerging adults.

This was a statewide initiative conducted at four-year universities and two-year community colleges; both types of institutions were selected to achieve a more representative sample of college students. The aims of this study were twofold: to assess the prevalence and severity of gambling in a sample of college students aged 18-25 years and to assess the potential differences in gambling beliefs, motives and behaviors between community college and university students. There is a paucity of studies which examine the differences between these two college types. In fact, the researchers of this study found no data specific to community college students in the literature of student gambling.

Do gambling differences exist between the two college types? Is one college type at greater risk for problem gambling than the other? This study is exploratory in nature and its contribution to the literature is in conducting initial analyses of college type as a correlate of problem gambling. The results of gambling studies, like this study, are used to direct money toward designing and implementing services—services which may be of benefit to many community college students. Thus, data presented here have the potential to aid in the development of needed gambling addiction services.

## LITERATURE REVIEW

Several studies identified demographic characteristics of students who were more likely to gamble. These studies described college student gamblers as more often male than female (LaBrie et al., 2003; Locke et al., 2013; Petry, Stinson, & Grant, 2005; Stuhldreher, Stuhldreher, & Forrest, 2007), similar to national population studies, and over 20 years of age (LaBrie et al.; Petry et al.). In a study of undergraduate students at a large public university, researchers found that males gambled more frequently, with larger amounts of money and had greater problem gambling severity than females (Lostutter, Lewis, Cronic, Neighbors, & Larimer, 2014); other researchers have also found problem gamblers to be significantly more often male than female (Ginley, Whelan, Meyers, Relyea, & Pearlson, 2014). In a large multi-campus study of university students, regression analyses showed that male students were twice as likely to engage in gambling and more than three times as likely to have a gambling problem as female students (Wong, Zane, Saw, & Chan, 2013). Race proved significant in collegiate gambling studies as well; several studies found that non-white students were more likely to gamble and to be at an increased risk for gambling problems than white students (Barnes et al., 2010; Locke et al.; McComb & Hanson, 2005; Petry et al.).

Reviews and meta-analyses of population surveys indicate that the social costs of pathological gambling are high and effects extend from issues at home and work to mental health and physical issues in the general population as well as in the college student population (Erickson, Molina, Ladd, Pietrzak, & Petry, 2005; Lorains, Cowlishaw, & Thomas, 2011; Petry & Weinstock, 2007; Sprinkle et al., 2002; Stuhldreher et al., 2007). Student gambling studies report higher prevalence for comorbid disorders among problem and pathological gamblers: Lorains et al. found the highest prevalence was for nicotine dependence (60.1%), followed by a substance use disorder (57.5%), any type of mood disorder (37.9%) and any type of anxiety disorder (37.4%). Locke et al. (2013) found pathological student gamblers to have higher scores on the alcohol problem scale (AUDIT) and to use more cigarettes, marijuana and other illicit drugs than other students.

Among students who met the criteria for pathological gambling, Martin, Usdan, Cremeens and Vail-Smith (2014) found a disproportionately high comorbidity rate for problem drinking (81.7%) and depression (40%) compared to



non-pathological gamblers. Moreover, these researchers found that students who met the threshold for problem drinking or depression were more than twice as likely to be pathological gamblers as non-problem drinking or non-depressed students. Similar studies found: over a quarter of student gamblers reported being depressed for two or more weeks during the past year (Atkinson, Sharp, Schmitz, & Yaroslavsky, 2012); almost 40% of pathological gamblers in a large national sample reported a comorbid diagnosis of major depressive disorder or dysthymia (Kessler, 2008); binge drinking was directly related to greater frequency and severity of gambling (Bhullar, Simons, Joshi, & Amoroso, 2012). Studies of persons in residential treatment facilities for substance abuse have found problem or pathological gambling to range from 10.5% to 29% (Ledgerwood & Downey, 2002; Toneatto & Brennan, 2002; Toneatto, Ferguson, & Brennan, 2003). Additionally, in their study's student population, Stuhldreher et al. (2007) found that 27% of problem gamblers admitted to considering suicide, while 18% attempted it.

In terms of familial history of alcohol and/or other drug (AOD) and gambling problems, a study of over 400 college students aged 18-25 years found that gambling was correlated with each: 22% of student gamblers reported a family member having an AOD problem, while 51% reported a family member with a gambling problem (Atkinson et al., 2012). Family history of problematic gambling has also been shown to be a factor in predicting problem and pathological gambling among individuals seeking treatment for alcohol and drug abuse (Ledgerwood & Downey, 2002; Toneatto & Brennan, 2002; Toneatto et al., 2003).

## METHODS

Data related to gambling and problem gambling specific to this Midwestern US state were limited. Moreover, gambling data specific to the state's youth population were almost nonexistent. This study was an attempt to fill this data gap by generating needed epidemiologic descriptions of gambling behaviors and patterns of problem gambling among a segment of the state's youth population: college-aged individuals (18-25 years), a population thought to be at higher risk for problem gambling than the general adult population. Data were collected at four institutions of higher learning from January through June 2014: two four-year universities and two community colleges; one institution in each of the state's four cities where casino gambling became permissible by law. With

the openings of the casinos, one in each of the designated four cities, the state's behavioral health authority desired to collect baseline epidemiologic data with the intent to replicate data collection in future years to track the prevalence and severity of gambling over time. As stated previously, community colleges, as well as universities, were selected to achieve a more representative sample of college students. Institutions were comparable in that each institution had a campus population of at least 23,000 students and all were located in urban areas of between 500,000 and 1,800,000 residents.

A minimum target of 100 students for study participation was sought at each institution through convenience sampling for a total targeted study population of 400. We calculated that sample size should be at least 384 at a confidence level of 0.95 and a confidence interval of 5. The only eligibility criterion for study inclusion was age: only students aged 18-25 years were eligible to participate, as emerging adults were the study population of interest. Students were recruited through poster announcements displayed in highly trafficked areas around campus, as well as through social media and student email listservs. A \$25 restaurant gift card incentive was offered for participation. Student informed written consent was obtained by study epidemiologist prior to administration of surveys. Applicable institutional review boards approved this study.

### *Measures*

Participants completed a set of questionnaires consisting of self-report measures and a demographic questionnaire. See Table 1 for a complete list of questionnaires administered.

### *Survey of Participant Characteristics.*

A survey of participant characteristics captured the following demographic information: sex, ethnicity, race, age, current living arrangement (on campus in a residence hall/dormitory/apartment, off campus in own apartment/house with no roommate, off campus with roommate(s), with parent(s) and other living arrangement, specify), year of school currently enrolled in (first, second, third, fourth and fifth or higher), primary source of income (work, student loans/financial aid, parents, credit cards and other source, specify) and AOD use during the past six months (alcohol, crack cocaine, ecstasy, heroin, marijuana, methamphetamine, powdered cocaine and prescription drugs not prescribed: opioids, sedative-hypnotics and stimulants, other drug(s), specify and none: did not use alcohol or other drugs).

**Table 1. Measures**

Measures		# of Questions per Section
Survey of Participant Characteristics	Captures demographic information	(8 questions)
Community Readiness Scale	Describes beliefs regarding community and gambling	(8 questions)
Gambling Motives Questionnaire	Describes the motives to gamble	(15 questions)
Gambling Quantity and Perceived Norms Scale	Describes gambling habits and perceived norms of gambling	(13 questions)
Survey of Gambling Behaviors	Captures types of gambling engaged in and primary gambling type	(9 questions)
Canadian Problem Gambling Index	Examines correlates of family and personal history of substance abuse and mental disorder	(7 questions)
Problem Gambling Severity Index	Screens for problem gambling	(9 questions)

#### *Community Readiness Scale.*

To describe beliefs regarding community and gambling, items from the Minnesota Institute of Public Health's Community Readiness Scale (CRS), which measures attitudes toward substance abuse and community readiness to address substance abuse, were adapted for this study. Four questions asked the participant how much of a problem he/she believed gambling to be by teenagers, by young adults (age 18-20 years), by adults (age 21-54 years) and by older adults (age 55 years and older): 'not a problem, minor problem, moderate problem, serious problem' or 'don't know.' Additionally, participants were asked to respond on a 5-point Likert scale of strongly agree to strongly disagree to the following four attitudinal statements: It is possible to reduce gambling problems through prevention; The community has the responsibility to set up prevention programs to help people avoid gambling problems; Gambling at a casino is more risky than buying lottery tickets or pull tabs; It is okay for high schools to sponsor casino nights for graduation or prom. Adaptation of CRS items were used based on psychometric evaluation that produced evidence of construct validity and above adequate domain internal consistency (all alphas > 0.70) (Beebe, Harrison, Sharma, & Hedger, 2001).

#### *Gambling Motives Questionnaire.*

To describe the motives to gamble among community college and university students, the 15-item Gambling

Motives Questionnaire (GMQ) was used. The GMQ measures how frequently one engages in gambling (almost always, often, sometimes or almost never/never) for each of 15 common reasons which comprise three distinct subscales of gambling motives: enhancement (to increase positive emotions), coping (to decrease negative emotions) and social (to increase affiliation). The GMQ scale was chosen as a measure as its three subscales have been found to possess good internal consistency (all alphas > 0.80) (Stewart & Zack, 2008).

