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Treatment Access Barriers and Disparities Among Individuals with Co-occurring Mental Health and Substance Use Disorders: An Integrative Literature Review

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Abstract

The purpose of this integrative review is to examine and synthesize extant literature pertaining to barriers to substance abuse and mental health treatment for persons with co-occurring substance use and mental health disorders (COD). Electronic searches were conducted using ten scholarly databases. Thirty-six articles met inclusion criteria and were examined for this review. Narrative review of these articles resulted in the identification of two primary barriers to treatment access for individuals with COD: personal characteristics barriers and structural barriers. Clinical implications and directions for future research are discussed. In particular, additional studies on marginalized sub-populations are needed, specifically those that examine barriers to treatment access among older, non-white, non-heterosexual populations.

Keywords

Co-occurring; Dual diagnosis; Substance use disorders; Mental health disorders; Treatment barriers

1. Introduction

An estimated 8.9 million adults in the United States have co-occurring mental health and substance use disorders (COD; Substance Abuse and Mental Health Services Administration [SAMHSA], 2015). An individual is determined to have COD if they meet clinical criteria for both a mental health disorder and at least one substance use disorder (Center for Substance Abuse Treatment, 2005). Divergent etiological theories exist regarding how these disorders may interact, but a diagnosis of COD requires that at least one mental illness and one substance use disorder (SUD) must be able to be diagnosed independently (Mueser, Drake, & Wallach, 1998; SAMHSA, 2002).

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The Institute of Medicine (IOM) defines healthcare access as “the timely use of personal health services to achieve the best possible health outcomes” (Millman, 1993, p.4). Research suggests that individuals with COD access mental health and substance use treatment at disparate rates compared to individuals without such co-morbidities (US Department of Health and Human Services, 2002; Harris & Edlund, 2005). Twenty percent of individuals with a severe mental health disorder will develop a substance use disorder during their lifetime (SAMHSA, 2015). Only 7.4% of these individuals receive treatment for both disorders, and 55% receive no treatment at all (SAMHSA, 2015).

The integrated treatment model has been identified as a best practice for providing treatment to persons with COD. Recognizing the complex nature of COD and the multitude of combinations of mental and substance use disorders, a number of treatment modalities have emerged to address specific manifestations of COD. For example, McGovern and colleagues (2009) have adapted and evaluated a cognitive behavioral therapy program (CBT) for posttraumatic stress disorder (PTSD) for use in addiction treatment programs. Findings suggest that patients who received CBT for PTSD experienced significant reductions in substance use, substance use severity, and PTSD symptoms (McGovern et al., 2009). There is also evidence that modified therapeutic community (MTC) is a promising intervention for persons with COD. A meta-analysis examining the effectiveness of modified therapeutic community (MTC) for persons with COD (offenders, outpatient, homeless) found that MTC was associated with significant treatment effects in substance abuse, mental health, employment, crime, and housing domains (Sacks, Banks, McKendrick, Sacks, 2008; Sacks, McKendrick, Sacks, & Cleland, 2010). The integrated dual disorder treatment model (IDDT) for addictions services has identified a bio-psychosocial approach, motivation enhancement, time-unlimited services, substance use counseling, multidisciplinary teams, and outreach programming as key components of evidence-based treatment across different types of interventions for persons with dual disorders (Kola & Krusynski, 2010). However, as demonstrated by this review, just as each subpopulation of individuals with COD has specific treatment needs, these subpopulations face unique barriers that may prohibit their ability to access such specialized treatment.

Untreated and/or un-identified COD have been associated with increased difficulties with treatment engagement, developing a therapeutic alliance, and adhering to treatment regimens (SAMHSA, 2005). Individuals with untreated COD have increased odds for medical illness, suicide, and early mortality (Chi, Satre, & Weisner, 2006; Rush & Koegl, 2008; SAMHSA, 2015). They frequently present with anxiety, depression, personality disorders, have a history of homelessness or incarceration, and are women (Brooner, King, Kidorf, Schmidt, & Bigelow, 1997; Bassuk, Buckner, Perloff, & Bassuk, 1998; Reiger et al., 1990; Robins, Locke, & Regier, 1991; Rush & Koegl, 2008; Watkins et al., 2004).

Extant studies utilizing national population survey data have examined patterns of treatment utilization among persons with COD (Kessler et al., 1994, 1996; Hatzenbuehler et al., 2008; Mojtabai, Chen, Kaufmann, & Crum, 2014). Kessler and colleagues' (1994) examination of National Comorbidity Survey data illustrated that of those with lifetime mental disorders and SUD, less than 40% have ever received professional treatment and less than 20% of persons recently diagnosed had received treatment in the previous twelve months. An

examination of National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) revealed that treatment entry and utilization may be mediated by race/ ethnicity, and mental disorder type (Hatzenbuehler et al., 2008). Mojtabi and colleagues' (2014) suggest that perceived barriers to treatment among persons with COD may be related to mental disorder type. While there are numerous studies documenting high service utilization and costs among persons with COD, other studies suggest that this population has markedly lower treatment entry and utilization than those with only substance use or only mental disorders (Curran et al., 2003; Simon & Unutzer, 1999; Verduin, Carter, Brady, Myrick, & Timmerman, 2005). The high prevalence of COD, low treatment entry among this group, known risk factors, and the complexity of the relationship between disorder type, structural challenges, and treatment utilization indicate a need for increased access to treatment for this vulnerable population.

The Mental Health Parity and Addiction Equity Act and the Affordable Care Act have mandated increased availability for behavioral health and addiction treatment services (Mental Health Parity and Addiction Equity Act, 2008; Patient Protection and Affordable Care Act, 2010). However, unique barriers to treatment access among individuals with COD may make such service delivery challenging (Druss & Mauer, 2010). Further, barriers to treatment access lead to low treatment entry, underutilization of services, and poorer outcomes (Millman, 1993). A greater understanding of barriers to treatment may facilitate increased treatment access and, therefore, enhanced outcomes for individuals with COD.

