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Social Determinants of Health: Hazardous Consumption of Alcohol in Lusaka, Zambia

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Abstract

Early alcohol use can be a predictor of impaired health and long-term alcohol dependence and abuse; the detrimental effects are particularly acute for youth, who may be more vulnerable to alcohol-related harm than any other age group.[1] In Zambia, 45.1% of students grades 7-10 exhibit problematic drinking, and 42.4% report drunkenness.[2] Constructed in conjunction with the Zambian Ministry of Health, this study adds to the public health and epidemiological understanding of the Social Determinants of hazardous alcohol consumption, both within the city of Lusaka, Zambia and in conversation with broader global trends. In addition, as hazardous consumption of alcohol does not function solely as a health behavior, but also as an outcome and instigator of mental health challenges, this research contributes to local and global understandings of mental health. Based upon data from focus groups, extended site observations, semi-structured interviews and procurement of epidemiological data, this study theorizes five categories of Social Determinants of hazardous alcohol consumption: (1) Governance, (2) gender inequalities, (3) educational inopportunities, (4) stigmatization and (5) gaps in healthcare service and delivery. These categories shape hazardous alcohol consumption, yet also present avenues for structuring interventions. Though many challenges exist in implementing interventions, future research and policy must consider this interaction between mental and physical health and the surrounding social, political and economic environment.

Key Words Zambia; mental health; social determinants of health; alcohol; non-communicable diseases; youth

INTRODUCTION

Non-communicable diseases (NCDs), chronic illnesses not transmitted from person to person, account for two out of three global deaths annually.[3] Recently classified under the umbrella of NCDs, hazardous consumption of alcohol[1] contributes significantly to the global burden of disease.[4,5] Accounting for 5.1% of the global burden of disease and injury as measured in disability-adjusted life years (DALYs), hazardous alcohol consumption is detrimental to users as well as their networks, in the spheres of health,

[1] Defining hazardous consumption is highly complex, and must leave substantial room for relativity and context-specific definitions. According to the WHO Global Status Report on Alcohol 2014, hazardous consumption of alcohol is defined by the quality, quantity, and pattern of drinking.[1]

education, economics and social capital.[4] Yet gaps in knowledge persist as to the causes of this harmful behavior and its long-term implications.[6,7,8,3] This is particularly relevant in Zambia, where it is estimated that nearly half of students abuse alcohol.[2]

Fifty years after independence from British colonial rule, Zambia's history of leadership entrenchment, economic instability, and influence by external actors[2] dramatically affects the health of its population.[9] According to recent measures, 74.5% of the Zambian population lives below the poverty line, and nearly 50% of children under the age of five are classified as "stunted" due to inadequate nutrition.[11] The completion rate of secondary school for girls remains strikingly low at just 17.4%, and, though its rank is improving, Zambia remains in the bottom 25% of countries in the UN Human Development Index.[12,13] Framed in recent priority-setting discourses as the "Social Determinants of Health" (SDH), the conditions of the social world, shaped by history, international relations, and the global political economy, influence the quality and distribution of Zambian health outcomes.

Defined as "the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life," the SDH embody a modern movement to elucidate interactions between the spheres of society and health.[14] With a particular emphasis on the causes of health disparities—unfair and avoidable differences in health status—frameworks of SDH theorize the ways in which social, economic, political, cultural and environmental contexts shape the landscape of justice in health outcomes.[15] In Zambia, longstanding social inequalities are embodied in a multiplicity of health outcomes; the hazardous consumption of alcohol is a paramount example of this phenomenon. However, the systems and structures of inequality are not necessarily inevitable, and the subsequent shaping of opportunities and outcomes may be modifiable by informed action.[16]

Designed and implemented in Lusaka, Zambia, in collaboration with the Zambian Ministry of Health, [3] this study illuminates several of the major social determinants of hazardous alcohol consumption among both youth and adults in the region, and suggests globally applicable frameworks for understanding the role of context-specific factors in shaping patterns of addiction and substance abuse.

