

Original Paper

Practices in Addiction Treatment of Voluntary Drug Rehabilitation Institutions in Northwest China

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Abstract

Anti-Drug Law of the People's Republic of China has made clear legal provisions for various measures to combat drug addiction, including voluntary rehabilitation, community rehabilitation, compulsory drug rehabilitation, and community rehabilitation. It has established a working system that combines drug rehabilitation treatment, rehabilitation guidance, and assistance services. Voluntary drug rehabilitation institutions are a crucial social force that not only reduces the public power's expenses for mandatory drug rehabilitation but also helps drug users receive professional and standardized treatment, according to analyzing the treatment practices of voluntary drug rehabilitation institutions in Northwest China by conducting fieldwork at Huayou Drug Rehabilitation Hospital in Xi'an. It is argued that the voluntary drug rehabilitation institutions in this region adhere to a holistic approach and utilize drug detoxification, methadone maintenance treatment, psychosocial support, and nursing intervention to provide patient-oriented treatment for addicted patients. However, most drug users tend to self-medicate, leading to low treatment compliance and high relapse rates. Consequently, drug rehabilitation medical institutions in Northwest China face new challenges, such as an increase in patients with alcohol and iatrogenic addictions, and a decrease in drug addiction patients. How to scientifically analyze the micro-meso-macro environmental factors affecting voluntary drug rehabilitation institutions in Northwest China, and then effectively integrate resources are the current work priorities of voluntary drug rehabilitation institutions in this region.

Keywords

Voluntary drug rehabilitation institutions, drug detoxification, psychosocial support, nursing intervention, treatment compliance

Highlights:

The addiction treatment practices employed by voluntary drug rehabilitation institutions in Northwest China have been the subject of little research. This study aims to fill this gap by exploring the addiction treatment practices of such regional institutions.

We researched voluntary drug rehabilitation institutions using fieldwork which is common in anthropology, and observed the addiction treatment practices at Xi'an Xincheng Huayou Hospital.

During our research, we conducted fieldwork at Xi'an Huayou Hospital, where we employed in-depth interviews with licensed doctors, nurses, psychiatrists, inpatients, and outpatients. In addition, we organized separate seminars for medical staff and patients and observed public entertainments for drug abstainers, which were convened by psychiatrists.

Introduction

Within the current national drug policy system in China, People Who Use Drugs (PWUD) have access to treatment for their substance use disorders through both compulsory and voluntary programs, including isolated mandatory drug treatment, community-based drug treatment, and voluntary drug treatment. These programs are provided by various institutions, including public security authorities, judicial departments, public health authorities, administrative departments, and civil society organizations. Compulsory isolated and community-based treatments are currently the most common forms of drug treatment in China. Besides, voluntary drug treatment institutions provide professional treatment services by licensed doctors, nurses, psychiatrists, and other healthcare professionals under the supervision of the country's health authorities. At the same time, voluntary drug treatment institutions have also played an important role in reducing social costs and providing scientific and standardized treatment for drug users through professional services

Drug abuse has been a serious social issue in China since the 1980s. Since the early 1990s, to address the drug rehabilitation situation, the national health authority and civil affairs systems have continually built and completed a significant number of voluntary drug rehabilitation institutions or hospitals. Most of these institutions are self-supporting, with only a small number being public institutions. Voluntary drug rehabilitation institutions typically employ a formal hospital management model, with robust medical facilities and professional medical workers who possess certain research and development capabilities.

Voluntary drug treatment institutions once experienced rapid development due to their profit-driven and social influence, becoming popular in large and medium-sized Chinese cities. To a certain extent, this model not only relieved the pressure on the police for compulsory drug rehabilitation but also preserved the family integrity of PWUD.

According to the latest records of the “Voluntary Drug Rehabilitation Institutions Directory” on the official website of the Ningxia Center of the National Drug Control Office, at present, there are mainly three voluntary drug rehabilitation institutions in the Northwest region: Xi’an Xincheng Huayou Hospital, Qinghai Jinfeng Voluntary (drug rehabilitation) Center, Yinchuan Jingyida Hospital (Co., Ltd.). Among them, Xi’an Xincheng Huayou Hospital is the largest and most influential voluntary drug rehabilitation institution, and its patients mainly come from Shanxi Province, Gansu Province, Ningxia Hui Autonomous Region, Qinghai Province, Xinjiang Uygur Autonomous Region and Inner Mongolia Autonomous Region. Because it has accumulated rich practical experience in addiction treatment, the research team took it as the point of this study.

Preliminary findings suggest that voluntary drug rehabilitation institutions in Northwest China employ a range of addiction treatment practices, including medication-assisted treatment, behavioral therapies, and psychological counseling. These practices are tailored to meet the specific needs of patients and are continually adapted to ensure their effectiveness.

This study provides insight into the addiction treatment practices employed by voluntary drug rehabilitation institutions in Northwest China. The findings suggest that these institutions utilize a range of evidence-based practices and are continually adapting their approaches to improve patient outcomes. Further research is needed to fully understand the effectiveness of these practices and to identify areas for improvement.

According to the Anti-Drug Law of the People’s Republic of China, voluntary detoxification means that PWUD may go to licensed voluntary drug treatment institutions to voluntarily participate in drug treatment. In practice, voluntary drug treatment in China provides clinically-oriented treatment through the public health system, as opposed to the civil and criminal justice system. Voluntary treatment in the public health system is provided by licensed doctors, nurses, psychologists, and other healthcare professionals under the supervision of the Ministry of Health China (MOH).

Methods

Between 2022 and 2024, we conducted research on voluntary drug rehabilitation institutions using fieldwork which is common in anthropology, and observed the addiction treatment practices at Xi’an Xincheng Huayou Hospital. The findings indicate that this voluntary drug rehabilitation institution plays a significant role in helping drug abstainers reintegrate into society.