#### *Gambling Quantity and Perceived Norms Scale.*

To describe the gambling habits and perceived norms of gambling among community college and university students, the 13-item Gambling Quantity and Perceived Norms (GQPN) scale was used. This scale measures personal gambling frequency and perceived gambling frequency of peers on a 10-point Likert scale from 'never' to 'every day.' Additionally, the GQPN asks participants to indicate how much money they have lost and won during the past month and past year as well as how much money on average they lose/win per month, with subsequent questions asking participants to indicate how much money the average student loses/wins per month and year. The GQPN scale was chosen as a measure as the gambling quantity subscale has demonstrated good reliability (alpha = 0.89) and its use with undergraduate college students has been validated. Moreover, the scale's gambling frequency items were found to be moderately correlated with the frequency index of the South Oaks

Gambling Screen (SOGS) and other similar indices (Neighbors, Lostutter, Larimer, & Takushi, 2002).

#### *Survey of Gambling Behaviors.*

A survey of gambling behaviors captured types of gambling engaged in during the past 12 months as well as primary gambling type. For the purpose of our study, gambling was defined as participation in any of the following activities: bingo, lottery/scratch-offs, casino: slots, dice, craps, poker, etc., non-casino: dice, craps, poker at a private club, bar or friend/associate's home, horse/dog racing, sports betting/office sports pools, stock market/day trading, Internet gambling and other gambling, specify. Participants were asked to indicate which of these activities they participated in during the past 12 months, and then in a subsequent question, they were asked to indicate which activity was their primary gambling type. This survey also asked participants to describe the relationship, if any, between their gambling and their AOD use. Lastly, this survey assessed participant exposure to and knowledge of gambling treatment: Have you ever tried to get help for your gambling; Have you ever participated in gambling treatment; Do you currently need help for a gambling problem; Are you familiar with Gambler's Anonymous; Have you ever attended a Gambler's Anonymous meeting; How confident are you that you would be able to recognize signs that a friend or family member had a gambling problem ('extremely, moderately, slightly or not at all confident')?

#### *Canadian Problem Gambling Index.*

In addition to examining gambling beliefs, motives and behaviors, we examined correlates of problem gambling. Thus, since family and personal history of substance abuse and mental disorder are thought to be highly correlated with problem gambling, students were asked to respond to the following seven survey items borrowed from the Canadian Problem Gambling Index (CPGI) designed to examine these correlates (Ferris & Wynne, 2001): Has anyone in your family ever had a gambling problem; Has anyone in your family ever had an alcohol or drug problem; Have you ever felt you might have an alcohol or drug problem; In the past 12 months if something painful happened in your life, did you have the urge to have a drink; In the past 12 months if something painful happened in your life, did you have the urge to use drugs or medication; In the past 12 months have you been under a doctor's care because of physical or emotional problems brought on by stress; In the past 12 months have you felt seriously depressed?

#### *Problem Gambling Severity Index.*

Participants were screened for problem gambling using the Problem Gambling Severity Index (PGSI). The rationale for selecting the PGSI was based on the determination that the PGSI has demonstrated strong internal validity and reliability (Currie, Hodgins, & Casey, 2013; Ferris & Wynne, 2001). Moreover, given the number of surveys administered in this study, we sought a problem gambling screen which was relatively short. The PGSI consists of nine items, and when psychometric analyses compared it to the widely used SOGS, which consists of 20 items, researchers found that the PGSI had better internal consistency and better external and classification validity (Stevens & Young, 2008). The PGSI consists of nine questions: "Thinking about the last 12 months ...

1. *Have you bet more than you could really afford to lose?*
2. *Have you needed to gamble with larger amounts of money to get the same feeling of excitement?*
3. *When you gambled, did you go back another day to try to win back the money you lost?*
4. *Have you borrowed money or sold anything to get money to gamble?*
5. *Have you felt that you might have a problem with gambling?*
6. *Has gambling caused you any health problems, including stress or anxiety?*
7. *Have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?*
8. *Has your gambling caused any financial problems for you or your household?*
9. *Have you felt guilty about the way you gamble or what happens when you gamble?*

These nine items each scored on a scale of 0-3 (0 = Never; 1 = Sometimes; 2 = Most of the Time; 3 = Almost Always) for a total scale score of 0-27. Individuals scoring a 1-2 on the index are at low risk for problem gambling. This group does not experience adverse consequences from gambling. People with this score range may benefit from prevention messages (education and awareness of gambling problem signs and symptoms) but would not necessarily be candidates for further intervention. Individuals scoring a 3-7 on the index are at moderate risk for problem gambling. This group may experience adverse consequences

from gambling; however they do not meet diagnostic criteria for problem gambling. Individuals scoring an 8 or higher on the index meet diagnostic criteria for problem gambling. This group generally exhibits loss of control and distortions in thinking regarding gambling behaviors.

## ANALYSIS PLAN

Counts and frequencies were run for each demographic and gambling activity variable by college type (community college vs. university). Independent samples t tests were performed to compare mean differences between community college and university participants on the following variables: age, year of school, number of gambling types participated in during the past 12 months and PGSI score. Chi square tests (crosstabs) were performed to assess for differences between college types on each of the demographic and gambling activity variables. In addition, chi square tests were performed to assess for gambling differences based on sex (male vs. female) and race (white vs. non-white), and chi square tests were performed to assess for differences between college types based on PGSI determined problem gambling risk category ('no risk' vs. 'at-risk/problem gambling'), as well as on each variable of the following measures: CRS, GMQ, GQPN and CPGI. Lastly, a logistic regression model was developed to further examine significant associations of at-risk/problem gambling.

All analyses were conducted using the Statistical Package for the Social Sciences (SPSS) (SPSS Inc., Chicago, IL). An alpha level of .05 was used for all statistical tests. Significant findings only are reported in the results section below. Note, all analyses were based on weighted data due to the overrepresentation of male and African-American students in the community college sample and the overrepresentation of white students in the university sample. Weighting was accomplished using a manual iterative solution of  $\text{weight} = \text{population percent} / \text{sample percent}$ . Data were weighted for sex and race for each college type using enrollment data from the state's board of regents. Note, for the variable 'race,' a category of 'non-white' was created due to small numbers of less than five cases for several 'not white' race categories; also some numbers remained too small for crosstab analyses even when cases of race categories other than white and black were collapsed into a third category of "other."

In constructing the logistic regression model, the variable '**problem gambling risk**' (no risk; at-risk/problem gam-

bling) was entered as the dependent variable. This variable was created using participant total score on the PGSI: a total score of zero constituted 'no risk,' while a total score of one or greater constituted 'at-risk/problem gambling.' Note, the category of 'at-risk/problem gambling' was created due to too few cases of moderate-risk and problem gambling which resulted in cell sizes less than five for many bivariate analyses. The following variables were entered as independent variables through block entry and were included in the model based on findings from preliminary crosstab analyses that each was significantly associated with problem gambling risk; results of these preliminary crosstab analyses are provided in parentheses:

**'Age'** – A significantly higher proportion of students aged 21-25 years were found to be at-risk/problem gamblers than students aged 18-20 years (34.8% vs. 20.2%;  $N = 394$ ,  $X^2 = 10.527$ ,  $df = 1$ ,  $p < .001$ ). This variable was created using data reported on the Survey of Participant Characteristics.

**'Primary income'** – A significantly higher proportion of students whose primary income was derived from work were found to be at-risk/problem gamblers than students whose primary income was derived from some means other than work (28.3% vs. 16.4%;  $N = 350$ ,  $X^2 = 6.772$ ,  $df = 1$ ,  $p = .009$ ). This variable was created using data reported on the Survey of Participant Characteristics.

**'AOD use'** – A significantly higher proportion of students who reported any AOD use during the past six months were found to be at-risk/problem gamblers than students who reported no AOD use (30.8% vs. 12.9%;  $N = 390$ ,  $X^2 = 12.451$ ,  $df = 1$ ,  $p < .001$ ). This variable was created using data reported on the Survey of Participant Characteristics.

**'AOD problem'** – A significantly higher proportion of students who reported ever feeling they might have an AOD problem were found to be at-risk/problem gamblers than students who reported not ever feeling they might have an AOD problem (58.1% vs. 22.3%;  $N = 357$ ,  $X^2 = 24.885$ ,  $df = 1$ ,  $p < .001$ ). This variable was created using data reported on the CPGI.

**'Urge to drink'** – A significantly higher proportion of students who reported having had an urge to drink during the past 12 months if something painful happened in their life were found to be at-risk/problem gamblers than students who reported never having had an urge to drink during the past 12 months if something painful happened in their life (43.0% vs. 15.6%;  $N = 392$ ,  $X^2 = 35.800$ ,  $df = 1$ ,  $p$

< .001). This variable was created using data reported on the CPGL.

**'Urge to use drugs'** – A significantly higher proportion of students who reported having had an urge to use drugs or medication during the past 12 months if something painful happened in their life were found to be at-risk/problem gamblers than students who reported never having had an urge to use drugs or medications during the past 12 months if something painful happened in their life (38.8% vs. 24.3%;  $N = 367$ ,  $X^2 = 5.824$ ,  $df = 1$ ,  $p = .016$ ). This variable was created using data reported on the CPGL.

**'Under doctor's care'** – A significantly higher proportion of students who reported having been under a doctor's care during the past 12 months because of physical or emotional problems brought on by stress were found to be at-risk/problem gamblers than students who reported not having been under a doctor's care during the past 12 months because of physical or emotional problems brought on by stress (42.9% vs. 24.6%;  $N = 362$ ,  $X^2 = 7.152$ ,  $df = 1$ ,  $p = .007$ ). This variable was created using data reported on the CPGL.

**'College type'** – College type was included in the model as it was this study's primary variable of interest and a significant difference was found between college type and problem gambling risk: 30.7% of community college students were found to be at-risk/problem gamblers compared to 22.0% of university students ( $N = 394$ ,  $X^2 = 3.887$ ,  $df = 1$ ,  $p = .049$ ). This variable was created based on type of postsecondary institution attended: community college or university.

