Efficacy of Collegiate Programs for Pioneering Student Recovery Outcomes

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ABSTRACT

The United States currently faces a notable crisis in consideration of the exponential rise in alcohol and opioid-related overdoses per capita. Collegiate intervention programs for alcohol and substance abuse have made significant strides with regard to this epidemic in the recent decade, as higher education communities work to refocus their budgets and initiatives towards fostering programmatic resources for providing students with support who are afflicted with addiction disorders. Limited existing research on collegiate programs display correlations between peer-based intervention programs and success outcomes for students with alcohol and substance abuse disorders. This study further analyzes collegiate recovery programs in correspondence with aiding students towards rehabilitation from addiction disorders related to alcohol and substance abuse. The conclusion of this study emphasizes the effectiveness of collegiate programs in student recovery and the need to address current barriers which limit the expansion of these programs from becoming readily available across campuses.

Efficacy of Collegiate Programs for Pioneering Student Recovery Outcomes

The necessity for adequate resources and intervention for college students has exacerbated in the wake of an addiction epidemic across the United States. The Centers for Disease Control and Prevention (CDC) currently reports more than 700,000 people have died from a drug-related overdose between 1999 to 2017, with an average of 130 Americans deaths per day attributed to an opioid related-overdose. Opioids alone were involved in 47,600 overdose deaths in 2017 (67.8% of all drug overdose deaths) (CDC, 2018). In addition, The National Institute on Alcohol Abuse and Alcoholism (NIH) reports about 1,825 college students between the ages of 18 and 24 die from alcohol-related unintentional injuries per year, including motor-vehicle crashes (NIH, 2019).

These statistics signify a critical challenge facing the United States, particularly in assessing the impact of how these related alcohol and opioid-related fatalities are tied to demographics of young college students each year. This influenced the current research study described in this paper, specifically, the researcher chose to analyze resources available for students who are affected by addiction disorders, particularly through the lens of recovery support provided from collegiate programs. This study explores the documented outcomes of research which has analyzed existing collegiate recovery programs, the extent to which peer-based intervention is integrated with recovery support within explored programs, and any outcomes associated with related programs across the United States. The following research questions were constructed to guide the course of the study:

1. What are the correlations in outcomes between collegiate recovery programs within the limited literature?

2. To what extent is peer-based and social support intervention used within these programs?
3. What are the student perceptions and outcomes for those who participate in these programs? Are there any correlations in outcomes based on race/ethnicity, gender, or socioeconomic status of recovering students?
4. Which limitations and challenges currently affect the expansion of these programs across college campuses?

LITERATURE REVIEW

Similarities in collegiate program research

A multitude of research studies demonstrate outcomes related to the effectiveness of collegiate program recovery for students with alcohol and substance addiction disorders. A systematic review of collegiate recovery programs conducted by Bassuk and colleagues (2016) involved the evaluation of quantitative studies conducted between 1998 and 2014. This study yielded 1,221 articles on student recovery support services, with nine studies focused on peer-delivered services, which examined the effectiveness of recovery support interventions within collegiate programs having salutary effects on participants and positive contributions to substance use outcomes (Bassuk et al., 2016). The review revealed the significance of wide-range intervention efforts within collegiate programs and their vastly understudied nature heavily contributing to prosperous recovery outcomes for students involved battling addiction disorders.

Similarly, Hennessy and colleagues (2016) conducted a systematic review using a quasi-experimental design that evaluated existing studies on collegiate recovery communities (CRCs) at postsecondary educational institutions. Specifically, the review focused on identifying student outcomes based on academic performance and substance use domains (Hennessy et al.,

2016). The study found that collegiate recovery communities with explicit goals of providing support services tailored toward encouraging abstinence, providing multi-faceted support services (e.g. intervention with one or more students, online, telephone, or video communication), and those that provided substance-free housing for recovering youth on campus succeeded in aiding sobriety and displayed positive outcomes in both academic and substance use domains (Hennessy et al., 2016). The review exhibits the criticality for collegiate program recovery expansion based on positive impacts for academic performance domains (e.g. GPA), college enrollment, and college completion rate increases post-CRP participation at select U.S. postsecondary institutions.

Relapse rates hold precedence as an outstanding benchmark in determining the effectiveness of collegiate program recovery. Brown & Boehler (2019) conducted a systematic review of physician health programs (PHPs) parallel to collegiate recovery programs (CRPs) to measure relapse rate intersections between both PHPs and CRPs involving long-term, comprehensive components of recovery care and ancillary services oriented toward highly transformative abstinence-based recovery (Brown & Boehler, 2019). The study concluded that CRPs, in comparison to PHPs, particularly facilitated long-term recovery through addressing recovery and quality of life concerns concurrently, while the individual works to achieve greater social capital through education. Similarly, Brown & Boehler (2019) identified that CRPs show evidence that a near 15% relapse rate is achievable dependent on CRP expansion within higher education institutions, as CRPs currently cite a relapse rate from year to year of 8%, further building corroboration of the influence these type of programs yield on student recovery outcomes.

