Zambia's Mental Health Patients: Victims of Unspeakable Infrastructure Challenge in Zambia's Health System

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Disclaimer: Kindly note that the views, omissions, and any factual errors contained in this study should be attributed to the author and in no way reflect the positions of her current or former employers. She can be reached at kapschilu@gmail.com.

Abstract

Purpose: This article attempts to examine the critical role that physical health infrastructure and associated facilities play in the delivery of effective integrated primary health care services for mental patients in Zambia. The working definition for 'physical infrastructure' in the paper relates to wider capacities in form of hospital buildings, bed spaces, medical equipment, and professional healthcare personnel, among other elements that facilitate effective operations of a health facility.

Methodology: This study has used both quantitative and qualitative data from various sources to map the debate on the impact of inadequate infrastructure on mental health patients in Zambia's health system.

Findings: Inadequate health infrastructure has had a negative impact on the well-being of mental health patients and other sectors of the Zambian society. The entire country has only one ill-resourced main hospital, offering mental health services and has been overwhelmed by a combination of insufficient infrastructure and effects of COVID-19 pandemic.

Unique Contributions to Theory, Practice, and Policy: For the health reforms to be effective, it is recommended that the conceptual integrated health system in Zambia be anchored on universal allocation of adequate resources and operationalization of mental health policies that genuinely connect with social determinants of mental health issues within communities. The involvement of non-governmental organizations providing an interface between communities and governments should be supported by organizational and multi-institution capacity and coordination. A systems theory informed this study and has been elaboratively discussed in the second chapter of this paper

Key Words: Mental Health, Infrastructure, Communities, Collateral Damage, Integrated, Society.

1. Introduction

The strength of this paper is premised on inevitable argument that there are few studies that have indicated preliminary quantification of available mental health infrastructure and qualitatively argued its negative impact on the well-being of mental health service delivery for patients and Zambian society in general. The paper has sought to provide more recent evidence, minimally disaggregating facility levels. It has determined that despite the more recent health reforms at policy pronouncement level, resource allocation for mental health still exists at the very least of health priorities.

The paper argues that, while the government of the Republic of Zambia enacted a Mental Health Act (No.6 of 2019), aimed at promoting an effective care for mental health disorders, this legal framework has not been matched with any formidable policy framework and/or the requisite infrastructure development to support it. Therefore, the interrogation of the political commitment and availability of the robust infrastructure development, in the context of Zambia's integrated health care system, forms the nucleus of the argument in this write-up.

2. Theory

This study is grounded in systems theory, generally traced to the work of Ludwig von Bertalanffy (1901–1972), credited with being the originator of the form of systems theory used in multiple disciplines. Bertalanffy, a theoretical biologist born and educated in Austria, argued that it is possible to attain change from the interactions between different parts of a particular system. But achieving this change through a reductionist approach, which simply means understanding the whole by breaking it into its parts, was not adequate in promoting the intended change. Instead, Bertalanffy introduced systems theory which changed that reductionist framework, by looking at the system as a "whole", with its relationships and interactions with other systems, as a mechanism of growth and change. General systems theory is likened to a science of wholeness (Bertalanffy 1968). The theory is important to the study because, regardless of which discipline it's being applied to, it emphasizes "wholeness" as greater than the sum of its parts. It is critical to holistic examination how Zambia's mental health sector has operated within the integrated health system. Brett R. Anderson (2016), candidly argues that, focusing too intently on the specifics of individual health cases or medical staff alone, often misplaces blame and leaves important questions unanswered.

Borrowing from Anderson's noble argument, mental health situation in Zambia cannot easily be explained or rationalized when looked at singularly but when given the same weight as other sectors in the integration. Bertalanffy's idea behind systems theory is that nothing can be explained by isolating a component of a system. Unfortunately, the general science of "wholeness" in Zambia's health system, has not triggered much attention to infrastructure development as one of the forces that are critical to an effective health system in the country. Therefore, applying systems theory lumps adverse events together across different health components and allows us an opportunity to detect patterns and system failures (ibid). It is reduction of adverse system failures that can improve patient care without ignoring individual accountability of health practitioners (ibid). Simply said, the improvement of health care outcomes needs to be based on a systematic appreciation of the whole system that contributes to those outcomes. After all, Abraham Maslow, a famous American Psychologist hypothesized that having one's basic needs met is a prerequisite to pursuing a fulfilling life (Maslow 1943). These needs may include the physiological desires, safety, security, sense of

love and belonging, respect, self-actualization, which can only be propagated down-stream to mental health patients through a coordinated and coherent health system. As evidenced by this paper, mental health in Zambia is easily explained or rationalized singularly through inadequate human and financial resources, infrastructure underdevelopment, policy deficiency and general de-prioritization of the sector.