Empirical work suggests that individuals with COD access treatment at disparate rates compared to individuals without co-morbidity. In order to gain an extensive understanding of barriers to treatment access for individuals with COD, an integrative review strategy was undertaken. An integrative review strategy allows for the simultaneous examination of diverse methodologies to gain a more comprehensive understanding of a particular topic (Whittemore & Knafl, 2005). The aims of this integrative review are to: (1) identify and synthesize the research on barriers to treatment access for individuals with COD, and (2) identify populations among individuals with COD that are underrepresented in the treatment access literature.

2. Methods

Whittemore and Knafl's (2005) updated methodology for integrative reviews has been used for this study. This updated methodology consists of five stages: problem identification, literature search, data evaluation, data analysis, and presentation (Whittemore & Knafl, 2005).

2.1 Search Strategy

A comprehensive literature search (stage two) was conducted to identify studies that met the following criteria: (a) Peer-reviewed, English language article published between January 1993 and January 2013, (b) related to treatment access, and (c) related to individuals with COD. The terms dual diagnosis and COD began to appear in peer-reviewed literature in the early 1990s. The date range for this review coincides with the emergence of these terms. We chose articles published between 1993 and 2013 because we wanted to identify current

barriers to treatment access yet still capture a robust range of studies to examine. Inclusion criteria were broadly defined to enable identification of empirical/non-empirical studies from quantitative and qualitative methodologies and theoretical/conceptual literature focused on treatment access for individuals with COD (Whittemore & Knafl, 2005). A research librarian was consulted to discuss potential databases and identify search terms.

In September 2013, ten electronic scholarly databases were searched using three databases search engines: EBSCO (Academic Search Complete, CINAHL/ CINAHL Plus, Criminal Justice Abstracts, PsycARTICLES, PsycINFO, Social Work Abstracts), PubMed (Medline), and Social Sciences Databases/ProQuest (Social Services Abstracts, Sociological Abstracts). As index terms vary across databases and multiple databases were searched, the authors chose to utilize keywords rather than indexing terms. Combinations of the following search terms were used: “co-occurring;” “dual-diagnosis;” “substance abuse;” “mental illness;” “treatment;” “access;” “engagement;” and “client.” An additional search utilizing the same search strategy was conducted in January 2015 to determine if additional relevant studies had been published between September 2013 and January 2015.

2.2 Data evaluation, analysis, and presentation

To address data evaluation, each article examined by the first and second authors using a data evaluation tool. The data evaluation tool utilized a five-point scale to examine the theoretical/methodological rigor of each article and article relevance to the study aims. A score of 1 indicated low theoretical/ methodological rigor and/or relevance to the study aims and a score of 5 indicated high theoretical/ methodological rigor and/or relevance to the study aims (Whittemore & Knafl, 2005). Scores on this measure were above three for all included articles and therefore, no articles were excluded from the study based evaluation tool score.

Data analysis consists of data reduction, data display, data comparison, and conclusion drawing and verification (Whittemore & Knafl, 2005; Miles & Huberman, 1994). The first author critically evaluated each study to identify represented sample populations and barriers to treatment access for individuals with COD (*data reduction*). A data extraction form that was used to capture study characteristics including sample, geographic location, study methods, article type, and main findings (*data display*; George, 2000). Data were compared across studies to identify how barriers clustered into themes and subthemes. The second author reviewed the extracted data to ensure studies met inclusion criteria and that thematic conclusions were justified. Disagreements were discussed between both authors until theme consensus was reached. The first and second author cross-checked included articles to verify that categorization of main findings were consistent with the original article (*data verification*; Whittemore & Knafl, 2005; Miles & Huberman, 1994). Finally, all authors reviewed findings for agreement.

3. Results

3.1. Overview of selected studies

Thirty-six articles meeting inclusion criteria were identified (See Table 1). Twenty-four articles were empirical articles, nine were theoretical/applied articles, two were review articles, and one article was a committee proceeding. A descriptive review by Barrowclough et al. (2006) was included because it presented unpublished data from a randomized control treatment trial. A review by Sterling et al. (2010) was included because it presented unpublished findings from a National Institutes of Health (NIH) funded study, R01AA16204.

3.1.2. Populations represented in the literature—Of the 36 included articles, 19 focused on specific subpopulations of individuals with COD. Five of these studies focused on adolescents; four were related to women with COD; four focused on individuals involved in the criminal justice system; three studies focused on veterans. Three studies focused on individuals with SUDs and severe and persistent mental illness (SPMI). Two studies focused on treatment access for men of color or ethnic minorities and two studies focused on individuals with low socio-economic status. Individuals experiencing homelessness; and individuals with intellectual disabilities were represented with one study each.

3.2 Findings

Two broad categories of barriers to service access were identified from an analysis of the literature: personal characteristics barriers and structural barriers.

3.2.1. Personal characteristics barriers—Fifteen of 36 articles described personal characteristics barriers to treatment access. Personal characteristics barriers identified in this review were related to personal vulnerabilities and personal beliefs. Personal vulnerabilities barriers include individual characteristics, knowledge, and skills that may impede treatment access (Tawil, Vester, & O'Reilly, 1995). Personal beliefs barriers are attitudinal, motivational, and belief-based impediments that formally or informally inhibit an individual's ability to mobilize personal resources to access care (Kalmuss & Fennelly, 1990; Venner et al., 2012).