A mixed-methods study examining student outcomes from 29 CRPs nationwide operating in the fall of 2012 explored participation in these programs and the utilization of services and recovery resources (Laudet et al., 2016). The study included 600 participants enrolled in CRPs over the data collection period through an online student survey, with over half (58%) citing drug addiction as their primary lifetime problem, with the remaining 42% citing alcohol abuse. Laudet and colleagues (2016) concluded from the surveys that CRP participation provides efficient support for students, while allowing them to sustain their recovery without having to postpone or surrender their educational goals, in addition to finding that rates of relapse defined as "any use" ranged from 0% to 25% within the past academic year (mean = 8%) (Laudet et al., 2016, p. 239). Similarly, Brown & Boehler (2019) found an 8% relapse rate from year-to-year in addition to abstinence rates on PHP and CRP models suggesting an abstinence-based recovery rate of 75% to 95% for participants (DuPont, McLellan, White, Merlo, & Gold, 2009; Laudet, Harris, Kimball, Winters, & Moberg, 2015, as cited in Brown & Boehler, 2019).

Collegiate recovery programs which involve connecting recovery students to participate in sobriety-based social events, including a focus on motivating recovery-type lifestyles, have proved effective in practice. Sobriety-based participation and inclusion between departments on campuses which are attuned to recovery efforts help to support these initiatives. Gueci (2018) initiated two small qualitative studies to understand how to create an institutionally relevant CRP model, both studies involved interviewing participants within the "Students for Recovery" organization and student CRP employees with regard to their views as providers of recovery support to their peers (Gueci, 2018). Gueci (2018) identified that "students in recovery identified a desire for social support and safety within the university environment, education and awareness

of what it means to be in recovery - CRP student employee roles identified themselves as providers of outreach and one-on-one support, and strategic planners of the most effective methods to provide services to their peers in recovery" (p. 40). The study showed that the receptivity and inclusion of support from university staff, in combination with strong social support and available recovery resources, helped better guide students toward their recovery efforts. Gueci (2018) states that the "data provides context to the larger action research study and instruction on programmatic development of the CRP at an institutional level" (p. 40).

Similarly, Kimball and colleagues (2017) conducted a phenomenological qualitative research study that involved interviewing eight participants of collegiate recovery programs which included a 12-Step program at a Southwest U.S. university, with a focus on holistic approaches including hope and recovery themes. The study identified common themes between the participants' CRP experiences such as the inclusion of social-based support with a focus on hope and recovery, immersive participation in a recovery ready community, and guidance on how to take action for alternative methods of coping through addiction (Kimball et al., 2017).

Scott and colleagues (2016) conducted qualitative in-depth interviews of 17 students in a CRP at a public university in a rural setting. Scott and colleagues (2016) through content analysis of the interviews that there were five themes across recovery ready modeled CRP-related experiences and outcomes, the first three relating to the experience of campus life for CRP students (e.g. returning to campus after recovery; feelings of exclusion; disclosure) and the last two themes (e.g. identity; social support) relating to the CRP itself and the role it played as a student resource for social support and the reconstruction of identity. The study concluded that the CRP at the university was known for its positive reputation, reported above average GPA

outcomes, and successful identity development formation for recovering students (Scott et al., 2016).

Theoretical recovery health models and frameworks utilized in collegiate recovery programs that display integrations between behavioral health, community-inclusion, and recovery ready ecosystems (as noted in Kimball et al., 2017) for students yield positive outcomes for academic success and addiction disorders (Ashford et al., 2017; Ashford et al., 2019). Ashford and colleagues (2017) conducted a mixed-methods descriptive design study using an anonymous internet survey using a sample of 54 students who identified as in recovery at the University of North Texas (UNT) and participating in the Psychology Department's Sona System - of students 16.8% (n = 54). Students in this program are in recovery from a behavioral health disorder, inclusive of substance use and mental health disorders, as well as co-occurring disorders (Ashford et al., 2017). The study determined that CRPs which integrate 12-Step intervention frameworks to help treat alcohol and substance addiction disorders, along with support resources for behavioral and mental health disorders through professional therapy, resulted in positive correlations between scholarship assistance increasing the psychological quality of life, recovery capital of students, higher grade point average (M = 3.68, SD = .34), and lengths of recovery time (M = 3.69, SD = 2.87 [years]) (Ashford et al., 2017).

Ashford and colleagues (2019) followed with a supplemental study that assessed the recovery-oriented systems of care (ROSC) theoretical model and framework designed to support communities in the coordination of services supporting recovery from SUD (DiClemente, Norwood, Gregory, Travaglini, Graydon, & Corno, 2016; White, 2009; Davidson & White, 2007, as cited in Ashford et al., 2019). David and White (as cited in Ashford et al., 2019). These

programs offer several key strategies, within the ROSC framework, that can facilitate successful recovery through CRP: a) early identification and engagement; b) use of role modeling; c) increase motivation for change; d) offer education; e) provide effective treatments and interventions; f) provide opportunities for individuals to occupy valued roles; g) connection between individuals and the larger recovery community; h) provide post-treatment monitoring and recovery coaching; i) offer meaningful recovery support services (e.g. supported housing, supported employment, supported education); and j) offer legal advocacy (p. 11).

Ashford and colleagues (2019) subsequently initiated a review of the *recovery ready ecosystems model* (RREM) (Appendix A) that include the following levels from the social ecological model put forth by Bronfenbrenner (1979) (as cited in Ashford et al., 2019): 1) individual and intrapersonal levels (combined), 2) the community level, 3) the institutional level, and 3) the policy level. The model is used to define the location of beneficial services and resources, as well as provide evidence of the interplay between services and resources across different ecosystems - the model can then be used as a guide to further define the recovery ready community framework (p. 19). The study concluded that enhanced community needs assessment informed by RREM and Recovery Ready Community framework assists in identifying areas of weakness within program infrastructure, measures the level of efficacy for community ability to support long-term recovery from substance use disorders, and provides evidence of sustained recovery for individuals that gain intervention from programs utilizing these type of models.