MATERIALS AND METHODS

Utilizing both qualitative and quantitative methods, this research is structured to mirror the multi-sectorial nature of hazardous alcohol consumption through the execution of a comprehensive cross-sectional analysis. To display relationships between policy, treatment and individual experiences, the research team[4] conducted four focus groups, six extended site observations, 20 semi-structured interviews, and procured data from World Health Organization and Chainama Hills Mental Hospital—the only mental hospital in the country—housed in the state capital. Across all data collection methods, the study aimed to ascertain the relevant social inequalities in Zambia and their linkages to health outcomes, using both quantitative analyses and the perspectives of many populations.

Focus group discussions (FGDs), composed of 5-12 individuals each, emphasized community perceptions regarding alcohol and its effects. To incorporate a range of perspectives from relevant stakeholders, these groups included members of a local market, college students and family members of those with substance-related issues. Local partners[5] assisted in identification and recruitment of these individuals. Selection criteria included those above the age of 18. For college students, the research team conducted separate groups for males and females as determined in conjunction with university

[2] External actors may include international lending institutions and policies, political interference by colonial and post-colonial powers, and international charitable institutions. For more information, see Gewald, 2008[9]; Moyo, 2009.[10]

[3] The development, execution and evaluation of this research occurred in partnership with the Mental Health Unit of the Zambian Ministry of Health (MoH). MoH articulated a particular need for research regarding hazardous alcohol consumption among youth, and in conjunction with Northwestern University, the On-Site Investigator compiled a research team of US and Zambian partners to conduct this research.

[4] A research team was established on-site in conjunction with the Ministry of Health. This team included the On-Site Coordinator (Crane), a Principal Investigator in an advisory role and several faculty from Northwestern University, staff from the Mental Health Unit of the Ministry of Health, and a Principal Investigator from Chainama Hills College in Lusaka. Informed consent was obtained from all human subjects; Study Title: "Alcohol Abuse and Zambia's Youth," IRB: STU00200763.

[5] Local partners at Chainama Hills College, Chainama Hills Hospital, and Ministry of Health helped recruit, facilitate, and monitor focus groups.

administration and local partners. The research team conducted focus group discussions in Nyanja, Bemba and English,[6] and the FGD instrument was developed in conjunction with the Ministry of Health. The analytic tool used for focus groups was content analysis of transcribed discussions.

Extended site observations—six in total—explored the mechanisms of care provision in healthcare facilities and the obstacles therein. At Chainama, the research team shadowed psychologists, social workers and psychiatrists in daily operations, as well as during bi-weekly group therapy sessions. At the mental health clinic within University Teaching Hospital (UTH), the research team observed psychologists and psychiatrists during the intake and check-up processes. Content was analyzed through coding.

Eliciting the perspectives of key stakeholders, interviews examined the roots, manifestations and implications of hazardous alcohol consumption in Lusaka. The selection criteria of "key stakeholders" incorporated a variety of individuals including, but not limited to, researchers at the Centers for Disease Control, physicians at UTH, the Curriculum Development Coordinator for Health Education, the Director of Mental Health at the Ministry of Health and those identifying as former hazardous consumers. Interviews were conducted in English, and then their content was transcribed and analyzed.

Various forms of quantitative medical and epidemiological reports were also collected. These data emphasized trends in the prevalence of hazardous alcohol consumption, as well as the social and demographic characteristics associated with these outcomes. Yearly admissions reports from Chainama Hospital Data from 2004-2013, procured from the Chainama Statistics Department, demonstrate the prevalence of and transformations in hazardous consumption. Data from the Zambian chapter of the World Health Organization, provided by the Zambian Health Information and Promotion Officer, express national trends and consumption patterns in relation to alcohol, as well as correlative demographic factors. Findings were analyzed via data tabulation and graphing, as well as comparison of trends across datasets.

RESULTS

Findings may be grouped into five categories of Social Determinants. These intersecting categories simultaneously shape hazardous consumption and are shaped by hazardous consumption. Categories are (1) governance, (2) gender inequalities, (3) educational inopportunities, (4) stigmatization and (5) gaps in healthcare service and delivery.