During the fieldwork, we conducted in-depth interviews with medical practitioners, nurses, psychologists, inpatients, and outpatients in the drug dependence Department of Xi’an Xincheng Huayou Hospital. In addition, the research team also organized seminars for medical staff and patients and participated in group recreational activities involving psychological counselors, nurses, and drug addicts. In addition, we participated observed the process of addiction treatment, including psychological counseling and recreational activities. The in-depth fieldwork has laid the foundation for the study of addiction treatment practices.

Holistic and Systematic Treatment Practice

Despite being located in economically underdeveloped areas, voluntary drug rehabilitation institutions in Northwest China play a crucial role in addiction treatment with their professional expertise. These institutions combine integrated traditional Chinese and Western medicine, physical therapy, psychological therapy, and behavioral modification therapy to provide comprehensive care. Closed-loop management is adopted throughout the entire process, from pre-hospital assessment to post-hospital follow-up, rehabilitation guidance, and psychological crisis intervention, to help patients achieve systematic rehabilitation from physiological to psychological levels.

Xi'an Huayou Hospital is a non-profit, voluntary drug rehabilitation institution that was approved by the Shaanxi Provincial Department of Health and the Shaanxi Provincial Public Security Department in 2004. It was previously known as Xi'an Minle Drug Rehabilitation Hospital, and it became a part of the Huayou Medical Group in 2017. Currently, it is the leading hospital for voluntary drug rehabilitation in Northwest China.

The addiction treatment practices at Xi'an Huayou Hospital are guided by the modern bio-psycho-social medical model. Specifically, the medical staff at the hospital follows a five-dimensional holographic approach to relapse prevention and addiction rehabilitation treatment. This approach includes treatment for somatic psychiatric comorbidities, detoxification using integrated traditional Chinese and Western medicine, individual psychological and family intervention treatment, physical rehabilitation treatment, and relapse prevention maintenance treatment. Additionally, nursing intervention plays a significant role in addiction treatment.

In general, the primary measures for addiction treatment at Xi'an Huayou Hospital include detoxification using integrated traditional Chinese and Western medicine, methadone maintenance treatment (MMT), individual psychological and family intervention treatment, and nursing intervention. These practices are in line with the holistic and systematic approach to addiction treatment at the hospital.

Detoxification Treatment

“Detoxification is the first step and the foundation of drug treatment.” At present, detoxification treatment mainly adopts a medical model, that is, medical professionals use corresponding drugs and necessary medical means to reduce the withdrawal reaction and help addicts safely through the acute withdrawal period. Drug detoxification methods for opioid addiction mainly include opioid receptor agonist (such as methadone oral solution, etc.) maintenance treatment, opioid receptor partial agonist (such as buprenorphine) maintenance treatment, non-opioid receptor agonist (such as lofexidine) detoxification therapy, traditional Chinese medicine (such as Fukang tablets, Jitai tablets, etc.) detoxification therapy. Methadone and buprenorphine are the most common utilization of declination therapy. The initial dose of methadone therapy should be determined according to the dosage and degree of dependence of the patient. The declining rate of methadone varies from person to person, based on the principle that patients can tolerate it, the faster the decline rate, the shorter the course of

treatment, but the heavier the withdrawal reaction, the more pain. Therefore, the detoxification course is generally about 2 weeks. The principle of detoxification treatment is: decreasing day by day, first fast and then slow, only reducing without adding, and stopping firmly. The detoxification treatment of buprenorphine includes two stages: the induction phase and the drug reduction phase. In the acute withdrawal period, withdrawal symptoms were controlled by giving buprenorphine at a time when early withdrawal symptoms were observed, and the dosage was based on effective control of withdrawal symptoms. After that, the patient can only enter the reduction period after stable treatment for at least 2 days. Depending on the patient's condition, buprenorphine can be reduced for 3 to 14 days until complete withdrawal.

In addition, voluntary drug treatment facilities in the Northwest Territories also use physical detoxification therapy, which refers to the use of a variety of physical means (including acupuncture, transcranial magnetic, cupping, massage, etc.) to reduce patients' withdrawal symptoms.

We interviewed with Dr. Zhang, who has worked in the addiction department for over ten years. Dr. Zhang analyzed the symptoms of people who use drugs and introduced various therapies:

Drug addiction patients are in poor health, many drug addiction patients have gastrointestinal dysfunction, indigestion, constipation, and other symptoms. For these symptoms, the main purpose is to restore gastrointestinal function, relieve constipation, and sometimes use open logs. From the point of view of traditional Chinese medicine, the treatment process is mainly based on the production of fluid, righting and replenishing qi and blood. In addition, many addicts have lost teeth, and caries, and some have serious physical conditions such as tuberculosis and bronchial asthma. Those with asthma often have a family history and allergies, and asthma symptoms get worse with drug use.

Although integrated traditional Chinese and Western medicine is widely utilized, many patients in Xi'an Huayou Hospital have lower treatment compliance. Dr. Peng, who is the vice president of the hospital, pointed out that the hospital's treatment plan is scientifically based, but many patients only take the medicine they want:

Even when they are hospitalized, they often decide what medicine to take to quit drugs, and some of them don't follow the doctor's advice.

It is important to note the patient's preference in treatment and tailor it to meet their specific treatment goals. Globally, before withdrawal, methadone is typically used instead of heroin, and detoxification is accomplished by progressively lowering methadone dosages over intervals of 10 to 28 days. Due to its dual agonist and antagonist activity, buprenorphine can also be utilized for detoxification. As a detoxification treatment, buprenorphine was found to be as effective as methadone, with the benefit that withdrawal symptoms may subside more quickly with buprenorphine.

Because of the contradiction between doctors and patients in the treatment plan, coupled with the low treatment adherence of addicted patients, the relapse rate of patients in voluntary drug rehabilitation institutions remains relatively high. Early research confirmed that an initial relapse to opioid usage frequently happens very soon after leaving the program among patients who have undergone

detoxification in inpatient or residential settings.

