Factors Influencing the Attitudes of Substance Use Disorders: A Review from Patients and Health Care Providers Perspectives

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Abstract. Substance use disorder (SUD) is a long-term uncontrolled use of harmful substances such as illegal drugs, prescription drugs, alcohol and tobacco. Despite growing treatment options, SUD remains a public health challenge. This review explores factors of attitudes and cognition that affect both the SUD patient and therapist perspectives. The review mainly focuses on the role of cognition, stigma, implicit cognitive attitude and general explicit attitude. From patients' perspective, the perception and awareness of having the disorder as well as the self-stigma to SUD significantly shape their attitude and willingness to seek help and treatments. Implicit attitudes unconsciously influence patients' overall attitudes toward substance use behaviors and substance use behavior treatment, as well as subsequent behaviors. For health care providers, stigma, lack of expertise and training in SUD can lead to negative attitudes and inadequate treatment of SUD patients. This may reduce the effectiveness of patient treatment and the likelihood of recovery. This review emphasizes to recognize the limitations of different studies and encourage next steps for improvement. Limitations of different studies including over-reliance on self-reporting, and lack of long-term studies can be improved by adding more follow-up studies on different aspects to update the data and further validate the research on the impact of different attitudes. This review also encourages to increase and popularize the knowledge of SUD, to increase the training of healthcare professionals on SUD to change and influence the attitudes of patients and healthcare professionals.

Keywords: Substance use disorder, stigma, attitude change, patients, health care professionals.

1. Introduction

The substance use disorder (SUD) refers to a long-term uncontrolled use and desire of illegal drugs, prescription drugs, alcohol and tobacco even though they already knew that such substances could be harmful [1]. The long-term uncontrolled use of different substances could lead to lots of different severe side effects on not only the human body but also people's minds. Till nowadays, substance use disorder has been a wide range public health issue. According to the data from the U.S. Department of health and Human Services, in 2022 almost 48.7 million people aged over 12 had a substance use disorder in the past years [2]. Among such SUD populations, there's large prevalence of comorbid symptoms of mental illness and other physical health disorders [3]. The essence of a substance use disorder is addiction to a certain drug, and such uncontrollable symptoms of addiction lead to subsequent uncontrollable long-term symptoms for the patient. Although there are lots of different treatment plans focusing not only on addiction but also specifically the symptoms of SUD, there're continued barriers on substance use disorder treatment and recovery by extremely high relapse rates and other complicating factors that affect treatment outcomes [4].

Among all the possible influential factors, attitude including both patients' and therapists' attitudes may play a critical yet often underappreciated role. Cognitive attitude could influence the cognition of patients on their illness, treatment taken and further affects the outcome and long-term recovery of the treatments. The therapists' attitude including their self-concepts, biases, and expectations, can affect their interactions with patients and their role in treatment thus affecting the effectiveness of the treatment they provide [4]. This review not only pays attention to the patient who receives the treatment, but also involves the health care providers who provide the prescription and health care support under substance use disorder. The aim of this review is to synthesize existing research to

explore how attitudes and cognition affect both the SUD patient and therapist perspectives. The attitudes of the different groups about the disorder itself, treatment options, etc. influence their behavior and mindsets. Cognition shapes these different attitudes. In addition to the explicit attitudes and expressions that people exhibit, implicit cognitions and attitudes are also in the focus of this literature review. People's epiphenomenal attitudes and cognitive processes may be misrepresented from different studies and experiments, attention focusing also on implicit attitudes and cognitions can provide a more objective perspective.

2. Factors that Changed Patient's Understanding and Impression of the Substance Uses Disorder and Treatments

2.1. Disorder Recognition

Patient's understanding of the substance uses disorder and the impression they get from different information sources forms their cognition of SUD in general. Furthermore, patients' perception on their personal situation and impact of substance uses also shape patients' cognition for different groups [4]. And this cognition could be distorted during this process through different bias and mental cues.

According to the research of Rogers et al., the patients' perception difference on level and extent of their substance use behavior affect their agreement and sense of identity on having substance use disorder [4]. The functional aspects of substance use, such as the impact on life, affect both people's substance use behavior and their judgment of whether they have SUD. Rogers et al. collected responses from 54 SUD patients across five years by doing a qualitative analysis [4]. And all SUD respondents were collected by an online website and were diagnosed for both alcohol drug use disorder (AUD) and drug use disorder (DUD) [4]. Through qualitative interviews with the samples, the study found that people's judgment on whether they have SUD largely comes from whether substance use has affected their normal life events. When the use of items cannot affect the normal life events perceived by people, people tend to deny the existence of problems and disorders with their substance use [4]. At the same time, people may consciously control the frequency and time of use to avoid affecting the events that they think are important and mark as normal-life events, such as work, family gatherings, etc. Such selective control also reduces people's agreement of identification with SUD. And since patients denied that they may have the disorder, they were less likely to search and seek treatments and help [4]. In the study of Rogers et al., some of the participants expressed their refusal to get treatments and bad attitude to those who have taken the treatments because they think once they seek help, they are going into a more depraved step [4].