Governance

In Zambia, the lack of accountability mechanisms for monitoring corruption, as well as the history of economic and political marginalization in the international sphere, contribute to unjust health outcomes.[9,18] Though Zambia possesses a robust legal discourse surrounding alcohol, the lack of enforcement of these policies—such as the age of drinking, the prohibition on unlicensed facilities, or the hours at which bars may open—contributes to the availability of these spaces for consumption. In addition, the low cost of alcohol in Zambia, due to market distortions and the prevalence of home brewing, enables it to be widely accessible. Sold for mere change, the spectrum of alcoholic beverages, from hard liquor to the widely popular corn-beer mixture called "Shake Shake," was often cited by study participants as being cheaper than water.

Dynamics of hazardous consumption are entangled in industry in the midst of a struggling economy plagued by detrimental lending policies. Participants cited the existence of "more bars than schools," and the availability, affordability and accessibility of alcohol as exacerbating mental health concerns. A female focus group participant cited the influence of industry in providing economic incentives for the Zambian government, stating, "We cannot stop the government from licensing—that's where they get revenue…on [sic] alcohol." Indeed, with the aim of targeting "low-income consumers," Swahn et al. highlighted the recent strategies of the alcohol industry to "produce and sell cheaper alcohol to African populations, in order to increase its consumer market."[2] Involving trade associations, marketing campaigns and multinational corporations, the dynamics in Zambia operate within a broader conversation, at the site of complex interplay between governance, health policy and corporate interests.[19,20,21,22,2,23] Enabled by market distortions and limited enforcement, governance structures influence health outcomes and experiences.

[6] According to the 2010 Census, local languages Nyanja and Bemba are the two most widely spoken languages in Zambia, and English is the national language.[17]

Gender Inequalities

The prevalence of gender inequalities normalizes consumption among males while shaming female consumers and thus deterring them from seeking treatment. Situation analyses conducted by the Zambian Center for Communications Programmes (ZCCP) identified that hazardous alcohol consumption is associated with stigma, particularly for women, and that often this behavior is a method for coping with problems such as physical, emotional and sexual abuse.[24] Furthermore Zambia ranks 136th out of 148 countries in the Gender Inequality Index (GII); only 6% of employed women work in the formal sector, and only 26% have reached the level of secondary education or above.[12] In addition, employed women earn on average 37% less per month than do their male counterparts.[25] These inequalities limit workplace advancement opportunities and fiscal independence for women, and as a result often function as additional barriers for women to access care. Divergences in the acceptability of drinking also occur along these gender lines, as study participants called male consumption "expected" and female drinking "shameful." At Chainama, only one female consumer of 20 participants attended group therapy over a period of two months. As cited by Mr. Banda, the Executive Director of a small treatment center, SHARPZ,[7] "culture definitely looks at women engaging in alcohol drinking as weak, and ethically it is wrong for a woman to be drinking. So even when they have problems they wouldn't come out in [the] open to talk about it. But they are there. And women are struggling." Thus, gender inequalities across the indicators of education, employment and violence, as well as in relation to consumption normalization, impact the health outcomes of women in Zambia.

Moreover, as indicated by participants, economic strain and high social acceptability condone hazardous consumption among men. Interview participants indicated that the expectation to provide for a family, whether nuclear or extended, often engendered high levels of stress within the context of skyrocketing unemployment.[25] Of the 76% of employed persons in Zambia, 85% work in the informal economy, where they are susceptible to excessive hours and wages below the government-mandated threshold.[25] Additionally, economic shifts and currency devaluation in recent years have caused falling work wages: 75% of Zambians currently live below the poverty line.[26,25] As such, particularly among users and their networks, participants reported the lack of meaningful job availability as contributing to the increase in the risk of hazardous consumption. Furthermore, costs such as school fees, rent, food and groceries, and healthcare expenses often competed for limited salaries, and the stress of this competition was associated with increased consumption across age groups. In addition, users identified the high rates of job dissatisfaction, especially among occupations such as public transportation and construction, as fostering feelings of depression and low status. According to Ms. Sitale, the Principal Mental Health Officer of the Ministry of Community Development and Mother and Child Health (MCDMCH), "If the head of the household is taking alcohol, is he going to take money for food? He will not be able to take his children to school, he will not be able to manage his home properly, and it will also lead to gender-based violence." Though an accurate depiction of the data on consumption and its ramifications, Ms. Sitale's observations both question and demonstrate the existence of gender inequalities in implying that the head of the household must be male, and that his financial situation determines the fate of his family. The head psychiatrist at Chainama, Dr. Mwansa, corroborated the weight of economic insecurity in reflecting gender inequalities and in influencing health outcomes, stating,