Methadone Maintenance Treatment (MMT)

Methadone Maintenance Treatment (MMT) has been the most widespread clinical program throughout China since 2004. It is also the world's most extensive medication maintenance treatment program, funded by the Chinese government. Clients are only charged CN¥10 (\$1.50) per treatment. PWUDs who meet the admission criteria for MMT can apply for voluntary treatment. Since the implementation of MMT in China, there has been a significant reduction in the spread of HIV among PWUD, accomplished by diminishing the use of illicit opiate drugs and providing clean facilities for syringe exchange.

In September 2006, Xi'an Huayou Hospital received joint approval from the health, drug supervision, and public security departments to establish a national community drug maintenance treatment pilot clinic. It was recognized as a National Excellent Methadone Clinic in 2008. Since its opening, the MMT clinic in Xi'an Huayou has served over two million patients.

We interviewed Dr. Zhou, who is the director of the MMT clinic at Xi'an Huayou Hospital. She outlined the treatment and service measures provided to outpatients:"

In addition to supervising patients to take methadone according to the amount every day, we also combine medical measures with psychosocial intervention. Firstly, we provide free physical examinations twice a year for outpatients taking medicine. Secondly, we provide free psychological counseling, crisis intervention guidance, and employment guidance for them throughout the year. The third is to provide material rewards and free medication to patients who have negative urine tests throughout the year by regular urine tests. The fourth is to conduct home visits to patients regularly and carry out family psychotherapy. The fifth is to provide free medication and treatment for needy patients and AIDS patients and distribute festive presents.

The supplemental services provided in the MMT programs of Xi'an Huayou Hospital, which focus on physical health, psychological well-being, social support, and life-management skills, are essential elements of successful recovery. According to Dr. Zhou, patients who consistently take methadone can reintegrate into society because its effects last up to 24-36 hours. Dr. Zhou also explained the characteristics of people who have successfully reintegrated into society:

In the methadone clinic, there have been several successful cases. Their common features are having good economic conditions, generally being involved in business, having a relatively stable family, and not relapsing. These patients have a strong economic foundation, good education, and high treatment compliance.

Besides the scientific treatments and timely psychosocial intervention in the clinic, the MMT in Xi 'an Xincheng Huayou Hospital is accessible to all patients during COVID-19. We interviewed some patients in the MMT clinic, and they expressed their gratitude towards the clinic:

It is difficult for patients with underlying diseases to quit methadone. How do we quit methadone? Since methadone is harder to abstain from than heroin, we are afraid that the methadone clinic will

close in the future. We are especially grateful to Xi'an Huayou Methadone Clinic. Because the outpatient clinic has been open to ensure our normal life during the COVID-19. The medical staff in the clinic rush to the front line of the epidemic, and they are people with great love.

As the MMT clinic in Xi'an Huayou Hospital is accessible to every patient all year round, some patients were instructed to quit heroin permanently, and some even tapered off methadone. Additionally, since the end of 2022, the Xi'an Huayou Methadone Clinic has been collaborating with the Shaanxi Provincial Center for Disease Control and Prevention to carry out a hepatitis C virus(HCV) screening and treatment project. Because most PWUDs suffer from diseases such as hepatitis C virus(HCV), this project will help to reduce its spread among them and support their recovery.

While studying the effectiveness of drug treatments, it is essential to examine their limitations thoroughly. Although recent discoveries in addiction neuroscience may lead to the development of innovative pharmaceuticals for managing addiction, enhancing the efficacy of currently available therapies remains a significant challenge. In the case of opioid addiction, pharmacotherapy alone is often insufficient. A complete course of treatment should also include effective psychological support or other therapies. The most effective approach to treating opioid addiction involves combining pharmacotherapies with patient-specific psychosocial support techniques and nursing interventions.

Psychosocial Support

People with opioid use disorders are often medically and psychosocially vulnerable. At Xi'an Huayou Hospital, psychosocial interventions are combined with medication to treat opioid addiction. While medication is often necessary for treating PWUD, the addition of evidence-based psychosocial interventions, such as prosocial life skills training, relapse prevention skills training, and HIV education, is critical for maximizing the effectiveness of medication treatment.

Supportive psychosocial therapies have been used as adjuncts to pharmacotherapy and psychoeducation programs to relieve withdrawal symptoms. This kind of therapy can improve social functioning, quality of life, and medication adherence. Meanwhile, it can reduce relapse and rehospitalization. Furthermore, in many cases, psychosocial interventions are critical for generating important skills, attitudes, information, and motivation to promote a drug-free lifestyle. Providing evidence-based psychosocial interventions has been shown to meaningfully improve treatment outcomes, including drug abstinence, treatment retention, psychosocial functioning, and relapse prevention.

We interviewed Dr. Gao, a psychological counselor at Xi'an Huayou Hospital, utilizing psychological techniques in addiction treatment. According to Dr. Gao, the most commonly adopted method is narrative therapy. Dr. Gao explained the clinical significance of narrative therapy as follows:

One of the core ideas of narrative therapy is to get rid of the traditional concept of treating people as problems, and first emphasize that people are people and problems are problems. The point is to free the person from the problem, to face the problem. Through this process of "problem externalization", people can get rid of self-blame or shame for their problems. The direction of our conversation is to

support substance addicts in building a proper relationship between their problems and their selves. For example, in clinical practice, I usually guide drug addicts to rebrand their behavior. This process is to separate the addiction problem from the individual, and in the process of rebranding, through the “storytelling” of life, discover the missing pieces of life’s journey and guide them to reconstruct a positive life story. In this way, people with drug addiction can find out from the naming of the problem how the problem affects them, the impact of the addictive behavior on their life, work, and relationships, and more importantly, the naming of different names that show how the addict evaluates his or her behavior. Such an attitude can also infer the motives and goals of the person concerned.

Among Dr.Gao’s patients, Xiao Lei (pseudonym) is one of the most successful cases. He said that when he was young, he was engaged in sports, and his qualifications were not high, he had a history of drug abuse for more than 20 years due to the influence of his peers and the working conditions. To be precise, he has been struggling with addictive behavior for more than 20 years, repeatedly. After meeting Dr.Gao, he took the initiative to find Dr.Gao for psychological counseling three times and maintained contact with Dr.Gao after discharge. He still maintains a state of withdrawal, and now works as a coach in a fitness center.