While findings from preliminary crosstab analyses were not significant for the following variables, they were included in the logistic regression model based on findings in the literature that each was associated with problem gambling risk:

**'Sex'** – Sex was included in the model based on findings that noted males as more likely to have at-risk/problem gambling status than females (Ginley et al., 2014; LaBrie et al., 2003; Lostutter et al., 2014; Petry et al., 2005; Stuhldreher et al., 2007; Wong et al., 2013). This variable was created using data reported on the Survey of Participant Characteristics.

**'Race'** – Race was included in the model based on findings that noted racial minorities as more likely to have at-risk/problem gambling status than whites (Barnes et al.,

2010; Locke et al., 2013; McComb & Hanson, 2009; Petry et al.). This variable was created using data reported on the Survey of Participant Characteristics.

**'Family AOD problem history'** – Family AOD history was included in the model based on findings that having a family member with a current or former AOD problem is correlated with at-risk/problem gambling (Atkinson et al., 2012; Ledgerwood & Downey, 2002; Toneatto & Brennan, 2002; Toneatto et al., 2003). This variable was created using data reported on the CPGL.

**'Family problem gambling history'** – Family gambling history was included in the model based on findings that having a family member with a current or former gambling problem is correlated with at-risk/problem gambling (Atkinson et al., 2012; Ledgerwood & Downey, 2002; Toneatto & Brennan, 2002; Toneatto et al., 2003). This variable was created using data reported on the CPGL.

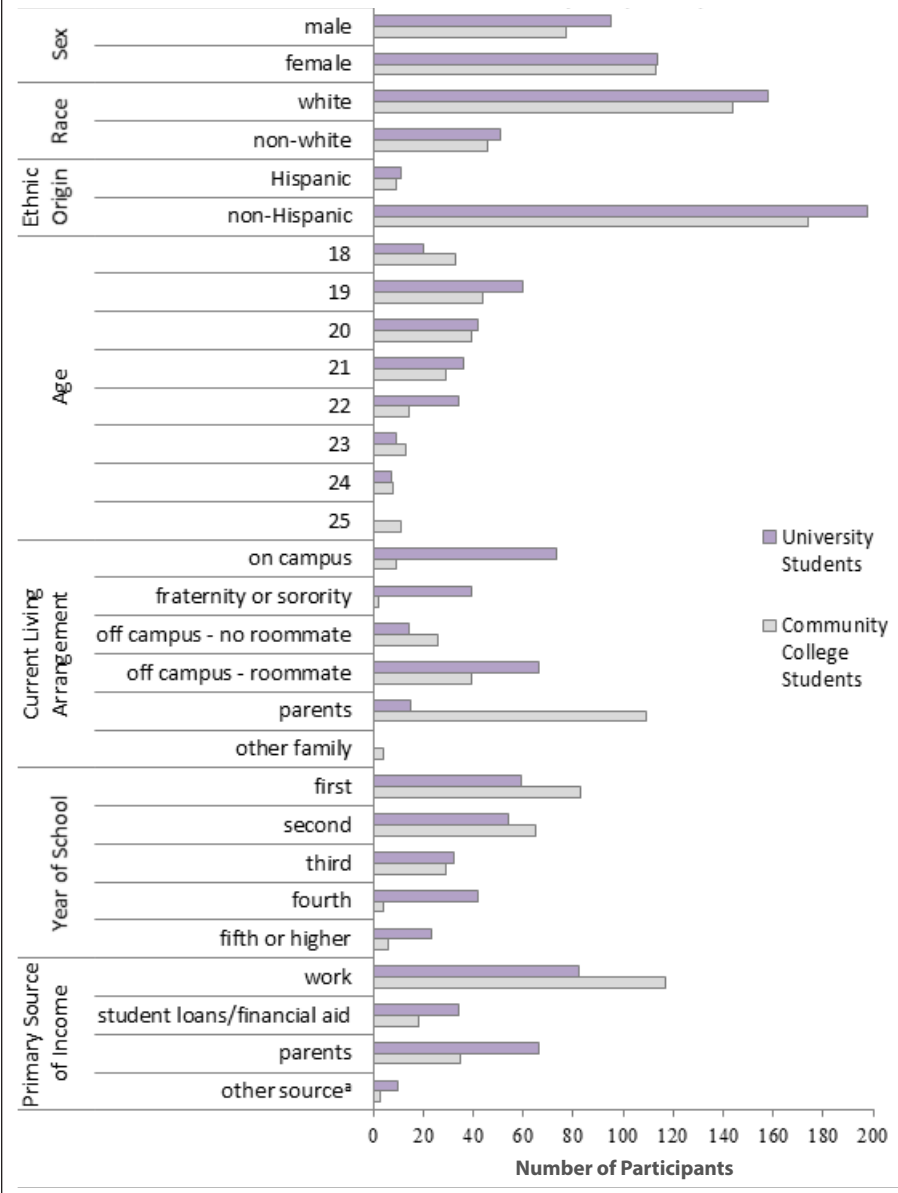
**'Depression'** – Depression was included in the model based on findings that having felt seriously depressed during the past 12 months is correlated with at-risk/problem gambling (Atkinson et al.; Kessler et al., 2008; Martin et al., 2014). This variable was created using data reported on the CPGL.

## RESULTS

### *Survey of Participant Characteristics*

A total of 412 students participated across campuses; however, after exclusion of students older than 25 years and cases of missing data for gambling status, the study population was 398 (189 community college students and 209 university students). Figure 1 displays demographic information for these 398 cases. There were no between-group significant differences for sex, race, ethnic origin and age. There were significant between-group differences for the variables of current living arrangement, year of school and primary source of income. As expected, significantly more university students reported living on campus (35.4% vs. 4.8%) while significantly more community college students reported living with parents (57.7% vs. 7.3%) ( $N = 395$ ,  $X^2 = 154.830$ ,  $df = 3$ ,  $p < .001$ ). The mean year of school was significantly higher for university students [ $(M = 2.60$ ,  $SD = 1.365$  vs.  $M = 1.85$ ,  $SD = .968$ ),  $t = 6.352$  (2-tailed),  $p < .001$ ,  $d = 374.870$ ]. Lastly, significantly more university students reported their primary source of

**Figure 1**  
**Characteristics of Student Participants (N = 398)**



income as parents (36.3% vs. 20.6%) and student loans/financial aid (18.7% vs. 10.6%), while significantly more community college students reported work as their primary source of income (68.8% vs. 45.1%) ( $N = 352$ ,  $X^2 = 20.208$ ,  $df = 2$ ,  $p < .001$ ).

In terms of AOD use, a significantly higher proportion of university students than community college students reported using at least one AOD type during the past six months (62.8% vs. 37.2%;  $N = 393$ ,  $X^2 = 47.371$ ,  $df = 1$ ,  $p < .001$ ). When types of AOD were examined, two significant

differences were found between the college types: 64.3% of university students versus 35.7% of community college students reported alcohol use ( $N = 398$ ,  $X^2 = 55.543$ ,  $df = 1$ ,  $p < .001$ ); 15.9% of university students versus 3.2% of community college students reported non-prescribed prescription stimulant use ( $N = 394$ ,  $X^2 = 17.589$ ,  $df = 1$ ,  $p < .001$ ).

*Community Readiness Scale*

There were no significant differences found between college types regarding gambling beliefs except around the belief that it is okay for high schools to sponsor casino nights for graduation or prom: 41.8% of university students versus 31.5% of community college students agreed to strongly agreed with this statement ( $N = 362$ ,  $X^2 = 4.022$ ,  $df = 1$ ,  $p = .045$ ). The majority of students (58-81%) of each college type agreed to strongly agreed with the following items with no significant between-group differences found: It is possible to reduce gambling problems through prevention; The community has the responsibility to set up prevention programs to help people avoid gambling problems; Gambling at a casino is more risky than buying lottery tickets or pull-tabs.

Significant differences in perceived problem gambling among specific segments of student communities were found between the two types of students. Higher proportions of community college students than university students perceived problem gambling to be moderate to serious among teens, young adults and adults: 40.5% versus 9.6% for teens ( $N = 364$ ,  $X^2 = 51.199$ ,  $df = 2$ ,  $p < .001$ ); 47.7% versus 20.1% for young adults ( $N = 348$ ,  $X^2 = 40.687$ ,  $df = 3$ ,  $p < .001$ ); 75.2% versus 60.7% for adults ( $N = 354$ ,  $X^2 = 12.205$ ,  $df = 3$ ,  $p = .007$ ). When students were surveyed regarding their level of confidence to recognize signs that a friend or family member had a gambling problem, community college students were significantly less confident than university students: 8.4% and 3.4% respectively reported being not at all confident ( $N = 397$ ,  $X^2 = 8.083$ ,  $df = 3$ ,  $p = .044$ ).

**Table 2. Gambling Reasons by College Type (N = 209)<sup>a</sup>**

	Community College <sup>b</sup>	University <sup>b</sup>
<b>Social</b>		
It's a way to celebrate	25.9%	23.8%
*It's what most of my friends do when they meet up	29.2%	17.0%
For socializing	28.6%	25.2%
It's something I do on special occasions	24.8%	29.5%
It makes a social gathering more fun	28.9%	23.6%
<b>Enhancement</b>		
I like the way it makes me feel	23.2%	24.9%
It's exciting	27.5%	29.9%
To bring on a feeling of euphoria	15.3%	16.7%
It's fun	37.6%	38.7%
It makes me feel good	18.1%	15.0%
<b>Coping</b>		
*To relax	16.2%	8.7%
*It makes me feel more confident and sure of myself	21.7%	6.7%
*It helps me when I feel nervous or depressed	11.6%	5.7%
To forget my worries	12.9%	6.8%
To make me feel better when I'm in a bad mood	13.9%	8.5%

<sup>a</sup>Only participants who reported gambling during the past 12 months were included in analysis.

