

National Recovery Science Research Collaborative
Day 1: Dec 4th, 2017

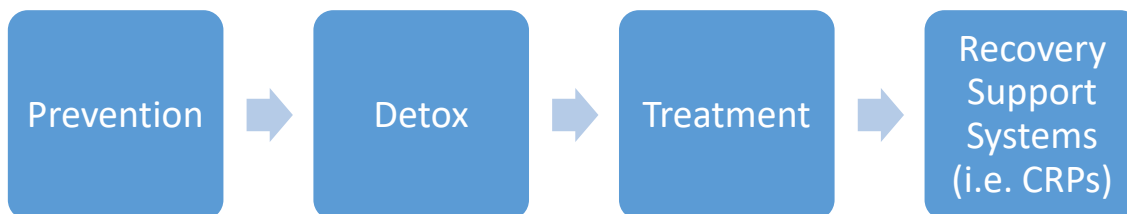
Welcome and Introduction

The first National Recovery Science Collaborative was opened by Teresa Johnston, host and Executive Director of Kennesaw State University's Center for Young Adult Addiction and Recovery (CYAAR). A welcome and introduction PowerPoint noted the vision for the collaborative: To build the science of responsive systems that allow sustainable life-long recovery to be a reality for all who may seek it. She also stated the mission: To address substance use disorders and related behavioral health issues, along with the socioeconomic, political, and psycho-social impacts of such disorders by providing evidenced-based research.

The opening PowerPoint reviewed the history of recovery science to date, research ideas over the years, sources of funding, and where Collegiate Recovery Programs (CRPs) fit in the wider field of recovery science. Johnston discussed what recovery programming can entail in higher education settings, specifically in terms of retention and graduation rates. The need for evidence to support CRPs was discussed. It was noted that there are approximately 4,000 universities in the United States and only approximately 160 Collegiate Recovery Programs and Communities.

There was discussion about the current state of the treatment process and the continuum of care. Treatment programs can range from 3 days to multiple years. They can also come with significant costs. How can recovery science contribute to long-term recovery planning across the continuum of care?

Figure 1. Continuum of Care



The following goals were outlined:

- 1.) Establish an interdisciplinary nationwide network of recovery science researchers and experts.
- 2.) Discuss the role of collegiate recovery programs as a central intellectual hub for research on recovery, and recovery-informed education and policy.
- 3.) Survey the current science in the field of recovery, and collegiate recovery research, to decide on future research directions for collaborative undertakings.

Objectives include: helping create sustainable CRPs, CRP Research and Recovery Science with measures noted through the continuum of care of substance use disorders: prevention, education, programming, and research.

Johnston noted that this collaborative is a privately funded event and that the overall spirit is national work and collaboration in this field that is at times segregated. Johnston noted that each of the people in attendance are making contributions to the field, but that a focused effort in CRP research is necessary to sustain CRPs in general.

Research and Data

Austin Brown, Associate Director of Programming and Research for CYAAR, opened the review of current recovery research. He discussed the complexities of SUD and the need for an interdisciplinary approach, because compartmentalizing comes with inherent losses. Brown noted that CRPs are uniquely positioned to inform recovery science, stabilize the field, and guide future directions of recovery science.

Institutions of higher learning have the resources and an ethical obligation to explore the recovery science field. In order for CRPs to initiate such work, these programs must make themselves indispensable to their universities by extending their work across campus. Simply

put, it is hard to justify substantial funding without providing services for a wider campus population.

Brown reviewed some current issues with recovery research:

- The Use/Non-Use paradigm
 - Key determinant of pathology and marker for health
 - Can we do better than this? Is there more to recovery than abstaining from use?
- The need to assess and then meet needs
 - Needs can vary among individuals based on biopsychosocial factors
- The field of recovery science needs to break away from addiction science
 - We know far more about the mechanisms of addiction than we do about recovery
- Lack of journals and misguided industry standards
 - Difficulty in publishing because “Who do we generalize this information to?”
 - Definition of recovery
- Recovery was described as a constant process, and then there was conversation about research flaws associated with what factors are measured, when they are measured, and how they are measured

There was conversation about the importance of defining recovery because how we define recovery influences how we measure recovery. It was noted that the definition of recovery tends to change based on individual motives, intentions, and purposes. Key words to describe recovery were: homeostatic, purposefully maintained, dynamic process, within person rather than between person basis, and wellness. Conversation ensued about the definition of wellness. What is considered a functioning person? Housing? Employment? Health? Not breaking the law? The conversation turned to recovery capital as a means of measuring recovery wellness. Self-esteem?

Self-efficacy? Change? The process and outcomes of recovery need to be measurable in order for us to research them to determine long-term outcomes and success.