3.2.1.1. Personal vulnerabilities: Symptoms associated with concurrent mental illness and SUDs may exacerbate individual vulnerability and act as barriers to treatment access. For example, individuals with COD including psychosis are extremely vulnerable because their substance use often worsens mental health symptoms, creates psychosocial instability, lowers motivation, and decreases their ability to seek and access treatment (Green, Drake, Brunette, & Noordsy, 2007; Barrowclough, Haddock, Fitzsimmons, & Johnson, 2006). Individuals with co-occurring schizophrenia and SUDs may have impaired cognition, lack social interaction skills, and have low energy levels and low motivation (Bellack & DiClemente, 1999; Little, 2001). Their level of functioning such as emotional capacity and ego strength may inhibit their ability to participate in traditional treatment modalities (Little, 2001). Individuals who are in crisis might also be too psychologically vulnerable to participate in treatment. (Little, 2001). Further, distress and disorganization due to dual

disorders may affect an individual's ability to engage in services and follow through with a treatment plan (Drake, Morse, Brunette, & Torrey, 2004). The impact of these symptoms is further intensified among individuals with intellectual disabilities, SUDs, and severe mental illness. A study of 5,099 Medicaid beneficiaries found that individuals who were diagnosed with intellectual disabilities, SUDs, and severe mental illness were less likely than people with none of these diagnoses to initiate (26% compared with 32%) or engage in SUD treatment (51% compared with 54%; Slayter, 2010).

3.2.1.3 Personal beliefs: Personal beliefs were identified as a barrier to treatment access across multiple populations. These included personal beliefs about treatment providers, cultural beliefs, and stigma related to substance abuse and mental illness. In two qualitative studies, both women diagnosed with COD and service providers working with women with COD who were criminal justice involved cited lack of trust of institutions as a barrier to the women accessing treatment (Johnson, 2014; Penn, Brooks, & Worsham, 2002). Similarly, 26.4% of single mothers receiving welfare cited fear as a reason for not accessing treatment despite wanting it (Rosen, Tolman, & Warner, 2004).

Ro, Casares, Treadwell, and Braithwaite (2006) argue that cultural attitudes and beliefs about mental illness, substance abuse, and help-seeking are barriers to treatment among men of color and low socioeconomic status. For marginalized individuals, such as people of color or lower socioeconomic status, diagnosis of mental illness and/or SUDs adds an additional burden of stigma to their already marginalized status (Eliason & Amodia, 2006). Stigma also plays a role in adolescents' ability to access treatment. Perceived stigma by both adolescents and their parents may act as a barrier to treatment seeking (Hawkins, 2009). Compounding these beliefs are provider beliefs about stigma associated with substance use. Sterling et al. (2010) note that provider beliefs about stigma associated with substance use often leads medical practitioners to diagnose adolescents with psychiatric disorders instead of SUDs due to a fear of jeopardizing adolescents' futures.

3.2.2. Structural Barriers—Thirty of 36 articles described structural barriers to treatment access. Structural barriers are factors and practices rooted in social, political, legal, and service systems "that systematically hinder access [to care] to certain groups of people" (Kalmuss & Fennelly, 1990, p. 215; Sumartojo, 2000). These barriers are related to the availability of services, how services are provided, service location, and the organizational configuration of service providers (Millman, 1993). In addition, structural barriers include financial factors such as insurance coverage and reimbursement levels (Millman, 1993). In this integrative review, the following structural barriers were identified: service availability, disorder identification, provider training, service provision, racial/ ethnic disparities, and insurance/ policy related barriers.

3.2.2.1. Service availability: A primary barrier to treatment access for individuals with COD is service availability. In general, there is a lack of specialized services to treat individuals with COD (residential or rehabilitation programs, intensive inpatient care, etc.). Focus groups with clinicians working in a psychiatric clinic from a variety of disciplines reported needing additional training or additional staff that specialized in COD (Carey, Purnine, Maisto, Carey, & Simons, 2000). In rural and resource-poor settings, this lack of

specialized services is exacerbated. Generally, substance abuse and mental health programs are very limited in rural areas and (Hester, 2004). Geographic proximity to services and lack of transportation or resources to obtain transportation to reach these limited services are commonly cited in the literature as a barrier to treatment access (Adler, Pritchett, Kauth, & Mott, 2014; Godley et al., 2000; Rosen et al., 2004). In particular, rural veterans and individuals who are homeless or criminal justice-involved have fewer resources, lack transportation, and have limited access to assistance and support services (Adler et al., 2014; Godley et al., 2000). On an online survey of 296 staff providing services to veterans who were homeless, 53% cited fewer resources, 29% cited lack of transportation, and 20% cited limited access to support and services as barriers to substance use and mental health services (Adler et al., 2014). Another study of 11 projects that served individuals with COD as they transition from homelessness to permanent- supported housing found that even once individuals were stabilized in housing there was still a general lack of expertise for integrated treatment in the communities studied (Foster, LeFauve, Kresky-Wolff, & Rickards, 2010).

3.2.2.2. COD Identification: Another barrier to treatment access for individuals with COD is disorder identification. It is common that practitioners may identify a substance use disorder or a mental health disorder but not the co-occurrence of both. Findings suggest under-identification rates are particularly high among adolescents, individuals from low socioeconomic backgrounds, and racial/ ethnic minorities. COD identification is a significant barrier to treatment access for adolescents with few adolescents receiving mental health and substance use screening in medical settings. In a review of the literature about treatment access for adolescents, Sterling, Weisner, Hinman, and Parthasarathy (2010) report that comprehensive screening and assessment are not commonly used in psychiatric or primary care settings. One study of 4,060 adolescents enrolled in managed care organizations found that overall adolescents receive preventative, counseling, and screening services at 20%-50% of optimum rates (Bethell, Klein, Peck, 2001). Under-identification of both substance use and mental health disorders in primary care and other systems decreases the likelihood many adolescents receive the treatment they need (Sterling et al., 2010).