<sup>b</sup>Percentages are valid percentages representing those who responded 'often' to 'almost always.'

\* $p < .05$ .

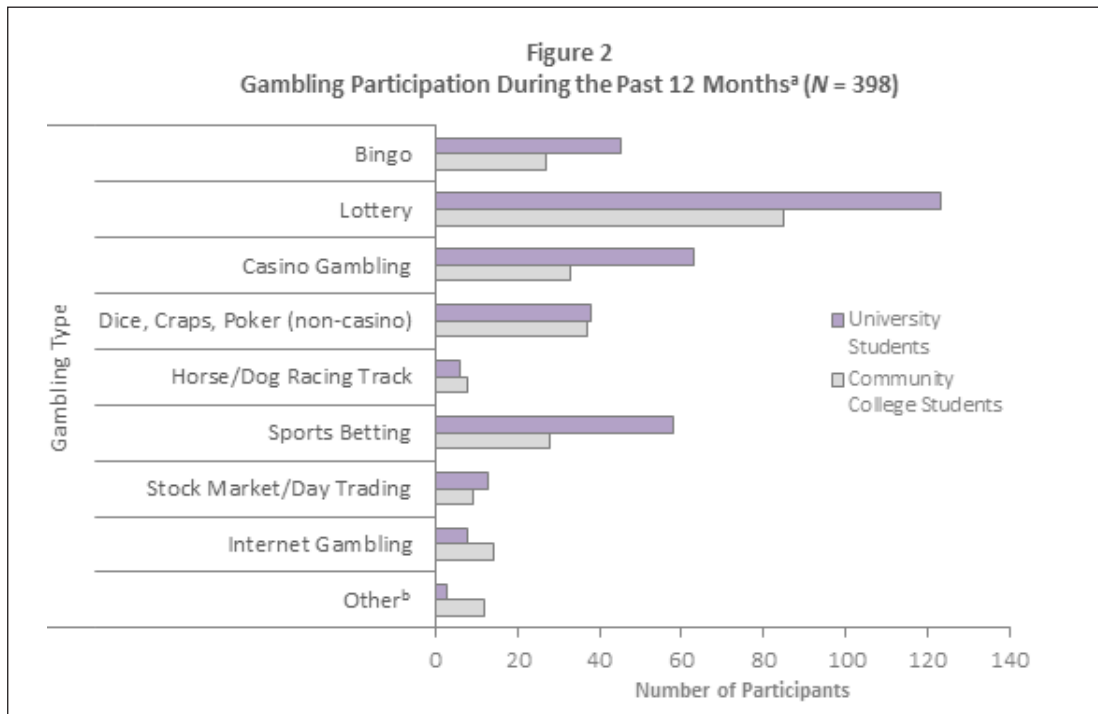
### *Gambling Motives Questionnaire*

Significant differences in motives to gamble were found between the two student groups based on comparative analyses of the GMQ three scales. For three of the five items measuring coping as a motive, significantly higher proportions of community college students than university students reported engagement in gambling as 'often' to 'almost always' 'to relax' (17.1% vs. 7.4%;  $N = 259$ ,  $X^2 = 5.809$ ,  $df = 1$ ,  $p = .016$ ); 'because you feel more self-confident or sure of yourself' (19.8% vs. 4.1%;  $N = 248$ ,  $X^2 = 15.765$ ,  $df = 1$ ,  $p < .001$ ); 'because it helps when you are feeling nervous or depressed' (11.8% vs. 3.4%;  $N = 251$ ,  $X^2 = 6.781$ ,  $df = 1$ ,  $p = .009$ ). In addition, there was one significant difference found among social motives: a significantly higher proportion of community college students than university students reported engagement in gambling as 'often' to 'almost always' 'because it's what most of your friends do when you get together' (32.4% vs. 13.7%;  $N = 248$ ,  $X^2 = 12.435$ ,  $df = 1$ ,  $p < .001$ ). Note, no significant dif-

ferences were found among enhancement motives. See Table 2 for a complete list of gambling reasons and the corresponding proportional response of 'often' to 'almost always' for each reason by college type.

### *Gambling Quantity and Perceived Norms Scale*

Students from both college types perceived peers gambling more frequently than them. However, a significant proportion of community college students reported peers gambling more frequently than did university students: 46% versus 20.2% reported peers gambling greater than once per month ( $N = 395$ ,  $X^2 = 55.298$ ,  $df = 3$ ,  $p < .001$ ). Students also generally perceived peers gambling greater amounts than them, with significant differences in these perceptions between college types: 25.7% of community college students perceived peers losing greater than \$100 per month gambling versus 5.3% of university students ( $N = 395$ ,  $X^2 = 32.485$ ,  $df = 2$ ,  $p < .001$ ), and 41.2% versus 24.9% respectively perceived peers winning greater than \$20 per month ( $N = 396$ ,  $X^2 = 21.061$ ,  $df = 3$ ,  $p < .001$ ).



<sup>a</sup>Some respondents reported participation in multiple types of gambling.

<sup>b</sup>Other gambling participation included: friendly wagers, car racing, arcade and carnival games.

### Survey of Gambling Behaviors

Of the 189 participating community college students, 67.2% reported participation in at least one type of gambling during the past 12 months versus 78.6% of the 209 participating university students—this difference in gambling participation was significant ( $N = 398$ ,  $X^2 = 5.704$ ,  $df = 1$ ,  $p = .017$ ). Of these students who gambled, 47.7% of community college students reported participation in two or more gambling types versus 62.8% of university students. When the mean number of gambling types were compared for the two groups of students, a significant difference was found between community college students ( $M = 1.33$ ,  $SD = 1.436$ ) and university students [ $(M = 1.72$ ,  $SD = 1.356)$ ,  $t = 2.731$  (2-tailed),  $p = .007$ ,  $d = .140$ ].

Greater than half of students from each college type who reported just one gambling type, reported lottery participation only during the past 12 months. The top three reported gambling types were lottery, non-casino (dice, craps, poker) and casino for community college students and lottery, casino and sports betting for university students. See Figure 2 for a complete list of gambling types reported by college type.

Student gambling behaviors were examined in association with sex (male vs. female) and race (white vs. non-white). As explained in the methods section, the category 'non-white' was created due to small numbers of less than five cases for several of the other race categories. Significantly higher proportions of whites engaged in each of the following gambling types than did non-whites: bingo (20.9% vs. 9.4%;  $N = 398$ ,  $X^2 = 6.485$ ,  $df = 1$ ,  $p = .011$ ) and lottery (57.0% vs. 38.1%;  $N = 398$ ,  $X^2 = 10.414$ ,  $df = 1$ ,  $p = .001$ ). Significantly higher proportions of males engaged in each of the aforementioned gambling types than did females: casino gambling (32.6% vs. 18.1%;  $N = 398$ ,  $X^2 = 11.176$ ,  $df = 1$ ,  $p = .001$ ); dice/craps/poker non-casino (26.7% vs. 12.8%;  $N = 398$ ,  $X^2 = 12.510$ ,  $df = 1$ ,  $p < .001$ ); horse/dog racing (5.8% vs. 1.8%;  $N = 398$ ,  $X^2 = 4.797$ ,  $df = 1$ ,  $p = .028$ ); sports betting (36.8% vs. 10.1%;  $N = 398$ ,  $X^2 = 41.077$ ,  $df = 1$ ,  $p < .001$ ); stock market/day trading (10.5% vs. 1.8%;  $N = 398$ ,  $X^2 = 14.227$ ,  $df = 1$ ,  $p < .001$ ); and Internet gambling (8.1% versus 3.5%;  $N = 398$ ,  $X^2 = 4.001$ ,  $df = 1$ ,  $p = .045$ ). A significantly higher proportion of females engaged in bingo than males (22.5% vs. 12.3%;  $N = 398$ ,  $X^2 = 6.829$ ,  $df = 1$ ,  $p = .009$ ).

Of students who identified a primary gambling type, greater than a third of students from each college type



identified lottery/scratch-offs as their primary type. In addition, all students were asked to indicate the frequency of their gambling. There was a significant difference in gambling frequency between college types. Interestingly, while a higher proportion of community college students reported never gambling (33% vs. 28%), a higher proportion of community college students reported gambling more than once per month (10.3% vs. 4.3%;  $N = 392$ ,  $X^2 = 8.414$ ,  $df = 3$ ,  $p = .038$ ). In terms of amounts of money lost and won during the past month, a significant difference was found for amount of money won: 19.4% of community college students versus 10.7% of university students reported winning greater than \$20 ( $N = 239$ ,  $X^2 = 15.321$ ,  $df = 3$ ,  $p = .002$ ). Overall, students most often reported losing less and winning less than \$25 in the past year, while they most often perceived the average college student as losing \$100-200 and winning \$50-100 in the past year.

When gambling participation was examined among study participants based on college type, significant associations were found for lottery, casino, sports betting and other gambling. With the exception of other gambling, significantly higher proportions of university students engaged in each of the aforementioned gambling types than community college students: lottery (58.9% vs. 45.0%;  $N = 398$ ,  $X^2 = 7.662$ ,  $df = 1$ ,  $p = .006$ ); casino gambling (30.1% vs. 17.5%;  $N = 398$ ,  $X^2 = 8.723$ ,  $df = 1$ ,  $p = .003$ ); sports betting (27.8% vs. 14.8%;  $N = 398$ ,  $X^2 = 9.805$ ,  $df = 1$ ,  $p = .002$ ). For other gambling, 6.3% of community college students reported engagement versus 1.4% of university students ( $N = 398$ ,  $X^2 = 6.552$ ,  $df = 1$ ,  $p = .010$ ).