Similarly, Wiebe and colleagues (2010) compiled research findings within their publication, *Substance Abuse Recovery in College - Community Supported Abstinence,* which address and explore multi-faceted characteristics, areas of support, challenges, and opportunities

available through limited collegiate program offerings. The 2010 publication holds precedence because it provides insight and discussion into collegiate recovery program frameworks, as Wiebe and colleagues (2010) discuss the identity development model in correlation with collegiate recovery programs. Wiebe and colleagues (2010) analyzed research of identity development models as a prominent piece of CRP initiatives, equipping recovering students with tailored therapy and resources to both transition towards rehabilitation in addition to helping them gain a better sense of their self-identification (Wiebe et al., 2010, p. 23). The study found that students go through an evident "identity crisis", signaling the need for CRP resources to provide support through a community that fosters growth, supports recovery efforts, and holistic approaches to guide students towards a better understanding of their identities in separation from drug and alcohol dependence.

Holistic approaches to drug and substance abuse recovery have demonstrated success in providing students with resources to reach recovery and identity development milestones. Blank (2018) conducted a correlational review of several collegiate recovery program frameworks at universities across the United States, including University of Georgia, University of Vermont, University of Michigan, Kennesaw State University, and Our Lady of the Lake University. Blake (2018) found that these programs identified with the need to provide more holistic programs, offering academic, social, and career support-a sort of "wrap around", in comparison to AA or Smart Recovery Programs which reportedly are not enough for students (Blank, 2018, p. 21). The review found that each of the four institutions had parallels in CRP framework, available resources, and reported successful outcomes for GPA, academic performance, and rehabilitation.

The comprehensive research finds that recovery outcomes for students participating in CRPs is favorable, as each study exhibits positive results across social, academic, and recovery-based domains. Correlations between the literature display unique characteristics of CRP program assessment and implementation, notably the integration of peer-to-peer connections and social support from other students elicited successful recovery outcomes.

Peer-to-peer recovery and social support intervention

Collegiate program research has identified the inclusion of peer-based intervention and degrees of social support as a notable integration with successful outcomes for student recovery. Peer-based recovery support services are defined as the process of giving and receiving nonprofessional, non-clinical assistance to achieve long-term recovery from substance use disorders. This support is provided by peers, also known as recovery coaches, who have lived experience and experiential knowledge (Borkman, 1999, as cited in Bassuk et al., 2016, p. 1). Bassuk and colleagues (2016) found that most studies reported statistically findings indicating that participants receiving peer-based intervention showed improvements in substance use, a range of recovery outcomes, or both--these findings suggest that peer interventions positively impact the lives of individuals with substance use disorders (Bassuk et al., 2016, p. 7). Comparably, Ashford and colleagues (2019) found that peer recovery support services (PRSS) are delivered through formal and specialized roles by individuals with personal experience in the recovery process (i.e. lived recovery experience) - a recent systematic review of the literature on PRSS found that the inclusion of these services often improved outcomes (Bassuk, Hanson, Greene, Richard, & Laudet, 2017; White, 2009, as cited in Ashford et al., 2019).

Hennessy and colleagues (2016) discuss the "*Theory of Change*" in relation to recovery school models in CRP programs drawing heavily on the notion of social capital, or the "amount of connectedness, social support, social control, information, and access to resources available to a person" (p. 32), as one of the strongest factors influencing educational and recovery outcomes. Essentially, the study found that campus recovery communities which foster peer mentor support, as well as linkages to community support and services, have helped students better develop connectedness and social capital in a context that presents a clear pathway to abuse recovery success (Hennessy et al., 2016, p. 4-5). Similarly, Brown and Boehler (2019) found that models of support treatment and the maintenance of recovery while facilitating occupational or educational stability and social support through peer-based and incentivized participation with healthy communities of recovery yield positive outcomes for students (Brown & Boehler, 2019).

Laudet and colleagues (2016) determined that CRPs are campus-based communities of students in SUD recovery, which are typically peer-driven and operate with a small professional staff, bringing attention to the addiction field lacking rigorous studies quantifying the effectiveness of peer driven recovery support services. Laudet and colleagues (2016) found through a survey analysis, *Reasons for enrolling in a CRP* (N = 476), that CRP's most noted reason (56.4% of respondents) for enrolling was the need/want for a recovery supportive peer network, with analysis of studies included in the research finding that same-age peer based resources nurtured recovery outcomes.

Similarly, Ashford and colleagues (2017) found through their CRP analysis of University of North Texas that students participating (n=14) most often reported that the most beneficial services offered by the program were peer-related services or resources, including recovery

meetings. Peer support networks and peer to peer recovery services (Appendix B) ranked the highest percentage for students responding to most beneficial services to personal recovery offered by the collegiate recovery program (p. 6-7). In addition, the study found that students in substance use and mental health disorder recovery identified that peer-related services were most beneficial, supporting the notion that integrated CRPs, and the students they serve, are also likely to view peer-based services as the most useful in providing support for personal recovery, irrespective of the type of disorder they are recovering from (Ashford et al., 2017).

