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Postsecondary Career and Technical Education

A Pathway to Employment for Individuals
with Mental Health Conditions

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AMY BANKO, AND BRITTANY STONE

ABSTRACT

This position paper reviews the benefits and advocates for the application of an underutilized career pathway, postsecondary career and technical education (CTE), to increase employment participation among individuals with mental health conditions (MHC). This group of individuals experience a disproportionately high unemployment rate and a lower postsecondary educational attainment rate. Among those with MHCs who obtain jobs, many do not earn a living wage. One challenge is a lack of specific, standardized, technical skills required by many skilled jobs. CTE encompasses vocationally oriented certification or degree education and training based on industry standards. CTE provides individuals opportunities to complete their education more quickly, with less financial burden and stronger job prospects than some traditional academic undergraduate education. CTE information and support services should be made widely available to individuals with MHC and professionals providing mental health, vocational rehabilitation, and educational services to promote success and inclusion.

KEYWORDS

employment, career and technical education, vocational rehabilitation, mental health conditions, career service

Improving employment preparation and outcomes for people with mental health conditions (MHC) is key to increasing people's earning potential and positively impacting their quality of life, especially among those experiencing serious MHCs associated with functional impairments, including within areas of education and employment (Bosmans et al., 2017; Julià et al., 2017; Modini et al., 2016). However, current efforts within

supported employment (SE) and supported education (SEd) services emphasize quick entry-level job placement or traditional academic undergraduate degree attainment. Postsecondary career and technical education (CTE) is an emerging career pathway that offers higher paying job prospects than traditional high school education and even many undergraduate degrees while reducing student financial burden and duration of time enrolled in an education program (Carnevale et al., 2018). CTE refers to vocationally oriented certification or degree programs that teach a set of technical standards based on essential job functions (Association of Career and Technical Education, n.d.). Participation in CTE programs is high for secondary students with disabilities and shows improved educational and employment outcomes (U.S. Department of Education, 2019). However, there are reports of lesser awareness of and advocacy for CTE among support providers, possibly due to the stigma that has been historically associated with postsecondary vocational programs (Gauthier, 2020). Moreover, providers may lack the knowledge, skills, and nuanced expertise to support the success of CTE students and workers in attaining their vocational goals.

This article calls for the development and dissemination of knowledge and resources on CTE vocational pathways for mental health service providers and for people with MHCs who desire to pursue postsecondary education or seek to improve their employment opportunities. Additional exploration is needed to determine best practices for supporting individuals with MHCs in accessing and completing CTE programs with special consideration for provider training needs. Moreover, existing SEd practices for traditional postsecondary academic programs will need to be amended to reflect the nuances observed within postsecondary CTE educational programs, such as developing reasonable accommodations based on the highly varied CTE curriculum standards.

Education and Employment Challenges and Opportunities for People with MHCs

Many people with MHCs who are unemployed or underemployed lack postsecondary education credentials. They can benefit from CTE education and training to increase their employment prospects and their ability to earn a living wage. In the United States, about 13.1 million adults, or 5.2% of the adult population, have been diagnosed with a serious MHC

(Ahrnsbrak et al., 2016; Substance Abuse and Mental Health Services Administration [SAMHSA], 2020). Only 15% to 20% of this group are employed despite two-thirds having stated the desire to work (Bond et al., 2014; National Alliance on Mental Illness, 2014). High unemployment rates contribute to high levels of dependence on disability benefits and living in poverty. At least four million working-age adults, 30% of all Supplemental Security Income (SSI) recipients, and 33% of all Social Security Disability Insurance (SSDI) recipients, receive benefits due to a psychiatric disability (Social Security Administration, 2017). SSI and SSDI recipients with psychiatric disabilities tend to be younger, have children, and want to work more than others with disabilities receiving benefits. This group is more likely to report barriers such as being discouraged by past work, others' perceptions, lack of transportation, or not wanting to lose benefits (Livermore & Bardos, 2017). In a recent study, 99% of participants with a serious MHC living in supportive housing ($n = 162$) were financially dependent on entitlement benefits, including SSI and SSDI (Gao et al., 2020).