There was no significant between-group differences for the proportion of student gamblers who reported no AOD use when gambling: 45.2% of community college gamblers and 40.9% of university gamblers. However, a significantly higher proportion of university gamblers reported increased AOD use when gambling than community college gamblers (15.2% vs. 6.3%;  $N = 290$ ,  $X^2 = 5.590$ ,  $df = 1$ ,  $p = .018$ ). Note, when the association between gambling participation and AOD use was examined, it was found that significantly higher proportions of student gamblers also used alcohol and/or another drug during the past six months than non-gambling students, and these proportions differed significantly between college types: 93.3% for university gamblers versus 75.2% for community college gamblers ( $N = 288$ ,  $X^2 = 18.507$ ,  $df = 1$ ,  $p < .001$ ).

Of the 293 students who participated in at least one type of gambling during the past 12 months, 7 community col-

lege students and no university students reported ever trying to get help for their gambling; only one student from each college type reported ever participating in gambling treatment; and 3 community college students and no university students reported currently needing help for a gambling problem. Of the entire study population, 39.7% of community college students and 35.4% of university students reported being familiar with Gambler's Anonymous; only one student from each college type reported ever having attended a Gambler's Anonymous meeting.

### *Canadian Problem Gambling Index*

In terms of correlates of problem gambling, significantly higher proportions of community college students than university students responded 'yes' to each of the following questions: Has anyone in your family ever had an alcohol or drug problem? (35.5% vs. 22.2%;  $N = 309$ ,  $X^2 = 6.663$ ,  $df = 1$ ,  $p = .010$ ); Has anyone in your family ever had a gambling problem? (68.8% vs. 54.9%;  $N = 355$ ,  $X^2 = 7.124$ ,  $df = 1$ ,  $p = .008$ ); In the past 12 months, if something painful happened in your life, did you have the urge to use drugs or medication? (24.8% vs. 12.1%;  $N = 371$ ,  $X^2 = 10.124$ ,  $df = 1$ ,  $p = .001$ ).

### *Problem Gambling Severity Index*

Of students for whom a valid PGSI score existed ( $N = 189$  for community college students;  $N = 205$  for university students), 30.7% of community college students screened positive for at-risk/problem gambling versus 22.0% of university students—a significant difference ( $N = 394$ ,  $X^2 = 3.887$ ,  $df = 1$ ,  $p = .049$ ): 20.9% and 18.2% respectively screened positive for low-risk gambling; 6.7% and 2.8% respectively screened positive for moderate-risk gambling; and 3.0% and 1.0% respectively screened positive for problem gambling. When PGSI mean scores were compared between college types, the mean score for community college students was significantly higher than the mean score for university students [ $M = 1.22$ ,  $SD = 2.548$  vs.  $M = .630$ ,  $SD = 1.688$ ],  $t = 2.272$  (2-tailed),  $p = .024$ ,  $d = 210.703$ ].

### *Logistic Regression Modeling*

As described in the methods section above, a logistic regression model was developed to identify the relative importance of age, primary income, AOD use, AOD problem, urge to drink and urge to use drugs when something pain-

**Table 3. Analyses of Associations of At-Risk and Problem Gambling (N = 244)<sup>a</sup>**

	Logistic Regression					
	Model $\chi^2$	<i>df</i>	<i>p</i>	Goodness of fit $\chi^2$	<i>df</i>	<i>p</i>
<b>Overall Model</b>	66.640	13	.000	8.780	8	.361
	Relative Risk (95% Confidence Interval)					
The Model	B	Wald $\chi^2$	<i>p</i>	OR	Lower	Upper
Age	.787	3.389	.066	2.197	.950	5.079
Income	-.743	2.708	.100	.476	.196	1.153
AOD Use	.664	1.453	.228	1.942	.660	5.712
AOD Problem	2.449	17.747	.000	11.579	3.705	36.184
Urge to Drink	.918	3.814	.051	2.504	.997	6.293
Urge to Use Drugs	.274	.262	.609	1.315	.460	3.763
Under Doctor Care	1.504	6.851	.009	4.499	1.459	13.873
College Type	-.954	4.873	.027	.385	.165	.899
Sex	-.294	.548	.459	.745	.342	1.624
Race	.560	1.405	.236	1.751	.694	4.419
Family AOD Problem History	-.380	.764	.382	.684	.291	1.604
Family Gambling Problem History	.104	.047	.828	1.110	.433	2.843
Depression	-.821	2.425	.119	.440	.157	1.236
Constant	-1.061	2.082	.149	.346		

<sup>a</sup>Missing cases were excluded from the model.

<sup>b</sup>Hosmer and Lemeshow test.

\**p* < .05.

ful happens, being under a doctor's care for stress, college type, sex, race, family problem gambling history, family AOD problem history and depression with problem gambling risk. P-values and odds ratios with corresponding confidence intervals were generated. See Table 3 for results of logistic regression modeling. The following three factors were significant:

- AOD problem was significantly associated with at-risk/problem gambling (*p* < .001, *OR* = 11.579); students who reported ever feeling they might have an AOD problem were 11.5 times more likely to engage in at-risk/problem gambling than students who reported not ever feeling they might have an AOD problem.
- Under a doctor's care for stress was significantly associated with at-risk/problem gambling (*p* = .009, *OR* = 4.499); students who reported having been under

a doctor's care during the past 12 months because of physical or emotional problems brought on by stress were 4.5 times more likely to engage in at-risk/problem gambling than students who reported not having been under a doctor's care during the past 12 months because of physical or emotional problems brought on by stress.

- College type was significantly associated with at-risk/problem gambling (*p* = .027, *OR* = .385); community college students were 38.5% more likely to engage in at-risk/problem gambling than university students.

Pearson correlations were generated for each pairing of study variables to determine if multicollinearity was a significant factor. All correlations were small to moderate, suggesting that multicollinearity was not a significant factor. The largest coefficient produced was for the correla-

tion between family problem gambling history and family AOD problem history ( $r = .353, p = .001$ ).

## DISCUSSION

Consistent with the literature, this study found that the majority of college students gamble. Nearly three quarters of this study's student population reported participation in at least one type of gambling during the past 12 months; and of these gambling participants, almost 67% reported participation in two or more gambling types. Moreover, 19% of participants reported gambling with some regularity: anywhere from 1-3 times per month to weekly-daily.

This study was unique in examining at-risk/problem gambling in community college students in addition to at-risk/problem gambling in university students. This study found that community college students were 38.5% more likely to engage in at-risk/problem gambling than university students, with the difference in prevalence rates between these two college types also significant: 30.7% of community college students versus 22.0% of university students engaged in at-risk/problem gambling. Thus, while college students are generally a population that experiences higher rates of at-risk/problem gambling, community college students appear to experience significantly higher rates than those of university students.

Additionally, on many of this study's key variables, community college students were found to significantly differ from university students. Higher proportions of community college students reported gambling more than once per month, having family histories of problem gambling and of problem AOD use, perceiving problem gambling to be moderate to serious among all age groups in their communities, and being significantly less confident in their ability to recognize signs that a friend or family member had a gambling problem. Thus, this study found community college students significantly more vulnerable to problem gambling than university students.

A possible explanation for this increased vulnerability to problem gambling among community college students may be found in the significant differences in motivations to gamble between the two college types. Our comparative analyses of the Gambling Motives Questionnaire found that on the coping scale, which measures gambling as a way to decrease negative emotions, a signifi-

cantly higher proportion of community college students endorsed three of the scale's five items than did university students. Our results indicate that community college students are more likely gambling to relax, to feel more self-confident or sure of self and to help when feeling nervous or depressed.

Takamatsu, Martens and Arterberry (2015) found depressive symptoms to be directly associated with gambling-related problems among their sample of college students, suggesting that students who experience more depressive symptoms might engage in negative coping strategies, like gambling, to reduce their negative affect. Moreover, these researchers hypothesized that a student who has found gambling to be an effective strategy for temporarily relieving his/her depressive symptomology might be motivated to engage more in gambling than seek alternative coping strategies. MacLaren, Harrigan and Dixon (2012) found gamblers who frequently play slot machines were at high risk for pathological gambling if they play slots as a strategy of self-regulating their negative emotions. Similarly, in a study of college student athletes, St-Pierre, Temcheff, Gupta, Derevensky and Paskus (2014) found a positive association between negative emotional affect and gambling problems, suggesting that student problem gamblers continue to gamble despite having more negative expectancies and few positive expectancies of enjoyment as a way of dealing with their difficult emotions, or rather "escaping." Community college students may be equipped with fewer healthy strategies for coping than are university students.

## IMPLICATIONS AND RECOMMENDATIONS

While the majority of college students are not problem gamblers, more than a quarter of college students potentially could benefit from problem gambling prevention initiatives. The number of students potentially at-risk is substantial. When this study's prevalence estimate for at-risk/problem gambling is applied to the total number of enrolled students across the state's community colleges, greater than 53,000 students could potentially benefit from gambling prevention measures. And, students generally support problem gambling prevention; in fact, slightly more than 75% of community college students agreed that it is possible to reduce problem gambling through prevention, and nearly 65% agreed that the com-

munity has the responsibility to set up prevention programs to help people avoid gambling problems.