Under-identification of COD has also been documented among racial/ethnic minorities and individuals from low socioeconomic backgrounds. A study of 195 individuals from three publically funded substance abuse facilities that primarily served low-income racial/ethnic minorities found that half of the individuals in the sample who screened positive for COD reported that they had never received mental health treatment (Watkins, 2004). In addition, one-third of the participants reported this was their first substance abuse treatment episode highlighting the need for increased screening.

3.2.2.3. Provider training: Contributing to under-identification of COD is a lack of sufficient training to identify both mental health and SUDs (Carey et al., 2000; Foster et al., 2010; Green et al., 2007). Among medical practitioners, most psychiatric programs do not provide training in co-morbid disorders and many family practice residents do not feel confident in discussing substance use issues with their patients (Blumenthal, Gokhale, Campbell, & Weissman, 2001). A study of 2626 medical residents completing their last year

of training found that approximately 1 in 10 residents in eight specialties felt unprepared to manage patients with substance use disorders and/or depression (Blumenthal et al., 2001). Another deficit in medical provider training is related to knowledge about community mental health and substance use referral sources. Medical providers often cite a lack of knowledge about appropriate referral sources as a barrier to identifying substance abuse in adolescents (Sterling et al., 2010).

With regard to behavioral health practitioners, mental health professionals may be more qualified to identify COD than SUD professionals (Kerwin, Walker-Smith, & Kirby, 2006). It is important to increase the rate that individuals in treatment for mental health problems are screened and referred for SUD treatment (Clark et al., 2008). At the same time, SUD treatment clinicians need to be able to screen, assess for, treat, or refer those with mental health disorders as well (Clark et al., 2008). Disparate training and licensure requirements may influence providers' capacity to identify COD. All but one state requires a master's degree for mental health licensing while licensed substance abuse clinicians are only required to have a bachelor's degree or in some states less education (Kerwin et al., 2006). Interprofessional training may increase access to treatment by increasing provider capacity for mental health and SUD identification (Hawkins, 2009).

3.2.2.4. Service provision: Another structural barrier to treatment access for individuals with COD is service provision. Service provision includes service barriers such as organizational red tape and barriers related to treatment provision, such as the way that treatment is provided. The service barriers an individual encounters during their pre-treatment phase has the potential to impact the accessibility of treatment services. In a study examining administrator and staff perceptions of integrated treatment systems for COD in Los Angeles county, Grella, Gil-Rivas, and Cooper (2004) found that substance abuse staff indicated significantly poorer rates of accessibility for clients with COD due to excessive waiting lists or delays; red tape involved in treatment enrollment; failure to make clients feel welcome; or provider tendency to select clients based on potential for positive treatment outcomes. A study examining perspectives of prison and after care providers had similar findings (Johnson et al., 2014). Service providers for women with COD who are incarcerated describe long wait times for appointments as a deterrent to treatment and a lack of discharge planning as related to women's inability to access treatment (Johnson et al., 2014).

Treatment needs vary by individual and population characteristics. As such, traditional treatment modalities may act as a deterrent for some individuals with COD. For individuals with psychosis, the confrontational treatment style of traditional substance abuse programs is contraindicated (Bellack & DiClemente, 1999). For those with schizophrenia, traditional approaches are often a deterrent because programs fail to address specific learning and performance deficits characteristic to schizophrenia (Bellack & DiClemente, 1999). For adolescents, treatment agencies may be unprepared to treat youth or lack comprehensive, developmentally appropriate treatment services for adolescents with COD (Sterling et al., 2010). Further limiting treatment access, youth are often referred to SUD treatment with the stipulation that they will complete treatment and achieve a period of abstinence before their mental health issue will be evaluated or addressed (Libby & Riggs, 2005). Lack of

sensitivity to individual cultural needs (e.g. culturally-specific services) may also play a role in whether or not an individual with COD accesses treatment. A retrospective chart review of 129 consecutive admissions found that while African-Americans persons had higher mean duration of drug use than their white counterparts, they had fewer mean number of substance abuse treatment admissions and lower treatment success than their White counterparts (Eliason & Amodia, 2006). Eliason and Amodia (2006) suggest that lack of culturally sensitive services or culturally competent staff may be a reason for the underrepresentation of people of color and ethnic minorities in substance abuse and mental health treatment.

There are also a number of gender-specific factors that may inhibit treatment access. One factor consistently mentioned by women as a barrier to treatment access is a lack of treatment services that provide onsite childcare. An examination of data collected during the Women's Employment Study and the National Co-morbidity study found that among single mothers who received welfare and wanted substance abuse and/or mental health treatment but did not access it, 7.5% cited not having childcare as a reason for not accessing services (Rosen et al., 2004). In addition, some research suggests that women have gender-specific treatment preferences. In a qualitative study examining the treatment concerns of women with COD, women expressed a desire for treatment environments that had welcoming and empathetic staff; client-directed goals; and women only groups (Penn et al., 2002). Treatment service providers that do not address these gender-specific preferences in treatment provision may deter women from accessing treatment services.

3.2.2.5. Racial and Ethnic Disparities: There are notable racial and ethnic disparities in treatment access for individuals with COD. A survey of drug dependent inmates in correctional facilities determined Whites were more likely to have been diagnosed with a co-occurring mental health disorder and were more likely to have mental health counseling and substance use treatment as part of their sentence than non-whites (Nowotny, 2015). There are similar racial and ethnic disparities in treatment referral. An examination of data from caregivers who participated in the National Study of Child and Adolescent Well- Being (NSCAW) longitudinal study found that Native American parents were assessed for mental illness less frequently than other races/ ethnicities even though they had the highest prevalence of mental illness and emotional problems (Libby et al., 2007). In addition, only 20% of Native American caregivers that were assessed for mental illness were referred for service (Libby et al., 2007). Conversely, Native American parents were assessed more frequently for substance use than their study counterparts, which may be related to assumptions about the substance use treatment needs of Native Americans based on stereotypical assumptions that they have a high prevalence of substance use issues (Libby et al., 2007). This is consistent with Eliason and Amodia (2006) who suggest that societal oppression may contribute to differential, inaccurate, and under diagnosis of individuals who are racial/ethnic, gender, or sexual minorities. These racial and ethnic disparities in mental health and substance abuse treatment access are not bound by age. A study of administrative data of Oregon youth found that Native American youth accessed mental health services less frequently compared to other youth, indicating that disparities in access to mental health services for Native Americans is not limited to adults (Deck & Vander Ley, 2006).