The conversation turned to verified measures of recovery. The group began discussing the “recovery process” as initiation, stabilization, maintenance, and then capitalization. The conversation returned to defining recovery with a question about recovery being a “dynamic process”. If this terminology is a part of the definition, then at what point do we measure the outcome and how do we do so objectively? An answer to this question was the utilization of qualitative data and within individual measures, as well as acknowledgment of environment as a key determinate. It was stated that the recovery science field should take a recovery-informed approach to our research initiatives. Utilizing the lived experiences in recovery can guide studies on recovery in general, and could allow us to study multiple pathways to recovery. It was noted that change doesn’t happen cross-sectionally, and therefore methods like non-linear models may allow us to measure success. It was also stated that no true outcomes studies currently exist, which makes it a good place to start.

Addiction pathologically manifests in human relationships. As such, relationships are an arena to measure recovery. Factors like housing, treatment, social support, and family support can form bidirectional relationships that positively or negatively impact the recovering individual. Relationships can be quantified. We can measure from ecological levels, looking at perceived problems as well as interpersonal, family, and school relationships. This also allows an individualized approach that brings in cultural aspects.

Definitions

What are people recovering from? We cannot figure out a solution until we define the problem. In CRPs, people are predominately in recovery from SUDs.

A new prevalence study published by John Kelly was discussed, and it was noted that Kelly uses the word ‘resolved’ in defining recovery. This definition contributes to the discourse that has been going on for decades. It was proposed that rehashing the multi-faceted debate surrounding the definition of recovery could be a disservice to the collaborative. Upon further discussion, it was determined considering the collaborative’s goals, this is a prime opportunity to attempt to resolve this debate. It was determined that the collaborative would begin with

SAMSHA's definition and a few other popular definitions. As a group, we can determine the overlapping components of definitions.

Austin Brown shared a potential working definition developed among his team: "Recovery is a measurable process of holistic change involving significant alterations in meaning, global wellness, and social resiliency (Brown, Montgomery, McDaniel, Austin, 2017)."

The larger collaborative split into smaller working groups that took a list of current definitions of recovery and dissected each definition to determine the critical elements of a suitable definition. The following definitions were included.

- Center for Substance Abuse Treatment (CSAT)- 2005: "Recovery from alcohol and drug problems is a process of change through which an individual achieves abstinence and improved health, wellness, and quality of life."
- American Society of Addiction Medicine (ASAM)- 2005: "A patient is in a "state of recovery" when he or she has reached a state of physical and psychological health such that his/her abstinence from dependency producing drugs is complete and comfortable."
- Betty Ford Institute- 2006: "A voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship."
- William L White- 2007: "Recovery is the experience (a process and a sustained status) through which individuals, families, and communities impacted by severe alcohol and other drug (AOD) problems utilize internal and external resources to voluntarily resolve these problems, heal the wounds inflicted by AOD-related problems, actively manage their continued vulnerability to such problems, and develop a healthy, productive, and meaningful life."
- UK Drug Policy Commission- 2008: "The process of recovery from problematic substance use is characterised by voluntarily sustained control over substance use which maximises health and wellbeing and participation in the right, roles and responsibilities of society."
- Scottish Government- 2008: "A process through which an individual is enabled to move on from their problem drug use, towards a drug-free life as an active and contributing member of society."
- SAMSHA- 2011: "Recovery from mental disorders and substance use disorders is a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential."

- American Society of Addiction Medicine- 2013: “A process of sustained action that addresses the biological, psychological, social and spiritual disturbances inherent in addiction.”
- Kelly and Hoepfner- 2014: “Recovery is a dynamic process characterized by increasingly stable remission resulting in and supported by increased recovery capital and enhanced quality of life.”
- Recovery Research Institute Addiction-ary- 2017: “The process of improved physical, psychological, and social well-being and health after having suffered from a substance-related condition.”
- Brown, Montgomery, McDaniel, Austin- 2017: “Recovery is a measurable process of holistic change involving significant alterations in meaning, global wellness, and social resiliency.”

Key terms identified among the definitions were process of change, improved, health, voluntarily maintained, adaptation, and sustained. A strength of the SAMSHA definition was that it applies to other mental disorders as well. One group voiced the importance of avoiding overpathologizing the definition and urged the group as a whole to keep cultural implications in mind. One group also wanted to ensure that a new definition would not be too broad.

There was extended conversation about the difference between “moments of progress” or “moments of change”. Eventually the term “dynamic state” was suggested as it encompasses both concepts. It was important to the group to acknowledge that recovery is a nonlinear change.