Wiebe and colleagues (2010) identified that peer-based integrated resources are one of the most effective tools for recovery and academic success in CRP:

> It is important that recovery support services in collegiate settings include efforts to enhance academic success. One of the best ways to do this is to implement peer-based tutoring among members of the recovery community. This type of tutoring system is not only effective, but takes advantage of existing peer support networks through which mutual help support groups function - by building academic success and confidence and building another connection between recovering students these tutoring relationships help both parties strengthen their recoveries (Wiebe et al., 2010, p. 12).

Wiebe and colleagues (2010) analyzed the StepUP Program at Augsburg College, which created a peer government system of students to provide recovery, academic support, and address infractions for students breaching their rehabilitation-recovery track. The text discusses other institutions, such as Texas Tech University's Center for the Study of Addiction and Recovery (CSAR) and College of St. Scholastica, which have adopted this form of peer-related recovery governance and programmatic approach to providing support for affected students on campus.

Gueci and colleagues' (2018) study indicated the need for a larger action research study of supporting students in recovery using a peer-to-peer CRP model of support. The study concluded that recovering students found solace in connecting with a like-minded community of their peers, in which the instant friendship formed within the context of the CRP community protected students in recovery from isolation, which is linked to risk of relapse (Bell et al., 2009, as cited in Gueci et al., 2018). In parallel, Kimball and colleagues (2018) found that peer-to-peer recovery fellowships and community systems that offer support provide relief to students--peers in the study sample confirmed that support from a community of individuals in recovery fosters hope, therefore the themes of finding hope can benefit individuals in the beginning stages of recovery, through the continuum of care, and toward long-term recovery.

Scott and colleagues (2016) found intersections with peer support services in CRP that assist in fostering a sense of comfort, community, and identity development. The study found that students involved in CRP described it as representing a "safe, comforting" emotional space, providing both social support and serving as an important source of social support in the process of identity formation, a means of coping with issues or self-redefinition and stigma on campus (Scott et al., 2016). Scott and colleagues (2016) concluded that the CRP provided a gathering space, social activities, and a group of peers, all valuable elements to the construction of a daily life in recovery, in addition to being a resource that helped students establish positive identities, both as individuals and as a collective on campus.

Blank (2018) determined that participation in CRP programs with peer-related recovery and assistance resulted in successful outcomes for students with regard to GPA, addiction recovery, and preventing relapse (Blank, 2018). The study found correlations between the three

schools using peer-to-peer support within their CRPs respectively, which resulted in participants leveraging social support as a community, working with each other towards personal growth, motivating professional development, and increased academic success (Blank, 2018).

CRP programs that nurture peer-to-peer connections and social support to help better influence recovery students to focus on progressive and abstinent lifestyles presents affirmative outcomes. Students in recovery provided with peer groups they can closely relate to and confide in for support has shown effectiveness in relapse rates, academic performance, and self-identity formation to further remove themselves from an addiction-based lifestyle. Student perceptions and overarching outcomes of CRPs show an array of constructive feedback and optimistic results in relation to the inclusion of peer-to-peer and social support integration.

Recovery outcomes and perceptions from CRP participation

Involvement within CRPs displayed efficacious and beneficial for institutions with alcohol and substance abuse resources readily available, as well as favorable student perceptions regarding addiction. Laudet and colleagues (2016) found that academic outcomes (GPA and retention) were significantly better among CRP students than the overall undergraduate student body at the institution in their study. Additionally, there was a decrease in relapse rates for students (Laudet et al., 2016). In relation to academic success outcomes, Scott and colleagues (2016) found that success rates of CRP students in a national survey showed that 90% of CRP students were found to graduate from college, compared with 61% of their peers on campus. Laudet and colleagues (2016) identified that students reported high levels of perceived past harm, potential future harm, and correspondingly high future benefits of staying in recovery from substance abuse, in addition, most students continued to evade using alcohol or drugs over the

course of several years: Mean duration since last alcohol use was 31.7 months (i.e., 2 years and 7 months) and time since drugs were last used yielded similar results (mean = 35 months, SD = 32 months). In relation, Ashford and colleagues (2017) noted that students engaged in CRPs were likely to have higher GPA, retention rates, and graduation rates, as compared to the national college student mean. Additionally, CRPs historically have had a recurrence of use (i.e., relapse) rate as low as 8% (Laudet, Harris, Kimball, et. al., 2014; Laudet, Harris, Winters, et al., 2013, as cited in Ashford et al., 2017).

Similar to Laudet et al. (2016) and Ashford et al. (2017), Brown & Boehler (2019) identified that CRPs offered in the context of a comprehensive approach to care, that envisions positive life improvement as a chief outcome, tended to elicit better abstinence rates as a by-product of the recovery process. Brown & Boehler (2019) highlighted that a 15% relapse rate is attainable based on the evidence of CRP factors of highly successful recovery outcomes holding the ingredients needed to ensure low relapse rates for all addiction treatment--CRPs in particular provide an example of recovery supports that facilitate long-term recovery through addressing recovery and quality of life concerns concurrently, while the individual works to achieve greater social capital through education (Brown & Boehler, 2019).