2.2. Self-stigma

Another factor Rogers et al. found during the interview collection that affects patients' agreement of having substance use disorder is the negative bias and negative societal impression on SUD and its patients [4]. The social stigma against substance abusers makes most patients ashamed to talk about and think about the existence of substance use disorders and to seek help from the outside world. Participants equated negative stereotypes of substance abusers or tragic life stories with the SUD disorder itself in their responses. People believed that refusing to acknowledge and treat their substance use disorder was a way to deny themselves as such negative images. In the study of Rogers et al., some of the participants expressed their fear of seeking further help and treatments since they link different assists as failures and see people who seek and expose their disorder as failures [4]. On the other hand, patients' self-stigma level can also be influenced by their personal factors such as age, education level and gender [5]. Cross sectional research of Melchior et al. explored the correlation of self-stigmatization with females and their age and mental stress levels [6]. They measured participants' level of self-stigma by using the Self-Stigma Scale for Alcohol Addiction but changing the Alcohol addiction expression to general addiction wordings in the scales [6]. Through ANOVA

replications and multiple regression analyses, the study identified significant correlations between these factors and self-stigma [6]. The results showed that younger female participants or those with higher levels of depression were more likely to label themselves negatively, leading to increased levels of self-stigma [6].

2.3. Implicit Attitude

The concepts of implicit and explicit attitudes derive from people's self-cognition. Implicit attitudes are generally considered to be the opposite of the inferred notion of episodic attitudes that can be consciously altered by the subjective mind [7]. Although people are not necessarily unable to identify and be aware of their implicit attitudes, implicit attitudes are considered to be more unconscious and more internalized [7, 8]. The research method that is able to measure the implicit attitude is the Implicit Association Test (IAT). During the test, participants are not able to be aware of the goal and purpose of the research, which can make the result more objective [9].

According to the review of Lindgren et al., people's self-concepts and internalized attitudes may establish different positive or negative attitudes and associations on substance use issues [10]. In turn, these concepts and perceptions and attitudes toward self-substance use may influence people's behaviors in controlling substance use like alcohol use and tobacco use. Lindgren et al.'s (2018) review argues that people's perceptions of their relevance to substance use, as well as attitudes toward substances themselves, shape changes in people's implicit attitudes [10]. Such self-attitudes may predict people's future substance use and can influence the treatment and its outcome of substance use disorders. A follow-up study by Wang et al. (2021) expanded Lindgren's review from tobacco and alcohol use to the impact of implicit attitudes on other substance use [11]. The study focused on the association between implicit attitudes and heroin use disorders and their methadone treatment (MMT) dependence [11]. The characteristics of drug dependence include physical dependence, psychological dependence and the development of tolerance to drugs by the human body. Urges for drug use in the treatment of substance use disorders are also recognized as an indicator of the level of substance use disorders and the effectiveness of treatment [12]. Although such psychological cravings can be measured directly through questionnaires and scales, which are methods that reflect explicit attitudes, implicit attitudes may be more capable of influencing and reflecting the severity of substance use disorders and treatment outcomes given the modifiable nature of explicit attitudes and the unconscious nature of drug cravings [11]. Methadone treatment is a widely used treatment for opioid use disorder, which is known as a safer replacement of heroin. The participants were heroin use disordered individuals who had been in MMT treatment for one month collected from MMT clinics as participants in the study. Researchers examined and compared participants' explicit and implicit attitudes toward heroin elicitation and urges and methadone treatment adherence through a self-reported intuitive survey of participants' heroin dependence, urge of drug use, and an implicit association test (IAT) of heroin-related vocabulary and keywords for positive and negative attitudes [11]. Analysis of means and standard deviations and matrix structure analysis of statistics (AMOS 18) revealed that implicit attitudes and level of craving were positively correlated with each other while indirectly or directly influencing participants' substance use disorder severity and persistence in adhering to methadone treatment [11]. According to Wang et al. (2021), participants with higher level urges on heroin show higher levels of reliability and obesity on MMT [11]. The implicit attitude affects participants' level of drug abuse in an indirect way by affecting the level of urges of heroin.

3. Influential Elements that Shape the Attitudes and Actions of Health Care Providers

3.1. Stigma and Negative Attitudes

In the process of seeking help and receiving treatment for substance use disorders, patients not only need to face struggles with self-desire and the impact of stigma but are also likely to have

significant exposure to another group, health care providers. Although not all patients have the chance to face professionals who specialize in SUD treatments and addiction recovery, they may still be exposed to other health care professionals such as nurses, psychologists, and other health care providers. The attitudes and bias that health care people hold during the treatment with SUD patients may affect the respect and rights of patients and affect the healthcare professionals' decisions and behaviors during treatment, thus ultimately affecting the treatment outcomes [13].