Dr.Gao pointed out that narrative therapy believes that human activities and experiences are full of meaning and stories. Revisiting a person’s life is key to narrative therapy, which avoids easy categorization and judgment because each person is unique. The cause of the problem exists in the discourse of the parties. The concept and technique of narrative therapy are to guide patients to rediscover and tell a new story about their experience through “problem externalization”, “double listening”, “exception story”, “rewritten dialogue”, “retrospective dialogue”, “defining ritual”, “supportive dialogue” to relieve their depression, anxiety, and other negative emotions. Increase openness and initiative to help them see new options. The core concept of narrative therapy is to de-pathologize and decentralize the narration and interpretation of problems, deconstruct, externalize, reconstruct, and witness the events that constitute problems, pay attention to the social and cultural backsides of the parties, and explore language and narrative.

Another psychosocial support in Xi’an Xincheng Huayou Hospital is family therapy. Family-based models are not only a viable treatment alternative for the treatment of drug abuse but are now consistently recognized among the most effective approaches for treating both adults and adolescents with drug problems. Family therapy is a kind of psychological treatment that focuses on the interaction pattern of family members. It is not only an auxiliary treatment scheme for drug abuse, but also one of the most effective psychological intervention methods recognized by evidence-based medicine. This method can not only help adults treat addictive behaviors but also be widely used in adolescent-related behavioral and psychological intervention programs.

Dr. Gao presented cases where family therapy was used to guide patients through detoxification. Based on an analysis of Xiaojin’s life course, Dr. Gao utilized family therapy to help him abstain from illicit drugs:

Although Jin's father appears to be successful, he abuses Jin and his mother. When Jin was a student, his father would beat him for doing something wrong that any child might do, because he was drunk. This pattern of interaction in the family made Jin feel that being beaten seemed inevitable. After witnessing his mother endure years of domestic violence to protect herself, Xiao Jin cannot understand his own life. This traumatic childhood experience had a profound impact on his life. In addition, Xiao Jin's emotional expression mode is also affected by the relationship between his parents. Because he loves his mother deeply, he re-constructs his concept of gender relationship, "men should be good to women, no matter right or wrong". Jin's ex-wife is spoiled by her parents, which reinforces Jin's belief that "men should treat women well no matter, right or wrong". Although Jin's job seems to be going well and his marriage partner is admired by colleagues and friends, he believes his father used his marriage to achieve further success.

This "inappropriate concept of life" in their lives, not only to his good life goals but also over time, inevitably led to the breakup of their marriage.

Jin's mother has terminal cancer, but she stayed with him throughout his treatment. The reason for her insistence is not the cancer but her belief that her son might not be controlled by his father. Xiao Jin said that his life is like a movie, the story of others, not his own story. As he discussed the future, his eyes showed confusion, depression, and fear.

Dr.Gao guided Xiaojin and his family members in updating their concept of withdrawal, teaching them how to manage occasional addictive behavior. Xiaojin learned to take the initiative to adjust his passive feelings when accepting supervision, and how to actively and frankly communicate with authorized persons. Moreover, he learned to communicate his difficulties rather than take chances. Meanwhile, Dr. Gao advised family members to observe Xiaojin's emotional changes promptly. More importantly, Dr. Gao instructed family members to adopt an attitude of not questioning, guessing, accusing, or denying when communicating with Xiaojin, but always paying attention to him. Dr.Gao also reminded that XiaoJin should clearly express his motivation and behavior to his family, including specific action plans and implementation steps, to obtain positive support and encouragement from his family. Through family therapy, XiaoJin's family members also realized that the withdrawal and rehabilitation of addiction patients is a continuous project, and all family members should make corresponding adjustments and changes to truly support and help XiaoJin.

Through these systematic family therapies, which lasted for five months, Xiaojin was able to abstain from drugs and found a new job because his family functioned as normally as any other family. During psychological treatment, his family members played an important role in supporting him, particularly in the process of developing an action plan. Xiaojin's daily schedule was detailed down to the hour, during which his family supervised its implementation.

Family therapy is a general term for treatment methods including evaluation and treatment from the family level. Family therapy believes that the family is a system, any member of the system is related to other members, and the change of any member of the family will affect the change of other members.

Family therapy mainly relies on the strength of the family. Family therapy interventions in the treatment of addictive behaviors are designed to help family members understand their own needs and to provide sincere long-term support for the recovery of the addicted person. In the course of family therapy, the psychologist provides support for the interaction of the entire family member to gather the strength of the family, which can assist the family functioning well. First, psychologist integrates the role of family and social connection to help drug users find a way out of the lifestyle of drug abuse. Secondly, the psychologist helps to lessen the impact of drug addiction on both the whole family and the addicted person. In terms of family, whether it is the parent or the child who is abusing substances, the whole family needs to change. Family therapy is to instruct to change the drug users' substance abusing behavior by helping to change the whole family environment. The efficacy of family therapy for drug addiction was researched by Aaron Hogue and his colleagues. Their findings suggest that couple and family-based therapies produce benefits for PWUD whether they are being provided as the exclusive treatment or are being delivered as part of a multicomponent PWUD treatment program.

Nursing Intervention

As part of the healthcare team, nurses deal with PWUD on a 24-hour basis. High-quality nursing intervention is essential for improving the quality of life, health status, and continued abuse-free status of PWUD. Professional nurses working in hospital and community care should be sensitive to PWUD and identify strategies for addressing their issues. Positive nursing outcomes improve their quality of life.

Nursing interventions help PWUD acknowledge their drug addiction and facilitate the development of effective coping skills, medication self-efficacy, information-processing skills, occupational skills, and social skills. The nursing process assesses information and healthcare needs of PWUD and identifies nursing diagnoses using a classification system. Nursing diagnoses for PWUD include acute confusion, ineffective coping, and dysfunctional family processes.