> The socioeconomic situation in this country is not very good. And the people are very low income. So it's very difficult for them to make both ends meet. So because of that there are a lot of problems at home—they can have marital problems, financial problems that can lead to the medical problems. So you find that a lot of people run away from their problems and find socially alcohol … it is used as a coping mechanism.

Therefore, the influence of gender inequalities alters consumption patterns as well as health and treatment outcomes.

Educational Inopportunities

Contributing to increased consumption associated with the lack of meaningful employment experiences, education scarcities increased the number of hours during which youth cited feelings of emptiness and meaninglessness. Influenced by the lack of facilities, low salaries for educators, and the small number of teachers relative to the population, public schools in Zambia often truncate the school day in half to accommodate two different sets of students a day, resulting in fewer hours of classroom instruction per student. Furthermore, many youth and adult focus group participants articulated the costs of education,

[7] All names of individuals have been changed in this publication to protect the privacy of participants.

though described as free for primary school, as inhibiting their ability to remain in school and causing early dropouts. In addition, as expressed by every single participant in this study, the combination of halved school days and scarce recreational activities for youth fosters an environment in which hazardous alcohol consumption flourishes. The lack of social spaces without the presence of alcohol, for youth and adults alike, increased the likelihood of spending time in bars or clubs. Every participant articulated a linkage between this lack of alcohol-free social spaces and the hazardous consumption of alcohol, citing boredom, hopelessness and depression. As articulated by Ms. Nyrienda, a nurse at Chainama,

> Nowadays, because we don't have adequate space in school, there are two sessions. There, those who go in the morning and have to knock off, maybe it's 12 [o'clock] or something, to [give space] to those in the afternoon. Then, they don't have a specific program to take up their time. They are free the whole afternoon, or they are free the whole morning before school. There is no structured program for the youth.

As such, the limited job prospects for students, even after completing grade twelve, as well as the scarcity of meaningful activities and educational opportunities for students while in school, foster an environment in which health challenges thrive.

Stigmatization

Stigmatization often silences conversations about hazardous consumption and mental health, marginalizing individuals and inhibiting treatment. Defined as the "co-occurrence of labeling, stereotyping, separation, status loss and discrimination," stigma influences health outcomes, disrupts resource access and enables the creation of mechanisms for perpetuating difference.[27,28] In Zambia, the stigmatization of mental health can produce a form of "social death" for an individual labeled with any form of mental illness or mental health challenge. Even the families of such individuals may experience exclusion from their communities, and the individuals themselves can be fired from work, abused, attacked or utterly shunned. Across all participant groups, individuals identified the social stigma surrounding receiving treatment at Chainama as inhibiting individuals from seeking help. This stigmatization contributes to the lack of awareness surrounding treatment options. Dr. Tembo, the head psychiatrist at University Teaching Hospital (UTH), framed the experience of stigmatization as a lifelong label, explaining that patients "can lose their job if their employers find they are at Chainama. You will be highly stigmatized in society … It's a tag they carry their whole life." Elaborating on the ramifications of this stigmatization, Dr. Tembo articulated misunderstandings and exclusionary practices by communities:

> Once [patients] are [at Chainama], irrespective of what the basis or cause was, when they go back into the community, they are not seen as sane because now [community members] see them as someone who has a mental problem, who is dangerous to "us"—they are contagious, we cannot share food with them … They are being stoned at, they are being injured.