Recovery was discussed as a process of moving from a state of disorder to a state of order. There was also a conversation about whether recovery requires active engagement or simply compliance or surrender. It was noted that the collaborative wanted to avoid pathologizing people coming in and out of recovery and that it was important to avoid language that suggested a final stage of attainment.

There was extensive conversation about keeping terminology broad enough to encompass a variety of mental and behavioral health disorders or specifically focusing on substance use disorder and addiction. The merits of broadly defining recovery to encompass mental and behavioral health were that it more likely addresses root causes of addiction, it applies to a large

number of CRP students who experience co-occurring disorders, and it is more consistent with state and federal approaches. In contrast, specifying addiction recovery allows a more specific application to fully address the dimensions of substance use disorder and other addictive disorders that may not be fully encompassed in mental and behavioral health approaches. On that same note, a portion of the group firmly believed it is important to clarify what a person is recovering from in the definition of recovery.

Initial components of the recovery definition:

1. A process of overcoming something- whether it be a substance use or mental health condition
2. with intentional sustained action
3. to mitigate issues and/or to support or achieve a state of health/wellness/functionality
4. that can vary by individuals and context.

There was consensus about utilizing a core definition and being able to exchange the words substance-related condition, mental health condition, and addiction.

The following final definition was agreed upon by unanimous vote.

“Recovery is an intentional, dynamic, and relational process involving sustained efforts to improve multiple aspects of wellness, which may vary by individual, social, and experiential contexts.”

The collaborative also decided to clarify the function of Collegiate Recovery Programs and Communities.

“Collegiate Recovery programs/Communities support students engaged in an intentional, dynamic, and relational process that involves sustained efforts to improve multiple aspects of wellness, which may vary by individuals, social, and experiential contexts.”

The conference adjourned for lunch.

Upon reconvening after lunch, Teresa Johnston asked the group if there was anyone missing from the collaborative that should be invited in the future.

Emily Tanner Smith (Recovery high school)

John Kelly

Dr. Brennan Bergman

Spencer Bradshaw (Texas tech)

Sterling Shumway

Shawn McCabe

Terrian (to bring an international perspective)

Current Research Projects

Austin Brown and Robert Ashford distributed a handout detailing all of their projects (see Appendix 1).

Austin Brown, Lindsay Montgomery, and Jessica McDaniel of Kennesaw State each discussed ‘recovery-informed’ education projects covering First-Year programs, at-risk interventions, and targeted presentations for Greek and Athletic groups. Kennesaw State is also studying social protective factors for CRP students, as well as the role of spirituality in recovery. The KSU undergraduate team is working on a comprehensive review of recovery literature across the continuum of care to identify key areas for future research.

Dr. Thomas Kimball from Texas Tech discussed research on family experiences of being connected to CRPs, as well as the CRP’s theoretical programming surrounding a study abroad program. Texas Tech is also qualitatively studying an outreach initiative in which CRP students go into the community in an effort to break barriers, reduce stigma, and reach marginalized population. Dr. Kimball noted that a dream study of his is to use an app (potentially HeadSpace) to track CRP students who meditate regularly compared to students who only meditate periodically or not at all. A suggestion on this study was Emory’s Tibet program that looked at cognitive-based compassion with adolescent girls in foster care.

Robert Ashford of University of Pennsylvania debriefed his studies (see Appendix 1).

Bo Cleveland of Penn State discussed his project of analyzing genetic factors and their influence on components of interventions. He also discussed his current study with Caron Treatment Centers utilizing an app to respond to questions about mood, sleep, craving, and social interactions. He discussed a study about the use of sleep medication to reduce cravings. Dr. Cleveland also mentioned the potential to design apps to collect data about recovery. He discussed his current involvement in study abroad education research in Cambodia. Dr. Cleveland also discussed a project in which a FitBit type of monitor provides biofeedback that can detect cravings and potentially prompt an at-risk person in recovery to take preventative action (like a message to call a sponsor). This approach offers tailored feedback for each user.

Jason Callis of the University of Georgia discussed his theoretical work with a peer mentoring program inspired by Baxter Magolda. This study includes substantial hypothetical testing and includes demographic and resiliency measures.

Nick Hayes, a doctoral student at Texas Tech, discussed his work with Dr. Sterling Shumway and Dr. Spencer Bradshaw that utilizes longitudinal data from the Texas Tech CRP family program. This study involves prefrontal cortex scans while participants view a variety of pictures including images of family members and substance use cues. Findings indicate similar prefrontal activity when viewing substance use cues and family images. This has inspired an increased focus on family support and recovery. Mr. Hayes identified his dream study as a longitudinal outcome study across 20-30 universities comparing students in recovery in CRPs, students in recovery outside of CRPs, and students not in recovery.

