



# A historical review of alcohol-related health and social outcomes in Zambia

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## ABSTRACT

The purpose of this review was to summarize the history of health and social outcomes related to alcohol use in order to inform current strategies for addressing alcohol use disorders in Zambia. Peer-reviewed journal articles, historical reports, government documents, and media sources were included in this review. Results found differences between earlier decades and today such as increasing social issues like poor work performance, work absenteeism, truancy among students, public disorderly conduct, declines in overall productivity, and increasing health issues including STDs, unplanned pregnancy, chronic disease, road accidents, alcohol dependence and mental illness. Similarities between earlier decades and today are also discussed. Efforts should focus on understanding the true burden of alcohol in Zambia and standardized identification and contextualized treatment of alcohol use disorders. The increasing abundant and diverse health and social outcomes related to alcohol misuse highlight the need to address alcohol use disorders in Zambia.

**Keywords:** Alcohol, Alcohol Use Disorders, Substance Use, Zambia, Non-communicable Disease

## INTRODUCTION

The disease burden attributed to alcohol misuse is increasing globally and remains greatest in low- and middle-income countries (LMICs).<sup>1</sup> Alcohol misuse is a pertinent risk factor for mortality and disease, specifically non-communicable diseases (NCDs) and injuries.<sup>2,3</sup> Among 15-49-year-old individuals alcohol use is attributed to 10% of deaths globally and is a leading risk factor associated with overall disability and premature death.<sup>4</sup>

Alcohol attributed burden of disease and injury is highest in the World Health Organization (WHO) African Region, with the prevalence of alcohol use disorder including alcohol dependence among men and women ages 15+ being 3.7% and 1.3%, respectively.<sup>5</sup> In Zambia the current prevalence of alcohol use disorders (AUD) and alcohol dependence among men and women ages 15+ is 5.5% and 1.9%, respectively.<sup>5</sup> Alcohol use disorder prevalence in the African region and specifically in Zambia is also likely underestimated based on the known levels of unrecorded alcohol use. Protecting communities

from alcohol-related harm is a priority of the Sustainable Development Goals 2030, however, disparities still exist in the burden of substance abuse along with research and treatment implementation among LMICs compared to more middle- and high-income countries.<sup>6-8</sup> The lack of mental health professionals, funding, policies, and inadequate mental health infrastructure in LMICs contributes to barriers in receiving mental health treatment, specifically for AUDs.<sup>9-11</sup>

To properly address alcohol use disorders, it is necessary to examine a country's specific history of various health and social impacts related to alcohol. Therefore, the purpose of this review paper is to summarize the history of various health and social outcomes related to alcohol use in Zambia. This paper aims to discuss past and present similarities and differences in alcohol use-related health and social outcomes in order to inform current strategies for addressing alcohol use disorders in Zambia.



## METHODS AND MATERIALS

A literature search was conducted to ascertain peer-reviewed journal articles for review. Databases included PubMed, Scopus, MEDLINE, Academic Search Complete, Global Health, APA PsychInfo, and CINHALL with Full Text. Search terms utilized were alcohol, alcohol use, substance, substance use, Zambia, and Republic of Zambia. However, peer-reviewed journal articles were mainly published after 2000. Peer-reviewed literature detailing alcohol-use related health and social outcomes in Zambia in earlier years was clearly lacking, therefore, grey literature such as historical reports, government documents, and media sources were included in this review. To acquire media sources, government documents, and international reports, the Google search engine was searched with the predetermined search terms. Additionally, onsite at the University of Zambia's Institute of African Studies document archives were searched to obtain unpublished grey literature and historical documents written between 1970 and 2010 resulting in an additional 13 sources. Substance use researchers and policy-makers in Zambia were contacted to identify additional information, studies, or policy documents to assist in gathering historical and current documentation of alcohol use in Zambia. In total, 25 literature sources were included in this review. Sources were categorized into two time periods, 1980-2000 and 2000-2020. These time periods were determined by the availability of sources clustered by date and common themes identified within each time period.

