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EDITOR'S DESK

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In this issue of our newsletter, we explore the vital role of traditional, complementary, and alternative medicine in fostering a holistic approach to health care. The editorial by Prof Kureya sets the stage by emphasizing the importance of integrating these diverse practices within ethical frameworks, allowing us to better serve our communities.

Prof Nhachi provides insights into the documentation and research methodologies that are crucial for advancing traditional medicine practice. The discussion on utilizing science to incorporate traditional remedies into pharmacy settings highlights the delicate balance between innovation and respect for cultural practices.

Particularly relevant to our Zimbabwean context, we examine efforts aimed at coordinating the use of these medicines and the strategic framework necessary for regulating herbal products. We also spotlight the rich knowledge of the Jahunda people regarding traditional medicinal plants used for managing diabetes and the perspectives of pregnant women towards herbal remedies in clinical environments.

Additionally, our feature on the synergistic antibacterial activity of *Catharanthus roseus*, *Hypoxis hemerocallidea*, and *Urginea sanguinea* illustrates the potential of traditional medicines to complement modern treatments in addressing pressing health challenges.

As we navigate these complex topics, we are reminded of the importance of ethical considerations in research and practice. We encourage you to engage with these articles, fostering dialogue about how we can honour and integrate traditional healing practices in a responsible and effective manner.

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Embracing traditional, complementary, and alternative medicine promotes a holistic approach to health.



Figure 1: Professor Tendayi Kureya – MRCZ National Executive Secretary

This year, we spotlight traditional complementary and alternative medicine (TCAM). There has been a growing interest in TCAM as people seek more holistic and personalised approaches to health and wellness. This shift reflects a broader recognition of the value that diverse medical traditions bring to our understanding of health.

Traditional and complementary medicine encompasses many

practices, including herbal medicine, acupuncture, naturopathy, and homoeopathy. These practices have deep cultural roots and have been used for centuries to treat various ailments and promote overall well-being. For instance, Traditional Chinese Medicine (TCM) and Ayurveda from India offer comprehensive systems of health that emphasise balance, prevention, and the body's innate ability to heal.

One of the most promising developments in healthcare today is the integration of TCAM with conventional medicine. This integrative approach combines the best of both worlds, offering patients more comprehensive and personalised care. For example, acupuncture is increasingly being used alongside conventional treatments to manage pain and reduce the side effects of chemotherapy. Similarly, herbal supplements are often used to support traditional therapies for chronic diseases like diabetes and hypertension.

Integrating Traditional Complementary and Alternative Medicine (TCAM) into mainstream healthcare presents many benefits but faces several challenges. These challenges



include the need for thorough scientific validation of traditional practices, the standardisation of treatments, and strict regulations to ensure safety and effectiveness. However, these obstacles also create opportunities for research and innovation. By investing in research, we can better understand the mechanisms behind traditional therapies and develop new, evidence-based treatments that can be safely integrated into modern healthcare systems.

A Call to Action!

As we progress, healthcare providers, researchers, and policymakers must collaborate to create a supportive environment for traditional and complementary medicine (TCAM). This collaboration should include

funding for research, education for healthcare professionals, and public awareness campaigns highlighting the benefits and limitations of TCAM. We can ensure patients access safe, effective, holistic healthcare options by fostering this cooperative approach.

Traditional and Complementary Medicine offers valuable insights and tools for enhancing health and well-being. By embracing and integrating these practices with conventional medicine, we can develop a more holistic and patient-centred healthcare system that respects and utilises the wisdom of diverse medical traditions.



Documentation and Research in Traditional Medicine Practice



Figure 2: Professor Charles F.B. Nhachi – MRCZ Chairman

Documentation of research work and research results goes hand in hand. They are the two sides of the same coin. Undocumented research is like marketing without advertising. It is like winking at someone in the dark. You may know you are doing it, but no one else knows! This applies to all research practices, including

Traditional Medicine Practice. The need for research and documentation is imperative in traditional medicine, which, for the most part, needs to be documented more widely.