3.2.2.6. Insurance/ policy-related barriers: Insurance and coverage policies act as barriers to treatment access. Lack of insurance among men of color and low socioeconomic status hinder treatment access (Ro et al., 2006). Among single mothers who receive welfare who wanted substance abuse and/or mental health treatment but did not access it, 26.4% cited cost of services or lack of insurance as a reason for not accessing treatment (Rosen et al., 2004). For individuals who have insurance, insurance benefits are often more generous for mental health services than for substance use treatment, so SUDs are at risk of being under diagnosed and untreated (Clark et al., 2008). In addition, some Medicaid programs do not cover SUD treatment, which also creates barriers to access (Foster et al., 2010).

Conversely, in some states, Medicaid may facilitate substance use and mental health treatment access for individuals with COD, with those without Medicaid accessing services at much lower rates than those with Medicaid coverage. A study of administrative data for 5,813 Oregon youth found that after controlling for group differences and system changes over time, 42% of youth with Medicaid utilized mental health services within the same year they received substance abuse treatment while only 8% of non-Medicaid eligible youth accessed mental health services (Deck & Vander Ley, 2006). Despite these seemingly high rates of access for Medicaid youths, the Oregon study demonstrated that Oregon youth had service utilization much lower than the estimated prevalence of COD further illustrating a service gap for youth with COD (Deck & Vander Ley, 2006). Lack of coverage for prevention and early intervention treatment decreases treatment access for adolescents until their symptoms escalate (Sterling et al., 2010). Insurance overage limits or time-limited services further decreases access to needed services (Sterling et al., 2010). Additionally, the restrictions associated with publically funded services, such as specialized programs for specific populations (e.g. pregnant women) and lifetime or yearly limits on access to care, create barriers to access (Sterling et al., 2010). Health plans interact in a variety of ways to produce economic incentives or disincentives for integrated care (Libby & Riggs, 2005). Treatment access is increased by financial incentives from integrated service systems for early detection and intervention (Libby & Riggs, 2005).

4. Discussion

4.1 Main findings

The overall aim of this integrative review was to identify barriers to treatment access for individuals with COD and to identify populations in need of such treatment that are underrepresented in the literature. Two primary types of barriers to treatment access for individuals with COD were identified: personal characteristics barriers and structural barriers. Nine sub-populations were identified as underrepresented in the literature, including adolescents, women, men of color/ ethnic minorities, veterans, individuals with low socio-economic status, individuals with SPMI, individuals who are involved in the criminal justice system or are experiencing homelessness, and individuals with intellectual disabilities. Notably absent from the literature were studies examining treatment access for individuals who identify as LGBTQ, older adults, and individuals of Hispanic descent. With only 7.4% of individuals with COD receiving treatment for both disorders, and 55%

receiving no treatment at all, it is imperative we identify and address barriers to treatment access to improve outcomes for this underserved population (SAMHSA, 2015).

4.2 Clinical implications

This is the first review of its kind to integrate extant literature on barriers to treatment access among individuals with co-occurring mental health and SUDs. Consistent with Kohn, Corrigan, and Donaldson (2001), findings from this review suggest one strategy to increase accessibility to treatment for individuals with COD may be to shift towards a more client-centered approach to service provision. This not only includes specialized treatment programs that generally meet the needs of individuals with COD but also programming that considers different client characteristics such as mental and substance use disorder type and combination (Hatzenbuehler et al., 2008; McGovern et al., 2009; Mojtabi et al., 2014). For example, individuals with SPMI may be more likely to access treatment that utilizes a less confrontational treatment modality such as harm reduction programs (Bellack & DiClemente, 1999). Increased availability of developmentally appropriate treatment options might increase treatment access among adolescents (Sterling et al., 2010). Further, approaches that require abstinence prior to mental health assessment may create missed opportunities to engage clients with dual disorders (Libby & Riggs, 2005).

Treatment services with substantial entry barriers are also a significant deterrent to treatment access. Reducing organizational red tape and developing pre-treatment programming that can engage clients while they wait for availability of intake and treatment appointments may increase treatment enrollment (Grella et al., 2004; Johnson et al., 2014). Flexible service provision, such as increasing evening and weekend hours or providing satellite or home-based services for individuals in rural areas, may address transportation challenges. Finally, as is well documented in the literature, integrated service systems with integrated communication may enhance treatment access (see review Drake et al., 2004; Kola & Krusynski, 2010). Single-entry point and co-located and/or integrated assessment, treatment, and case management services are key components of increasing treatment access among this vulnerable population (Drake et al., 2004; Minkoff, 2014). A recent qualitative study that examined barriers to client-centered treatment in rural communities found that flexible, community-based, wrap-around services that address substance use, mental health, and basic needs in an integrated way may increase the likelihood of individuals' accessing treatment when significant barriers such as transportation, childcare, and geographic proximity to services in resource poor, rural communities are present (Browne et al., 2015). Integrated services must be flexible and client-centered to maximize treatment accessibility for individuals with COD, particularly those who face structural barriers to treatment (Kola & Krusynski, 2010).