Drawing upon the standpoints advanced by Maslow, it becomes expedient to conclude that robust infrastructure interfaces delivery of quality mental health services within an integrated system on one hand, and realization of the aforementioned basic human needs to mental patients on the other. The meaning of such proposition is that, technically and practically, well-established infrastructure has the potential to provide a conducive environment in which physiological, emotional, intellectual, and psychological development of mental patients can thrive. For example, individuals who do not feel loved or miss a sense of belonging may experience depression or anxiety (Barut, Dietrich, Zanoni, Sheila 2015). Ultimately, there is decreased quality of life which undermines illness remission and recovery process. Any health system without vibrant connectivity of key sectors supported by robust infrastructure development, unquestionably renders patients as victims of such a system.

3. Understanding Mental Health: Global Overview

Mental health is a multifaceted issue cutting across various aspects of human life and wellbeing. It is broadly defined by Galderis, Heinz, Kstrup, Beezhold, Sartorius (2017) as a "dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of the society, basic cognitive and social skills, ability to recognize, express and modulate one's own emotions, as well as empathize with others; flexibility and ability to cope with adverse life events and function in social roles; and harmonious relationship between body and mind which represent important components of mental health and contributes, to varying degrees, to the state of internal equilibrium". It is a part of health sector where services need to be provided adequately both at out-patient care level, which includes: routine out-patient care (individual counseling, medication evaluation, management and group therapy), intensive out-patient program and partial hospitalization; and in-patient care level which includes: in-patient acute care and in-patient residential care (Nemecek, 2020). In brief, mental health problem is a wide-ranging term referring to all mental health conditions that involve changes in emotions, thinking, patterns interaction with other people, and behaviour in a person.

The World Health Organization's (WHO) new Mental Health Atlas report (2020) indicates that there has been an increase in the percentage of countries that were reporting the treatment of people with specific mental health conditions, that is, psychosis, bipolar disorder, and depression. The report was based on the captured data in national health insurance or reimbursement schemes, which revealed a rise from 73% in 2017 to 80% (or 55% of the Member States) in 2020. Despite this noticeable increase in case surveillance and treatment, there is still growing public concern about improving the care for people with mental health problems and minimizing the treatment gap (Putri, Gustriawanto, Rahapsari, Sholikhah, Prabaswara, Kusumawardhani, Kristina 2021). The WHO (2020) attributes these concerns to a worldwide shortfall of investment in mental health care systems. In fact, these gaps have led to WHO's failure to meet most of the mental

health benchmarks set for 2020. There are less than 50%, with a global median of 40% of people with depression and just 29% of people with psychosis receiving care.

One of the major constraints to effective mental health delivery system, stems from how resources are allocated to the sector. As noted by (Kapur 2020), resource allocation is one significant factor in the infrastructure provision. Espounda and her colleagues also observed that, despite the growing recognition of the importance of mental health within political and developmental agendas, median government expenditure on mental health ranges from just 0.02 United States dollars (USD) per capita in low-income countries to 2.62 USD in upper middle-income countries (Esponda, Lockwood, Usmani, Lee, Murphy, Qureshi, Endele, Regan, Eaton, De Silva 2021). In this regard, infrastructure availability should be broadly understood as constituting five key components which include skilled workforce, integrated electronic information systems, public health organizations, resources, and research (Kapur 2020). Luxon (2015) adds that infrastructure includes the built environment and supporting elements. They are in form of equipment, access, information technology (IT), systems and processes, sustainability initiatives and staff. In summary, infrastructure represents a key pillar supporting the fundamental aim of promoting improved standards of care and wellbeing for all patients, together with a good experience of the health care system.