We interviewed the head nurse Ms. Yan who has been working in Xi'an Xincheng Huayou Hospital since 2004. She argued that the nursing intervention plays a significant role in addiction treatment:

The adherence of addiction patients to treatment is low, making nursing intervention crucial. During the acute withdrawal period, patients experience intense drug cravings, which can cause them to disregard medical advice. As a result, we monitor their medication schedule closely to ensure they take it on time. Patients also experience withdrawal symptoms at specific times, such as 4:00 pm, and we provide support by engaging in conversation with them. Due to stigma, patients often feel inferior and vulnerable. However, when they come to Huayou, they feel respected, cared for, and loved.

In addition to providing physical care, we also play a teaching role. We educate patients about the dangers of drug abuse, including its physical and psychological effects, as well as its impact on relationships, family life, and job opportunities. We inform patients about their treatment options, including inpatient and outpatient programs, as well as methods to achieve long-term drug-free recovery. We also offer education to patient's family members, providing them with an understanding of

the rehab process and how they can support their loved one's in overcoming drug addiction.

Moreover, our psychiatric nursing intervention program is designed to help patients effectively manage their urges and cravings by practicing skills for managing and preventing relapses. These skills improve patients' ability to maintain abstinence from substance abuse, leading to a more successful recovery process.

Nursing intervention at Xi'an Huayou Hospital includes not only routine nursing programs but also high-quality, efficient comprehensive nursing. This approach utilizes humanistic care, refined psychological care, medication, and dietary guidance, and formulates individualized nursing measures. Nursing intervention can significantly reduce patient anxiety and depression, enhance patient confidence in treatment, and achieve the desired treatment outcomes.

Accordingly, the progress made by the nursing profession in addressing substance use and its related disorders offers recommendations to sustain and advance efforts to enhance care for persons who use substances, one of the most stigmatized and vulnerable populations. As awareness of the continuum of substance use has expanded, the care of persons with substance use has also expanded, from the domains of psychiatric-mental health and addictions nursing specialties to the mainstream of nursing. Nowadays, greater efforts are being undertaken to identify and intervene with persons at risk for and experiencing substance use disorders. Nurses have advanced the knowledge and skills necessary for substance-related nursing care including education and training, leadership, care innovations, and workforce expansion, and can drive efforts to increase public knowledge about the health risks associated with substance use.

Treatment Compliance Influenced by Self-medication

The significant challenge that voluntary drug rehabilitation institutions face is the low treatment compliance among inpatients with substance use disorders. In the addiction department, treatment adherence is relatively low due to their self-medication habits.

One of the theories of substance use is the Self Medication Hypothesis by Khantzian, a theory with 30 years of research. He argues that the drugs that drug users select are not chosen randomly. Their drug of choice is the result of an interaction between the psychopharmacologic action of the drug and the dominant painful feelings with which they struggle. Rather than simply seeking escape, euphoria, or self-destruction, drug users are attempting to medicate themselves for a range of psychiatric problems and painful emotional states. Although Danny H. Hall tested Khantzian update theory and pointed out that affective measures did not have the expected relationship with reported substance use. The self-medication Hypothesis is one of the valid theories for explaining drug use. This paradigm includes the use of non-prescription products to treat common health conditions or symptoms without the need for medical supervision, as well as using products to maintain health, whether self-initiated or following physician recommendations. The potential disadvantages of self-medication include postponement of seeking care or incorrect diagnosis, unsupervised use increasing the risk for misuse, abuse, overdose, adverse events, or interactions with other medications or consumables. Due to the

self-medication paradigm, some inpatients in voluntary drug rehabilitation institutions show lower treatment adherence.

According to the fieldwork, we found that many patients in Xi'an Xincheng Huayou Hospital also have a self-medication phenomenon. The hospital's vice president noted that the therapeutic schedule is based on science, but many patients only take the medicine they want:

Even when they are hospitalized, they often make decisions about what drugs to take to detox, and some don't follow their doctors' advice.

Self-medication is a common phenomenon among addiction patients undergoing treatment. The research team interviewed a patient named Xiao Meng (pseudonym), who shared the reasons why he occasionally ignores his doctor's advice.

In my several detoxification treatments at Xi'an Xincheng Huayou Hospital, the hospital used the following order of detoxification drugs: first methadone, then tramadol hydrochloride, and finally compound tramadol. However, I don't like methadone because I get constipated after taking methadone. It's an uncomfortable feeling. I still think buprenorphine is better than methadone because three buprenorphine tablets solved all my problems. If I could have bought buprenorphine outside, I wouldn't have come to Huayou.

Xiao Meng's experience suggests that practitioners of addiction treatment should pay attention to patients' drug preferences in the treatment process to achieve specific goals more effectively. Globally, methadone is commonly used in place of heroin before withdrawal, and detoxification is accomplished by gradually lowering the dose of methadone throughout 10 to 28 days. Because of its dual properties of agonist and antagonist, buprenorphine can also be used in the clinical detoxification treatment of opioid addiction patients. Used as a detoxification treatment, buprenorphine is as effective as methadone, with the benefit of faster relief of withdrawal symptoms.

The self-medicating hypothesis is one of the valid theories to explain drug use. This model includes the use of over-the-counter medications to treat common health conditions or symptoms without the need for medical supervision, as well as the use of health products to maintain health, whether self-prescribed or following a doctor's recommendation. Potential disadvantages of self-medication include delayed seeking treatment or incorrect diagnosis, and unsupervised use increases the risk of misuse, abuse, overdose, adverse events, or interactions with other drugs or consumables. Due to the self-medication model, some hospitalized patients in voluntary drug rehabilitation facilities exhibit lower treatment compliance.

Opportunities in Voluntary Drug Treatment Facilities

Despite the numerous challenges faced by voluntary drug rehabilitation institutions, there are also opportunities for them to make a difference. With extensive experience in treating addiction, these institutions can treat not only drug addiction but also alcohol addiction and iatrogenic addiction. We witnessed Dr. Lu treating a patient with similar symptoms at Xi'an Huayou Hospital.

