Influencers of the Stigma Complex toward Substance Use and Substance Use Disorders

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Abstract

Negative outcomes for individuals with substance use disorders are further aggravated by stigma experienced at the level of the public, the self, and policies of private and governmental institutions. In this review, we integrate the findings of prior literature reviews as well as more recent research on stigma toward those with substance use disorders. We focus first on the ways in which stigma is manifested among those with substance use disorders, and then on the influencers on such stigma, particularly those that may be modifiable (i.e., those that can be targeted most directly at the level of the public or policy). At the level of *public stigma*, these influencers included (1) blame, (2) the extent to which substance dependence is viewed as a mental illness, (3) moral versus biological views of addiction, (4) stereotypes of unpredictability and dangerousness, (5) labeling, (6) lack of education/training among healthcare professionals, (7) lack of contact with individuals with SUDS, (8) the media, and (9) structural stigma. Less research has been conducted to examine influences on *self-stigma;* however, one primary influence is simply the perception of public stigma. Lower self-efficacy, higher temptation to use, higher depression, higher anxiety and lower quality of life have also been shown to be associated with self-stigma, but given the cross-sectional nature of this work, it is unclear whether these represent causes or consequences. Our literature review highlights a dire need for more research in the area of stigma as it relates to substance use and substance use disorders, particularly research that is longitudinal in nature. We conclude our review with suggestions for ways to target some of the known influencers on stigma, in order to evoke positive change in this phenomenon.

Substance misuse and substance use disorders (SUDs) have great costs for users, their families, and society in general. The negative impacts for individuals with SUDs are further aggravated by the stigma complex (i.e., "the set of interrelated, heterogeneous system structures, from the individual to the society, and processes, from the molecular to the geographic and historical, that constructs, labels, and translates difference into 'marks'," p. 25) (Pescosolido & Martin, 2015). Of note, there has been a dearth of research on alcohol and drug use-related stigma compared to mental illness stigma. Drawing from this small body of literature, the main purpose of this review is to document the influencers and drivers that shape the stigma complex (i.e., norms, attitudes, beliefs) regarding substance use and SUDs. However, first, we provide an overview of some of the ways in which stigma is manifested for individuals with SUDs and enumerate some of the negative impacts such stigma has on these individuals. The majority of data provided in this paper is derived from four literature reviews (Kulesza, Larimer, & Rao, 2013; Lloyd, 2013; Room, 2005; Schomerus, Lucht, et al., 2011), with the additional integration of more recent research not included in those reviews.

Manifestations of Stigma among Individuals with SUDs

Stigma manifests in several ways for individuals with SUDs. Within the framework put forth by Corrigan and colleagues these fall in to the categories of (1) *public stigma* (i.e., "the prejudice and discrimination endorsed by the general population that affects a person") (Corrigan, Morris, Michaels, Rafacz, & Rusch, 2012, p. 963), (2) *self-stigma* (i.e., "the harm that occurs when the person internalizes the prejudice") (Corrigan et al., 2012, p. 963), and (3) *structural stigma* (i.e., "the policies of private and governmental institutions that intentionally restrict the opportunities of people with mental illness;" "major institutions' policies that are not intended to discriminate but whose consequences nevertheless hinder the options of people with mental illness") (Corrigan, Markowitz, & Watson, 2004, Abstract, p. 481). In this paper, we focus primarily on public and self-stigma, as these are where the majority of the research has been conducted, and where influencing factors can most easily be identified.

Public Stigma. Evidence of *public stigma* in the form of attitudes and beliefs comes from survey research undertaken in the U.S. and a range of other countries that demonstrates the harsh moral judgments placed on, and negative attitudes held toward, individuals with SUDs. One such study indicated that the majority of the U.S. public holds negative views towards individuals with SUDs; considering such individuals to be "lazy," "losers," and having "no future" (Blendon & Young, 1998). Of note, Kulesza et al. (2013) describe studies revealing that the level of public stigma may depend on the substance that is used. In particular, Crisp, Gelder, Rix, Meltzer, and Rowlands (2000) showed that those with drug dependence were more stigmatized than those with alcohol dependence; and Cunningham, Sobell, and Chow (1993) found public stigma was highest towards those with either alcohol or cocaine dependence (with no differences between the two) and the lowest towards those with tobacco dependence.