The image of infrastructure problem is however acute in sub-Saharan Africa, where the allocation is less than 1% for most of the countries' overall health budgets (Esponda *et al* 2021). Consequently, the proportion of Africans including Zambians who receive treatment for mental health problems is extremely low. Simply put, while the global annual rate of visits to mental health outpatient facilities is 1,051 per 100, 000 population, Africa's rate is 14 per 100, 000 (Sankoh, Sevalie, Weston 2018). On the sideline of these perennial problems, the coronavirus disease-2019 (COVID-19 pandemic) has also exacerbated levels of poverty, socio-economic insecurity, and mental health problems (Purgato, Singh, Acarturk, Cuijpers 2021). Certainly, a combination of these pre-existing factors and COVID-19 have increased levels of acute distress and risk of developing mental disorders. The Tacoma-Pierce County Health Department (2016) adds that lack of attention to and treatment of mental illnesses has costs that extend well beyond the individual impacted by the illness. It can therefore be said that, providing for and supporting good mental health is a public health issue.

4. Impact of Untreated Mental Health Disorders on Society

Mental health disorders have for over a relatively long time affected human society alongside their concomitant far reaching effects. For instance, statistics reveal alarming concern that, about one billion people worldwide suffer from mental disorder (Lancet Global Heath 2020). According to Anderson, Jané-Llopis, Hosman (2011), mental illness accounts for about one-third of the world's disability all caused by adult health problems, resulting in enormous personal suffering and socio-economic costs. Severe mental health problems include major depressive disorder, anxiety, bipolar, schizophrenia, and substance use disorders. In fact, the Tacoma-Pierce in the County Health Department (2016), collapses the whole argument into one expression, saying, "communities prosper when the mental health needs of community members are met". This means that, unaddressed mental health problems due to lack of infrastructure affects normal functioning of society. This is because it de-capacitates society's resilience to overcome homelessness, poverty, unemployment, safety, and the local economy arising from large scale mental malfunctioning of the population. The productivity of local businesses is brought down, which ultimately increases people's inability to meet health care costs. It also impedes children's and youths' prospects to succeed in school, with family or

community disruption being the ultimate consequences. In short, the impact can potentially extend from public health to other sectors of society such as law enforcement, criminal justice system, emergency and social services, and societal welfare (Tacoma-Pierce County Health Department 2016, WHO 2013).

Moreover, Lake (2017) highlights that, mental illness is closely associated with poverty, wars, and other humanitarian disasters, and in some cases, this may lead to suicide at individual level. Ordinarily, suicide is one of the most common causes of preventable death among adolescents and young adults. Such propositions are also backed by the WHO (2013) views that, disturbances to a person's mental well-being can adversely compromise their motivational drive and intellectual capacity to make palatable choices. Any diminished functioning at the individual level has negative impact to a broader society to which the individual belongs. For instance, children of mothers who suffer from chronic depression are more likely to have behavior problems at school (Moore, Hair, Vandivere, Cameron, Thomson, McNamara 2006). This also affects the caregivers themselves due to the increased burden associated with depression that can ultimately affect workplace performance (Mohamed, Rosenheck, Lyketsos, Schneider 2010). Such things are bound to happen because depression impairs concentration, decision making and dilutes interest in performing any work-related activity (Beck 1987). In the same limelight, the WHO (2004) also affirms that, the impact of mental illness cuts across every level of social and economic wellbeing of society.

5. Situating Mental Health in Zambia's Context

For a long period of time, Zambia pursues an integrated health system in which mental health issues are less pronounced. As such, the system has conditioned society to believe that mental health patients are of less importance in society to call for urgent action from government (Ngungu and Beezhold 2009). Compounding this perception, mental health delivery services in the country have been concentrated at provincial government hospitals and not at the primary care level due to low funding for mental health activities (Mweemba and Kasonde 2012; Bird, Omar, Doku, Lund, Nsereko, Mwanza 2011).