Wiebe (2010) evaluated outcomes for CRCs (Collegiate Recovery Communities) with regard to social support networks and abstinence-specific support they provide compared with the relapse risk they present for alcohol-abuse related disorders. Wiebe and colleagues (2010) found that student outcomes post-participation in CRCs/CRPs with abstinence-specific support increased the likelihood for increased length of recovery, as individuals early in their recovery

may have a harder time with staying sober without social network support for abstinence. Kaskutas, Bond, and Humphrey (2002) noted:

> 78% of those with AA abstinent friends in their support group were able to stay sober at least 30 days and 72% stayed sober for at least 90 days. Approximately 52% of alcoholics who had non-AA abstinent friends were able to stay sober at least 30 days, with 45% staying sober for 90 days. However, only 37% of alcoholics whose social network provided *no* abstinent friends stayed sober for 30 days and only 33% stayed sober for 90 days. Presumably, the friends in AA are helping to deliver abstinence-related interventions, thus providing functional as well as structural support (Kaskutas et al., 2002; as cited in Wiebe et al., 2010, p. 100).

The student perceptions of recovery also determined a "protective ceiling effect", specifically, Wiebe and colleagues (2010) identified that CRCs environment is so protective that it has blocked males' tendency to construct social networks filled with drinking friends and creating a statistical equivalence between males and friends, the degree to which the CRC helps protect its members from the otherwise abstinence-hostile social context of college evidenced the lack of differences found between male and female members' social network abstinence support and relapse risk. CRC and CRP participation provided a strong abstinent support framework for students, resourceful methods to deal with addiction based challenges, and the ability to construct safe social connections (Wiebe et al., 2010).

Bassuk and colleagues (2016) determined from their study that while there were significantly small trends in decreasing rates of substance abuse post-CRP involvement, that the experimental group decreased alcohol use over time and the control group increased alcohol use

over time. Notable findings among studies include decreased alcohol use and drinking to intoxication, reduced re-hospitalization rates, and increased post-discharge adherence among the groups receiving the peer intervention from CRPs (Bassuk et al., 2016). Comparably, Hennessy and colleagues (2016) concluded through both academic performance and substance use domain outcomes through the "*Theory of Change"* utilized in CRP displaying primary elements which include building a richer base of peer and family connection, social support, and accountability; minimizing contact with negative peers to increase school engagement and reduce relapse risk; also support students' academic goals through fostering a positive, sober peer environment that provides companionship as well as emotional and recovery support (Harris et al., 2014, as cited in Hennessy et al., 2016, p. 5).

Similar to Bassuk and colleagues (2016), Kimball and colleagues (2017) identified emerging thematic outcomes from students participating in CRP programs in relation to (1) finding hope in the recovery of others and (2) finding hope in a relationship with a Higher Power In addition, the study concluded that the presence of hope emergent from CRP participation helps students find new ways of both coping with their addictions and comfortability reaching out for help (Kimball et al., 2017). The outcomes overall deemed that students felt closer connected towards their sober relationships, showed improved development of internal motivations toward self-hope, and shifted towards articulating a more successful recovery path.

Ashford and colleagues (2019) determined through analysis of the *Recovery Ready Ecosystems Model* in which it provides a basis for communities to identify the services and resources that are available, and missing, in their local areas (p. 22-23). The study found outcomes in the best interest of students within recovery ready communities, as Ashford and

colleagues (2019) conclude that the framework suggests that communities with more recovery support services and resources are more likely to impact successful recovery outcomes including improved quality of life, recovery capital, and abstinence length. Essentially, recovery ready model outcomes which identified the main factors of multifaceted support elements within education, community, law/policy, and advocacy can positively assist mitigation of SUDs affecting students participating in CRPs, and even local communities. Similarly, Gueci (2018) concluded that thematic results from cycles of inquiry suggest that students in recovery are interested in receiving support and safety from those within their local environment, education and awareness about what addiction and recovery really means, and advocacy of a recovery lifestyle. The study inquired for data to gather feedback on the needs of students in recovery and reported student perceptions revealed a desire for social support, safety within the university environment, education and awareness, and to lead advocacy activities through their organization (Gueci, 2018).

Scott and colleagues (2016) primary findings suggested that membership in the CRP may be seen as a form of identity capital, a term coined by Cote (1997) (Scott et al., 2016). The study outcomes demonstrate student perceptions relating to identity capital aid in the development of stable, viable identities in emerging adults, in the context of a lack of traditional support structures--CRPs are important sources of social support, but go further to reflect on their added importance as sources of identity capital (Cote & Schwartz, 2002, as cited in Scott et al., 2016). The predominant theme of the study indicated that student perceptions were strong in alignment with their development of identity capital based on the incorporation of both external and internal resources available to aid recovery.

Blank (2018) distinguished that social work values are "all over" collegiate recovery, the emphasis on the solution to the problem being found within a community of peers rather than coming from the professional helper is important in CRPs (Blank, 2018, p. 22). The study found positive connections between institutions with CRP resources for students, including supplemental support for eating and mental health disorders which aided students towards more successful recovery outcomes. The emergence for CRPs which can extend varied support related services to students who manifest both alcohol or substance abuse related disorders with co-existing mental disorders consequently displays well-rounded student perceptions and divergent rehabilitation.

Overall recovery outcomes found student perceptions were most complimentary and approving of participation in CRPs. Program involvement overarched as advantageous for assisting recovering students with not only their addictions but comorbidity with mental disorders, development of identity, extended sobriety, and opportunity to closer connect with peers in safe spaces. Students strongly displayed approval for CRP participation and further reinforced the importance for these programs to nurture recovery outcomes. Though, the literature displays various limitations which are current barriers to CRP program expansion and challenge the reliability for general applicability or as long-term solutions for student recovery.