Research also shows greater stigmatization of drug addiction in comparison to other types of mental illnesses (Corrigan, Kuwabara, & O'Shaughnessy, 2009; Crisp, Gelder, Goddard, & Meltzer, 2005; Singleton, 2010), and that substance use provokes greater desires to be socially distant from an individual than does smoking or obesity (Phillips & Shaw, 2013). Among the

most notable studies is one conducted by the World Health Organization across 14 different countries, in which local key informants were asked to rank 18 conditions in terms of degree of social disapproval or stigma. Participants ranked alcoholism and drug addiction near the top (Room, Rehm, Paglia, & Ustun, 2001); in most countries alcoholism and drug addiction were ranked above being 'dirty and unkempt' and/or having a criminal record for burglary. In their 2011 review, Schomerus, Lucht et al reported six studies that found alcoholism to be a condition that is more rejected (i.e., higher reported desire for social distance) than both schizophrenia and depression. This included a 1996 U.S. survey showing rejection of someone addicted to drugs to be highest, followed by rejection toward an alcohol dependent person (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). No changes in this rank ordering were revealed in a follow-up survey in 2006 (Pescosolido et al., 2010; Schnittker, 2008), and other more recent research continues to support a heightened stigma towards persons with SUDs as compared to those with depression and schizophrenia (Hengartner et al., 2013).

Furthermore, Schomerus, Lucht, et al. (2011) review research suggesting that a proportion of the public is approving of *structural* discrimination against alcohol-dependent persons. Alcoholism is often identified as a condition where 'financial means for treatment could best be saved' (Beck, Dietrich, Matschinger, & Angermeyer, 2003; Matschinger & Angermeyer, 2004) and an illness for which research monies should not be prioritized or spent at all (Beck et al., 2003). Additionally, a portion of the public are in support of compulsory medication (25%), compulsory out-patient treatment (39%), or compulsory hospital treatment (41%) for individuals with alcohol dependence (Pescosolido, Monahan, Link, Stueve, & Kikuzawa, 1999); and, again, such attitudes have not changed significantly over time (Schnittker, 2008). Moreover, public opinion is that tobacco smokers, alcohol users and illegal drug users should all receive low priority in health care, as summarized by in a review of six studies from the U.S., Britain, and Australia (Olsen, Richardson, Dolan, & Menzel, 2003). Of note, stigmatizing attitudes toward problem drug users are held not only by the general public, but importantly, also by health professionals who are tasked with providing care for these individuals (e.g., Henderson, Stacey, & Dohan, 2008; McCreaddie et al., 2010; Merrill, Rhodes, Deyo, Marlatt, & Bradley, 2002) .

Public stigma may also be manifest in emotional reactions, which are likely a result of such attitudes and beliefs described above. Schomerus, Lucht et al (2011) review two studies conducted outside the U.S., both of which show more negative emotional reactions toward alcohol-dependent individuals than those with other psychological conditions. For example, a German study revealed lower levels of empathy, understanding, pity and desire to help, but higher levels of irritation, anger and repulsion evoked toward alcohol dependent individuals than those with schizophrenia or depression (Angermeyer, Matschinger, & Siara, 1992). A Brazilian study demonstrated that alcohol dependent individuals were less likely to be met with friendliness and warmth and more likely to be met with fear, irritation and indifference, than those suffering from schizophrenia, depression, or Alzheimer's disease (Blay & Peluso, 2010; Peluso & Blay, 2008a, 2008b; Peluso & Blay, 2009). It is likely that both these stigmatizing attitudes and emotional reactions result in discriminatory behaviors.