Matt Statman from the University of Michigan mentioned that he consistently collects data from his students. He discussed a study/outreach initiative in which recovery students go into classes and share their story. He mentioned the service this provides in creating an accepting campus culture as well as reaching students who may need recovery. He also discussed a pre and post-test that students take to analyze attitude changes surrounding recovery.

Jason Whitney of Penn State highlighted components of his dissertation work with four students in recovery from Penn State, four from University of Michigan, and four from CU Boulder. Each of these students participated in three 90-minute interviews. Each narrative is being coded for similarities in how they tell their story and the stories they tell. Whitney

identified a key struggle in his research has been finding sufficient background research. He discussed the value of some consistent data collection across CRPs.

Michael Polacek from Kennesaw State identified his primary focus as translating data into institutionally sustainable programs. He sees this research initiative as a key to fundraising and advocacy. He applies current recovery research to his academic advising approach. He also discussed factors surrounding job placement for CRP students. He mentioned his work with the Georgia Health Policy Center and the push to have state-level funding for recovery themed clubhouses.

Teresa Johnston discussed CYAARs work with tracking progression, retention, and graduation rates. She also highlighted CYAARs work in tracking students' mental health history along with their substance use history. CYAAR also collects additional information about effectiveness of seminars, adulating workshops, and other programming initiatives.

Tiffany Brown, University of Oregon, is working with colleagues in gathering pilot data from CRP students to secure an NIH grant for a large-scale outcome study. She discussed including measures of well-being and quality of life, as well as additional factors, and is willing to review any suggestions the group may have.

Emily Eisenhart from Georgia Southern shared that she is currently working on a variety of projects, one of which focusing on the increase of stimulant use in college. She also identified a dream of studying women in recovery with a history of sexual trauma.

Brigitte Manteuffel of the Georgia Health Policy Center is the national evaluator for SAMHSAs children's initiatives. She assists in the strategic planning for Georgia and has worked with multiple government departments abroad. She mentioned her interest and work on the opioid epidemic and peer support services. She identified a similar research interest with Nick Hayes. She is interested in trauma and stress for families and caregivers. She also mentioned a potential qualitative study 12-step slogans and cognitive transformations.

Shane Phillips discussed overseeing a pilot program of NARCAN distribution.

The collaborative briefly adjourned.

A national database of CRP data was discussed and Teresa Johnston talked about her efforts to establish and secure funding for it. The conversation evolved to the classifications of CRPs. Some are student organizations, some have dedicated staff. Austin Brown suggested classifying CRPs by their sources of funding (i.e. Student Services line item, private donation, Institutional contributions, etc.).

The group adjourned for the day.

Day 2: Dec 5th, 2017

Day 2 of the conference began with a review of the new definition of recovery: “Recovery is an intentional, dynamic, and relational process that involves sustained efforts to improve multiple aspects of wellness, and which may vary by individual, social, and experiential contexts.” Someone asked how to reference the new definition.

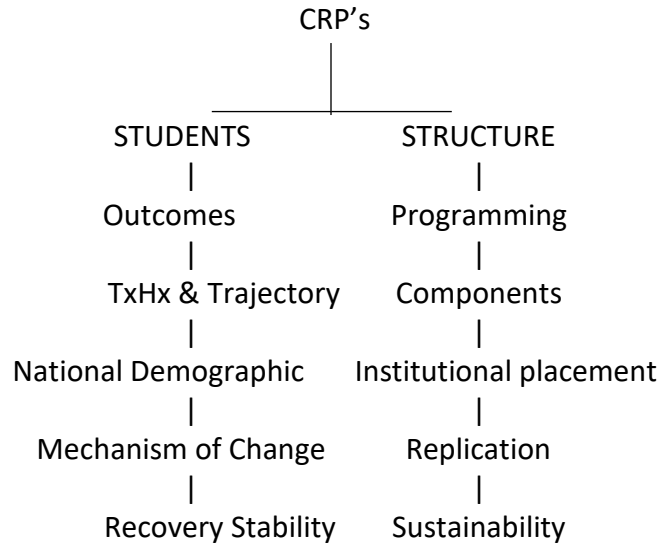
Austin Brown set out three specific projects inspired by the collaborative so far. First, the collaborative will publish an article about the new definition consensus and the methods by which that was reached. This article can then be referenced as the source of the definition. Second, the collaborative will publish a white paper on the state of recovery science and future directions. The white paper will present the goals for recovery researchers:

- 1) Establish an interdisciplinary nationwide network of recovery science researchers and experts
- 2) Discuss the role of collegiate recovery programs as a central intellectual hub for research and recovery informed education and policy
- 3) Survey the current science in the field of recovery research to decide on future research directions for collaborative undertaking

Finally, the collaborative will construct an annotated bibliography of existing recovery research. Google Docs will be created for each of these projects and all attendees will be given access. The definition article and the white paper will both start with an outline so that everyone can contribute.