However, inasmuch as the write up vehemently advances arguments against the flaws in the provision of mental health in the Zambian health system, the paper doesn't negate the system altogether, since in-patients still receive adequate pharmacological care. The challenge relates to out-patient residential care partly due to inadequate transport and resources for patient monitoring and community engagement (Munakampe 2020). The transport challenges also hamper patients' regular visits to the hospital, coupled with inadequate human resources at the hospitals to meet the needs of the patients adequately (Ngungu and Beezhold 2009). For example, intensive out-patient program requires patients to visit the hospital 3-5 times a week, a frequency way above the capacity of Zambia's main mental health institution. As a result, patients' hopes for an effective government-driven health care vanishes, a situation that extends to the few mental health specialists whose expertise and academic accolades get eroded by a health delivery system skewed against their sector. This state of affairs has ultimately 'rarefied' the plight of mental patients. Given the circumstances in relation to resource allocation, the discourse on infrastructure development has remained less prioritized on the national health agenda. This is evidenced by inadequacies across various dimensions such as mental health specialists at field level, specialized mental health infrastructure, and a lack of consolidated coordination linkages with mainstream health at every level of service delivery (ibid, Munakape 2020).

The entrenchment of the aforementioned problems is well-documented. Mwape and Mweemba (2010) confirms that slightly over a decade ago in 2008, only 0.38% of health care funding was directed towards mental illness. Literally, mental health services were lacking in general health care, including secondary and primary care levels (Mwape, Mweemba, Kasonde 2012). It was not among the twelve priority areas in the National Health Development Plan (NHDP) and was not provided for in the basic package of services defined by the Ministry of Health. Simply, although mental illness constituted a large proportion of the burden of disease in Zambia, it received inadequate attention (ibid). The paper, therefore, uses this background information to also interrogate the scale of progress achieved so far in infrastructure development to address the problem. The information is important as it will assist in scaling up the argument taking into account the recent crafting of the Mental Health Bill 2019 and the Mental Health Act 2019 respectively. Preliminaries indicate that mental health issues in Zambia are often compounded by the weak resource base and psychological stress of systemic failures of national health systems.

6. Mental Health Infrastructure and Government Efforts

In the recent past, research has demonstrated that necessary infrastructure provision and development is critical to the effective delivery of health support to mental patients (Luxon 2015). It also entails that the availability of physical infrastructure in a country like Zambia is closely linked to political commitment. The governance element is crucial as there is no guarantee that a well buttressed physical infrastructure translates into patients receiving adequate health care services (Wachira *et al* 2021). Instead, it is political support that is important to the management of that infrastructure in the health sector, which is crucial in the improvement of delivery of services (Ibid 2021).

Recently, the government of Zambia came up with a Mental Health Bill whose operationalization has remained inadequate. In fact, it presents questions whether this Bill has in practice facilitated the achievement of the prescribed minimum standard or has remained another reflection of government driven 'public relations' stance on mental health issues. The Mental Health Bill (2019), prescribes minimum standards for a mental health institution to function effectively; (a) availability of a qualified psychiatrist or a mental health practitioner and other appropriate professional staff; (b) have adequate space; (c) implement an appropriate and active therapy programme; (d) avail and maintain medical and non-medical equipment, diagnostic and therapeutic equipment, kitchen, laundry and mortuary; (e) provide information communication technology, security systems and equipment, and transport; and (f) ensure adequate and consistent medical and non-medical supplies.

The other important instrument developed, is the enactment of the Mental Health Act No. 6 of 2019. Part II of the Act dwells on legal capacity and rights of mental patients, and highlights very pertinent assignments of the Ministry of Health. It plainly states that, "(1) The Minister shall, in consultation with other relevant Ministries, take policy measures to promote mental health. (2) Without prejudice to the generality of subsection (1), the Minister shall ensure that the policy measures are aimed at—(a) preventing or reducing the occurrence of mental illness; (b) enhancing awareness about mental health; (c) preventing or reducing stigma associated with mental illness; (d) training and sensitization of law enforcement officers and adjudicators on mental health issues; (e) ensuring the provision of adequate mental health services by— (i) training health care providers in public health facilities and correctional centres in basic and emergency mental health care and in human rights of mental

patients; (ii) necessary infrastructure provision and development; and (iii) making available finances, medical and non-medical supplies".