Limitations of collegiate program expansion

Existing studies and literature on CRPs report relatively similar limitations between implementation, demographic samples, and deficiencies in extended research. Brown & Boehler (2019) noted that self-selecting cohorts of individuals with high degrees of social capital, who appear to respond well to extraordinary treatment, is not a particularly significant scientific

finding per se. Lack of matched comparison sampling, a lack of objective biological measures (i.e. urinalysis monitoring) of the CRP population, all limit the findings. The study also addressed that CRPs vary from institution to institution in services provided, in addition to a lack of longitudinal studies and long-term outcomes from CRPs, with a lack of comparison sampling of students in recovery not affiliated with CRPs, limits findings significantly (Brown & Boehler, 2019). Bassuk and colleagues (2016) similarly identified study outcomes hindered by various methodological limitations that restrict the ability to generalize findings, for instance, a few studies lacked a comparison to either the absence of treatment (counterfactual) or credible alternative (Ja et al., 2009; Kamon & Turner, 2013, as cited by Bassuk et al., 2016). In addition, Gueci (2018) noted limitations for their study ranging between generalizability and transferability of the research due to the small sample size and inquiry (Gueci, 2018).

Laudet and colleagues (2016) stated their largest study limitation was that it did not collect information from the unknown number of students in recovery who choose not to enroll in a CRP at the recruiting institutions, especially about their reasons for not enrolling. It also addressed that studies relying on self-report can be vulnerable to a social desirability bias whereby some respondents provide answers that they will "please" researchers, for example, some students may have overstated positive reasons for joining a CRP (Laudet et al., 2016). The study also addressed that it could not determine how behavioral and mental health disorder comorbidity may affect CRP outcomes and participation.

Hennessy and colleagues (2016) found a significant limitation being that among youth that do successfully complete substance use treatment programs, large proportions return to rates of previous substance use within months of treatment discharge (Brown et al., 2001; Ramo et al.,

2012; White et al., 2004, as cited in Hennessy et al., 2016). The study determined that there is a lack of ongoing recovery support for youth post-program completion, in which high rates of relapse after substance abuse treatment suggest the need for these services to provide continued support, though literature surrounding long-term recovery efforts is insufficient. Ashford and colleagues (2017) identified limitations in terms of support services studied secluded to one-site and non-longitudinal, while also noting UNT is a national leader in behavioral health sciences, counseling psychology, as well as disability and rehabilitation counseling. Essentially, the findings may not be easily replicated elsewhere, as the sample size was also not large enough to provide generalizable results (Ashford et al., 2017).

Ashford and colleagues (2019) in a later study noted that CRP research and framework studies for recovery science is relatively new, the models and framework does not take into consideration alternative support systems, such as digital communities; the rise of technology-based interventions and applications that enhance recovery were not included. Moreover, the frameworks remain untested in real communities, though based in real-world tested models, and are only based on care readily available in the United States that may be less transferable to similar international systems or contexts (Ashford et al., 2019). Similarly, Kimball and colleagues (2017) discussed a limiting factor in which the nature of their small qualitative study warrants a broader and more diverse sample of individuals in recovery, while the field of recovery science being new could benefit from further studies investigating, obtaining, and maintaining hope and developing healthier coping skills (Kimball et al., 2017).

Scott and colleagues (2016) reported that limitations within their study included the lack of inclusion of students in recovery who were not involved with the CRP, who were by definition

unknown, and the lack of inclusion of non-CRP students - the study also did not collect detailed demographic information about study participants, or detailed information about participants' time in treatment or type of treatment received. The study also notes that CRPs differ from campus to campus with regard to services they offer and the roles they play on campus, so the findings may not transfer to all CRPs as it was conducted at a rural setting within a state university (Scott et al., 2016).

While not noted directly in the literature, a limitation of Blank (2018) was the lack of diverse sampling for CRPs analyzed across select institutions in the study review. Most of the schools in the study are in the northeastern United States, with one school in the south central region of the country. There was a lack of assessment for a diversity of schools in other regions of the country, notably for drug epidemic affected western states. The Centers for Disease Control and Prevention (2019) reports that statistically significant increases in opioid and other drug related overdoses have spiked in recent years in California and Arizona from 2016 to 2017 (Appendix C) though notably most overdose death rate increases have occurred across northeastern states (CDC, 2019).

The CDC (2019) also reports that in 2017, the states with the highest rates of death due to drug overdose were West Virginia (57.8 per 100,000), Ohio (46.3 per 100,000), Pennsylvania (44.3 per 100,000), the District of Columbia (44.0 per 100,000), and Kentucky (37.2 per 100,000) (CDC, 2019). The study could have been extended to account for research on CRPs at institutions within areas where high risk death toll relating to drug overdoses occur. In addition, Wiebe and colleagues (2010) within their publication did not assess any proposed or general limitations of CRP studies discussed throughout the literature, which essentially poses some

concerns over the validity and reliability of how transferable the data is for CRP initiatives. Though, the study is nearly from two-decades ago in comparison to present date which assumes there was even less literature with the possibility of research bias to pose favorable information regarding positive correlations in CRP participation.