## RESULTS

The health and social impacts of hazardous alcohol consumption have shifted from the 1980s to today. From 1980 to 2000, most research shows that outcomes related to alcohol use were mainly social in nature and involved child neglect, family violence, and malnutrition.<sup>12,13</sup> During this time chronic alcohol consumption, alcohol dependence and related health problems were mostly common among middle-aged to older and wealthier adults.<sup>12,14</sup> Young adults who were usually more educated and employed were more likely to experience social issues related to alcohol consumption such as injuries and violence.<sup>12,14</sup> For example, drinking among employees in the

copper mining industry often led to work disciplinary issues, work accidents, and sometimes fatal injuries.<sup>15</sup> During this time, health and social issues related to alcohol use were also widely neglected. In 1982 the Community Response to Alcohol Related Problems in Zambia (CRTARPZ) found that 55% of assault cases involved drinking and that police rarely acted to solve or prevent alcohol problems.<sup>12</sup> In earlier decades, no services were available to support individuals who experienced alcohol dependence or related use disorders.<sup>13</sup> In general, alcohol was viewed as part of the social and cultural patterns rather a public health problem.

In recent decades, outcomes related to alcohol consumption have been recognized to be not only social in nature but also physically harmful to the health of individuals. While social issues such as gender-based violence (GBV), fights, and crime still exist, other issues have been on the rise such as family dysfunction, poverty, poor work performance, work absenteeism, and declining academic performance and truancy for students, public disorderly conduct, bullying victimization in schools, and overall declines in productivity for the entire country.<sup>16-23</sup> GBV is a widely prevalent social issue contributing to subsequent health issues with increased hospital admissions due to injury.<sup>24</sup> Other health issues which have become increasingly prevalent include risky sexual behaviors contributing to sexually transmitted diseases (STDs) and unplanned pregnancy, chronic disease, traffic accidents, poor oral health among teens, and mental illness.<sup>16,17,22,25,26</sup> Mental health issues have become highly prevalent due to the increasing availability, accessibility and affordability of alcohol.<sup>17</sup> It was estimated by the Zambia Ministry of Health Strategic Plan for NCDs in 2015 that 20-30% of individuals experience mental health problems, such as depression and anxiety, which may be linked to the use of alcohol and other drugs.<sup>27,28</sup> Mental health is currently a major contributor to alcohol abuse leading to generational effects of individuals passing on traits of alcoholism and mental health issues to their families and children.<sup>29,30</sup> Another health problem related to alcohol use is the increased likelihood of developing human immunodeficiency



virus (HIV) and Tuberculosis (TB). Alcohol use may also decrease adherence to anti-retroviral therapy and TB treatment.<sup>31-33</sup> In Zambia, HIV/AIDS is ranked as the second leading cause of death, therefore, alcohol use attributing to risky sexual behaviors and HIV/AIDS is a significant alcohol related health outcome.<sup>34</sup>

One difference from previous decades to today, is the availability of treatment options for individuals facing mental health issues related to alcohol. Chainama Hills, the only mental health hospital in the country, which is located in Lusaka, currently has a detox center for those dealing with alcohol dependence, however, inpatient facilities to offer intensive therapy or rehabilitation are needed.<sup>29</sup> Chainama Hills also faces scarcities in resources, staff, and patient rooms, making treatment difficult for the many individuals in need. Admissions at Chainama due to alcohol consumption have increased by 293% from 2010 to 2014.<sup>17</sup> Shortages in staff, lack of training for professionals, and poor conditions, make early diagnosis and effective treatment difficult.<sup>17</sup> In addition, those coming to Chainama represent only those with severe alcohol use disorders given the ongoing challenge of diagnosing harmful drinking using established criteria. Most definitions relate to

the number of standard drinks in a given time period yet in countries like Zambia, many drinkers consume alcohol with inconsistent levels of alcohol content from communal, non-standard containers. This similarity throughout the decades makes it difficult to accurately identify individuals who might benefit from less intense, outpatient treatment services. Other rehabilitation programs may exist such as the Teen Challenge Zambia Residential Rehabilitation Center (TCZRRC) which runs a small year-long rehab program mainly serving teenagers and Serenity Harm Reduction Program Zambia (SHARPZ) which strives to eliminate the misuse of substances through education and therapy. These programs are limited in the number of individuals they can serve.<sup>29,35</sup> The Hellen Gray Recovery Foundation in Kasama is a relatively new community-based organization providing addiction services including screening and brief intervention training for health care providers and community-based psychosocial counselors in the Northern Province of Zambia.<sup>36</sup> The inability of these organizations to universally screen and treat individuals on the community level remains a gap in reversing the increasing rate of the alcohol-related burden. Tables 1 and 2 summarize similarities and differences among alcohol-related health and social outcomes between 1980-2000 and 2000-2020.