The general thought among students is that their college peers gamble more frequently and lose/win more money than they do; however, based on our diverse sample of community college and university students, this thought is inaccurate. Less than 5% of students in our study reported participating in gambling activities weekly to daily—the vast majority of college students gamble less than once per month. Our findings of gambling frequency are aligned with the recent findings of other researchers who also employed the Gambling Quantity and Perceived Norms Scale. Hodgins and Racicot (2013) found that students generally gamble less than monthly; only 12% of their sample reported gambling at least once per month. Foster, Neighbors, Rodriguez, Lazorwitz and Gonzales (2014) found students in their study reporting gambling frequency most often between never and 2-3 times per year. Moreover, in terms of amount of money lost and won gambling, our student reports aligned with other research. Students in Hodgins and Racicot's study most often reported losing less than \$25 in the past year (winning amounts in the past year were not captured); students in Foster et al.'s study most often reported losing less than and winning less than \$25 in the past year, while they most often perceived the average college student as losing \$100-200 and winning \$50-100 in the past year.

Other research has demonstrated perceived norms for gambling as significantly associated with gambling behavior (Celio & Lisman, 2014; Foster, Neighbors, Rodriguez, Lazorwitz, & Gonzales, 2014; Neighbors et al., 2015). Foster et al. found those students who estimated peers to gamble more frequently and to spend more money when gambling, reported gambling more frequently and spending more money gambling. Celio and Lisman noted that the likelihood of gambling increases with increased perception that family and peers are engaged in gambling. Thus, we recommend including normative messaging in responsible/problem gambling campaigns targeted at college students to dispel misperceptions and to provide needed gambling education. It is also imperative for clinicians to explore motives for gambling with student problem gamblers. If a student typically engages in gambling as a way to cope with life's problems and stressors, the clinician needs to help the student identify and develop healthy coping strategies to replace gambling as a coping mechanism. Therefore, we recommend

that clinicians working with students who gamble assess not only quantity and frequency of gambling, but also students' perception of gambling norms, providing accurate descriptive normative feedback to students who overestimate gambling among peers. Skills-training approaches that encourage acquisition of healthy strategies to replace problematic gambling have also been suggested by other research (Celio & Lisman, 2014; Bhullar et al., 2012; Lostutter et al., 2014).

We recommend including problem gambling preventative measures with substance abuse prevention work, particularly in light of this study's significant finding that students who felt they ever had an AOD problem were 11.5 times more likely to engage in at-risk/problem gambling than students who reported not ever feeling they had an AOD problem. Other research also supports addressing gambling issues along with addressing AOD issues. Hodgins and Racicot (2013) found that drinking and gambling among college students were linked: students who drink to cope are more likely to gamble to cope and to have more gambling-related problems. Almost a quarter of student gamblers in our study reported either gambling more when using alcohol and/or other drugs or using more alcohol and/or other drugs when gambling. Bhullar et al. (2012) endorsed college AOD prevention programs addressing gambling activities along with AOD use. Nowak and Aloe (2014) highlighted the need for colleges and universities to develop strategic gambling education and harm reduction with their students; they recommended incorporating gambling education into similar programs, such as sex and AOD educational programming that students regularly receive at new student orientation. Additionally, perhaps community-based interventions could be delivered in partnership with campus area bars where students commonly socialize, disseminating information to increase awareness and knowledge of problem gambling and how to access gambling treatment services.

Furthermore, we recommend that campus counselors start asking about and screening for problem gambling with all students who come to the counseling center with any mental health or substance use issue given the high correlation for co-occurring disorders—a recommendation that has garnered support from other researchers as well (Martin et al., 2014; Nowak & Aloe, 2014). This study found that significantly higher proportions of students who screened positive for at-risk/problem gambling, than students who did not, reported having felt they might have an alcohol or drug problem, having had the urge to

drink and/or use drugs or medication if something painful happened in their lives and having been under a doctor's care because of physical or emotional problems brought on by stress. Martin et al. found a high level of co-morbidity among psychiatric disorders in the college student population and advocated for college health professionals to concurrently screen for commonly observed disorders, including problem gambling.

Campus counseling centers need to do more in providing information on problem gambling and ensuring problem gambling services are accessible to students. Recent research of McKinley, Luo, Wright and Kraus (2016) that examined the websites of over 1,300 college campus counseling centers found that only 11% of campus counseling centers in the U.S. mentioned anything regarding problem gambling on their websites. Moreover, we recommend that campus counselors seek training and certification in the delivery of problem gambling clinical services. Wong et al. (2013) likewise concluded that campus counseling programs and staff need to develop more assessment and treatment skill proficiencies specifically designed to address at-risk/problem gambling. Lastly, campus counselors, educators, parents, mentors and others who regularly interact with college students—community college students in particular—need to start talking to these young people about responsible gambling.

## LIMITATIONS

There are several study limitations which warrant discussion. The cross-sectional nature of this study does not allow for causal inferences to be made. The use of convenience sampling might have created selection bias. To minimize selection bias, a mass email invitation was sent to all students on campuses where administrators agreed to email blasts. Furthermore, marketing of the study was extensive on all campuses via poster announcements displayed in highly trafficked areas and through numerous social media posts. This study was open to all. Another possible selection bias might have been created through the offering of an incentive for study participation. Students who gamble might have found the \$25 incentive particularly appealing, perhaps resulting in an overrepresentation of gambling students. To minimize this potential bias, recruiters emphasized to students that one does not have to participate in gambling to enroll in the study. A \$25 campus area restaurant gift card was offered in lieu

of a cash incentive, as a monetary incentive could have enabled/encouraged participation in gambling. Furthermore, other recent college gambling studies have also utilized a gift card incentive to recruit student participants (MacLaren, Harrigan, & Dixon, 2012; Martin, Nelson, & Gallucci, 2015; Petry & Gonzalez-Ibanez, 2015; Rinker, Rodriguez, Krieger, Tackett, & Neighbors, 2015).

This study relied on self-report data in which students reported behaviors related to AOD use and gambling, thus recall bias was possible in that students may have selectively reported behaviors that were perceived as socially desirable. As a means to reduce recall bias, students were assured that their participation was confidential and covered by a Certificate of Confidentiality.

There is concern that study findings may not be wholly generalizable to the entire population of the state's community college and university students, although student participants reported home zip codes in nearly half of the state's counties, representing every region of the state. Generalizability of findings to the community college student population as a whole is cautioned as the two community colleges represented in this study were both located near the core of a large city. Thus, our findings may not reflect the gambling behaviors of students attending community colleges in non-urban areas of the state or to student populations in other states.

Lastly, our study was exploratory in nature and its contribution to the literature is in conducting initial analyses of college type as a correlate of problem gambling; thus, due to the lack of research specific to community college students, hypotheses pertaining to gambling differences between college types were not made. Moreover, we had not hypothesized that gambling behaviors would differ between community college and university students. In terms of controlling for demographic differences, we chose urban universities with high proportions of minority students to compare with urban community colleges. Furthermore, all of our analyses were based on weighted data due to the overrepresentation of male and African-American students in the community college sample and the overrepresentation of white students in the university sample. No significant between-group differences were found for sex, race, ethnic origin and age.

Significant between-group differences were found for the variables of current living arrangement, year of school and primary source of income. Of these significant dif-

ferences, only primary source of income was found to be significantly associated with at-risk/problem gambling: a significantly higher proportion of students whose primary income was derived from work were found to be at-risk/problem gamblers than students whose primary income was derived from some means other than work (significantly more community college students reported work as their primary source of income than did university students). Our study lacked measures of socio-economic status. Student parental income/educational level and overall socio-economic background might explain some of the variance in at-risk/problem gambling between the two college types.

## CONCLUSION

Findings from our study highlight the need to expand responsible/problem gambling campaigns to community colleges where students may be particularly at risk for problem gambling. College policymakers need to promote campus-wide awareness of problem gambling as a mental health disorder that is highly correlated with substance use disorders while promoting responsible gambling measures. Moreover, policies need to promote the employment of evidence-based strategies to identify and help students with gambling and AOD problems, while strengthening the capacity of counseling services to treat these problems. These policy recommendations are included in the recommendations set forth by the National Center for Responsible Gaming's Task Force on College Gambling Policies (2009).

In terms of future research, additional studies examining the differences in student gambling between college types are needed to further explore this study's significant finding that community college students experience higher rates of at-risk/problem gambling. Future study is also warranted to determine the significance of student socio-economic background to problem gambling among community college students, and perhaps, future studies should also include students from non-urban campuses to further increase generalizability of findings.

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Promoting Wellness and Recovery

## Innovations in Behavioral Health Care — What's New? Private Psychiatric Inpatient Provider Conference

**October 20, 2017**  
Quest Conference Center  
Columbus, Ohio  
8 a.m.-4 p.m.

OhioMHAS will host its one day biennial conference for behavioral health care providers to answer the question: "There's nothing new under the sun in behavioral healthcare — or is there?" This conference will present contemporary ideas in behavioral health care and provide answers that many are seeking.



Keynote Speakers include from L-R, The Honorable Judge Steven Leifman, Cindy A. Schwartz, MBA, and Sharlene Boltz, JD



**Location**  
**Quest Conference Center**  
**8405 Pulsar Place**  
**Columbus, Ohio 43240**

**PLEASE DIRECT QUESTIONS TO:**

Greg Lewis  
Email: [gregory.lewis@mha.ohio.gov](mailto:gregory.lewis@mha.ohio.gov)  
Phone: (614) 752-8880



# Save The Date

## Upcoming Behavioral Health Conferences, Workshops, and other Events\*

### Ohio Mental Health Conference Events

#### ★ MENTAL ILLNESS: THE FAMILY PERSPECTIVE



The family dynamic created in group living is greatly impacted when family members have a serious mental illness. Operators and staff of adult care facilities are the family of those living in their homes. This training examines the impact of serious mental illness upon the “family” dynamic, focusing on recognizing behaviors as symptoms and appropriate responses. Participants will strengthen skills to improve communications with clients for more stable home environments.