In this regard, the country has made strides in the recent past to address part of the challenges highlighted through these documents and accompanying political talking points. For example, in his State of the Nation Address (SONA) on 12 February 2021, the President of the Republic of Zambia, Edgar Chagwa Lungu reaffirmed the government's commitment to deliver mental health services across the country in an inclusive and coordinated manner. He was candid in further acknowledging the multi-sectoral concerted efforts from government, churches, civil society organizations (CSOs) on sensitization, training, and rehabilitation program against drug abuse. It is important to appreciate the role of multi-sectoral approach in Zambia's health care system, which is institutionally layered with primary health care level being commonly used. Statistical evidence showed that from 2017, at least 1.7million individuals and 1,075 organizations have been sensitized on the dangers of alcohol and substance abuse in the country. Since harmful use of alcohol leads to numerous health complications, including mental illnesses, such statistics significantly indicate a positive direction towards curbing mental health challenges in the country (Ministry of Health Zambia 2019). In addition, the government trained 171 teachers by the year 2021 under the peer education training program, who in turn have established anti-drug abuse clubs in their respective schools. Furthermore, 2, 802 drug addicts have benefited from rehabilitation program.

However, most of the multi-sectoral support services which should take place at primary care level, to serve communities in a more cost-effective manner, have been potentially non-existent. This situation erodes the expected benefits. Munakampe (2020) amplifies that, primary health care has by itself potential to significantly improve provision and utilization of mental health services. When implemented effectively, it allows for better health service outcomes for both the common mental disorders and psychiatric patients. Simply, it delivers 'essential health care' which is universally accessible to individuals and families, within the community settings and close to their homesteads supported by various organizations at that level. In other words, it presents a decentralized system that promotes active participation of the community and families (WHO 1978 Declaration of Alma-Ata). It also permits health workers to develop interviewing, counselling, and interpersonal skills at the community level, with net benefits trickling to the overall health outcomes in primary health care (WHO 1990). Thus, infrastructure availability for mental health patients in Zambia should be evaluated by locating them within the integrated primary health care services. In fact, integrating specialized health services such as mental health services into a primary care approach are one of WHO's most fundamental health care recommendations (WHO 2001).

In this regard, a wide spectrum of entities supporting the mental health sector in Zambia remain pivotal to the sector as they act as sub-centres in the value chain, particularly to the governments' efforts to take the services to the communities. In the public sector, a sub-center is the most peripheral and first point of contact between the primary health care system and the community (Narlawar and Sourav 2018). Researchers such as Patil and Shivaswamy (2012) cited in Narlawar and Sourav (2018), contend that the success of any nationwide program would depend largely on the well-functioning sub-centers, providing services of acceptable standard to the people. The competence and motivation of mental health workers working in these sub-centres are critical in the promotion of mental health, prevention, and provision of care for people with mental disorders (WHO 2005). Implementation of support

initiatives that speak to the needs of communities, largely depends on the availability of wide-range resources, including infrastructure.

7. Mental Health Services in the Post-2019 Government Efforts

At global level, many countries have adopted mental health policies, plans and laws, as well as improvements in capacity to report on a set of core mental health indicators (WHO Mental Health Atlas 2020). Nevertheless, effective leadership and governance for mental health, provision of mental health services in community-based settings, mental health promotion and prevention, and strengthening of information systems, which are all important components of infrastructure have remained far from being achieved. This is still the case despite increased attention at global scale on human resource management practices in improving the quality of health care (Wachira *et al* 2021). According to WHO Mental Health Atlas (2020), this realization is still at policy and planning stages that included estimates of required human and financial resources. The allocations are still not adequate because, just about 39% of responding countries indicated that the necessary human resources had been allocated and 34% that the required financial resources had been provided. In addition, unprecedented challenges in securing sufficient supply of physical infrastructure and health workforce have been witnessed in many countries with the rapid rise in demand from COVID-19 patients (Winkelmann, Webb, Williams 2021).

Zambia adopted a Mental Health Policy in 2005 but this positive development has not led to simultaneous development of infrastructure. For example, the country even lacks facilities for mental health service providers to train in evidence-based methods of handling violence and alcohol abuse (Kane 2017). In other words, policies being developed are still deficient in propelling robust infrastructure development. Currently, Chainama hospital which is the major national facility for mental health care services, has two trained psychologists only. This problem has been echoed by the WHO (2017) which argues that the median number of mental health workers in low-income countries are as low as below 2 per 100,000 population compared to over 70 per 100,000 in high-income countries. Okech (2016) further expands the argument by postulating that, effectiveness in health care depends partially on adequate qualitied health workers, appropriate health infrastructure and predictable system of financing the services.