The physical and social violence experienced by individuals associated with Chainama, or displaying deviant behaviors associated with mental health challenges, reflects the significance of stigmatization in influencing the medical and social treatment of mental health challenges both prior to and as a result of hazardous consumption. In addition, the stigmatization of mental health challenges affects the availability of treatment. According to Dr. Mwansa of Chainama Hospital, "There is expertise really lacking in those because then there is really less knowledge to diagnose and treat these conditions. So, I think that's again the reason why since there are no qualified personnel so it is a trade which is stigmatized." Therefore, the prevalence of stigmatization contributes to shortages in treatment options and quality, as well as complex social relations within families and communities.

Gaps in Healthcare Service and Delivery

As a result of the ever-present scarcities in staff, resources and space, healthcare professionals cited shortened treatment periods for patients as contributing to the "recycling problem." As the highest cause of admission at Chainama (see Graph 1 in Section 7: Tables and Figures), hazardous alcohol consumption admissions increased dramatically by 293% between 2010 and 2014. Many participants who were currently admitted at the hospital expressed that they had already been patients at the hospital several times prior. The high rates of relapse point to limitations in treatment as well as environmental concerns: Healthcare providers identified the lack of resources and time as inhibitors of their ability to conduct formal follow-ups after release, and additionally cited the inability of detoxification to ameliorate environmental conditions such as peer pressure, financial concerns and past trauma. Furthermore, participants across sectors outside the city center observed that healthcare professionals do not receive training in mental health care or assessment, hindering early diagnosis. In addition, available medication

is often scarce and expensive for patients at UTH and Chainama; this obstacle is amplified in rural regions. Gaps in healthcare service and delivery thus influence the experiences of treatment, as participants noted that the outcomes and limitations of treatment contributed to the proliferation and persistence of hazardous alcohol consumption throughout one's lifetime.

Chainama, the only mental hospital in the country, provides crucial detox medication and hazardous alcohol consumption-specific therapy. Yet the lack of space, distance from rural regions, minimal funding and treatment conditions inhibit individuals from accessing care. Located in the capital city of a country of nearly 16 million people, Chainama serves a very small portion of the population, with demand for its services exceeding its capacity.[29] Zambia established its first psychiatric training program less than a decade ago, and, combined with the stigmatization surrounding mental healthcare, staff shortages present a daily challenge for treatment.[30] As articulated by Ms. Nyrienda of Chainama Hospital, these shortages dramatically alter the quality of care experienced by patients and highlight the inadequacy of current structures to meet the demand. Ms. Nyrienda stated,

> According to the acceptable standards as a nurse, the maximum number of patients I'm supposed to cover is 5.5! How many are we looking after? For example, in [the male ward], if you've got 80 patients, how many nurses do you have? Two nurses. Sometimes, you're the only nurse and you've got 60 patients … [and] here we just see the tip of the iceberg.

The high admission rates (see Graph 1) not only alter the workplace dynamics for Chainama staff; patients experience the consequences of high demand and gaps in provision. Ms. Nyrienda expanded that the high rates of admission for hazardous consumption (see Graph 1) cause other patients to "go without medication," and that "all these others [not at Chainama to receive treatment for alcohol], they are suffering." And for patients admitted for alcohol-related concerns, Dr. Mwansa established that high admission rates contribute to truncations in care, wherein patients must be quickly rehabilitated and discharged before completing therapy, because "this hospital caters … the whole country."

Gaps in healthcare provision also contribute to poor conditions of treatment. Former patients cited foul odors, bug infestations, rapid illness transmission, overcrowding, poor facilities (such as bathrooms and crumbling infrastructure) and frequent robberies as instilling feelings of dehumanization. From the perspective of Mr. Siwo, a patient admitted several times to both Chainama and UTH,

> I came in and I could just smell it…the smell is bad. I think it needs to be more humane. Like when I left [Chainama], I got a haircut. But my head was still itching, I don't know if it was bedbugs or something like that. And UTH is bad. I think that's a government problem. They don't care about you there. They don't see you as a human, they don't see that you're the person who will be building the country. Yeah, UTH is just bad, bad.

Dr. Tembo of UTH concurred with Mr. Siwo's observations, stating, "Chainama has become a dumping grounds."