<b>Canton, OH</b> ★ <b>Thu., Nov. 2, 2017</b> 9:15 AM – 4:15 PM	Stark County District Library 715 Market Avenue North Canton, OH 44702	Questions? Please contact Sue Tafrate at OhioMHAS. (reservations@mha.ohio.gov or 614-466-9955)
<b>Cleveland, OH</b> ★ <b>Tue., Dec 5, 2017</b> 9:00 AM – 4:15 PM	ADAMHS Board of Cuyahoga County 2012 West 25th Street, 6th Floor, Ohio Room Cleveland, OH 44113	

#### ★ CODING AND DOCUMENTATION UNDER THE RE-DESIGN FOR CHILDREN’S BEHAVIORAL HEALTH PROVIDER



**7<sup>th</sup> Annual 1 in 3...Could It Be Me?**

*Together! Work Together, Grow Together, Heal Together*

A Workshop for Clergy, Professional Social Workers, Counselors and Nurses; Consumers, Families and Supporters of people living with mental illness

**Thursday, October 5, 2017**

**COST:** \$10 -25

**8:30 AM to 3:30 PM**

Cedar Creek Church - South Toledo Campus  
 2150 South Byrne Road  
 Toledo, OH 43614

***Together! Work Together, Grow Together, Heal Together . . .***

A Workshop for Clergy, Professional Social Workers, Counselors and Nurses; Consumers, Families and Supporters of people living with mental illness. Issues of diversity, culture, treatment and faith intersect with mental health at many levels and in many ways. In our ever-changing and evolving society, it is becoming clearer that we can’t work, grow or heal alone; for true health and wellness, we must be in this together. The 1 in 3 conference brings together perspectives and conversation from the faith community, the treatment community and the family/consumer community to help build a bridge that connects these communities so that we can WORK, GROW and HEAL together.



#### ★ ADAMHS BOARD “ROADS TO RECOVERY: 2017 CONFERENCE”

**October 23, 2017 from 7:30 AM to 5:30 PM**

**COST:** \$100

Marriott Cleveland Airport  
 4277 West 150th Street  
 Cleveland, OH 44135

**Registration and Vendor Sales end  
 October 16, 2017**

**The Roads to Recovery '17: Heading in the Right Direction to Attain Mental Health and Addiction Recovery!** conference has an agenda that offers a range of information to inspire everyone, especially as Ohio transforms to a *Recovery Oriented System of Care*:

- Individuals in recovery and/or living with mental illness and/or addictions.
- Family members and friends of people living with mental illnesses and/or addictions.
- Mental health and alcohol, drug and other addiction treatment and prevention providers; social workers; counselors; RN/LPN's, psychologists; psychiatrists and students

## Other Mental Health Conference Events 2017-2018



### The ATD Healthcare Summit: *Embracing Patient-centered Care & Innovation* October 23-24

The ATD Healthcare Summit will showcase talent development programs that can drive improved operational service excellence and a better patient experience. The Summit will feature some of the top subject matter experts in the field, as well as practical strategies on topics ranging from improving employee engagement to the use of new technologies in healthcare; as well as safety and risk assessment, coaching, value-based care; bridging gaps between clinical and nonclinical learning, and more.

ATD is a member organization • For info: Contact: [www.td.org](http://www.td.org)

#### Columbia Business School

Uris Hall, 3022 Broadway  
(at 116th Street)  
New York, NY 10027

#### Hotel Info:

NYLO New York City  
2178 Broadway, New York, NY

**COST: Sunday: \$189; Monday: \$279**



### Quality Improvement in Health Care

<http://www.ihl.org/education/Conferences/Forum2017>

**December 10-13, 2017**

Orlando World Center Marriott Resort & Convention Center  
8701 World Center Drive, Orlando, Florida 32821  
Toll-free: (888) 789-3090

For information: 617-301-4800/866-787-0831 Email: [info@ihl.org](mailto:info@ihl.org)

**Cost: \$1,300**

The IHI National Forum is targeted to Quality Leaders, Safety professionals, Physicians, Nurses, Researchers, Patient Advocates and more.

## MENTAL HEALTH AMERICA 2017 ANNUAL CONFERENCE

### *Sex, Drugs and Rock & Roll*

**November 5-8, 2017**

The Hyatt Regency Washington on Capitol Hill, USA  
For reservations: 202-737-1234

It's time to take mental health, mental illness and addiction — and all the messy, sometimes embarrassing, uneasy truths that accompany them — out from behind closed doors — and discuss them openly. The MHA conference will dive into these sometimes controversial topics in new and meaningful ways. The critical issues are real – across all age groups – and are far from black and white. It is time to take mental health, mental illness and addiction out from behind closed doors—and discuss them openly. Even if it makes some uncomfortable. It is that important to explore how engagement and inclusion are central to recovery and what it means to have real mental health, to be in recovery, and to address mental illness before Stage 4.

**For info:** 703-684.7722 or 800-969.6642

## IASR/AFSP INTERNATIONAL ACADEMY OF SUICIDE RESEARCH

### International Summit on Suicide Research

**November 5-8, 2017**

Green Valley Ranch Resort  
Henderson Nevada, USA

Network and interact with preeminent suicide researchers in an exploration of cutting edge evidence throughout the summit. In addition to keynotes, participants can benefit from a mentoring program, poster sessions, and workshops addressing methodological issues particular to suicide research, such as assessment of suicidal behavior, strategies for research on low base rate outcomes, use of proxy measures, and maintaining the delicate balance between ethical and methodological concerns.

**Registration:** <http://suicideresearchsummit.org/>

## NATIONAL CONFERENCE ON FAMILY RELATIONS

**THEME: "FAMILIES AS CATALYSTS: SHAPING NEURONS, NEIGHBORHOODS, AND NATIONS"**

**Orlando, Florida**

**Venue: Rosen Centre Hotel**

Rosen Centre Hotel, 9840 International Drive, Orlando, FL 32819  
Hotel Registration: 407-996-9840 Room Rate = \$150/day

**November 15–18, 2017**

**Wed.- Fri 7am to 9 pm -- Sat sessions end at noon**

**Pre-conference events Nov. 14<sup>th</sup> (Tues.)**

*Conference host is Florida State University's  
Department of Family and Child Sciences.*

**Registration Fees: \$145-425 for NCFR Members.  
\$190-560 for Non-Members**

**Single day rates: \$130 - !80**

**For information:** National Council on Family Relations  
Saint Paul, MN 55114 • (888) 781-9331 • email: [info@ncfr.org](mailto:info@ncfr.org)

## WOMEN'S ISSUES & MENTAL HEALTH

**"Break the Cycle"**

*Bridging the gap between mental and reproductive health*

**The 2017 PMDD Annual Conference Postponed Until  
May 2018**

Due to the impact of Hurricane Irma, the 2017 conference was rescheduled to May 2018. Contact sponsors for updates.

**Sponsor:**  Gia Allemand Foundation

**Call for Proposal Deadline is 11/30/17**

<https://giaallemandfoundation.org/conference/submit-a-proposal>

The Gia Allemand Foundation (formerly the National Association for Premenstrual Dysphoric Disorder) is a not-for-profit organization providing support and resources for those affected by Premenstrual Dysphoric Disorder (PMDD), Premenstrual Exacerbation of underlying disorders and female suicidal ideation. Seeking to improve the quality of women's lives through awareness, education, outreach, and recovery, respected leaders in PMDD research and patient advocacy will explore ways to break the cycle of misdiagnosis, patient deferment, poor symptom management, limited care and female suicide ideation. This is an excellent opportunity for healthcare providers, patients, and caregivers.

Continuing Medical Education & CEU units will be available.

## ★ 2018 CONFERENCE: "FIT FOR THE FUTURE"

### MENTAL HEALTH AMERICA ASKS:

**When it comes to mental health, is the United States languishing in the past, or are we fit for the future?**

**June 14-16, 2018**

HYATT REGENCY WASHINGTON ON CAPITOL HILL

400 New Jersey Avenue, NW, Washington, D.C., USA, 20001 • Tel: +1 (202) 737 1234

The *Fit for the Future Conference* tackles many questions to explore cutting edge 21st Century technologies, treatments, and research to benefit those with mental health needs. MHA believes in taking charge of a brighter future—where there is always hope.

For info contact: MHA, 500 Montgomery Street, Suite 820, Alexandria, VA 22314  
Phone (703) 684.7722 • Toll Free (800) 969.6642



**Ohio Statewide  
Culturally Competent  
Agency and  
Provider Directory\***

### MACC IS **NOW** ACCEPTING SUBMISSIONS FOR AN OHIO STATEWIDE CULTURALLY COMPETENT AGENCY AND PROVIDER DIRECTORY

MACC is often asked to identify providers believed to be culturally competent. Accepting the need for a central database, MACC has partnered with OhioMHAS to convene a statewide committee to develop criteria for inclusion in the directory. This first-ever directory of agencies and organizations providing culturally and linguistically appropriate behavioral health and health care will set the precedent for what is expected from all health agencies across Ohio.

Your inclusion in the directory will increase visibility, enhance ways to achieve customer satisfaction, and contribute to the prestige of providing equitable care to Ohio diverse populations.