A female patient, who is only 22 years old, has been taking Stilnox for chronic insomnia. At first, she

followed the doctor's advice carefully, but as the dosage increased, she bought Stilnox on the black market. Because she took 200 tablets each time which led to significant withdrawal symptoms, her family members sent her to Xi'an Huayou Hospital. Dr. Lu explained why the girl was dependent on Stilnox:

Stilnox is a Class IV controlled psychotropic drug, and it is also the first non-benzodiazepine imidazopyridine hypnotic drug. It has strong sedative, hypnotic, and mild anxiolytic, muscle relaxation, and anticonvulsant effects. It is used for patients with episodic, temporary, and chronic insomnia. Stilnox is dependent, but dependence is not the same as addiction. Short-term use of Stilnox to treat insomnia may lead to temporary drug dependence. However, when Stilnox is abused for a long time, withdrawal symptoms such as muscle pain, extreme anxiety, and tension will occur. Especially when the drug is suddenly stopped or the dose is suddenly reduced, the patient will be addicted to the drug.

A 36-year-old female patient had been abusing fentanyl after receiving cosmetic surgery. Her doctor prescribed fentanyl to alleviate pain, but she obtained the painkiller from the black market and became addicted. Her addiction symptoms were severe, and her husband sent her to Xi'an Huayou Hospital for treatment.

A male patient was addicted to morphine tablets due to the pain he experienced after leg surgery. He resorted to using his father-in-law's cancer patient card to obtain free morphine tablets from the Li Ka Shing Foundation, taking more than 70 tablets per day before seeking treatment at the hospital. Dr. Lu explained that morphine has a short half-life of three hours and must be taken every three hours to maintain its effectiveness. The patient reported experiencing withdrawal symptoms such as a snotty nose, general discomfort, night sweats, and lack of energy. Dr. Lu emphasized the importance of listening to the patient's experience of withdrawal symptoms. Due to the patient's reported depression and potential risk of suicide, he was assigned to a room where he could be closely observed by staff.

Three patients are addicted to alcohol. When we followed Dr. Lu on her daily ward rounds, we noticed that all of the alcoholic patient's hands trembling. I consulted Dr. Lu about the symptoms, and she gave us a professional explanation:

The clinical characteristics of alcohol addiction are mainly manifested in these six aspects: first, fixed drinking patterns (such as drinking in the morning, drinking at the wrong time, and drinking on occasions that do not need to drink). The second is the characteristic drinking-seeking behavior. Patients usually regard drinking as the first need and can use any means to drink regardless of everything. Third, alcohol tolerance increases manifested as an increase in drinking, but in the late stage, due to liver function impairment, tolerance decreases, showing that "a drink is drunk, but do not drink." The fourth is withdrawal symptoms, which are manifested as a series of neuropsychiatric symptoms after suddenly stopping drinking or reducing drinking, such as banter, limb tremors or trembling, hallucinations, and delusions. The fifth is a strong desire to drink alcohol after a long period of abstinence. The sixth is repeated failure to stop drinking.

Moreover, the issue of substance abuse is complex in Northwest China, much like in other regions

around the world. It has been reported that some patients at Xi'an Huayou Hospital's addiction department abuse Nitrous Oxide and e-cigarettes. The diverse needs of patients necessitate drug rehabilitation institutions to provide treatment to as many different types of patients as possible. Due to the COVID-19 pandemic and subsequent lockdowns of many regions, including border ports, the number of illicit drug-addicted patients has decreased, resulting in a shrinking illicit drug consumption market. Consequently, some drug rehabilitation hospitals in Northwest China have been forced to shut down. However, Xi'an Huayou Hospital has remained open to provide treatment for patients seeking to withdraw from addiction. We had the opportunity to interview the hospital director, who shared with us the reasons why they chose to remain open during the pandemic:

Paradoxically, from an economic perspective, we should have closed our doors a long time ago. During the three-year epidemic period, we have been operating at a loss, and currently, our drug rehabilitation hospital only has a few patients. We have to pay for medical staff and security guards, which cannot be sustained by the hospitalization fees charged to addicted patients. However, from a social responsibility standpoint, voluntary drug rehabilitation plays an essential role in the detoxification system mandated by the Anti-Drug Law of the People's Republic of China. Therefore, we should fully utilize the role of voluntary detoxification and assume the social responsibilities and obligations that our voluntary detoxification medical institutions are supposed to undertake.

Sometimes, I think about what would happen if we closed our doors. Even if we did, there would still be patients who genuinely want to overcome their addiction. Many of our patients over the past ten years engaged in self-harm behavior before being hospitalized, such as chopping off their fingers, as a way to express their determination to quit drugs. As doctors, we empathize with their injuries and their struggles. If people in society knew that they were drug users, it would be challenging for them to find jobs and reintegrate into society, which would lead to the vicious cycle of drug use, drug rehab, and relapse. When our patients beg us for help, we cannot ignore their cries. Even if only one patient needs help, we have to keep our doors open. It is our responsibility and obligation to assist every person who struggles with drug addiction in recognizing the dangers of drugs. Encouraging their family members and patients to actively participate in the voluntary drug rehabilitation process. Through scientific and standardized detoxification measures implemented in our professional drug rehabilitation medical institutions, we can help patients complete physical detoxification and psychological rehabilitation with minimal pain. Ultimately, our patients can achieve comprehensive physical and psychological recovery and minimize the risk of relapse. Our goal is to help every person struggling with drug addiction reintegrate into their family and return to society.

In China, PWUD are often viewed as lawbreakers, victims, and patients. As drug addiction is a chronic and relapsing brain disease, it requires professional medical treatment. In Northwest China, many patients have experienced family breakdowns due to drug abuse and live with daily stigma and low self-esteem. Some patients undergo secret detoxification in hospitals, fearing that their family members will abandon them if they find out. They also fear that if they are forced to undergo compulsory

treatment in isolated rehabilitation centers, their families' integrity will be compromised. This loss of integrity can lead some addicted patients to self-abandonment and even take revenge on society.