**Table 1 Similarities in Health and Social Alcohol-Related Outcomes in Zambia Between 1980 and 2020**

| Similarities            |   |
|-------------------------|---|
| 1980-2000 and 2000-2020 | <ul style="list-style-type: none"> <li>- Mental health and alcohol disorders are stigmatized</li> <li>- Health and social issues related to alcohol are commonly ignored</li> <li>- Youth and young adults are more likely to experience injuries and violence due to alcohol use</li> <li>- National epidemiological surveys of alcohol use in Zambia are not available</li> <li>- Units of consumption including alcohol content remain difficult to measure</li> <li>- Unrecorded and illicit alcohol consumption</li> </ul> |

**Table 2 Differences in Health and Social Alcohol-Related Outcomes in Zambia Between 1980 and 2020**

| Differences |  |
|-------------|--|
| 1980-2000   | <ul style="list-style-type: none"> <li>- Alcohol issues are mainly social in nature</li> <li>- Alcohol dependence and health issues are mostly among older adults</li> <li>- No professional entities existed to help individuals with alcohol use disorders or dependence</li> <li>- Treatment and diagnosis of alcohol disorders does not occur</li> </ul> |

2000-2020

- Alcohol issues are both health and social in nature
- Alcohol use impacts the workforce and road safety
- Mental illness attributed to alcohol is increasing
- Chainama Hills Mental Hospital and other small programs provide detox, treatment and rehabilitation to individuals
- Treatment and diagnosis are difficult but potentially exist

## DISCUSSION

This review of the history of alcohol-related health and social outcomes has revealed the need to better understand the true burden of alcohol use disorder to improve identification and treatment in Zambia. Improving knowledge of the context specific etiologic factors associated with alcohol use in rural and urban areas in Zambia through epidemiologic surveys is necessary to identify effective community-based treatment efforts. Health care providers are still lacking culturally appropriate information regarding alcohol use required to effectively treat the many diseases and conditions exacerbated by heavy alcohol use in Zambia. Based on the results, current priorities should include:

- 1) Understanding the national burden of alcohol use including unrecorded and illicit consumption and
- 2) Developing culturally appropriate screening tools to identify and treat alcohol use disorders early.

### Understanding the National Burden

Due to the abundance of various social and health problems related to alcohol use, streamlined and comprehensive epidemiologic data is necessary to understand the national burden of alcohol-related disease in Zambia. Information and primary data sources continue to be limited and scattered, making it difficult for policy makers to understand the true prevalence and impact of alcohol use and alcohol use disorders. Despite the increase in NCDs and alcohol attributable burden of disease globally and regionally, there are still little to no surveillance systems in place to collect accurate data on the prevalence and impact of alcohol use and alcohol use disorders.<sup>37,38</sup> While the 1982 Community Response to Alcohol Related Problems in Zambia (CRTARPZ) project was conducted in the early to mid 1980s, there was little long-lasting effort to understand and

quantify alcohol use including unrecorded and illicit alcohol production. Even prior to 2000, recommendations to enhance research efforts were proposed.<sup>39,40</sup> The WHO 2018 Global Status Report on Alcohol produces general figures outlining the prevalence of alcohol use, disorders, and regulations on alcohol in Zambia, but lacked a holistic and accurate report of alcohol that a national monitoring system could provide. For example, no primary data exists on production and sales of alcohol in and through unlicensed drinking locations which are common in the country. Additionally, the shift in alcohol dependence and alcohol attributed health issues from being mostly experienced by older wealthier adults to being prevalent among nearly all age groups highlights the need to enhance efforts that can quantify alcohol dependence and attributed health issues among all age groups and income levels.

Recent data collection efforts include the Zambia Living Conditions Monitoring Survey, the Zambia Demographic and Health Survey, the WHO and Centers for Disease Control and Prevention Global School-Based Student Health Survey in Zambia in 2004. National plans mentioning alcohol use include the Ministry of Health's adaptations of the WHO STEPs Plan for addressing NCDs in from 2013-2016 and revised in 2017 as well as the WHO 2017-2021 Country Cooperation Strategy for Zambia.

National surveillance systems are crucial for policy makers to be informed of the true burden and distribution of alcohol use and alcohol use disorders.<sup>41</sup> To address the need for established research in the area of alcohol in Zambia, the National Alcohol Policy (NAP) includes objectives to increase quantitative and qualitative research and dissemination of research in order to inform the advocacy and policy efforts.<sup>34</sup> Holistic and accurate



primary data obtained through research may provide a better understanding of the various health and social issues citizens in Zambia face and help inform efforts to reduce these alcohol related problems. Research aiming to quantify alcohol use disorders and alcohol-related problems in Zambia will be beneficial to properly drafting and implementing efforts and policies which put the health of Zambians first.