Self-stigma. Literature on *self-stigma* in addiction is more sparse; nonetheless, a handful of studies document high levels of this type of stigma among individuals with substance use problems (Ahern, Stuber, & Galea, 2007; Etesam, Assarian, Hosseini, & Ghoreishi, 2014;

Fortney et al., 2004; Luoma et al., 2007; Semple, Grant, & Patterson, 2005). One study found evidence of a stepwise process of self-stigmatization in persons with alcohol dependence, beginning with awareness of negative stereotypes other people endorse, followed by personal agreement with these stereotypes, then application of these stereotypes to oneself, finally leading to low self-esteem due to application of those stereotypes (Schomerus, Corrigan, et al., 2011). Importantly, measure development work provides evidence that self-stigma among individuals receiving treatment for substance use is a construct distinct from perceptions that others stigmatize the individual (Luoma et al., 2013).

Consequences of Stigma among Individuals with SUDs

Stigma, manifested in the numerous ways described above, has a number of negative impacts, serving to further aggravate the negative outcomes already associated with SUDs. First, research indicates that only about a third of individuals with SUDs seek treatment (Cunningham & Breslin, 2004; Teesson, Baillie, Lynskey, Manor, & Degenhardt, 2006), and it has been suggested that stigma may be one contributing factor to such underutilization (Room, 2005; Ross, Timpson, Williams, Amos, & Bowen, 2007; SAMHSA., 2008). Second, when individuals with SUDs do seek health care, the care that is received may be of lower quality than that provided to others (Room, 2005). Third, despite the importance of social support for the recovery of those with SUDs, stigma may instead contribute to social exclusion (Room, 2005). Notably, stigma may affect not only the substance user, but his or her family members as well (Corrigan, Watson, & Miller, 2006). Finally, the perception of stigma is associated with alcohol use disorders and internalizing psychiatric disorders later on (Glass, Kristjansson, & Bucholz, 2013). Unfortunately, the problem of stigma toward substance use and SUDs is not improving with time; research finds very little change (Schomerus, Lucht, et al., 2011) or even increases in negative attitudes toward alcohol dependence over the years (Pescosolido et al., 2010). Given this range of ways in which stigma further compounds the problems of, or interferes with recovery among those with SUDs, it is important to understand what predicts such stigma. An understanding of the influencers of stigma can provide insight into ways to target the phenomenon.

Influencers and Drivers of Public Stigma

Several types of attitudes, norms and beliefs that may increase the likelihood of stigmatizing/discriminatory behaviors among the public are covered in reviews by Schomerus, Lucht, et al. (2011), Kulesza et al (2013), Lloyd et al (2013), and Room (2005). Below we focus our review on those influences on stigma that may be modifiable (i.e., can be targeted most directly at the level of the public or policy). These aspects include (1) blame, (2) the extent to which substance dependence is viewed as a mental illness, (3) moral versus biological views of addiction, (4) stereotypes of unpredictability and dangerousness, (5) labeling, (6) lack of education/training among healthcare professionals, (7) lack of contact with individuals with SUDS, (8) the media, and (9) structural stigma. Other, likely non-modifiable correlates of public stigma (e.g., demographic factors, substance of choice, method of administration, whether the individual is currently using vs recovering) are outside the scope of this review.

Perceptions that Individuals with SUDs are to Blame. As reported in the review by Lloyd (2013), a number of survey studies document that people attach a high degree of blame to problem drug users (Crisp et al., 2005; Room et al., 2001; Singleton, 2010). Similarly, in the 14-country WHO study, themes of personal responsibility were apparent in response to scenarios involving alcohol or heroin problems (Room, 2005). Across all studies in the Schomerus, Lucht, et al. (2011) review examining blame, patients with alcohol dependence were shown to be held much more responsible for their condition than people suffering from depression, schizophrenia or other psychological disorders unrelated to substance misuse. Compared to alcohol dependent persons, drug-addicted persons are even more frequently held responsible for their disorder (Crisp et al., 2005; Crisp et al., 2000). Of note, Schomerus, Lucht, et al. (2011) review one older study showing no relation between the view that people were self-responsible for their condition and the desire for social distance (Ries, 1977).