Voluntary drug rehabilitation institutions keep patients' confidentiality, guaranteeing to some extent the integrity of their families. Additionally, patients in voluntary drug rehabilitation institutions receive services from medical workers, who provide respect and care. This approach is conducive to their psychological recovery. Therefore, among the various drug rehabilitation measures in China, the addiction treatment practices of voluntary drug rehabilitation institutions play a crucial role in the integration of PWUD into society.

Environmental Factors in Addiction Treatment Practices

Based on the fieldwork, the treatment adherence of drug addicts, as well as environmental factors, directly influences the effectiveness of drug rehabilitation practices in voluntary drug rehabilitation institutions. The environmental factors can be categorized as macroscopic, mesoscopic, and microcosmic. These factors have a significant impact on addiction treatment practices.

Macroscopic Environment

From the macroscopic environment's perspective, control measures implemented by the public security department sometimes discourage drug users from voluntarily seeking detoxification. Article 62 of the Anti-Drug Law of the People's Republic of China states that drug users who voluntarily register with the public security department or receive drug rehabilitation treatment at authorized medical institutions shall not be punished. However, in practice, some public security department staff implement a dynamic control system for drug users. To maintain social order, the public security department requires drug rehabilitation hospitals to regularly submit the personal information of drug users. Patients, concerned about their interests in various aspects, may choose to forego voluntary detoxification to avoid being registered or brought under control. Over ten years ago, the government relied on the compulsory isolated drug rehabilitation system to accommodate drug users. As the number of rehabilitators increased, public security departments sometimes assigned quotas to the police. Some police officers even stationed themselves at the entrance of the drug rehabilitation hospital to illegally arrest inpatients who came to quit drugs.

Based on fieldwork, this phenomenon was severe ten years ago. At times, to ensure that voluntary detoxification patients can receive medical treatment in the hospital normally, especially those who are from different provinces, the hospital dean needs to use his social connections to contact staff at the relevant provincial drug control office to prevent patients from being arrested on their way to the hospital. Otherwise, the police may send them to a compulsory isolated drug rehabilitation center. In recent years, with the improved awareness of law enforcement, this issue has become less prevalent. However, the fear of being arrested still lingers among addicted patients, which also discourages some patients who genuinely want to quit drugs from seeking medical treatment.

Mesoscopic Environment

From a mesoscopic perspective, the addiction treatment industry, disciplines, and professionals need to

be upgraded and promoted. According to Li, the current addiction treatment system in China has a weak theoretical foundation and a lack of standardization. Furthermore, there is a shortage of trained professionals in addiction treatment. Therefore, the government needs to invest in the development of the addiction treatment industry, establish a standardized training system for professionals, and strengthen the supervision and management of addiction treatment institutions.

Some voluntary drug rehabilitation institutions prioritize profits, resulting in chaos within the addiction treatment sector. Despite Article 36 of the Anti-Drug Law of the People's Republic of China explicitly prohibiting for-profit drug rehabilitation, some voluntary drug rehabilitation institutions continue to prioritize financial gain. In recent years, the decreasing number of drug users in China has made it increasingly difficult for voluntary drug rehabilitation institutions to survive. Public hospitals are reluctant to open addiction departments because the specialized treatment of addicted patients dissuades most psychiatric medical staff from providing care, lowering enthusiasm for public hospitals to establish addiction departments. Alternatively, private drug rehabilitation medical institutions are susceptible to financial instability due to a lack of government support and funding. These objective reasons have turned some voluntary drug rehabilitation institutions into drug-consuming places. For example, some patients bring illicit drugs into the hospital and sell them while hospitalized, paying only 4,000 yuan (RMB) for admission but earning 50,000 yuan (RMB) upon discharge. Others continue to use drugs after leaving the hospital. Some medical staff fear retaliation from patients and therefore do not intervene when they see patients abusing drugs or contacting the police. Consequently, the unregulated addiction treatment industry undermines the confidence of patients and their families who genuinely seek rehabilitation.

Despite Article 36 of the Anti-Drug Law of the People's Republic of China stipulating that drug rehabilitation treatment must not be for profit, some voluntary drug rehabilitation institutions prioritize profit over patient care. As a result, some institutions in the addiction treatment industry are chaotic. However, the number of drug users in China has decreased in recent years, which has made it difficult for voluntary drug rehabilitation institutions to survive. Although public hospitals are not keen on opening addiction departments due to the complexity of treating addicted patients, the reluctance of psychiatric department staff to provide treatment to PWUD significantly affects the establishment of addiction departments. Additionally, private drug rehabilitation medical institutions often face financial difficulties due to a lack of government support and investment in funds, which hinders their ability to provide quality treatment. These factors have led to the proliferation of drug abuse in some voluntary drug rehabilitation institutions. For instance, some patients bring illicit drugs into the hospital and sell them to other patients. The hospitalization fee is 4,000 yuan (RMB), and they can earn up to 50,000 yuan (RMB) after discharge. Some patients even continue to use drugs after being discharged from the hospital. Furthermore, some medical staff members are afraid of retaliation from patients when patrolling the wards, which leads to a failure to address drug abuse by patients and to call the police. Thus, the lax regulation of the addiction treatment industry has undermined the confidence of patients

and their families who seek genuine rehabilitation services.

The field of addiction treatment is slow to develop, and there is a lack of leading academic institutions in this area. Moreover, there is a shortage of specialized drugs for addiction treatment, primarily methadone and buprenorphine. The manufacturers of these drugs are limited, and their production is declining year by year. This often makes it difficult for drug rehabilitation hospitals to procure these medications promptly.