The group revisited the conversation about what journals to publish in. Higher Education and Student Health journals may be promising.

It was reiterated that a national database would be very useful, and the conversation began about what information would be collected and how CRPs would be categorized. It was suggested that CRPs should be viewed from the student side and the CRPs actual structure.



Conversation continued about who is being served, what methods are most effective (clinical or otherwise), how to analyze effectiveness, CRP structural analysis, studying transcripts, voluntary versus involuntary recovery, and how to reach marginalized demographics. The conversation turned to the importance of minimizing inequality in recovery. It was stated that recovery research can analyze CRP data and GPAs to push for CRP support in universities across the country. Additionally, cultural factors in CRPs (like “bro culture”) were discussed. Shane mentioned an upcoming meeting of HBCUs to explore the possibility of CRPs.

Teresa added a final note before taking a break. She stated that it is important for the group to reach a consensus on what data should be collected in the future.

The group took a brief break.

Conversation resumed about the national database and Brigitte offered her expertise on data collection and storage procedures. It was decided the easiest way to start such an endeavor

is to start with the simplest variables and work towards the more complex. The group then brainstormed variables of interest.

Demographics

DOB

Gender identity

Sex

Sexual orientation

Race

Ethnicity

Relationship status

Kids/dependents

University

Major

GPA

FAFSA

Trauma

Living on campus/of campus

Criminal record

Inpatient history SUD/MH/ # times

Outpatient

Origin- what were the last three zip codes

Veteran status

Disability status

Insurance status

Income

Family history of SUD/MH

Education Variables

Education status

Prev. HS/ GED

Transfer status/traditional student

Academic disruption

Recovery Variables

Recovery continuum

Recovery through CRP

1st time attempted recovery length?

Current recovery length?

Human Capital

Social Capital

Primary drug of choice/ Primary drug of use (KSU breaks it up as drug classification and age of 1st use)

MH/ED/ Compulsive behavior history

Self-report vs. formal diagnosis

12 step/MAT/other mutual aid approaches to recovery

Age of 1st use

Use within CRC in the past

Current living situation

Recovery housing

This is a tentative list, and it was noted that researchers must be mindful of HIPPA and FERPA. The process of data collection could be a 2-step process with the first part being a standardized survey and the second round being a targeted survey based on the student's CRP. A key question of when to measure was posed. Some CRPs have no time requirement while others have a requirement of recovery time prior to joining the CRP. Austin proposed measuring recovery based on one month increments across ten years.

What do program coordinators and directors want to know about their programs? The group discussed wanting to know what works with which students under what conditions. There was also feedback on wanting to determine if a student is a good fit for a CRP. The information from a broad data set could aid in programming and tailoring a program that maximizes service to the students. One answer to ensuring program coordinators and directors can use their students' data is to have these administrators distribute the survey and then input the data, as opposed to having students give the information directly to the database.

The group adjourned for lunch.

What are the research questions?

- 1) What are the characteristics of CRP students?
- 2) What services are CRP students utilizing?
 - Which do students find most beneficial?
 - What do students report as challenges/ needs?
- 3) What are the characteristics of CRPs?
- 4) How do CRPs meet academic/strategic planning goals for institutions?
- 5) How do students come into CRPs?
- 6) What are the definitions/expectation of success? (from students and administrators)
- 7) What is the extent of the problem of substance use in college?
- 8) Do CRPs impact campus culture?

A national database survey could conclusively capture who CRPs serve, how they are served, and key retention, progression, and graduation data. This can begin with a core module of questions and be expanded as necessary.

In conclusion, each member of the collaborative summarized what they hope to gain from or contribute to a collective recovery science effort.

Matt Statman: a template to help CRPs get established.

Jason Whitney: IRB approval of a national study so important information can be published and shared. Good studies kick out good data.

Emily Eisenhart: Her program is currently seeking a new program coordinator, and will then be looking for new research directions.

Shane Phillips: applying this information to social justice and juvenile justice initiatives.

Austin Brown: wider community outreach.

Tiffany Brown: wider consultation with experts on the periphery of addiction and recovery research to see what they can contribute.

Bo Cleveland: reviewing study designs, grants, and drafts. Bringing these initiatives to wider audiences.

Jason Callis: direction on what he can do to help at UGA or as a representative from the ARHE.

Robert Ashford: R-1s. Expanding to address behavioral health. Continuity of the collaboration.

Hillary Groover: giving back to the local community and treatment centers.