Blame placed on those with SUDs may be centered on the fact that the individual took the substance in the first place and went on to use more of that or other, increasingly dangerous drugs. While drug users themselves may not perceive a choice to take or not take drugs, the public may perceive problem drug users to have such a choice (Lloyd, 2013). One explanation for the pervasive nature of public stigma toward SUDs is the fact that substance use, and illicit drug use in particular, is viewed by many as a moral rather than a public health issue (Blendon & Young, 1998), as described below. Opinions that substance users should not be prioritized for health care are often justified by beliefs that the users' illness is a result of their own behavior (Olsen et al., 2003). Further, Peckover and Chidlaw (2007) present qualitative data from nurses that revealed that stigma experienced by problem drug users in primary and acute care stemmed in part from perceptions about the self-inflicted nature of their problems.

Perceptions that Substance Dependence is not a Mental Illness. Somewhat related to the concept of blame, while the American Psychiatric Association includes substance use disorders in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*, three out of four surveys found alcoholism was less often regarded a mental illness as compared to depression and schizophrenia. This was shown in the U.S. (Link et al., 1999), New Zealand (Ng, Martin, & Romans, 1995), and Canada (Canadian Medical Association, 2008). Other substance use disorders (e.g., cocaine dependence) have been judged similar to alcoholism in this regard (Blay & Peluso, 2010; Link et al., 1999; Ng et al., 1995; Peluso & Blay, 2008a, 2008b; Peluso & Blay, 2009). Again, ascribing SUDs to one's own behavior and choices, rather than a psychological condition, may help to explain high levels of public stigma.

Moral versus Biological Views of Addiction. Another way that views about addiction in the public domain can be divided is into biological views versus moral views. Perceived personal responsibility of the individual with addiction (a stigmatizing attitude that may lead to stigmatizing behaviors) can be influenced by public endorsement of one model over the other (Racine, Bell, Zizzo, & Green, 2015). The biological, or medical, view posits that addiction is a brain disease, due to dysfunction in biological mechanism of pleasure seeking and reward (Leshner, 1997; Volkow & Li, 2005). Moral views, on the other hand, posit that addiction is a problem due to personal habits and choices (Heyman, 2009).

While moral views may result in stereotypes that individuals with SUDs are weak, lack willpower, and are to blame for their poor choices, thus potentially augmenting stigma, it is not clear that biological views are any more beneficial in reducing stigma. Biological views have gained public visibility in the context of mental health (Schomerus et al., 2012) and are suggested by some to be useful (Hyman, 2007). However, others posit that such a view could inadvertently contribute to stigma development (Hammer et al., 2013), because it suggests that an individual is less capable of self-regulation due to their biological makeup, perhaps leading him/her to be dangerous or unpredictable, for example. Indeed, a recent review demonstrated that when biological views were adopted, there was an increase in stigmatization towards individuals with mental illness (Angermeyer, Holzinger, Carta, & Schomerus, 2011; Pescosolido et al., 2010; Walker & Read, 2002). Regarding SUDs, an Australian study showed that beliefs that addiction is a 'disease' or 'brain disease' generally were not related to beliefs about stigma, discrimination and dangerousness; support for coerced treatment; or support for imprisonment of addicted individuals (Meurk, Carter, Partridge, Lucke, & Hall, 2014).

Negative Stereotypes. Many conceptualizations of mental illness stigma involve a central role for negative, misinformed stereotypes (Corrigan & Watson, 2002; Link & Phelan, 2001; Thornicroft, Rose, Kassam, & Sartorius, 2007). Some of the stereotypes that may be relevant to stigma toward individuals with SUDs in particular are reviewed below.