Employment provides resources for basic needs and improves the overall quality of life and well-being for people with and without disabilities (Bosmans et al., 2017; Julià et al., 2017; Modini et al., 2016). For individuals with MHCs, employment is correlated with having increased financial resources, positive and meaningful social role, housing stability, better physical health, community participation and integration, and reductions in symptom distress, substance abuse, and service utilization (Bünnings et al., 2017; Elraz, 2018; Netto et al., 2016; Nishi et al., 2017). The impact of unemployment among people with MHCs includes a greater risk of living in poverty, food insecurity, increased substance use, suicidal behavior, poor physical health, and increased mortality rates (Bünnings et al., 2017; Naslund et al., 2017; Romain et al., 2017). Socioeconomic vulnerability correlates with unequal opportunities and outcomes seen in higher unemployment rates for Black and Hispanic men and people with MHCs (Bryer et al., 2017; Shim & Compton, 2020). Unequal conditions from vulnerability increase stress and negatively impact and exacerbate mental and physical health conditions and disabilities (Kellet et al., 2020; Shim & Compton, 2020). For example, one study (Gao et al., 2020) found approximately 50% of study participants with MHCs reported severe and chronic physical health problems as a major barrier to employment participation. The most common health problem identified includes heart

diseases, hypertension, diabetes, and obesity. About 65% of the study participants were racial or ethnic minorities. Conversely, other studies have suggested interventions that support educational and employment goal attainment may mitigate mental health symptoms and improve physical health (Bünnings et al., 2017; O’Neil, 2021). Employment is an underused support avenue to increase outcomes for people with MHCs, but targeted resources are required.

Increasing Options Through Supported Employment and Supported Education

Over the past several decades, various vocational rehabilitation services models emerged and were experimented with for achieving better employment outcomes among individuals with MHCs following legal mandates, including the Rehabilitation Act Amendments of 1992. This section outlines two models for support in improving employment and education outcomes for people with MHCs that are not well-connected to CTE training and jobs. The first, individual placement and support (IPS) practice model of supported employment (SE), is an established evidence-based practice (Becker et al., 2012; Bond et al., 2014; Modini et al., 2016). Twenty-eight randomized control trials have demonstrated that 55% of participants of IPS obtain competitive employment, compared to 25% of the control group (Bond et al., 2020). Participants of IPS reported having longer job tenure, improved self-esteem and quality of life, and reduced hospitalization compared to other vocational services (Bond et al., 2016; Hoffman et al., 2014; Jäckel et al., 2017; Mueser et al., 2016). The IPS model has been adopted by vocational rehabilitation providers in more than 40 U.S. states and a dozen countries worldwide (Drake et al., 2016). However, there is limited access to IPS services. An estimated 2% of the people with an MHC in the United States have access to IPS services due to the small scale of programs (Bruns et al., 2016; Drake et al., 2016; Mueser & Cook, 2012). Thus, the challenge of increasing employment participation among individuals with MHCs remains.

Furthermore, some studies found IPS participants achieved higher average number of hours worked per year, hourly wages earned, and yearly income than those of other vocational services (Cook et al., 2016; Druss, 2014), while other studies found no significant differences between the groups in the average number of hours worked per year, wages earned,

or yearly income (Carmona et al., 2017; Hoffmann et al., 2014). With IPS services, the vast majority of service recipients work part time, earning less than \$20,000 a year, and remain dependent on SSI or SSDI benefits. Consequently, many continue facing the challenge to earn a living wage, sustain long-term job tenure and job satisfaction with upwards career mobility, exit from public assistance programs, and achieve economic independence and full community integration (SAMHSA, 2020).

Lack of educational attainment or job training, especially at the postsecondary level, negatively impacts employment rates and wages of the general population and people with MHCs, including IPS recipients (Gao et al., 2011; Gao et al., 2016; Waynor et al., 2018). The importance of education for improved employment has increased since the 1970s, with a growing share of low-paying and low-skilled jobs held disproportionately by younger and more vulnerable workers with no or limited postsecondary education (Kalleberg, 2011; Kalleberg & Vallas, 2018). Many of those individuals also have experienced MHCs or other disabilities.

Educational support is crucial for students with MHCs. Traditional college age coincides with the onset of MHCs, and stress relating to adjusting to college attendance can exacerbate symptoms (Ellison et al., 2019; Pedrelli et al., 2015). Postsecondary institutions have identified a significant increase in student mental health needs coupled with an inundation of requests for campus support and services over the last two decades (Center for Collegiate Mental Health, 2020). Furthermore, students with MHCs have the highest dropout rates compared to students in other disability groups and students without disabilities (Hurst & Smerdon, 2000).

The second model, supported education (SEd), emerged as a promising practice in the 1990s to improve career outcomes for people with MHCs through postsecondary educational attainment and the development of human capital (Leonard & Bruer, 2006; Mowbray et al., 1999; Rogers et al., 2010; SAMHSA, 2011; Sullivan-Soydan, 2004; Unger, 1993). While there is variability among SEd programs, the core features of SEd include highly specialized and trained staff, individualized on-campus and community supports that offer student skill development, and enhanced academic and community resource linkage (Ringeisen et al., 2017).