Findings from this review also indicated that another major barrier to accessing services for individuals with COD is a lack of capacity to identify substance use and mental health disorders among medical, mental health, and substance abuse service providers (Carey et al., 2000; Foster et al., 2010; Green, et al., 2007; Blumenthal et al., 2001). Development of certification and training standards for clinical assessment of COD for substance abuse, mental health, and medical professionals may increase dual disorder identification (Kerwin

et al., 2006; Hawkins, 2009). Further, increased communication and collaboration among medical, mental health, and substance abuse service providers may increase dual disorder identification, inter-professional knowledge with regard to dual disorders, and treatment referrals (Sterling et al., 2010). Racial and ethnic disparities in screening and referral also serve as a barrier to access among minority populations (Nowotny, 2015; Libby et al., 2007; Deck & Vander Ley, 2006). Universal screening across service settings for both mental health and SUDs may decrease inconsistent and biased referrals and increase identification of dual disorders among minority populations. Compounding disparities in screening and referral among minority populations is a lack of culturally specific services and/or diverse, culturally competent staff (Eliason & Amodia, 2006). Targeted workforce development and recruitment of diverse substance abuse and mental health professionals may address cultural barriers to treatment access.

4.3 Limitations and directions for future research

There are limitations to this integrative review that merit attention. Differing research designs and sampling frames between studies prevented cross-study statistical comparison (Cooper, 1998). It is also possible that relevant studies may have been omitted due to the search strategy and inclusion criteria (Conn et al., 2003; Avenell, Handoll, & Grant, 2001; Whittemore, 2005). Focusing only on barriers to treatment access for individuals with COD, this review is unable to compare its findings to barriers to treatment access for individuals with only substance use disorders and barriers for individuals with only mental health disorders. Although some research has compared outcomes for individuals with COD to individuals with a single substance use or mental health disorder (Seay & Kohl, 2015), this comparison was outside the scope of this review. Future work can compare barriers to treatment across these groups (COD, mental health disorders only, SUDs only). Finally, as this review was limited to articles published in peer-reviewed publications, this review is susceptible to publication bias. It is possible that other articles examining treatment access for individuals with COD exist but have not been published due to factors such as submission and publication lag, insignificant findings, or a lack of resources to publish the study (Bartolucci & Hillegass, 2010). The present results should be interpreted within the context of these limitations.

Additional research examining barriers to treatment access for individuals with COD is needed. In particular, additional research should be conducted to further examine barriers to treatment access for non-White, non-heterosexual populations with COD. Notably absent from the literature were studies examining treatment access for individuals who identify as LGBTQ, older adults, individuals of Hispanic descent, and individuals with tri-morbid chronic medical conditions or trauma and COD. Studies that explore differences in treatment access across these underrepresented subpopulations of individuals with COD are needed to ensure more client-centered care. More studies are also needed that examine the impact of cultural norms and environmental factors as barriers to treatment access for individuals with COD. In addition, with the inclusion and expectation of behavioral health services now nationally mandated to be in accord with the Mental Health Parity and Addiction Equity Act, future research examining access to care for individuals with COD will be needed to

determine the role this new policy will have on possibly improving or decreasing such access.

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Disclosures

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(* Indicates inclusion in integrative review)

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Highlights

- Co-occurring disorders are associated with low service use and negative outcomes.
- We examine treatment access barriers for persons with co-occurring disorders.
- Treatment access barriers include personal characteristics and structural barriers.
- Few studies examine access barriers for older, non-white, non-heterosexual persons.
- Studies on treatment access barriers for underrepresented groups are needed.

Figure 1.
Search Strategy

Table 1

Article type, study design, sample, setting, key findings, and identified barriers of reviewed studies.