**All applications will be reviewed by a committee for both completeness and relevant content.**

**For Submission Criteria & Application Forms:**

<http://www.maccinc.net/directory/> **Info:** 614-221-7841

**Email:** Leah Penn at [lpenn@maccinc.net](mailto:lpenn@maccinc.net)



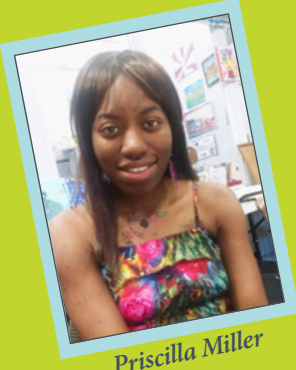
Sheila Suderwalla, MSW  
Executive Director, Artists First



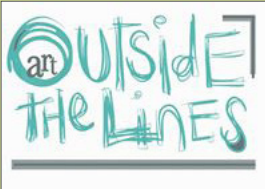
An Open Art Studio for People with Disabilities

**"Artists First"** is a non-profit organization that describes itself as a "an open studio for people with disabilities." Sheila Suderwalla (pictured here), the Executive Director, holds a Masters degree in Social Work and is the recipient of juried art prizes. She advocates that the creative process aids in the healing of trauma and the reduction of anxiety (Fowler, 2016). Located in St. Louis, MO, **Artists First**, welcomes all with disabilities as Suderwalla has earned national recognition for her work with teens in foster care. More recently she has helped veterans explore the arts to better deal with Post Traumatic Stress Disorder. **Artists First** creatively serves those whose lives are challenged by developmental disabilities, pervasive mental illness, and/or traumatic brain injury.

**Priscilla Miller** is one of the artists who work at the **Artists First** studios. A vibrant young lady, Priscilla hails from South St. Louis and excels at drawing, painting, writing, and collage. At the age of 13, Priscilla began reading Maya Angelou whose inspiring words encouraged her to write her own poetry. Priscilla explains, *"When I write I get in a zone. It's like a new dimension that I create but it's just different parts of my personality. I was really depressed for about a year. I just stayed in my bedroom that entire year. Writing makes it easier for me to work through whatever problems I'm having. I hope that my poetry can help other people that might be feeling the same way that I was."* Priscilla also found a new passion -- *"It's almost like drawing just sort of slid into my poetry. I just started drawing the faces of my emotions that were in my poetry."* Priscilla is gaining new skills at **Artists First** to help her become the writer and artist she desires. Priscilla's art is on the back cover. The OhioMHAS e-Journal staff also sends special thanks to Alex Orear who helped us secure permissions to use Priscilla's art.



Priscilla Miller



On behalf of the 8th floor at 30 E. Broad, the Bureau of Research and Evaluation extends a warm thank you to the artists of "Art Outside The Lines," Columbus, OH, whose artworks adorn the walls of our offices.

**Open Studio  
Halloween ART!**

**Saturday • October 14th**

8:30 am - 10:00 am

toddler/pre-K

10:00 am - 12:00 pm

Kids with disabilities only!

Noon-2:30 pm

OPEN TO ALL!



Art Opening & Reception

for

**Kelsey Hafer**



Thank You

# Behavioral Health Trends in Ohio

## Manuscript Preparation Guidelines for *Behavioral Health Trends in Ohio*

Submitted manuscripts should comply with these guidelines. For additional guidance visit <http://mha.ohio.gov/Default.aspx?tabid=305>

### Writing Style:

Refer to the *Publication Manual of the American Psychological Association* (APA) 6th edition for guidance in writing style, punctuation and grammar. Avoid unnecessary, complicated language, jargon, and research terminology. Keeping jargon to a minimum, use the active voice, first person (e.g. “individuals with severe mental disorders” rather than “the severe mentally ill”), and short sentences whenever possible.

Language should be gender-neutral. Abstracts should provide readers with a clear, concise summary of the article. Tables, graphs, and charts should be easy to understand and complete.

### Page/Word Limit:

Submissions that exceed these limits will be returned to the author(s).

- Research articles: up to 20 double-spaced pages excluding abstracts, tables, and reference list.
- Abstracts: up to 250 words
- Letters to the Editor: up to 150 words
- Professional Development/Events/Grants Notices: up to 150 words

### Manuscript Preparation:

#### 1. Layout Submission Specifications

Submit manuscripts as a Microsoft Word document. Do not use the graphics option for tables or the sequential (embedded) footnote option.

#### 2. Manuscripts must be:

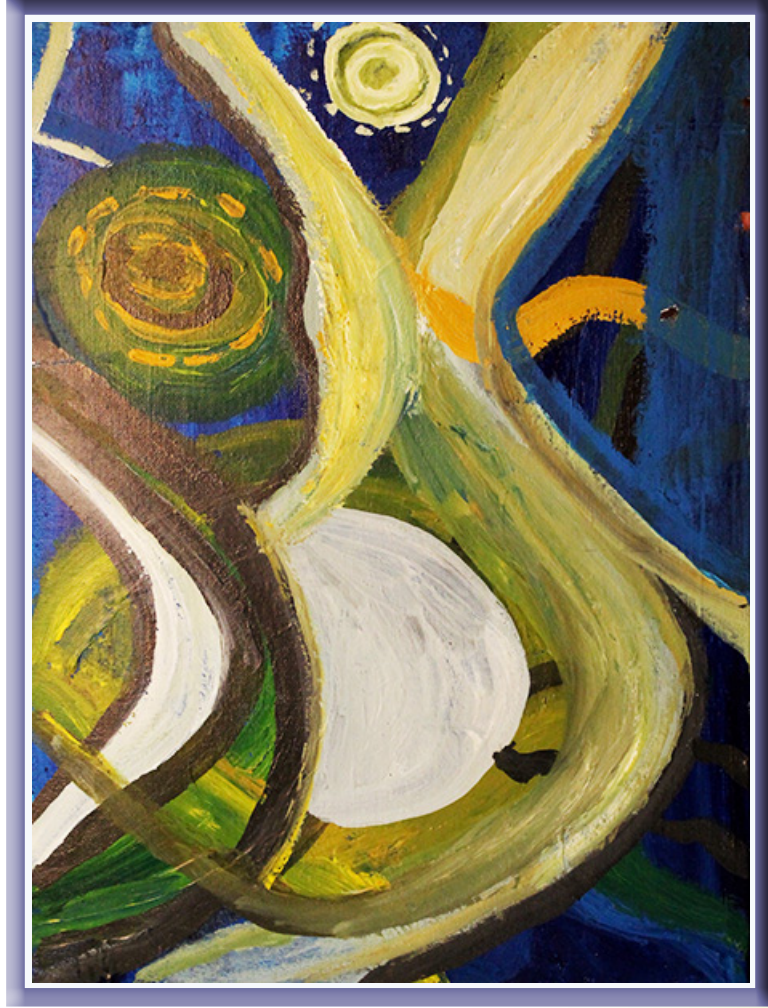
- a. Double-spaced with one-inch margins on the top, bottom, & sides.
- b. Text should be left-justified.
- c. Font style and point size should be Times Roman, 11 point.
- d. Limit the use of bold, underline, and italic text formatting.
- e. Do not use special formatting or editing features, such as templates, styles, outline, or index.
- f. Number manuscript pages consecutively, starting with the first page of the text (not the abstract).
- g. For section headings, follow APA 6th ed. guidelines for [section headings](#).
- h. For in text-citations, follow APA 6th ed. guidelines for [in text citations](#).

#### 2. Content Arrangement: *Arrange content of submitted manuscripts in the following order:*

- a. **Title**—Place the title at the top of the first page, centered in upper case letters. The title should be informative about the manuscript’s content and as brief as possible.
- b. **Authors**—List the authors names, academic degrees, and address of current primary affiliation, including specific title and department. List the authors names in the order that they should appear in the Table of Contents.
- c. **Corresponding Author**—List the author to whom correspondence should be directed. Include his/her full mailing address, telephone number, fax number, and email address.
- d. **Acknowledgments**—List all financial support received for the study. For grants, include the grant number and the full name of the granting agency. Include names of individual who contributed to the paper’s intellectual or technical content. Also, include a disclaimer that the views of the authors do not necessarily reflect OhioMHAS policies.
- e. **Abstract**—Include a concise abstract that summarizes the manuscript. Manuscripts should not exceed 250 words.
- f. **Key Words**—Provide up to five key words to be used for indexing.
- g. **Introduction**—In the last paragraph of the introduction, state the purpose of the research or the description of the issue studied. Research objectives, research questions, and/or hypotheses should be included. Also, indicate the type of study design, such as experiment, survey, or retrospective or prospective study.
- h. **Methods**—Provide a description of the sample, recruitment strategy, measurement/evaluation techniques, and data analysis. Describe the data analysis procedure concisely and in a manner understandable by non-statisticians will understand. Indicate whether informed consent and Institutional Review Board approval were obtained.
- i. **Results**—Report only findings related directly the research purpose or research question(s).
- j. **Discussion**—Include study limitations.
- k. **Policy Implications**—Since CRT is committed to publishing manuscripts in applied behavioral health service delivery and policy, include a section that will assist the reader in how results can be applied to operational needs and policy development.
- l. **Conclusion**—Relate conclusions to the data presented.
- m. **References\***—Use APA 6th edition guidelines. Only list those references *cited* in the text.



**Behavioral Health Trends in Ohio**  
The Ohio Department of Mental Health and Addiction Services  
Office of Quality, Planning and Research  
30 East Broad Street, 8th Floor  
Columbus, Ohio 43215  
mha.ohio.gov



Art by Priscilla Miller, see page 60