Four studies (Brown & Boehler, 2019; Kimball et al., 2017; Laudet et al., 2016; Scott et al., 2016) also displayed correlations in limited demographic samples for their research. Kimball and colleagues (2017) noted that all participants but one were Caucasian and adhered to a 12-step model of recovery, noting that as researchers and clinicians should be sensitive as to how underrepresented minorities and individuals who embrace alternative pathways of recovery experience these and other factors. Similarly, Laudet and colleagues (2016) reported a lack of diversity in their study sample as the majority of students were White (91%), this deemed to be a significant limitation in regards to demographic and race playing a factor in CRP recovery outcomes and perception (Laudet et al., 2016). Scott and colleagues (2016) comparably noted that the student population was predominantly White, as this lack of diversity is typical of CRPs in relation to the national percentage of White students (85%) involved in these programs (Laudet et al., 2013, as cited in Scott et al., 2016, p. 6). Brown & Boehler (2019) reported that CRP students are overwhelmingly White (91%), which may reflect a lack of diversity in treatment access coupled with the privilege of 4-year university attendance (Brown & Boehler, 2019, p. 113). Overall, the lack of diverse student samples and demographics limit CRP initiatives to provide generalizable and broader functions due to the underrepresentation of varying races within the current literature.

The limitations identify deficiencies in the generalizability of CRP implementation due to a lack of diverse student population samples, questionable transferability of practices across institutions, reliance on self-reporting measures, and an absence of effectively measuring outcomes for CRP participating students in relation to non-CRP participants.

CONCLUSION

Collegiate recovery program outcomes have shown to perform remarkably and demonstrate an enriched quality of recovery for students. Outcomes for CRP participation based on the literature have established a foundation for illustrating how this reaches various facets for student recovery within successfully achieving sobriety, building social relationships, academic improvement, and fostering a better sense of self-development. Peer-based and social intervention practiced within CRPs substantially influences outcome domains by providing recovering students with nurturing, safe environments within institutions to better thrive and overcome addiction-based disorders. Student perceptions were deemed favorable in regard to the impressive outcomes determined through CRP participation, though the existing limitations are prominent barriers for ample expansions of these programs across higher education institutions.

Limitations to CRPs are characterized by a lack of finite resources and scope of support to conduct broader studies with more diverse student participants, inclusion of research on students suffering from alcohol or SUD who are not in CRPs, and general application of models, practices, and outcomes to be consistent across institutions. Regardless, CRPs display to be a powerful bridge between addiction disorders and approach to provide student recovery development for higher education institutions.

Future research in this area can further look at areas of the United States where drug-related epidemics are rising in correlation with the extent, or insufficiency, of CRP programs available at colleges and institutions within these states. While CRPs are growing exponentially over recent years, they remain under researched and inadequately funded. Federal and state mandates could be placed into effect based on institutions' annual recurring revenue and fiscal/budget allocations to incorporate required access to services for alcohol and drug abuse related disorders. Supplementary to proposing this future initiative, emerging CRPs based on existing research can use the fundamental practices and knowledge gained from existing CRPs and theoretical models of recovery to integrate peer-to-peer related support, training programs to properly equip staff and participating peer support mentors to provide assistance, and review methodology for future methods of research to better capture the reliability of long-term recovery.

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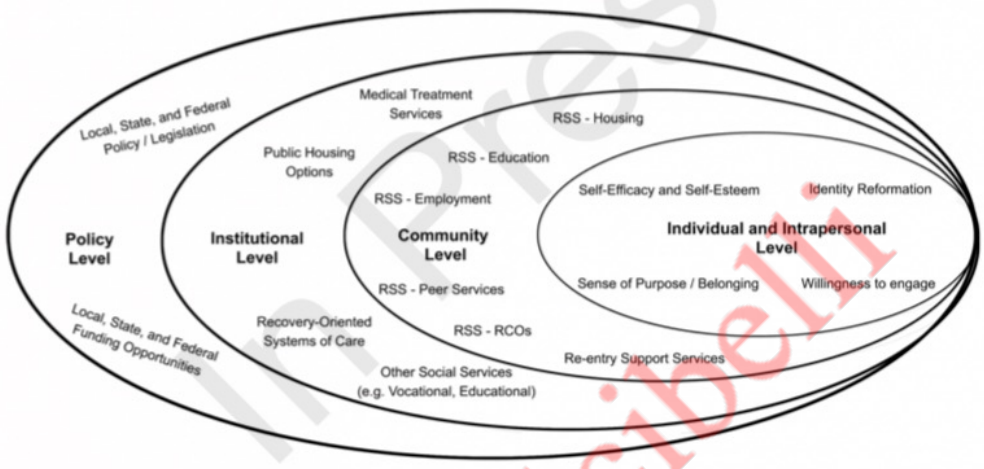
APPENDIX A
Recovery Ready Ecosystems Model (RREM)