DISCUSSION

To understand the disparities in health outcomes, the five categories of Social Determinants demand particular attention. Though many key challenges remain, these categories of Social Determinants provide frameworks for structuring apposite interventions to improve health and social outcomes.

Governance

First, bolstering accountability mechanisms for extant laws that pertain to drinking may decrease the availability, accessibility and affordability of alcohol. Such measures could include stricter enforcement of Zambia's laws pertaining to alcohol production and sales, as well as limits on market distortions. Coupled with increased investments in healthcare services, reallocation of resources could address the concerns of Dr. Mwansa that institutions like Chainama receive "very little funding from the government." This not only affects the material resources the hospital can offer to clients—Dr. Mwansa articulated that this lack of funding also causes "job freezes and wage freezes … there have been no new positions [at the hospital]." Thus, increasing enforcement and strengthening healthcare systems may contribute to both prevention and treatment of hazardous alcohol consumption.

Gender Inequalities

Second, through expanding employment and educational opportunities for women, women may gain relational power in advocating for their own health and well-being. Furthermore, de-stigmatizing the pursuit of treatment, particularly among women, may enable earlier intervention and access to systems of support. Also, through improving job satisfaction and training opportunities for all, in conjunction with decreasing the gender wage gap, both men and women may experience healthier relationships with others and with themselves. In concert, emboldening agency for women and reducing social pressures on men in the household may decrease the usage of alcohol as a coping mechanism for women (who may experience abuse by male partners) and men (who may encounter the stressors related to serving as the patriarch and provider of a family).

Educational Inopportunities

Third, bringing education to the fore in addressing inequalities in health provides mechanisms for improving health knowledge and future prospects, as well as strengthening social support for students. Through improving the economic accessibility of education and increasing the number of schools and instructors, the engagement of students may expand future employment opportunities and provide a venue for the formation of healthy and supportive relationships with peers and adults in students' communities. In addition, incorporating targeted health modules relating to alcohol in teacher training and student lessons may de-stigmatize the discussion and experience of mental health challenges and improve health literacy.

As articulated by participants, the mitigation of educational and health inequalities demands holistic reform, which requires investment in all forms of educational opportunities. Increasing the number of recreational activities after the school day, such as creating libraries, hosting clubs and conducting job training sessions, may not only decrease the number of empty hours in the day, but also provide students with skills applicable to the future. For example, public libraries may function as a community space, a resource for schools and a tool for bolstering literacy. Clubs and job training opportunities may prepare youths for employment, while also providing tools and supportive structures for coping with challenges. Dr. Phiri, the head of School Health in the Ministry of Education, noted the significance of education throughout the course of a student's life, explaining, "Education—maybe more so in our context than in other places—education is so critical … it's life changing … in our context, it can mean the difference between poverty and just a reasonable life." The transformative effects of education shape the lives of students not only while attending school but also throughout their lives, causing ripple effects in their families and communities.

Stigmatization

Fourth, as identified by research participants, emphasizing and incorporating the role of spirituality in recovery may serve as a tool for de-stigmatization as well as for lasting healing. In Zambia, a nation with Christianity explicitly written into its Constitution, faith is immensely salient. The core principles of many communities of faith incorporate basic human dignity, the importance of service and love. In the process of healing, key aspects of faith, such as a supportive community, a guiding narrative for endurance and hope for the future for any person, may also provide the necessary structures for long-term recovery. Mr. Siwo articulated the intersections of faith with his recovery process:

> I love [Saint] Paul. He did so much, and he went from everything in his past to becoming a great person. So I feel like that can be me, too. If you read the Bible and you see people who were even worse than you, and God still saved that person, you know, it's good.

In addition, engaging community and family members may play a crucial role in lasting care. Providing sensitization, training, and counseling opportunities for members of users' networks may equip these supportive structures with tools for preventing and addressing possible relapses. As such, empowering networks through providing necessary information pertaining to mental health and substance abuse may decrease the stigmatization of users. According to Ms. Sitale, "Generally, people have this stigma toward mental health from not understanding it. If they are able to understand it, I'm sure they would support it very well." Equipping and empowering the families and communities of users may help prevent negative experiences that are detrimental to mental health, as well as contribute to healthy recovery, whether physical, mental or emotional, for all involved.