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
Adler et al., 2014	Empirical	Mixed methods (survey/ qualitative content analysis with open-ended questions)	296 staff from 30 VA Community based outpatient clinics	Rural veterans have fewer resources, lack transportation, and have limited access to assistance and support services.		✓
Bethell, Klien, & Peck, 2001	Empirical	Quantitative/ survey	Diverse group of adolescents (14-18) enrolled in commercial or public managed care health plans (n=4,060); 5 sites: 2 N. California; 2 S. California; 1 NY	Few adolescents receive screening on key issues such as mental health and substance use due to teen access barriers and lack of provider training.		✓
Brown & Melchior, 2008	Empirical	Included 4 studies; 1 was relevant to this review. Included study: quasi-experimental nonequivalent control group design using an intent-to-treat model.	Data from the National Women with Co-Occurring Disorders and Violence Study (WCDVS) [Participants were women 18 years of age or older who met diagnostic criteria for a mental health disorder and a substance use disorder and had a history of violent or traumatic experiences	Women with higher burden (presence of each of the following: jail within past 30 days, history of homelessness, physical illness or disability, involuntary psychiatric admission, history of child abuse, and current interpersonal abuse) were more likely to leave their program within the first weeks of Treatment program. vulnerable population.	✓	
Blumenthal et al., 2001	Empirical	Quantitative/ survey	National stratified random sample of residents (n=2626) in 8 specialties (internal medicine, pediatrics, family practice, obstetrics/ gynecology, psychiatry, general surgery, orthopedic surgery, and anesthesiology)	Most psychiatric programs do not provide training in co-morbid disorders and many residents across specialties do not feel confident in discussing substance use issues with patients.		✓
Carey et al., 2000	Empirical	Qualitative/ focus groups	Services providers (n=12) from a mid-sized city (nursing, counseling, social work,	Lack of specialized services to treat CODs is a barrier (residential/ rehab programs, intensive inpatient, etc.).		✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
			rehabilitation, and psychiatry).	Finding case managers and other personnel who are trained to work with individuals with CODs is a barrier to integration efforts.		
Deck & Vander Ley, 2006	Empirical	Quantitative/ secondary analysis	5813 Oregon adolescents	42% of youth with Medicaid utilized mental health services within the same year they received substance abuse treatment while only 8% of non-Medicaid eligible youth accessed mental health services. Among both Medicaid eligible and non-Medicaid eligible youth, Native Americans accessed the least mental health services. Medicaid youths had service utilization much lower than the estimated prevalence of co-occurring disorders.		✓
Eliason & Amodia, 2006	Empirical	Quantitative/ Retrospective chart review	129 consecutive admissions to a residential program for substance abusers with co-occurring physical and/or mental health disorders	African-Americans persons had higher mean duration of drug use than their white counterparts, they had fewer mean number of substance abuse treatment admissions and lower treatment success than their White counterparts	✓	✓
Foster et al., 2010	Empirical	Qualitative analysis of project archives	11 Collaborative Initiative to Help End Chronic Homelessness (CICH) projects that serve individuals with CODs as they transition from homelessness to permanent-supported housing	Lack of stable housing among individuals who were homeless and had CODs was a barrier to accessing care. Once the individuals were housed poor previous experiences with service providers and a lack of knowledge about treatment benefits impacted accessing treatment. There was a general lack of expertise for integrated treatment in the		✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
				communities in the study. Insufficient number of qualified staff/ lack of advanced staff training to address CODs.		
Godley et al., 2000	Empirical	Qualitative/ program evaluation	9 rural counties; 54 individuals with CODs and significant criminal justice involvement participating in a Treatment Alternatives for Street Crimes/Mental Illness Substance Abuse program, which consisted of case management instead of incarceration.	Participants identified environmental barriers (rurality, transportation, or homelessness) as barriers to access for individuals who need substance abuse and mental health services.		✓
Grella, Gil-Rivas, Cooper, 2004	Empirical	Quantitative/ survey	Staff and administrators from 10 MH and 15 residential publicly funded SUD treatment programs in Los Angeles (n=260)	Substance abuse staff indicated significantly poorer rates of accessibility for COD clients in the following areas: excessive waiting lists or delays; red tape involved in treatment enrollment; reasonable cost of services; make clients feel welcome; creaming of clients; MH staff rated themselves lower on availability of evening/ weekend service hours.		✓
Hartwell et al., 2014	Empirical	Quantitative/ secondary data analysis	Merged administrative data on all ex-inmates with open mental health cases released from Massachusetts Department of Corrections and two County Houses of Corrections from 2007 to 2009 (N =2,280) and substance abuse treatment outcome data through 2011	Males are less likely to seek SA treatment post release than females. Black and Hispanic individuals were less likely to engage in treatment than their white counterparts. Individuals with sexual offenses were less likely to access treatment than those with other offenses.	✓	
Johnson et al. (2014)	Empirical	Qualitative	14 staff working with reentering	Providers noted a lack of resources to	✓	✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
			women with CODs in a state prison and aftercare system in Rhode Island	provide treatment and / or discharge planning as related to women's inability to access treatment. Long wait times for appointments were also a deterrent to accessing treatment. Women's lack of trust of institutions or inability to follow through with the treatment plan are also barriers.		
Kerwin, Walker-Smith, & Kirby, 2006	Empirical	Qualitative/ content analysis	Review of state regulations for licensure/ certification for SUD MH professionals	All but one state requires a master's degree for mental health licensing while SA only requires a BA or lower. All but one state requires a master's degree for mental health licensing while SA only requires a BA or lower.		✓
Libby et al., 2007	Empirical	Quantitative/ secondary analysis	3325 caregivers of 5,501 children who were the subject of an investigation of child abuse or neglect conducted by Child Protective Services between October 1999 and December 2000	American Indian (AI) parents were assessed for mental illness less frequently than others races/ ethnicities even though those assessed had a high prevalence of mental illness. Of those assessed only 20% were referred for service. American Indian parents were assessed more frequently for substance use than their study counterparts.		✓
Mericle, 2012	Empirical (secondary analysis); National sample dataset; 3,972 clients entering outpatient substance abuse treatment at 30 treatment programs	Quantitative/ secondary analysis	National sample dataset; 3,972 clients entering outpatient substance abuse treatment at 30 treatment programs	Overrating and underrating were found among counselors. Counselors failed to rate 32% (n = 691) of clients who reported psychiatric symptoms as needing mental health services, even though 36% (n = 250) of these clients endorsed need for mental health services.		✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
				Counselor overrating of need for services approximately 4% (n = 68) of clients who did not endorse psychiatric symptoms.		
Nowotny (2015)	Empirical	Quantitative/ secondary analysis	n=5180 inmates housed within 286 prisons; data from the 2004 Survey of Inmates in Correctional Facilities	Whites were more likely to have mental health counseling and substance use treatment as part of their sentence; With regard to treatment utilization 46% of whites reported having received treatment compared to 43% of blacks and 33% of Latinos.		✓
Penn, Brooks, & Worsham, 2002	Empirical	Qualitative/ focus group	7 women participating in a larger study about COD interventions in Arizona	Women expressed a desire for welcoming and empathetic staff; client-directed goals; and women only groups' The women expressed a perception that the system is unjust and unfair (particularly in relation to CPS).	✓	✓
Ro et al., 2006	Empirical	Quantitative/ survey	National sample in data sources used in the NHDR (no other sample description given)	Barriers to mental health and substance abuse services among men of color and low socio-economic status are structural (no insurance, lack of culturally competent services, stigma) and cultural (cultural attitudes about mental illness, substance abuse, or help-seeking).	✓	✓
Rosen, Tolman, & Warner, 2004	Empirical	Quantitative/ Secondary analysis	Data from Women's Employment Study (n=1446) and the National Co-morbidity Survey (n=2379)	Structural barriers to treatment for women include childcare, cost of treatment, and transportation. Of women who wanted treatment but did not access it, 7.5% cited no childcare, 26.4% cited cost of services or lack of insurance, and	✓	✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
				9.4% cited a lack of transportation as a reasons for not accessing treatment; reasons single mothers cited for not seeking treatment despite wanting it included a lack of time (11.3%) or knowledge about where to seek treatment (13.2%) and fear (26.4%). Having two or more disorders increased the respondent's access to services; the number of barriers predicted service utilization with three or more barriers predicting no service utilization.		
Slayter, 2010	Empirical	Quantitative/ Secondary analysis	National sample of Medicaid beneficiaries with ID/SA/SMI ages 12 to 99 (N = 5,099) and their counterparts with no ID/SA/SMI (N = 221,875).	SA treatment utilization suggest that people with ID/SA/SMI were less likely than people with no ID/SA/SMI to initiate (26 percent compared with 32 percent) and engage (51 percent compared with 54 percent).	✓	
Smelson et al., 2005	Empirical	Quantitative/ 8 week naturalistic feasibility study	59 subjects recently hospitalized within the VA system with a mental illness SUD who were offered time limited case management (TLC). TLC treatment group (n = 26); comparison group (n = 33).	Individuals in TLC program were more likely to engage and adhere to day treatment and meds than individuals who did not suggesting time limited case management assisting in the linkage of care upon discharge may improve treatment initiation and adherence post-hospitalization.		✓
Smelson et al., 2012	Empirical	Quantitative/ prospective randomized trial	102 Veterans in New Jersey: (1) met current DSM-IV or ICD diagnostic criteria for a substance abuse or dependence disorder or poly-substance use, (2) had used	Individuals in the TLC intervention (described above) attended more inpatient sessions and more sessions post discharge than those in a matched comparison group.		✓