Due to the different emphasis of medical education received by physicians in different specialties, the attitudes of different healthcare professionals toward patients with SUD may vary in different aspects. Doctors and nurses specializing in SUD generally have a higher level of understanding and empathy for people with substance use disorders compared to other healthcare professionals in other specialties [14]. This may be because SUD healthcare professionals have more relevant experience and expertise. Also, their own experiences and attitudes and biases about SUD disorders themselves may change healthcare professionals' attitudes and willingness to work with substance use patients [14]. Healthcare professionals who lack such experience and expertise may develop negative attitudes due to popular prejudice against people with SUD by stigmatizing them and attributing their illness to the patient's personal weakness or moral depravity [14].

According to Mahmoud et al.'s 2024 cross-sectional study of U.S. nursing staff, other nurses were more likely to have negative perceptions of both the SUD disease and the patients themselves and to misattribute the disease compared to nurses specializing in addiction [14]. Mahmoud et al. (2014) collected data on the personal attitudes on patients with alcohol use and drug use disorder, and related medical knowledge of nurses from professional national nursing organizations through a 6-month online questionnaire [14]. The researchers divided the group of the participants into medical-surgical nurses, psychiatric specialty nurses, and SUD specialty nurses. The researchers then conducted an ANOVA and Kruskal-Wallis test on the personal experiences and attitudes questionnaire data collected from the different groups [14]. Addiction-specialized caregivers have a higher level of confidence and expertise in dealing with alcohol and substance use disorders compared to other groups [14]. And without education on drug use, substance use disorders are more likely to be attributed to personal irresponsibility as well as public stigma, leading to medical staff's trivial and negative attitude and possible care problems [14]. The findings of Mahmoud et al. (2014) exposed that medical and surgical nurses were more likely to have negative attitudes towards substance use patients. Due to lack of relevant training experience and professional background, medical nurses and surgical nurses showed lower motivation and responsibility in caring for patients in the survey.

The lack of expertise and correct cognition on substance use disorder for healthcare providers are less likely to improve the situation of SUD patients and give them proper medical care. According to the study from Calcaterra et al (2022), resident physicians who lack cooperation with addiction specialists and training in addiction treatment are less likely to apply medications for substance use disorders and screening for substance use disorders in their diagnosis and treatment of their patients with drug use disorder [15]. When prescribing treatment plans, clinicians may be unable to provide patients with more helpful and appropriate drugs and quality plans in a timely manner due to lack of communication with addiction specialists, lack of addiction treatment knowledge or the influence of personal attitude, etc. At the same time, due to lack of institutional cooperation, these patients may also lack follow-up and continuous attention, resulting in worsening of the disease [15]. The study targeted patients with opioid use disorder and revealed the insufficient medication actions for clinicians to make during the diagnosis and treatment of opioid use disorder due to their personal attitude and the importance of substance use disorder educations and communications [15].

4. Conclusion

The impact of cognitive attitude on substance uses disorder (SUD) spans both the patient and healthcare provider perspectives, with significant implications for treatment outcomes. Patients' thoughts about their disorder and substance use actions can be influenced by personal bias, societal

and micro stigma. And such thoughts would further influence their recognition of SUD and acceptance of treatments, thus affecting the outcome of treatments and the further recovery. Distorted self-perceptions and implicit attitudes can lead to denial of the disorder, reducing the likelihood of seeking treatment and increasing the risk of relapse. The research results from Implicit Attitude Test (IAT) also imply the role that implicit attitudes have from patients' unconscious mind on building bias and making decisions during the treatment. Similarly, self-stigma, particularly among younger female patients, exacerbates the challenges of addressing SUD by reinforcing negative self-images and discouraging engagement in treatment.

From the perspective of a healthcare provider, attitudes and biased decisions made from insufficient background knowledge significantly affect the quality of care and treatment that patients may have, thus affecting the recovery rate for SUD patients. The addiction and SUD background knowledge and the cooperation with SUD professionals also shape the property of prescription and caregiving from healthcare providers.

Despite these insights, there are limitations in the existing research. Many studies rely heavily on self-reported data, which can introduce biases and limit the generalizability of findings. Meanwhile, many studies focus on cross-sectional research that mainly focus on short-term observation of different attitudes in different population groups, however, there is a lack of long-term studies of changes in different attitudes toward substance use disorders among patients and caregivers over the long term, as well as the causal relationships. Additionally, much of the research has focused on specific populations or substances, limiting the applicability of the findings to broader SUD contexts. Future research should aim to address these limitations by incorporating more diverse samples, improving measurement tools, and exploring the longitudinal effects of cognitive attitudes on SUD treatment and recovery.

Moving forward, several key areas warrant further exploration. There is a need for more comprehensive studies that examine the dynamic interaction between patient cognition and healthcare provider attitudes over the course of treatment. Understanding how factors related to people's attitude change such as stigma and personal experience and social-cultural background etc. evolve together could provide deeper insights into the barriers and facilitators of successful SUD treatment. Moreover, developing targeted interventions that address both implicit and explicit attitudes in patients and healthcare providers could enhance treatment outcomes. This includes creating more robust training programs for healthcare professionals that emphasize the importance of empathy and cultural competence in treating SUD patients. Finally, public health initiatives aimed at reducing stigma and promoting awareness of SUD as a medical condition, rather than a moral failing, are essential in fostering a more supportive environment for both patients and healthcare providers.

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