A Review of Substance Use Disorder Treatment in Developing World Communities

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ABSTRACT

Background: As global health endeavors increasingly encompass efforts to prevent and treat mental illness in the developing world, it is important to build a base of knowledge of existing treatment models and experimental outcomes.

Objective: This article reviews the current literature on substance use disorder treatment in countries with a high, medium, or low Human Development Index according to the 2011 United Nations Development Programme Report.

Methods: We searched the databases PubMed, PsycINFO, and Global Health using search terms such as *substance abuse treatment developing countries*, *addiction developing nations*, and *alcohol abuse developing countries*. Opinion pieces and articles published before 1994 were excluded. Thirty relevant articles (excluding those reviewed for background information) were identified.

Findings: Comprehensive overviews of treatment models were markedly absent from the current literature. However, existing research highlights specific areas of need, which may serve as a guide for future research and program development.

Conclusions: In light of the evident need for treatment of substance use disorder in developing countries, future research would do well to blend inquiry with practice. Although further investigation is needed to fully understand the specific needs of developing world populations, assisting those populations should be a primary goal.

Key Words: addiction treatment, drug abuse treatment, global mental health, rehabilitation, substance use disorder

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INTRODUCTION

Presented with clear evidence that global public health objectives cannot be achieved without addressing a broad spectrum of mental health issues, policymakers have called attention to the need to improve access to treatment for substance use disorder (SUD) in developing nations.[1] Although precise measures of the prevalence of substance use and dependence in developing countries is difficult to attain, in part because of the limited capacity of these countries' governments to conduct national surveys,[2] addiction is still recognized as a large and growing problem for developing societies.[3] Resources to address SUD in the developing world are severely limited; 34% of low- and middle-income nations have not developed a substance use policy.[3] Background information regarding the prevalence of SUD in the countries for which articles were identified is provided in Table 1 according to the six World Health Organization (WHO) regions.

Inadequate attention to SUD is part of a broader trend of underinvestment in mental health care by these countries, as the poorest nations allocate the smallest portion of their already strained public budgets to mental health.[18] Underutilization of mental health services in resource-poor settings has been attributed in part to stigma. However, WHO has called for investigation into additional explanations.[1,19] Inequities in the distribution of resources within countries and inefficiencies in the delivery of care have also attracted the attention of scholars.[18]

As inadequate treatment for SUD has been firmly established as a major public health problem plaguing developing countries, research into effective and feasible treatment options will inform how to bridge this treatment gap. A comprehensive overview of the disparate substance use treatment models and experimental outcomes across different nations is lacking in the prior literature. This article reviews the current literature on SUD treatment in the developing world, with the aim of informing future program development and research.

METHODS

We searched PubMed, PsycINFO, and Global Health for relevant articles, using search terms such as *substance abuse treatment developing countries*, *addiction developing*

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Table 1. Background Information by World Health Organization Region

The Americas	In Brazil, Alcoholics Anonymous (AA) first established a presence in 1947 and had gained 120,000 members in 5700 active groups as of 1997.[4]
	In Trinidad and Tobago, AA as well as Narcotics Anonymous (NA) groups comprise part of 110 existing local drug rehabilitation centres and hold both open and closed meetings, but it is not clear how many are active.[5]
Africa	In Nigeria, 1-year prevalence rates of cocaine use (0.7%) and opioids use (0.7%) rank third in the continent.[6] High rates of substance use also have been reported among inpatient psychiatric populations in Tanzania and Kenya.[7,8]
	Alcohol consumption per drinker in the World Health Organization-defined Africa E region, which includes South Africa, Ethiopia, Kenya, and other countries with similar health outcomes, is 16.6 L, compared with 14.3 L for the United States, Canada, and Cuba.[9] In much of sub-Saharan Africa, the beverage alcohol industry collaborates with governments to develop national alcohol policies.[10] Policy documents from Botswana, Uganda, Malawi, and Lesotho drafted following national symposia attended by representatives of government and the beverage industry were nearly identical in structure and wording, reflecting the industry's dominance in policymaking across countries.[10] A lack of public awareness also may thwart prevention efforts. In Nigeria, underfunding and migration of potential researchers to the private sector or to other countries have stunted what was once a growing knowledge base on alcohol issues.[11]
Asia	Following a successful campaign to combat opium abuse in the 1950s, China enjoyed a reputation as a drug-free country for more than 3 decades before the problem resurfaced under the global drug trade.[12] The number of registered substance abuse users in the country jumped from 70,000 in 1990 to more than 1 million by 2003, with heroin being the primary drug of abuse.[12]
	In India, AA originated in the 1950s in association with Christian organizations. Its presence has gradually expanded to reach many cities, with more than 250 groups currently operating in Bombay and approximately 120 in the state of Kerala, where the movement first gained a presence in 1987.[13] Half of the centers in Kerala were established and are currently managed by churches.[13] Little precise data on the effectiveness of AA groups in India is available.[13]
Europe	In Russia, alcohol dependence has garnered particular attention. A 1998 study declares that alcoholism in the country "threatens to block the current transition towards a functioning democracy."[14] and today, many consider alcohol-related harm to be a "natural disaster" in the country.[15] Opiate use is also widespread, with an estimated 2% of the Russian population using heroin or other opiates annually.[16] Despite increased government regulation on both supply and demand sides, structural barriers to treatment remain, including the illegality of methadone and buprenorphine maintenance programs.[17] Systematic research on the availability of treatment services is also lacking.[17]

nations, and *alcohol abuse developing countries*. Epidemiological studies focusing exclusively on prevalence were generally excluded, although some were reviewed for background information. Commentaries were excluded, as were articles published before 1994.

For the purpose of this review, *developing country* is defined as a nation with a high, medium, or low Human Development Index (HDI) according to the 2011 United Nations Development Programme Report.[20] Thus, studies conducted in countries with very high HDIs were excluded. Findings are reported here as follows. First, we review the limited prior literature that investigates treatment models in multiple developing countries. Next, we review papers that present comprehensive overviews of treatment models within a single country. Subsequent papers, many of which describe a single treatment center or intervention, are categorized by treatment approach. Some papers fall under multiple sections. A separate section is given to Alcoholics Anonymous (AA)-based treatment approaches due to the substantial body of literature on this model. Finally, articles that focus on services-related issues are reviewed.

FINDINGS

Comparative Papers

Although to our knowledge this is the first undertaking to review treatment models for SUD across the entire developing world, two papers comparing treatment approaches between two different countries were identified in the prior literature.

One comparative study reviewed approaches to drug abuse treatment in China and Germany, drawing particular attention to the use of methadone maintenance treatment (MMT). Although MMT was only approved in China in 2003 and continues to be hotly debated, in Germany, substitution treatment has a 20-year history and is a central component of opioid addiction treatment.[21] As of 2007, China planned to set up 1000 MMT clinics to serve 200,000 patients over the next 5 years.[21] The authors express concern that implementing MMT in China will prove difficult given the country's history of detaining drug users. They argue that China should look to Germany and other developed nations as a guide for improving both its MMT programs and its addiction treatment services more generally.