Stereotypes of unpredictability and dangerousness. Some of the public view substance-dependent individuals as unpredictable or dangerous. Again, three out of four studies reviewed by Schomerus, Lucht et al (2011) revealed that alcohol-dependent persons were viewed as more unpredictable or dangerous than those with schizophrenia and, especially more than those with depression. In the survey conducted in the U.S. (Link et al., 1999), 87% and 71% of respondents considered it likely for cocaine- and alcohol-dependent persons to hurt others. Unfortunately, more recent surveys reveal that such perceptions have not changed (Pescosolido et al., 2010; Schnittker, 2008). Peckover and Chidlaw (2007) present qualitative data from nurses that revealed that stigma toward problem drug users in primary and acute care stemmed in part from their fears of this client group and perceived risks surrounding their personal safety.

Other misinformed stereotypes. Schomerus, Lucht et al (2011) note that although lifestyle changes and treatment adherence for individuals with SUDs occur at similar levels as among those with other chronic medical conditions like hypertension or diabetes (McLellan, Lewis, O'Brien, & Kleber, 2000), some of the public views alcohol-dependent people as weak-willed. Similarly, whereas high remission rates for alcohol dependence have been observed in population based studies (Bischof, Rumpf, Meyer, Hapke, & John, 2005), some of the public views alcoholism as incurable. As such, there is room for correction in such misinformed stereotypes. Portrayals of untreated, symptomatic SUDS who have not recovered from their condition, in the media, for example, may contribute to social stigma towards such individuals (McGinty, Goldman, Pescosolido, & Barry, 2015).

Labeling. Among the potential influences on stigma toward substance users that Kulesza et al. (2013) comment on is the type of label used to describe an individual who uses drugs. For

example, Kelly and Westerhoff (2010) found that clinicians working with individuals who use drugs reported that, as compared to the label 'someone who has SUD', the label 'substance abuser' was more likely to be associated with beliefs that the individual was personally responsible for their condition and deserved more punitive treatment. Another study found that those methamphetamine users who had been in treatment were more likely to experience rejection from friends or family than those who had not been in treatment (Semple et al., 2005). The authors suggested that these differences may have stemmed from negative labelling whereby entry in treatment suggests a serious drug problem, carrying with it the 'drug addict' label.

Lack of Education/Training among Health Professionals. Lloyd et al (2013) comment on the lack of education or training among health professionals, which may lead to stigmatizing attitudes and behaviors. Older research in the US (summarized by Miller, Sheppard, Colenda, & Magen, 2001) showed limited coverage of addiction-related subjects in medical schools. It is possible that this in part explains documented negative and pessimistic views towards drug addicts on the part of primary-care doctors. Fortunately, in more recent years, there has been continued development of curriculum for teaching medical students about alcohol and drugs (Meltzer et al., 2013). Still, stigmatization of problem drug users in primary and acute care described in studies such as that by Peckover and Chidlaw (2007) may be a result of the fact that many staff have not elected or been trained to treat the marginalized and excluded. An Australian study of the impact of drug and alcohol education on the attitudes of first and fourth year medical students (Silins, Conigrave, Rakvin, Dobbins, & Curry, 2007) demonstrated that attitudes towards heroin users improved after educational input. Similarly, in the U.S., participation in an addiction medicine course was associated with improvement in attitudes toward those with SUDs (Meltzer et al., 2013). This promising body of work suggests that such education is one avenue through which to reduce stigma, at least among the subset of the public who serve as health professionals and are in a unique position to help those with SUDs.