Teresa Johnston: offering expertise in implementing such initiatives.

The collaborative concluded with a call to review potential dates for the next meeting in spring.

Appendix 1

Collegiate Recovery Research – Papers

Ashford, R. D., Brown, A. M., Curtis, B. (In Press). Collegiate Recovery: Results from an Integrated Behavioral Health Program. *Journal of Groups in Addiction & Recovery*.

Abstract

Campus-based recovery programs have been shown to support students in recovery from substance use disorders, as well as mental health disorders. However, this support has been historically delivered in isolation. This study highlights preliminary outcomes from a novel collegiate recovery program, one that uses a model of recovery with integrated support services for students in recovery from substance use or mental health disorders, or co-occurring behavioral health disorders. Similar to traditional collegiate recovery programs, beneficial services of the integrated program were most often related to peer-based services. Outcomes were also similar, with students in recovery having higher than average GPA ($M = 3.68$, $SD = 0.34$) and lengths of recovery time ($M = 3.69$, $SD = 2.87$ (years)).

Brown, A. M., Ashford, R. D., Figley, N., Courson, K., Curtis, B., Kimball, T. (In Review). Alumni Characteristics of Collegiate Recovery Programs: A National Survey. *Alcoholism Treatment Quarterly*.

Abstract

Collegiate recovery has been established as a field of study since the 1970s. To date, a number of qualitative studies have been completed on the programs and students served, along with a single national descriptive survey. The present study is the first undertaken exploring the status (recovery, professional, and quality of life) of student alumni that engaged in undergraduate collegiate recovery programs (CRP). Results contain alumni recovery status, primary recovery supports utilized, relapse rates since graduation, and recovery capital/quality of life scores.

Similar to previously published works, CRP alumni remain actively in recovery, with relapse rates only slightly higher than the national average of students currently engaged in CRPs (10.2% versus 6.8%). Findings are preliminary evidence that collegiate recovery programs adequately prepare engaged students for future recovery and professional life.

Brown, A. M., Ashford, R. D., Whitney, J., Heller-Thompson, A., Kimball, T. (In Review). A Literature Review of Collegiate Recovery: 1988-2016. *Alcoholism Treatment Quarterly*.

Abstract

Objectives: To present a review of the existing research on college students living in recovery, including the research on students in recovery participating in collegiate recovery programs.

Methods: Studies were included if they: a) were peer-reviewed or archived dissertations, b) were published between 1988 and 2017, c) directly involved students in recovery on campus, either with or without involvement in a collegiate recovery program.

Results: From 1988 to 2017, 25 studies met the inclusion criteria. These included 7 studies on students living in recovery within the general framework of higher education and 18 studies involving students in collegiate recovery programs. Qualitative reports and quantitative descriptive studies were both included.

Conclusions: Findings identify the gaps in currently available research, and support rationale for increasing longitudinal and quantitative studies of collegiate recovery programs and the students they serve.

Ashford, R. D., Brown, A. M., Heller, A. T., Eisenhart, E., Curtis B. (R&R). Collegiate Recovery Programs Meta-synthesis: 2000-2017. *Addiction Research and Theory*.

Abstract

As a relatively new field of practice, collegiate recovery programs (CRP), have utilized a practice-informed approach as a means of establishing best practices and pedagogy. While research on collegiate recovery programs and populations of students in recovery is growing, much of the qualitative studies have yet to be synthesized into a useful organizing matrix. This study utilizes meta-synthesis design to explore the leading qualitative research on student experiences in collegiate recovery. From this synthesis, researchers identified six metaphors from ten included studies from 2000-2017. The six metaphors of social connectivity, recovery supports, drop-in recovery centers, internalized feelings, coping mechanisms, and conflict of recovery/student status, validate much of the pre-existing practices and provide a critical framework for future program design, service delivery, and research.

Ashford, R. D., Brown, A. M., Curtis, B. (In Review). Quality of Life, Traumatic Event Exposure, Recovery Capital, and Substance Use Disorder Risk Among College Students. *Journal of Drug Education*.

Abstract

Traumatic life experience has been linked to the development of substance use disorders in the general population. Substance misuse among higher education students is common, with 63% of students reporting previous 30-day alcohol use. 4% of college students are also estimated to be in recovery from substance use, showing a resolution of previous disordered substance use. The current study compares the magnitude of previous traumatic life experience and the quality of life among college students with no/low risk and high risk of substance use disorder, and students living in recovery. Students in recovery and those at high risk showed statistically significant differences in the magnitude of traumatic event experience, as well as statistically significant different self-reported quality of life scores.