Healthcare Service and Delivery

Fifth, in relation to healthcare provision, expanding opportunities for staff training regarding mental health and hazardous consumption may improve and increase the number of treatment mechanisms, assist in producing earlier referrals, and shift discourse to include positive mental health rather than solely mental health challenges. In addition, increasing the number of community-level facilities equipped to care for mental health and substance abuse may decrease the obstacles to receiving treatment and consequently reduce the overcrowding at Chainama. Finally, integrating mental health assessments across the various levels and fields of healthcare may aid in de-stigmatizing mental illness and hazardous consumption, while also enabling care providers to promote positive and preventative strategies for mental health.

CONCLUSIONS

This study establishes the centrality of the linkages between society and health as manifested in the five categories of Social Determinants: (1) Governance, (2) gender inequalities, (3) educational inopportunities, (4) stigmatization and (5) gaps in healthcare service and delivery. Though many obstacles exist, bringing concerns surrounding the Social Determinants to the forefront enables holistic transformations in mental and physical health, hindering the impact of existing and future injustices in the social, political and economic environment. Future research within Zambia must include regions beyond the urban center, as well as incorporate additional voices of those identifying as current or former users, and those under the age of 18. Furthermore, quantitative measures concerning mental health conditions must be strengthened in future research pursuits, as the data available from Chainama only captures data points from the past five years and does not disaggregate or correlate conditions. On a broader level, research regarding social inequalities and mental health must be expanded, with a particular focus on the application of the five categories of Social Determinants.

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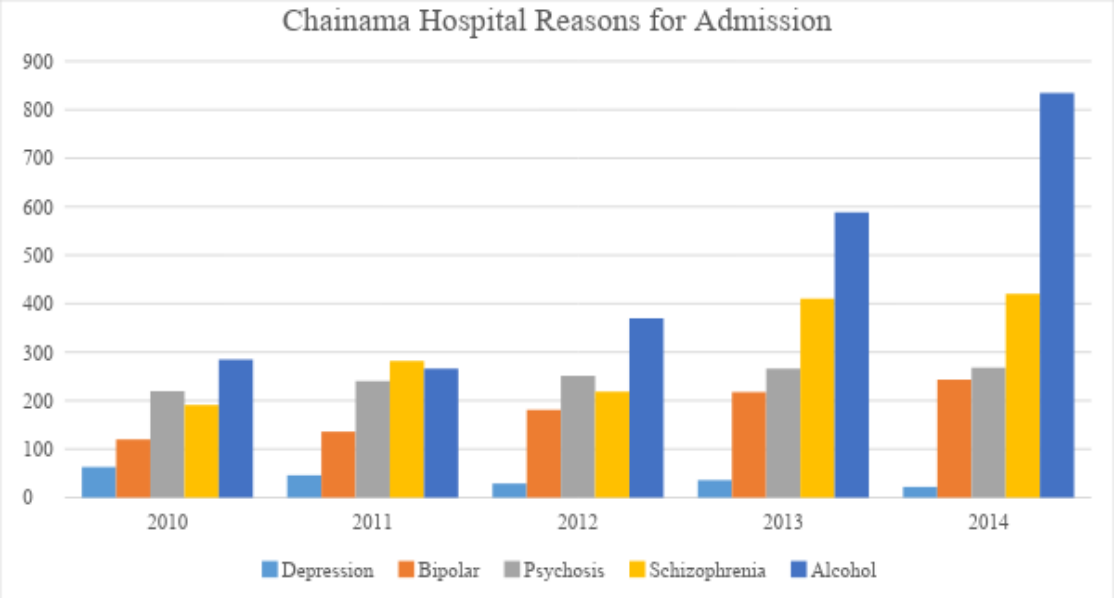
TABLES AND FIGURES

Graph 1: Chainama Hospital—Reasons for Admission



Graph 1: Chainama Hospital—Reasons for Admission. Graph depicts the top reasons for admission at Chainama Hills Hospital from 2010-2014.