While SEd increases enrollment for people with MHCs and improves course completion and student college experience, there are currently few longitudinal studies to determine the efficacy of SEd for degree

acquisition or entry rates into related employment fields (Gill et al., 2021; Ringeisen et al., 2017; Salzer, 2012). College students with disabilities report lower social engagement and poorer relationships associated with lower graduation rates than the general student population (Salzer, 2012). Barriers for students in SEd include a lack of support, accommodation, and transportation (Manthey et al., 2015). Additionally, program and student funding are limited for SEd (Manthey et al., 2015; Ringesien et al., 2017). While SEd programs do not formally link education with employment postcompletion, the merging of SEd and SE programs has been observed in many states to enhance the continuity of career services for people with MHCs (Manthey et al., 2012; Mueser & Cook, 2012; Ringeisen et al., 2017). Several studies found an IPS adaptation for young people with MHCs improved employment outcomes but recommended IPS paired with educational and skills training could further improve outcomes (Thompson et al., 2021).

In theory, SEd can be applied to all adult educational programs and environments (Unger, 2011). However, there has been little attention to adapting SEd to improve educational and employment outcomes for students with MHCs enrolled at the postsecondary level in CTE programs. Furthermore, no studies could be found exclusively focusing on this population, which may indicate few individuals with MHCs are engaged in postsecondary CTE programs, a gap addressed in the next section.

Lessons from Secondary CTE Successes

While SE and SEd programs are underinformed and/or underutilized on CTE vocational pathways, there are increasing efforts to promote CTE in secondary education, including for high school students with disabilities. CTE secondary education support and outcomes can serve as lessons for postsecondary providers and services. Current education policy relates education to work by focusing on college and career readiness, including CTE programs (Morningstar et al., 2017). Students with disabilities are guaranteed transition services to help bridge secondary education and postsecondary education and work under the Individuals with Disabilities Education Improvement Act, the Americans with Disabilities Act of 1990, and the Rehabilitation Act of 1973 (IDEA, 2004; Rehabilitation Act of 1973, 2012; U.S. Equal Employment Opportunity Commission, n.d.). Transition planning should be covered in a student's individualized reha-

bilitation program, including connection to educational institutions such as community colleges or vocational rehabilitation services (Shogren & Plotner, 2012). Special education professionals are tasked with preparing students with employability skills, which includes CTE connections (Harvey et al., 2020). Secondary education outlines the benefit of and connection to CTE training and employers for students with disabilities.

CTE holds many opportunities for students with disabilities. In technical high schools, students with disabilities have better secondary and transition outcomes than in traditional high schools (Dougherty et al., 2018; Hehir et al., 2013). Additionally, high school students on CTE tracks have higher graduation rates and are more likely to enroll in postsecondary education and training within eight years of graduation. This contributes to higher lifetime income (U.S. Department of Education, 2019).

However, the transition to postsecondary education, training, or career includes barriers and challenges and is insufficient to meet student needs (Forness et al., 2012). Secondary students with MHCs, or emotional and behavioral disorders, have the poorest transition outcomes with high dropout rates, unemployment, and incarceration (Metzner et al., 2020; Sweigart & Evanovich, 2015; Wagner & Newman, 2012). Challenges such as onset of mental health symptoms or diagnoses of MHCs that occur during late adolescence or early adulthood (Fryers & Brugah, 2013) can impact the successful transition from secondary to postsecondary education. Students with emotional and behavioral disorders face challenges beyond basic academic competencies (e.g., reading and writing skills), including coping with symptoms, managing disclosure, time management, and prioritizing skills, that significantly affect their educational outcomes and experience (Biebel et al., 2018). Another challenge during this transition period is that support services move from an entitlement and parent-navigated system to services based on the student opting in to support services. One such example is disability services that move from the secondary education approach of eligibility assessment upon enrollment to a fractured system of eligibility and assessment when students opt in, which is contingent upon information sharing and student awareness of the existence of disability services. Opting in can be a way many people lose services in transition (Oertel & Bragg, 2014). While there are transitional challenges, secondary education's emphasis on CTE education and training resources can be a model for postsecondary services, including SED and SE, to highlight CTE.