Author(s) and Date	Article type	Study design/ methods	Sample/ setting	Key Findings	Personal Characteristics Barriers	Structural Barriers
			drugs or alcohol within the past 3 months, (3) had a co-occurring schizophrenia spectrum or bipolar I disorder.			
Watkins et al., 2001	Empirical	Quantitative; secondary analysis	Nationally representative sample; 9,585 randomly selected participants of the Community Tracking study were used as a sample for the Healthcare for Communities study.	72% of persons with COD did not receive specialty MH/ SUD care in the previous 12 months. Perceived need for care was associated with receipt of care.	✓	
Watkins et al., 2004	Empirical	Quantitative/ cross-sectional	n=195; individuals from 3 publicly funded Los Angeles outpatient substance abuse treatment facilities that served primarily low-income and ethnic minority communities. All screened positive for a probable mental health disorder, reported they had a mental health problem, or were currently taking medication for a mental or emotional problem.	Half of the individuals in the sample who screened positive for CODs reported that they had never received MH treatment and 1/3 reported this was their first time in SUD Treatment.		✓
Sterling et al., 2010	Review		Adolescents	Medical providers have low referral rates to SA treatment with 74% referring primarily to psychiatry departments and 61% referring to MH treatment and cite lack of knowledge appropriate referral as a barrier to identifying substance abuse in adolescents. Pediatricians report sensitivity about discussing substance abuse with their patients compared to other behavioral	✓	✓

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				problems. Under-identification decreases the likelihood that many adolescents receive the treatment they need.		
Bellack & DiClemente, 1999	Applied		Patients with Schizophrenia	Confrontational style of traditional substance abuse programs is contraindicated for people with psychosis. Existing treatment models do not address specific learning and performance associated with schizophrenia; Individuals with co-occurring schizophrenia and substance use disorders have impaired cognition, lack social interaction skills, and have low energy levels and low motivation; these effects of their disease create barriers to accessing treatment.	✓	✓
Clarke et al., 2008	Applied			Insurance benefits are more generous for mental health than for substance use, so substance use disorders are at risk of being under diagnosed and untreated; Individuals with CODs are shuttled between siloed systems that can only treat one type of disorder, or receive treatment in segregated service systems that do not have capacity to share information.		✓
Drake et al., 2004	Applied			Distress and disorganization due to dual disorders may impact an individual's ability to engage in services and follow through with a treatment plan.	✓	

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Green et al., 2007	Applied/ Case study		Patients with Schizophrenia	Separate mental health and substance abuse training programs and service delivery systems result deficits in provider knowledge about CODs; Individuals with co-occurring disorders including psychosis are extremely vulnerable because their substance abuse often exacerbates mental health symptoms, creates psychosocial instability and decreases their ability to seek and access treatment.	✓	✓
Pincus, 2007	Committee Proceeding			Lack of cooperation, provider type, restrictions on information sharing, and a deficit in the use of information technology force individuals to seek care from multiple service systems and disparate providers		✓
Barrowclough et al., 2006	Review	Descriptive review	Patients with Psychosis	Individuals with psychosis may have low motivation to change (associated with their psychosis)	✓	
Hester, 2004	Theoretical		Rural primary care settings	Substance abuse and mental health programs are often very limited in rural areas.		✓
Kuehn, 2010	Theoretical			Separate payment systems for substance use and medical care is a key barrier.		✓
Libby & Riggs, 2005	Theoretical		Adolescents	MH care is available at primary care physicians and psychiatrists while SUD Treatment is offered almost exclusively at specialty facilities.		✓
Little, 2001	Theoretical			Abstinence only	✓	✓

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				programs may be a deterrent to treatment access. Programs that are focused on harm reduction increase the likelihood an individual accesses treatment. Level of functioning such as social skills, emotional capacity, and ego strength may inhibit an individual's ability to participate in traditional treatment modalities. Individuals who are in crisis might also be too psychologically vulnerable to participate in treatment.		
Hawkins, 2009	Theoretical/ Applied		Adolescents	Perceived stigma by both adolescents and their parents may act as a barrier to treatment seeking. There is a lack of comprehensive, developmentally appropriate treatment services for adolescents with CODs.		✓

Note. Any omissions in study design, setting, or sample are because these components were not included in the article. COD= Co-occurring mental health and substance use disorder; MH= Mental health; SUD= Substance use disorder; SA= Substance abuse; ID= Intellectual disabilities.