Collegiate Recovery Research – Data Sets

1. Student SUD Risk, WHO QOL, ARC, ISEL, PCL-5, LEC-C (N = 299)
2. CRP Alumni (WHO QOL, ARC, FS-8, QOL Self-report) (n=90)

3. Kennesaw CRP Student Longitudinal Data Set (N = 30)
4. Prevention Data (Kennesaw) (N=5,000)

Collegiate Recovery Research – Projects

1. UNT CRP Students compared with Alumni CRP Students (WHO QOL and ARC comparison)
2. CRP Longitudinal Descriptive and Outcomes
3. CRP Program Development Phases and Benchmarks (Theory/Modeling)
4. Students in Recovery compared to CRP Students (Descriptive, Outcomes Comparison)
5. CRP Tertiary Outcomes (Pro-social norming, intervention, prevention, cost savings) (Qualitative interviews)
6. CRP students in recovery (Recovery Length < 1 year compared to Recovery Length > 1 year) (QOL, FS-8 and ARC as predictors of success at differing time points)
7. Prevention descriptive and intervention outcomes/efficacy

Recovery Sciences – Papers

Ashford, R. D., Brown, A. M. (2017). Identifying and Bridging the Gaps: A Mixed Methods Study of Stakeholders in the Substance Use Disorder and Recovery Profession. *Journal of Intergenerational Relationships*, 15(4), 80-106. Doi: 10.1080/15350770.2017.1368326

Abstract

The substance use disorder and recovery field has undergone rapid transformation over the last 40 years. It currently has a workforce that includes three generations – Baby Boomers, Generation X, and Millennials. The current study sought to identify generational differences amongst those involved in the substance use disorder and recovery profession using an embedded design and grounded theory approach. Findings suggest that generational differences do exist across the three generations in regards to ideologies, value of formal and informal knowledge, training, and education. Results from the current study provide a further understanding of how we may bridge perceived contentious ideologies and knowledge gaps between generations to better develop current and future professionals within the field.

Curtis, B., Ashford, R. D., Rosenbach, S., Stern, M., Kirby, K. (2017). Parental Responses to Adolescent Substance Use and Substance Use Disorders. *Drugs: Education, Prevention, & Policy*. Doi: 10.1080/09687637.2017.1383973.

Abstract

Previous research showing that parents tend to underestimate adolescent substance use is consistent with concerns that adolescent substance use may develop because parents delay in reacting to it. However, little research has examined parental decisions regarding how and when to intervene on adolescent substance use. This study examines the actions that parents report they would take after a) discovering substance use to intoxication and b) when they believe their child has a substance use problem. Internet surveys were conducted asking parents (N = 975) how they would respond to a) evidence of their child's use to intoxication and b) their child's significant problem with either alcohol, cannabis, prescription opioids, or illicit drugs. While parental response to alcohol and cannabis intoxication focused on talking with their children (34% and 45% respectively) and punishment (30% and 18% respectively), parents were significantly more likely to report help-seeking behaviors when responding to prescription opioid or illicit drug use intoxication (37% and 30% respectively). More effective public health initiatives are needed to provide parents with practical strategies to address adolescent substance use and to increase parental engagement in the services offered by addiction specialists.

Ashford, R. D., Brown, A. M., Curtis, B. (In Review). "Abusing Addiction": Our Language Still Isn't Good Enough. *International Journal of Drug Policy*.

Abstract

Background: Previous research has found initial evidence that word choice impacts the perception and treatment of those with behavioral health disorders. These previous studies have relied on vignette-based methodologies, however, and a more quantifiable index of the stigma words can produce is needed.

Method: The current study uses the Go/No-Go Association Task to calculate a d-prime (sensitivity) indexed score of automatic attitudes to two terms, "substance abuser" and "person with substance use disorder".

Results: Participants have significantly more negative automatic attitudes towards the term substance abuser, as compared to "person with a substance use disorder".

Conclusion: Consistent with previous research, implicit bias does exist for terms commonly used in the behavioral health field. "Substance Abuser" and its derivatives should not be used in professional or lay settings.

Curtis, B., Buffone, A., Ungar, L., Ashford, R. D., Hemmons, J., Summers, D., Hamilton, C., Giorgi, S., Schwartz, A. (R&R). Can Twitter Be Used to Predict Excessive Drinking at the County Level?. PLOS-ONE.

Abstract:

Objectives: The current study analyzes a large set of Twitter data from 1,384 US counties to determine whether excessive drinking rates can be predicted by the words being posted from each county.

Methods: Data from over 138 million county-level tweets was analyzed using predictive modeling, differential language analysis, and mediating language analysis.