Postsecondary CTE: A Pathway to Middle Skill Jobs and Living Wage Work

While outcomes for secondary CTE are promising, postsecondary CTE support has been eclipsed by broad political and social support for universal college attendance (Newman & Winston, 2016). From the 1960s onward, CTE programs have been stigmatized as tracking for noncollege-bound low-performing students, deterring students and service providers from choosing CTE programs (Budge et al., 2019; Gauthier, 2020; Newman & Winston, 2016). However, rising debt, unemployment, and underemployment for many college graduates have put the college-for-all model into question (Newman & Winston, 2016).

CTE programs are a potential pathway to quality jobs, including those that pay living wages and offer good employment benefits. They are typically associated with lower tuition costs and shorter matriculation time when compared to four-year undergraduate programs (Schwartz, 2016). CTE refers to vocationally oriented certification or degree programs tracked with in-demand careers developed and taught with technical standards (National Association of State Directors of Career Technical Educational Consortium, 2012; Newman & Winston, 2016). CTE programs frequently offer both academic and career-oriented courses. Many provide students with the opportunity to gain work experience through apprenticeships, internships, job shadowing, and on-the-job training. CTE offers many diverse career tracks, including traditional programs such as construction, plumbing, and electrician to new expanding fields, including information technology, advanced manufacturing, renewable energy, and health care. CTE programs provide accelerated and specialized entry to diverse careers (Rosen et al., 2018).

CTE educational and technical programs can initiate or enhance existing career pathways through additional certificates and degrees. CTE programs can be found in secondary and postsecondary educational settings and are often associated with high schools, technical schools, and community colleges (Newman & Winston, 2016). As mentioned earlier, secondary students with disabilities in CTE programs, in both traditional high schools or vocational high schools, experience promising outcomes, including retention and graduation and opportunity to earn an industry-recognized certificate (Dougherty et al., 2018; Hehir et al., 2013; Rosen et al., 2018). While there are different CTE educational models, the goal re-

mains to, over time, advance students to more education and training to prepare for entry into specialized and skilled employment in middle-skill jobs that require more than a high school education and less than a bachelor's degree. CTE programs and jobs in CTE fields are experiencing rapid growth (Association of Career and Technical Education, 2018), especially in programs with expanding employment opportunities including health care, advanced manufacturing, and information technology (Frogner & Skillman, 2015; Hull & Kepner, 2014; Javdekar et al., 2016).

The total number of students enrolled in CTE increased 71% from 2002 to 2012, while total traditional academic college student enrollment increased 54% during the same period (Association for Career and Technical Education, n.d.). Students participating in CTE of occupational associates or certificate programs accounted for 38% of all undergraduate students in 2015 (Kena et al., 2016). Another draw of CTE is the growing underemployment of four-year college graduates taking more low-wage and part-time work (Abel & Dietz, 2019). In contrast for people with associate degrees, the percentage of CTE jobs with a salary of \$55,000 and up increased 83% from 1991–2016 (Carnevale et al., 2018). Many CTE programs increase employment outcomes (Bailey & Belfield, 2017). Short- and long-term community college nondegree certificates in fields such as allied health, information science, and mechanics increase employment rates and, in some cases, wages for those who complete (Xu & Trimble, 2016). Moreover, graduates of CTE programs can have significantly less student loan debt than their traditional academic graduate counterparts and sometimes higher starting wages. The average starting salary of graduates of the class of 2017 with a four-year bachelor's degree in communications was \$38,897 (National Association of Colleges and Employers, 2018). For someone with CTE training to become an electrician, it typically takes 18 months to complete the classroom instruction and a 2,000-hour paid on-the-job apprenticeship. The median annual wage of an electrician was \$56,900 in 2020 (Bureau of Labor Statistics, 2021a).

Despite the growth in CTE jobs and wages, there are not enough people trained and educated for middle skill jobs requiring postsecondary CTE credentials and skills (Cappelli, 2015). There is an ongoing worker shortage for many middle skill positions, including health care technicians, advanced manufacturing workers such as machinists, and information technology specialists (Holzer, 2015; Hughes et al., 2019). Jobs in fast-growing areas, including health care and advanced manufacturing, are

projected to continue hiring more workers and face shortages (Association for Career and Technical Education, n.d.). For example, phlebotomist jobs are expected to grow from 129,600 to 158,400 between 2020 and 2030, a 22% increase (Bureau of Labor Statistics, 2021b). Thus, CTE education and training can be a pathway to jobs facing a worker shortage and paying a living wage.