Zambia's situation at Chainama mental hospital, has remained way below the prescribed provisions in the Mental Health Bill of 2019. The institution records about 5,000 mental health cases per year while the prevalence is at 20,000 annually against two psychiatric doctors and two psychologists (Chainama Hospital annual statistical report 2021). Based on the figures above, the hospital is unable to cope with the caseload of patients. For example, a patient with severe depression, who requires meeting a psychologist or therapist more than once in a week is affected (Beck 1979). Also, Tiemens, Kloos, Spijker, Ingenhoven, Kampman, Hendriks (2019) confirm that both improvement and recovery from mental disorders were associated with a higher frequency of sessions during the first three months of treatment.

Technically, the challenge at Chainama can be deduced to imply that patients have single access to their respective psychologists per week. Consequently, inadequate therapy can potentially worsen the mental health condition leading to a chronic case (Tiemes *et al* 2019), such as suicide or psychosis. While Luxon (2015) confirms that appropriate medical equipment must be available and fit-for-purpose, as required for the delivery of high-quality clinical services, the situation at Chainama is different. The hospital lacks sufficient

equipment for conducting certain diagnoses such as the Intelligence Quotient (IQ) tests, including personality assessments like the 'big five' (Fiske 1949, Rorschach 1921). These services may be accessed elsewhere but potentially remain unaffordable by the majority poor population.

8. Inadequate Infrastructure for Mental patients: The Debate around its Collateral Damage on Zambian Society

Public health infrastructure provides communities and states the capacity to prevent disease, and promote health care systems. Central to this achievement, is the infrastructure component, which is the foundation for planning, delivering, evaluating, and improving public health. Unfortunately, the mental health sector in Zambia has no acceptable level of manpower to meet the burden of mental health conditions (Ngungu and Beezhold 2009).

As such, the paper looks at how inadequate health infrastructure creates collateral damage, which is 'unintended or unplanned consequences' to patients and communities. Though a big study and time are needed for all the damage to be tallied, this paper aims to quantify a few of them that can be used as a basis for investigating other sectors. Understanding the preliminary scope of the damage will help close gaps between policy pronouncement and reality on the ground. Critically, the intersection of primary care and general side-stepping of infrastructure development for mental health in Zambia, joins other factors that fuel collateral damage to society as outlined below:

Currently, the plight of mental health patients in Zambia occupies a very blurred position within an integrated health system. Zambia's outdated 2005 policy has not been amended ever since though it notes the need for adequate financing of mental health activities. Allocations and mechanisms to support policy implementation has remained low (Edwige, Michelle, Kleintjes, Ofori-Atta, Ssbunnya, Mwanza, Kim, Flisher 2011) which makes mental health patients 'aliens' inside a health system.

Entrenchment of stigma and discrimination is another damaging outcome due to poor referral system. It involves (i) self-stigma, where a patient begins to lose hope; (ii) stigma from family members and their communities and (iii) stigma from the health care providers (Bird 2011, Nzala 2020). Over reliance on Chainama hospital in Lusaka - the major mental health facility in the country (Mwape 2010), with inadequate transport and staff deeply affects its capacity for outreach activities and programmes. Literally, support to mental health patients in different localities is unattainable and the perpetuality of the problem leaves mental illness shunned, feared, scorned, humiliated, and condemned (Essien and Asamoah 2020).

The centralized arc of dealing with mental health patients, also affects community sensitization and home-based care treatment initiatives, in some cases, leads to suicides. Common mental disorders leading to suicides include acute psychotic episodes, schizophrenia, affective disorders, alcohol related problems and organic brain syndromes (Nyashanu, Karonga, North, Mguni, Nyashanu 2021. During his SONA in 2021, President, Edgar Chagwa Lungu revealed that the prevalence rate of suicides in the country stood at 17.5 per 100,000 males against 6.2 among females. Yet, there were no proper mechanisms in the current health system to deal with suicide cases. The system has remained clinic-centric, without adequate logistics to conduct periodic visits to communities to address the multi-faceted social determinants of mental health problems.

Another form of collateral damage brought by inadequate infrastructure, is the perpetuation of limited research in the field of mental health in Zambia. Few studies have focused on emotional and behavioral factors only (Imasiku and Banda 2015). Imasiku and Banda (2015) attempted to fill this gap by exploring the mental health problems among street children in residential care. Their study focused on examining the relationship between multiple mental health problems (co-morbidity) and levels of stress which is an indicator of need for mental health. The findings revealed that, out of 74 children sampled, 74% had mental health problems (Imasiku and Banda 2015). This affects child development with adverse effects in their adulthood, especially in a country without enough support systems.