### Identification and Treatment of Alcohol Use Disorders

Health and social outcomes related to alcohol use in Zambia are widespread and cause great harm to citizens, therefore, proper recognition and diagnosis are crucial in understanding and addressing alcohol use disorders and other negative outcomes. Furthermore, due to the increasing prevalence of alcohol use disorders and alcohol attributed health issues among younger and lower income adults, diagnosis and treatment services for all individuals regardless of age or income level, is necessary to effectively alleviate the country's burden. The need for improved diagnosis and treatment has been discussed since the 1980s and still exists today.<sup>39</sup> To address this, the NAP recognizes alcohol attributable mental and behavioral disorders and aims to establish specialized treatment centers for those with alcohol use disorders, services to mitigate hazardous use of alcohol, and interventions to support individuals and their families impacted by alcohol harm.<sup>34</sup> While it does not set standard criteria for determining alcohol use disorder or dependence, the NAP Implementation Plan does contain an objective to provide diagnostic, treatment and rehabilitation services at all levels of healthcare.<sup>42</sup> This objective involves ensuring availability and accessibility of appropriate infrastructure, equipment and medications needed for diagnosis and treatment of alcohol-related health problems. Culturally appropriate screening tools and brief intervention protocols are needed as part of this objective to adequately identify early on individuals with harmful alcohol use behaviors. Despite the focus on mental illness in the NAP, the 2019 Mental Health Act does not mention alcohol use disorders or alcohol attributed mental illness. The Mental Health Act also

does not address any diagnosis or treatment protocols for addressing alcohol use disorders or related mental illness.

The need for more community-based facilities with providers trained in effective brief intervention procedures aimed at addressing alcohol and other drug use disorders and attributed mental illness is high across the country. To increase the accessibility to treatment, public-private partnerships are needed to make available the necessary infrastructure, funding, and training.<sup>43,44</sup> The existing cultural perception around alcohol use requires a team-based approach to early intervention and treatment in order to create an environment where health care providers and community health workers feel comfortable to initiate substance use screening.<sup>45</sup>

Current resources that exist to measure mental illness and substance use disorders need to be made accessible and integrated into efforts to establish set diagnostic and treatment criteria. Current screening tools and interventions for mental health and alcohol disorders previously used in Zambia or in other African countries include the Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), the WHO's Mental Health General Action Plan (mhGAP) intervention guide, the Matrix Model intervention, The Friendship Bench intervention, Community Popular Opinion Leader (CPOL) intervention, Brief Motivational Intervention, Violence and Alcohol Treatment Trial (VATU) Alcohol Use Disorders Identification Test (AUDIT), and the CAGE Questionnaire.<sup>7,23,46-55</sup> If these resources are considered for widespread implementation, adequate training and professionals will be needed to ensure their proper application. Appropriate implementation of any of these resources may support the current objectives to create and improve health services for those with alcohol disorders.

### LIMITATIONS

The main limitation of this review is the heavy reliance on grey literature. Peer-reviewed literature on alcohol in Zambia prior to 2000 was much more limited compared to literature in the recent decades, making a historical review from 1980s to today

difficult and limiting the results. However, identifying and obtaining archived copies of historical documents regarding alcohol use in Zambia is also a strength of this paper. The multiple types of sources used allowed for a comprehensive review of alcohol use over the past 40 years in order to learn from Zambia's history to better understand the current situation.

## CONCLUSION

This paper aims to discuss past and present health and social outcomes related to alcohol use in order to inform current strategies for addressing alcohol use disorders in Zambia. Results showed multiple similarities and differences between earlier decades, 1980-2000, and more recent decades, 2000-2020. Similar health and social outcomes included neglect and stigmatization of alcohol related issues and mental illness, injuries, and gender-based violence (GBV). Health and social outcomes which differed in the literature included increasing social issues such as poor work performance, work absenteeism, truancy among students, public disorderly conduct, declines in overall productivity, and increasing health issues including STDs, unplanned pregnancy, chronic disease, road accidents, alcohol dependence and mental illness. The abundant and diverse health and social outcomes related to alcohol misuse in Zambia highlight the need to address alcohol use and alcohol use disorders. This review revealed two areas of focus, 1) the need to understand the true burden of alcohol in Zambia, and 2) the need for standardized identification and treatment of alcohol use disorders. These two foci should be targeted in order to inform and support public health strategies that address alcohol use and alcohol use disorders in Zambia.

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