Despite the economic importance of CTE, we found an absence of career services including SEd practice to date relating to the practitioner training, program manuals, practice guides, or research that focus primarily on individuals with MHCs interested in pursuing or attending CTE. In studies that have been published, the proportion of current SEd participants who are in CTE is unclear. A study of SEd programs found as few as 10% included CTE, implying that these programs are a severely underused resource for people with MHCs. When enrolled, participants with MHCs were more likely to drop out of programs and half as likely to be certified or employed at follow-ups than participants with other disabilities (Flannery et al., 2011). This may be due, in part, to a lack of awareness of CTE programs on the part of practitioners and service participants and/or the lack of support for participants enrolled. The lack of more recent studies speaks to the need for investigating and addressing the low participation rate in CTE among individuals with MHCs and a need for increased CTE dissemination and integration with support for students with MHCs.

Recommendations for CTE Dissemination and Integration

CTE Information Dissemination

Information on CTE and employment should be widely disseminated among individuals with MHCs, including youth transitioning into post-secondary education or adults receiving mental health services in the community. The information should include the advantages and benefits of CTE programs such as shorter duration, less financial burden, link to job-related apprenticeship and internships, promising job prospects, and available financial aid for students with disabilities.

Additionally, information should be available to service providers, including vocational rehabilitation counselors and mental health counselors who provide ongoing support for individuals who may not be actively engaged in vocational services. Staff members of SE and SEd programs must

take the initiative to seek information and training on CTE and promote CTE among people they serve and among other service providers with whom they collaborate. Moreover, practitioners should be trained to provide competent SE and SEd CTE services that can address the varying nuances in service provision unique to CTE programs and fields. In other words, counselors in all service modalities such as SE, SEd, supportive housing, assertive community treatment (ACT) teams, and case management services should seek to acquire the knowledge, skills, and expertise about CTE to encourage and support individuals with MHCs to learn and participate in CTE educational programs and CTE employment.

Integration

Integration of clinical and vocational services produces better educational and employment outcomes among people with MHCs (Manthey et al., 2012). For example, clinical and vocational providers can work together with an employee to identify employment-related functional issues of an MHC and assist in employee requests for workplace accommodation. This collaboration helps the individual maintain employment and address mental health needs as they arise. While the benefits of integrating clinical and vocational services have been documented, more can be done to foster other community-based collaborations, such as those with local CTE programs and professional organizations. There is a need for mental health and vocational service systems to support sharing across providers and modalities so that practices that support people with MHCs can be effectively disseminated.

Future Research

There have been promising studies of integrating SE and SEd to form a full spectrum career service approach (Addington et al., 2013; Manthey et al., 2012; Manthey et al., 2015; Robson et al., 2010). Within vocational programs or other modalities that provide vocational support, comprehensive staff training on the provision in SEd is often lacking. Research on these integrated approaches could inform training initiatives and assist in assessing sustainability, efficacy, and necessity of critical services specifically tailored to CTE.

Further research is needed to give a more detailed consideration of the challenges for students with MHCs in CTE programs. Qualitative studies

could be used to provide a clearer understanding of the personal experience of students with MHCs in CTE, including the impact of educational attainment on recovery, self-efficacy, and work readiness. Longitudinal studies will help to identify barriers that arise as people navigate the shift from student to worker and secure employment in their field of choice. Such studies could also reveal the long-term career development trajectory of people with MHCs in career and technical fields. The findings of research will serve individuals with MHCs to better access and engage in CTE.

Additionally, the process of determining potential educational accommodations, including identification of functional barriers related to MHCs, and subsequently providing reasonable accommodations is a nuanced and individualized process requiring mental health literacy about which many practitioners lack knowledge and training (Porter et al., 2019). While research on educational accommodations in the postsecondary environment for students with MHCs is lacking, most of the research has been conducted within traditional undergraduate academic programs, such as the acceptance of psychiatric advanced directives during student crises (Brockelman & Scheyett, 2015). Therefore, it is important to explore how to assess and develop accommodation for students with MHC within the postsecondary CTE setting, which could be highly varied, nuanced, and contingent upon the specific CTE program and field.

Conclusion

CTE provides a pathway for individuals with MHCs to access a livable wage in high-growth occupations, often more quickly and with less financial burden than traditional academic degree programs. Stable employment and postsecondary educational attainment contribute to recovery and are critical social determinants of health. CTE training and employment also contribute to community inclusion, housing stability, quality of life, and improved physical and psychological health outcomes. Information about CTE programs and career opportunities, along with support services, should be made widely available through the mental health service system, vocational rehabilitation, and postsecondary educational services. CTE should be included in the provisions of SE and SEd service. SE and SEd service provisions should be updated to support the unique needs of CTE students and workers.

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