Figure 1 – *Recovery Ready Ecosystems Model (RREM)*



APPENDIX B

Student Identified Beneficial Services - CRP at the University of North Texas

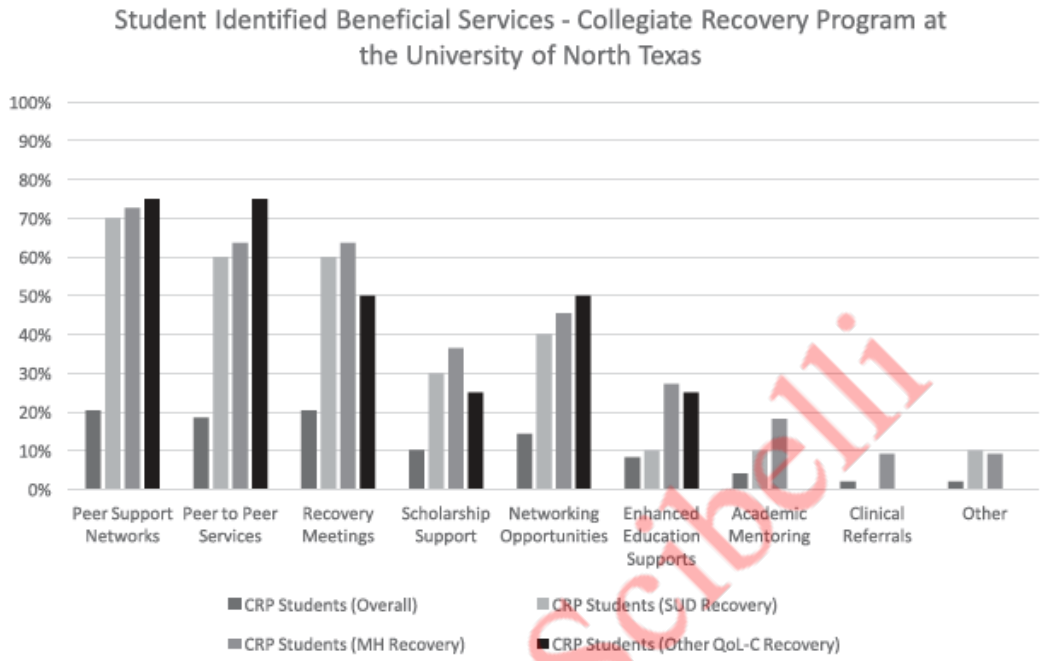
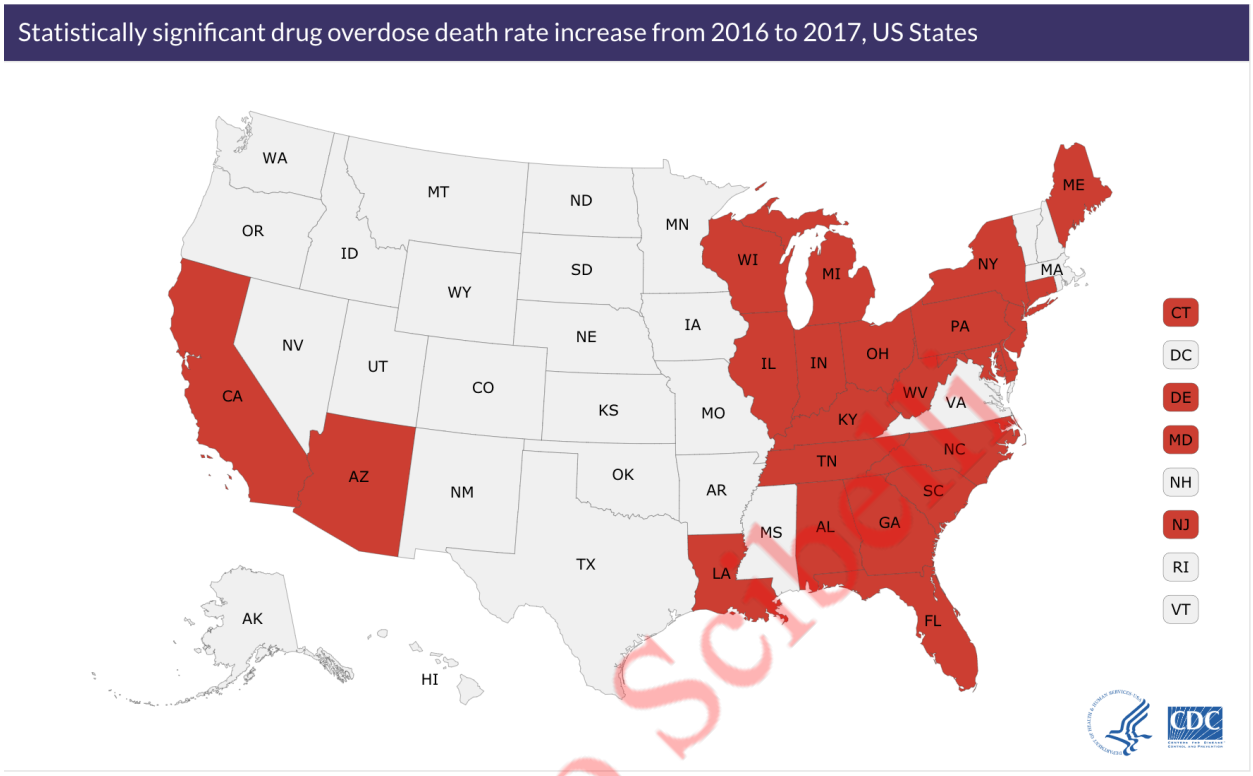


Figure 1. Percentage of students responding to most beneficial services to personal recovery offered by the collegiate recovery program.
Note. CRP = Collegiate Recovery Program; MH = Mental Health; SUD = Substance Use Disorder; QoL-C = Quality of Life Concern.

APPENDIX C

The Centers for Disease Control and Prevention - Drug Overdose Death Rates (2016-2017)



Statistically significant increase

Statistically significant increase from 2016 to 2017

No

Yes