Further, the debate on collateral damage has been brought to the fore by the current impact of COVID-19 on numerous spheres of Zambian society. In recent times, Nyashanu *et al* (2021) conducted a study on the triggers of mental health distress among women during COVID-19 lockdown on the Copperbelt province of Zambia. The study found that, there is cause - effect relationship between long periods of staying indoors and mental health distress among the research participants. There was increased domestic violence and anxieties through loss of employment, stress of managing children indoors, fear of COVID-19 infection, loneliness, and poor access to health services. The study brought out the gap between a health-social problem versus non-availability of response mechanism, compounded by inefficient health infrastructure.

This problem is not unique to Zambia alone but exists also at continental level. A review study was conducted by Jiyao, Nusrat, Kechen, Chen, Xu, Yin, Chen, Delios, Miller, Wan, Zhang (2021) on 'mental health during the COVID-19 crisis in Africa'. The study established that the continent is particularly vulnerable to the pandemic due to its unique and severe limitations, among them is the inefficient primary healthcare infrastructure. In the same vein, failure to deal with COVID-19 in a more effective manner has promoted gender power relations which are against women, deepening the pre-existing gender inequalities.

According to UNDP Policy Brief (2020), pre-existing toxic social norms and gender inequalities, economic and social stress caused by the COVID-19 pandemic, coupled with restricted movement and social isolation measures, have led to an exponential increase in gender-based violence. Many women are in 'lockdown' at home with their abusers while being cut off from normal support services. Nyashau *et al* (2021) also revealed that challenges on mental health in Zambia (particularly on the Copperbelt) were more compounding during the lockdown. According to WHO country report, from 3 January 2020 to 28 January 2022, there were 304,002 confirmed cases of COVID-19 with 3,907 deaths in Zambia. However, mental health support systems are almost non-existent in many hospitals, save alone at community level.

Equally, the education sector in Zambia has been impacted mentally. For example, a team of scholars at the University of Zambia conducted a cross-sectional study on the impact of COVID-19 pandemic on the mental health and physical activity of undergraduate pharmacy students at the University. The findings established that COVID-19 had affected the students (Mudenda, Mukosha, Chiluba 2021). On a broad scale, it means that COVID-19 has impacted the mental health of different populations across the country (Ibid 2021). The few examples of collateral damage discussed above should be understood in the context that, for a long time, Zambia's integrated health system is tilted towards clinical system transformation. Mental health services have not been complemented with system-wide innovations to cope with the burden of mental health problems.

9. **Promoting Mental Health through Infrastructure Development**

The UK's Academy of Medical Royal Colleges (2008) points outs that, good patient care and efficient system depends on access to high standards of assessment and management of mental health problems. In this regard, health infrastructure development subscribes to improved mental health care. It is a pathway to our understanding of the complex interconnections between social issues, infrastructure availability and mental health problems. In its own right design, an integrated health care system brings alongside reduced stigma for people with mental disorders and their families (WHO and Wonca 2008). It promotes collaboration and cross-agency mental health support activities to all patients. Collective impact produced through collaborative efforts, is critical to fulfilling the national objectives and goals of universal access to health care services. These can include women, children, vulnerable communities, to mention a few. For example, Imasiku and Banda (2015), argue that an effective intervention for children's mental well-being needs collaborative efforts from various stakeholders such as educationists, social workers, and child mental health specialists. Similarly, women who are victims of gender-based violence, induced by COVID-19 need 'safe homes' and an effective mental health support system that addresses their mental anguish. Unfortunately, various segments of Zambian society have remained part of the collateral damage of unspeakable infrastructure challenge in the country's health system.

10. Current Challenges

Despite the existence of progressive policies, challenges such as limited funds for mental healthcare, high burden of disease and staff shortages, among other factors continue to prevail. Part of the variables driving the challenges in the mainstream system are intrinsically tied to ineffective mental health policies and infrastructure development inertia. The government of Zambia exhibited political will through policy development in 2005. Meanwhile, the enactment of the 2019 Act, without ushering a corresponding policy to speak to the Act implicitly and practically meant that the fight against mental health problems remains a matter of 'public relations' in the political ranks. Infrastructure development and human resource limitations remain a key area of concern requiring long-term solutions.