The field of addiction treatment has been slow to develop, and there is a lack of leadership from high-level academic institutions. Furthermore, there is a shortage of specialized drugs for addiction treatment, with methadone and buprenorphine being the main options. However, the production of these drugs is limited, and their output is decreasing each year. As a result, drug rehabilitation hospitals may have difficulty procuring them promptly. The professional team for addiction treatment is relatively weak, with medical staff in drug rehabilitation hospitals typically holding technical secondary school or junior college degrees. Very few have a bachelor's degree as their primary degree, and almost none have a master's degree. Doctors who seek employment in drug rehabilitation hospitals are typically not licensed medical practitioners and many of them are hesitant to work there due to the nature of the job. Some become frightened on their first day and never return. Even among doctors who have worked in drug rehabilitation hospitals, some of them view it as transitional or unstable work and will leave for better job opportunities. Those who have worked in drug rehabilitation hospitals for over two years are considered senior doctors in the field of addiction treatment. In addition, medical staff in voluntary drug rehabilitation hospitals is often poorly paid, and the relapse rate of patients is high, which can lead to a lack of job satisfaction. Patients may also not always show proper respect for their doctors. Medical staff in drug rehabilitation hospitals have limited access to information on professional title promotion, and the channels for promotion are not always clear. This leads to job burnout among medical staff, resulting in high turnover rates and difficulty in finding high-level medical personnel in most drug rehabilitation hospitals. This, in turn, contributes to lower medical quality, a narrower business scope, and weaker professional ability in drug rehabilitation hospitals as a whole.

Micro-Environment

From a micro-environment perspective, some addicted patients have poor motivation for hospitalization, leading to voluntary detoxification being perceived as merely a formality. Patients who seek treatment at drug rehabilitation hospitals have different reasons: Some are forced into treatment by family members. Some are forced into treatment to avoid being caught by the police. Some are forced into treatment to manage withdrawal symptoms. Some are forced into treatment to reduce the dosage of their substance abuse. Such poor motives have caused voluntary drug rehabilitation institutions to be viewed as mere formalities. Due to the diverse motivations of patients, the effectiveness of drug treatment is compromised, resulting in a lack of trust in voluntary drug treatment by the government, patients, and their families. To expand on this, one possible solution to the problem of poor motivation

for hospitalization is to provide comprehensive, individualized care that addresses the specific needs of each patient. This could include a combination of medical, psychological, and social interventions, as well as family involvement and support. Additionally, efforts to improve public awareness and education about addiction and its treatment may also help to reduce stigma and increase motivation for seeking treatment. Finally, collaboration between government agencies, healthcare providers, and community organizations may be necessary to address the larger social and economic factors that contribute to addiction and hinder effective treatment.

Since voluntary detoxification is not mandatory for addicted patients, many of them are unable to complete the entire process of addiction treatment and usually require a 15-day residency to undergo physiological detoxification. According to the fieldwork of Xi'an Huayou Hospital, the average length of stay of most patients who received voluntary drug rehabilitation is a common phenomenon for patients to leave the hospital after receiving calls from family members or anti-drug specialists, which makes it difficult for them to complete the prescribed course of treatment and persist in later rehabilitation. Due to the short duration of treatment, subsequent psychological intervention and behavior modification cannot be fully implemented. Without compulsory measures for patients, the therapeutic effect of voluntary drug rehabilitation institutions is not guaranteed. As a result, many patients and their families lose confidence in the treatment provided by these institutions. To address these challenges, voluntary drug rehabilitation institutions in Northwest China need to implement comprehensive measures, such as increasing the duration of hospitalization and providing more effective psychological interventions and behavior modification programs, as well as strengthening collaboration with anti-drug agencies and family members to enhance patient adherence to treatment. Moreover, developing new drugs and treatment strategies for addiction can improve the effectiveness of drug treatment and provide better outcomes for patients undergoing voluntary drug rehabilitation.

Environmental factors play a crucial role in shaping the practices of addiction treatment in voluntary drug rehabilitation institutions in Northwest China. To enhance the professional skills and active role of drug rehabilitation medical institutions, it is necessary to address the lack of attention given to them. On one hand, national and local governments should provide support to voluntary drug rehabilitation institutions with a good reputation in terms of human resources, equipment, and funding to encourage more social participation in addiction treatment practices. On the other hand, it is essential to integrate resources for drug rehabilitation. Specifically, resources for voluntary drug rehabilitation and community rehabilitation should be merged to achieve a balanced development of voluntary drug rehabilitation, drug maintenance treatment, compulsory isolated drug rehabilitation, community drug rehabilitation, and community rehabilitation. This will help to optimize the use of resources and improve the effectiveness of addiction treatment.

Moreover, it is important to address the motivations of patients seeking treatment at these institutions. Many patients may lack a genuine desire to quit drug use, leading to superficial participation in the rehabilitation process. Therefore, it is crucial to design strategies that motivate patients to engage in

addiction treatment actively. For instance, institutions could provide education and counseling services to help patients understand the negative consequences of drug use and develop a personal motivation to quit. Additionally, institutions could offer incentives such as vocational training or employment opportunities to help patients reintegrate into society after rehabilitation.

In summary, addressing environmental factors and patient motivation is critical to improving the practices of addiction treatment in voluntary drug rehabilitation institutions in Northwest China. By integrating resources and providing support to these institutions, we can mobilize more social forces to participate in addiction treatment practices and achieve a balanced development of various rehabilitation approaches. Ultimately, this will contribute to reducing drug addiction rates and improving the quality of life of those struggling with drug addiction.

Conclusion

Northwest China is an underdeveloped region with a relatively backward economy and culture and a less popular entertainment industry. In this context, heroin is more commonly abused than methamphetamine or NPS, leading to a higher prevalence of drug addiction. As part of China's detoxification system, voluntary drug rehabilitation institutions play a significant role in supporting PWUD on their road to recovery. These institutions offer detoxification treatment, methadone maintenance treatment, psychosocial support, and nursing intervention to provide professional treatment for addicted patients. However, patients' treatment adherence is relatively low due to their tendency to self-medicate, which can sometimes result in unsatisfactory outcomes. Additionally, environmental factors can also impact treatment practices, highlighting the need for the government to provide both economic and technical support.

In the face of new challenges, voluntary drug rehabilitation institute should optimize their strategies to help patients cope with addiction to drugs, nitrous oxide, e-cigarettes, alcohol, and other substances, which are more complex issues. Voluntary drug treatment facilities should adapt their treatment programs to the unique needs of the patients they serve and the new challenges they face.

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