Lack of Contact with Individuals with SUDs. Lloyd et al (2013) reviewed two studies that addressed contact with individuals with SUDs as a contributing factor in level of stigma. First, an Australian study among medical students showing that contact with illicit drug users in small-group settings was associated with more positive attitudes (Silins et al., 2007). Second, a qualitative study in a British sample of injecting drug user and pharmacists providing needle exchange services found that the sense of stigma declined with increasing contact and familiarity. Kulesza et al (2013) also reviewed two studies that addressed this factor. Specifically, Adlaf, Hamilton, Wu, and Noh (2009) found that college students with at least 50% of friends who use drugs scored lower on a measure of public stigma toward individuals who use drugs, and Keyes et al. (2010) found that participants with a family member diagnosed with an alcohol use disorder reported lower levels of public stigma toward alcohol users than those without. On the other hand, among health professionals, negative attitudes toward individuals with SUDs seem to increase over time (presumably with more contact with such individuals) (Christison & Haviland, 2003; Geller et al., 1989; Lindberg, Vergara, Wild-Wesley, & Gruman, 2006).

Media. Lloyd et al (2013) suggest that the media clearly play a crucial role in creating fear and intensifying perceived dangers of illicit drug users. Most Americans rely on the mass media for information about the scope of the drug abuse problem (Blendon & Young, 1998) and get most of the information about serious mental illness or drug addiction from the news media (Link et al., 1999). Further, research shows that most individuals with mental illness and addiction depicted in the media are those exhibiting abnormal or deviant behavior (e.g., violence), while few movies, news stories, or television programs portray those who have success within treatment (Wahl, 1992, 1995, 2003; Wahl, Wood, & Richards, 2002; Wahl, Wood, Drapalski, & Mann, 2003). Such depictions in turn affect the public attitudes about those impacted by health and social problems (Zillman & Brosius, 2000).

Structural Stigma. Exposure of the public to structural stigma - policies of institutions that intentionally or unintentionally restrict the opportunities of people with SUDS - may influence public stigma. For example, the U.S. war on drugs, intended to aggressively reduce drug use in the U.S., may have promoted a stigmatizing environment toward drug users (Bluthenthal, Kral, Gee, Erringer, & Edlin, 2000; Inciardi, 1986). Use of anti-drug messages and harsh criminal sentences for drug use results in labels placed on drug users as people who are unwanted by society (Rivera, DeCuir, Crawford, Amesty, & Lewis, 2014). The perception that governmental or other institutions discriminate against those with SUDs may influence public attitudes marked by stigma.

Influencers and Drivers of Self-Stigma

One potential influence on self-stigma is the perception of public stigma. Corrigan suggests awareness of the stereotypical beliefs of others is a starting point for the formation of personal attitudes such as self-stigma (Corrigan, Rafacz, & Rusch, 2011; Corrigan, Watson, & Barr, 2006). Higher perceptions of stigma toward persons with alcohol problems have been shown to be related to lower treatment seeking in adults with AUDs in the U.S. (Keyes et al., 2010), perhaps due to the impact of perceived stigma on self-stigma. A positive correlation between the perception of alcohol stigma (stereotype awareness) and self-stereotyping or internalized stigma based on one's alcohol use disorder has also been observed in a sample undergoing alcohol detoxification (Schomerus, Corrigan, et al., 2011) and in other addiction treatment samples (Luoma, O'Hair, Kohlenberg, Hayes, & Fletcher, 2010; Luoma et al., 2007).

Most research on the correlates of self-stigma tends to be cross-sectional. Schomerus, Corrigan, et al. (2011) demonstrated that among individuals who drink alcohol, lower drink refusal self-efficacy was associated with higher levels of self-stigma. However, it is unclear whether self-efficacy is an antecedent or consequence of self-stigma. A recent study by Brown et al. (2015) found that higher temptation to use, higher depression, higher anxiety and lower quality of life were associated with higher levels of substance use self-stigma. Yet again, the direction of these effects are unclear, and it may be that these are negative outcomes that result from self-stigma rather than influences on self-stigma. More research in this area is needed.