There is a recurrent chronic shortage of general healthcare infrastructure which is unequally distributed in the country, with rural areas being at the helm of this inequality. The burden of mental health issues can potentially cripple the desire for an effective system. The study by Bindman, Grumback, Osmond (1995) provides evidence that achieving better health status, more frequent use of preventative services, and lower hospitalization rates is dependent on greater access to health care. Therefore, barriers to access health care services create discrepancies in the number, type, and timing of personal health services leading to poorer health status (Shook 2005). It is in rural areas where infrastructure may be at their most deficient and where the effect of poor transport on health is likely to be greatest (Broni, Aikins, Asibey, Agyemang – Duah 2014).

In this regard, the Zambia's Vision 2030 asserts the right of equality in access to and use of good quality health care for all regardless of socioeconomic status (Ministry of Finance Zambia 2010). The Vision aims to transform Zambia into a prosperous middle-income country as articulated also in the 7th National Development Plan (7NDP) and National Health Strategic Plan 2017 – 2021 (Ministry of Health Zambia 2018). But this national aspiration is likely to be dampened by the chronic shortage of health infrastructure. Currently, Zambia has in place a hermetic system that does not recognize the diversity of problems that a health

sector should respond to in a holistic manner. Simply, this paper advocates that, as much as health cohorts can remain compartmented in specializations, the curation should foster a carefully applied and an attentive system that is operationally effective and clear in policy. A system that does not include these elements, does not represent the demographics of the country and their variegated social problems. If mental patients do not adequately and freely access the services they deserve, they are gripped with a sense of marginalization from the Ministry of Health and its cooperating partners.

Without negating the importance of the mental health Act, the paper highlights its inadequacies at operational level. The Act and subsequent political talking points have not triggered a robust infrastructure development agenda that promotes immense participation of mental health patients. As mental health is fundamentally integrated into the mainstream primary health care systems, mental patients are key stakeholders whose human rights should drive policy direction to migrate them from the side-step of system to the center. For example, Mudenda and his colleagues contend that in addition to modifying the facets of the learning environment at the university of Zambia, extra consideration should be given to provide psychosocial support to students negatively affected by the COVID-19 pandemic (Mudenda, Mukosha, Chiluba, Munkombwe, Daka, Witika, Kampamba, Chileshe 2021). It reflects just one element of multiple dimensions of health challenges, that call for multi-pronged approaches informed by constant advocacy to policy makers and alike.

11. Conclusion and Recommendations

The study has revealed that infrastructure development for mental health system in its holistic meaning, has remained non-operationalized despite political efforts. Also, the stratification of health delivery revealed indicates that inaccessibility to and utilization of adequate mental health care services that is of acceptable quality, will remain an impediment towards achieving universal health coverage in Zambia. Currently, mental health delivery services are premised on the operationalization of policy, mental health Act and other instruments. But the failure to gain traction on mental health provision is vividly seen in many health facilities. Where it has been minimally implemented, still it is not in the primacy of the needs of patients as they fall below acceptable standards. Based on the paper's findings, inadequate health infrastructure severely impacts Zambia's capacity to effectively respond to mental health patients. Therefore, the following are the recommendations outlined not in any order of priority.

a. Strengthening primary mental health facilities that serve according to the community-based needs and not only anchored on Chainama hospital as 'one size-fits-all' facility.

b. Further research is required that goes beyond just quantifying and analyzing policy gaps for advocacy, but to examine what factors are aggravating the continued pull back of resource allocation for the mental health sector within the Zambian context. This is an important step to intellectually guide the elimination of the current reality, which depict that utilization of health services in Zambia does not favour those with the greatest need for mental health services.

c. There is urgent need to conduct a detailed study on the stretching impact of the tripartite combination of inadequate infrastructure, social-economic challenges, and the on-going COVID-19 pandemic on mental health across all major sectors of Zambian society.

d. The Ministry of Health policy makers should utilize the existing 'window of opportunity' to promote mental health services in the country through comprehensive early intervention programmes that are family-focused, culturally appropriate, and available on a long-term basis.

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