Results: Twitter language data captures cross-sectional patterns of excessive drinking beyond that of sociodemographic factors (e.g. age, gender, race, income, education), and can be used to accurately predict rates of excessive drinking. Additionally, mediation analysis found that Twitter topics (e.g. 'love genuine absolutely') can explain much of the variance associated between socioeconomics and excessive drinking.

Conclusions: Twitter data can be used to predict public health concerns such as excessive drinking. Using mediation analysis in conjunction with predictive modeling allows for a high portion of the variance associated with socioeconomic status to be explained.

Ashford, R. D., Lynch, K., Curtis, B. (R&R). Digital Media Use Trends Among Substance Use Disorder Treatment Clients. Journal of Medical Internet Research.

Abstract

Background: Substance use disorder research and practice have not yet taken advantage of emerging changes in communication patterns. While internet and social media use is widespread in the general population, little is known about how these mediums are used in substance use disorder treatment.

Objective: This paper aims to provide data on patients with substance use disorders prevalence of smartphone ownership, patterns of use of multiple digital platforms (social media, internet, computer, and mobile applications), and interest in the use of these platforms to monitor personal recovery.

Methods: We conducted a cross-sectional survey of patients in four intensive outpatient substance use disorder treatment facilities in Philadelphia, PA, USA. Logistic regressions were used to examine associations among variables.

Results: Survey participants (N= 259) were mostly male (73%), African American (63%), with annual incomes < \$10,000 (62%), and averaged 39 years of age. The vast majority of participants (94%) owned a cellphone and about 64% owned a smartphone, of whom 80% accessed the internet mainly through their smartphone. There were no significant differences in age, gender, ethnicity or SES by computer usage, internet usage, number of times participants changed their phone, type of cellphone contract, or whether participants had unlimited calling

plans. The sample was grouped into 3 age groups (Millennials, Generation Xers and Baby Boomers. The rates of having a social media account differed across these three age groups with significant differences between Baby Boomers and both GenXers and Millennials ($p < 0.0001$ in each case). Among participants with a social media account (73.6%), most (76%) reported using it daily and nearly all (98%) used Facebook. Nearly half of participants (47%) reported viewing content on social media that triggered substance cravings and an equal percentage reported being exposed to recovery information on social media. There was a significant difference in rates of reporting viewing recovery information on social media across the three age groups with Baby Boomers reporting higher rates than Millennials ($p < 0.001$). The majority of respondents (70%) said they would prefer to use a relapse prevention app on their phone or receive SMS relapse prevention text messages (72%) and 49% expressed an interest in receiving support by allowing social media accounts to be monitored as a relapse prevention technique.

Conclusions: This is the first and largest study to date examining the online behavior and preferences regarding technology-based substance use disorder treatment interventions in a population of patients enrolled in community outpatient treatment programs. Patients were generally receptive to using relapse prevention apps and text messaging interventions and a substantial proportion support social media surveillance tools. The design of technology-based interventions remains a challenge, however, as many participants have monthly telephone plans, which may limit continuity, and most do not have a smartphone.

Recovery Science – Data Sets

1. SUD and Recovery Professional Responses (N=399)
2. Social media use among outpatient clients (N=821)
3. Implicit Bias Go/No Go Association Task and Vignettes (N=49)

Recovery Sciences – Projects

1. Recovery Ready Ecosystems: Modeling Recovery Ready Communities
 - a. Manuscript in progress

Abstract

Public and private systems (e.g. healthcare, criminal justice, workforce, etc.), are all impacted heavily by substance use disorders. Despite more recent publicity and several attempts at bringing top down solutions, substance use disorders continue to be a leading cause of death, a leading correlate in violent crime, and a leading cause of lost productivity in the workplace. Community-based services and resources have been shown to positively impact the issue of substance use disorder and the recovery from the disorder by orienting communities and stakeholders towards the problem and creating continuity among the ways of addressing the issue closer to where it occurs. Community-based innovations, such as recovery community organizations and other recovery support services, have provided evidence of successfully scaling recovery efforts and improving the chance of sustained recovery for individuals that live within the community. Building upon the recovery-oriented systems of care (ROSC) model, a model and framework, the Recovery Ready Ecosystem, is proposed to identify components and connections that support a community's ability to support individual and group recovery from substance use disorder.

2. Census Region comparison of SUD and Recovery professionals' data
3. Correlates among ARC and WHO QOL subdomains
4. Recovery Index Measure Creation
5. Fix One Thing in the SUD Field (SUD and Recovery Professional Data Analysis)

6. Bi-modal model of learning for generational SUD and recovery professionals
7. The Arbor Treatment Outcomes Evaluation
8. Implicit Bias Full Scale Study
9. Imagery and Implicit Bias (GNAT)
10. Priming effects on policy interpretation (imagery and linguistics)