Factors that may Influence Links between Stigma and its Negative Consequences

Most of the factors revealed in our literature search that may influence whether or not perceived stigma leads to negative consequences pertain to how an individual with an SUD copes with that stigma. For example, according to modified labeling theory, although all individuals with SUDs may have some awareness of public stigma, only those who carry a stigmatized label (e.g. alcoholic) themselves will experience negative consequences due to this awareness (Link, Cullen, Frank, & Wozniak, 1987). However, there are not many empirical tests of this idea among individuals with SUDs. One study among individuals with alcohol use disorders demonstrated that the perception of alcohol stigma was associated with lower levels of perceived social support, and this effect was stronger among those classified as labeled as compared to unlabeled (Glass et al., 2013).

Regarding mediators (i.e., intervening, explanatory variables) in the link between stigma and negative consequences, it is possible that individuals who have been labeled with SUDs may react to anticipated devaluation and discrimination with stigma coping orientations – by withdrawing socially, concealing their condition, or educating others about their condition. Research supports the idea that perceived stigma and experiences of rejection are linked with these particular stigma coping orientations (Luoma et al., 2010; Wahl, 1999; Wright, Gronfein, & Owens, 2000). In turn, these are mechanisms hypothesized to be associated with further harm (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Link, Mirotznik, & Cullen, 1991; Link & Phelan, 2001; Link, Struening, Rahav, Phelan, & Nuttbrock, 1997). On the other hand, individuals who cope with perceived stigma and societal labels by recognizing their illegitimacy (Camp, Finlay, & Lyons, 2002) may be less likely to suffer additional harm.

Gaps in Knowledge and Limitations in the Literature

As noted, there is a relative dearth of research focused on stigma toward substance use disorders as compared to stigma toward other mental illnesses. Much of what the literature suggests about influences on public stigma is theory-based or speculative, with little empirical backing. Moreover, even less is known about the development and predictors of self-stigma, as compared to those of public stigma. This is in part due to the dire need for longitudinal research in this area. The review by Kulesza et al (2013) uncovered only one longitudinal research study, and it is unclear whether this has changed. The growth of longitudinal data would allow for clearer delineation of temporal relationships among stigma and both its antecedents and consequences. As it stands, it is difficult to ascertain whether several correlates of stigma are truly causes versus effects.

Another limitation of the current state of the literature is the difficulties in drawing comparisons across studies, given the complexity of the "stigma complex" and the various definitions of stigma. In future work, it is imperative that researchers provide a working definition of the precise construct(s) being measured. This will allow for more robust conclusions to be drawn in future literature reviews. Further, few studies have been conducted to investigate mechanisms through which stigma may lead to adverse consequences, or moderators of the link between stigma and negative outcomes.

There are high rates of comorbidity among substance use and other mental health disorders. As such, individuals with SUDs are likely subject to multiple sources of stigma. The ability to draw conclusions about stigma among individuals who use substances is limited when

such other sources of stigma are not controlled (Kulesza et al, 2013). Further, Schomerus et al (2011) note that the role of cultural belief systems about health and illness in general on stigma of substance use disorders is understudied.

Finally, our literature review revealed little research documenting potential stigma attached to substance abusing emergency department (ED)/trauma patients, despite that many individuals with SUDs may receive their only treatment in the emergency department (Cohen, Feinn, Arias, & Kranzler, 2007). Indeed, until recently it was not uncommon for a substance abusing patient to be medically treated in an ED or trauma unit and have his/her substance abuse problem largely ignored – even if it was related to the need for medical care. This was in response to a law crafted by the National Association of Insurance Commissioners (NAIC) in 1947 that allowed insurance companies to deny payment to physicians and health care providers for medical care provided to persons injured as a result of being under the influence of alcohol or any narcotic that was not physician prescribed. Although the NAIC recommended that the states repeal the law (because alcohol and drug treatments had improved), the 1947 version of the law is still on the books in most states (Higgins-Biddle, Hungerford, & Cates-Wessel, 2009) leading to a CDC recommendation that blood alcohol concentration not be used as a screening instrument as insurance companies may deny payment in certain states if the person was injured under the influence.

Potential Implications of Current Knowledge on Stigma toward SUDs

We posit several potential implications of the findings reviewed above. Overall, while many influences on stigma may not be modifiable (e.g., substance type, demographic variables of the user or person holding stigmatizing attitudes), there are several influences on stigma that may be good candidates to target in order to evoke change. At the structural level, reconsideration of policies such as excluding individuals with SUDs from housing or employment could be useful. Of note, it is important to think through any potential unintended consequences of changing such policies.

At the level of trained health care professionals, it may be important to ensure coverage of addiction-related subjects in medical schools, to train staff to treat the marginalized and excluded, and to train health care providers to avoid labelling (rather than “addict,” “a person with a substance use disorder”). One resource for the use of non-stigmatizing language is available from theNational Alliance of Advocates for Buprenorphine Treatment (2008). Additionally, educational programs such as that used by Meltzer et al. (2013) could be more widely implemented. Others have shown that use of motivational enhancement therapy (Hettema, Sorensen, Uy, & Jain, 2009) or reflection techniques (Ballon & Skinner, 2008) may improve addiction education by resolving ambivalence about treatment for alcohol and substance abuse or by increasing awareness of one’s own biases. In the context of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), research suggests that corrective professional role modeling by faculty during medical training can ameliorate negative effects of previously held biases (Yedidia, Berry, & Barr, 1996). Generally, a more supportive and less stigmatizing environment at a service delivery level may enhance treatment seeking and outcomes.

Other changes may need to take place at the level of the public. Similar to with health professionals, it may be useful to educate the public on the proper terminology with which to refer to these individuals. Ways in which contact/exposure to individuals who have or are suffering from SUDs can be increased may also serve to increase empathy and decrease stigma among the public. As an example, in Rhode Island there has been an active campaign by the Department of Health to destigmatize SUDS via TV spots with pictures of common folks with substance troubles. National stigma reduction campaigns for widespread dissemination of portrayals of successful treatment of those with SUDs are one avenue. More direct targeting of misinformed stereotypes among the public could involve educating people that individuals with drug/alcohol dependence are not uniquely weak-willed, that lifestyle changes and treatment adherence in alcoholism is comparable to other chronic medical conditions like diabetes or hypertension, and that individuals with SUDs are not incurable. Indeed, treatment works! One study revealed that portrayals of successfully treated painkiller and heroin addiction led to decreased desire for social distance, less willingness to discriminate, and greater beliefs about the effectiveness of treatment, suggesting that portrayals of persons with successfully treated SUDs may be a promising method by which to reduce stigma and discrimination (McGinty et al., 2015). As mentioned earlier, while it might be tempting to educate the public on the biological nature of addiction in order to remove moral judgments, as Racine et al. (2015) discuss, there could be unintended negative impacts of this approach as well. Blendon and Young (1998) reported that Americans are more apt to support needle exchange programs when they are told that the American Medical Association supports these programs, highlighting the important role that such associations may play in the perceptions toward individuals with SUDs among the public.

At yet another level, work should be done to combat stigma with those who have SUDs themselves (i.e., self-stigma). One study found that internalized shame (i.e., self-stigma) was more highly related to measures of well-being (psychological functioning and quality of life) than experienced rejection and perceived stigma. As such, among individuals with SUDS, targeting self-stigma might be a more appropriate than targeting perceived stigma or teaching them how to avoid rejection (Luoma et al., 2007). For example, it may be useful to increase drink/drug refusal self-efficacy among users, given the link between these constructs. Additionally, clinicians could prepare individuals with SUDS for the fact that they might be the target of stigma, and teach effective methods for coping with stigma, to reduce translation of stigma into negative impacts. Importantly, interventions to address shame among those with SUDS have begun to be formulated (Luoma, Kohlenberg, Hayes, & Fletcher, 2012). Continued research on the best ways to reduce both public- and self-stigma is recommended.

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