Documentation of information captures and preserves the information for posterity. It is one way to authenticate information with minimum distortion and ambiguity which is often associated with “hearsay” information. Documentation allows for referencing information and thereby passing on information from one population to another and generation to generation. Documented information avails itself to rigorous scrutiny and criticism. This is healthy and desirable for accuracy and peer review!

During the late 2019 to late 2022 period (the peak of the COVID-19 pandemic), several research efforts using traditional medicines were carried out, documented, and published through platforms such as “The University of Zimbabwe Research Week” Presentations and others. Examples of such works included “Effects of Herbal Steaming “. Such information ought to be collated and documented. It is a rich and practical repository of knowledge of traditional medicine.

Research in Traditional Medicine Practice is the best and optimal



systematic undertaking to authenticate, increase and demystify knowledge and understanding of traditional health practices.

Even though many practices and applications of traditional medicine are known and have been practised for a long time in human history, research validates certain practices, verifies specific claims, and establishes empirical evidence of traditional medicine's efficacy and safety. Traditional medicine practice is a science and should be regarded as such like any other branch of science.

It is, therefore, imperative (Zimbabwe Guidelines on Clinical Study of Traditional Medicines) that any ethno-medical evidence collected must be verifiable according to three essential criteria (i.e. identity, safety and efficacy) for any treatment or therapeutic agent.

The Medical Research Council of Zimbabwe is making a concerted effort to capacitate Traditional Medicine Research. One of the efforts that the Medical Research Council of Zimbabwe is making to promote traditional medicine research is the establishment of a technical sub-committee on

traditional, Complementary, and alternative medicine (TCAM). The committee is accountable to the Council. The primary mandate of TCAM is to ensure that all research involving traditional, complementary and Alternative medicine is conducted using high scientific, safety and ethical standards that ensure the integrity of data and the protection of participants, research staff, the public and the environment. TCAM will normally consider research proposal submissions but may also consider any matters referred to by the Council, Ministry of Health and Child Care, Professional Associations for traditional, complementary and alternative medicine practitioners and any other interested party. Members of TCAM are expected to have interest, knowledge and experience related to conventional medicine research.

Intellectual Property protection. Adequate measures should be employed to achieve this. Simple but elegant research studies can be done at our institutes of higher education to carry out justification studies of the efficacy, safety and or toxicity of our traditional medicaments. Some of this kind of



research is not resource-demanding and requires few sophisticated or up-market technologies. It is doable!

At the end of it all, i.e. after all the research has been done and documented, it must be published widely for visibility and effective communication!

These are just a few simple examples of how we can facilitate the integration of traditional medicine practice into the mainstream of national health enhancement.

Culture to counter: using science to get traditional medicine into the pharmacy



Figure 3: Harare Institute of Technology

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Abstract

Six Zimbabwean traditional medicines selected from two Traditional Healers were tested for effectiveness and safety. The scientific validation was carried out in South Africa by two Zimbabwean scientists, who researchers assisted at CSIR. The two best traditional medicines were selected, and a process was developed for their mass production. The results of the safety, efficiency and quality tests were used to support the submission of the two traditional medicines as candidates for complementary medicine registration in Zimbabwe. The LiSwati



team of Scientists carried out a similar process. The project yielded three complementary drugs submitted for registration. This was done within 1 year.

Introduction

Since immemorial, people have relied on plants for food and medicinal purposes. Historical records highlight early documentation by apothecaries, particularly in the Western world. For instance, aspirin, a pain-relieving drug, was derived from the bark of the willow tree and used in Greek traditional medicine as early as 2500 years ago. Identifying artemisinin—the active ingredient in Chinese traditional medicine for treating malaria—earned its discoverer a Nobel Prize. While many European and Asian drugs derived from traditional medicine are well known, there are few examples from Africa, even though at least 80% of Africans rely on conventional medicine as their primary source of healthcare.

Zimbabwe has fifteen nationally recognised official languages, representing at least fifteen distinct cultures with traditions associated with 6,398 plant species scattered across five agroecological zones. This abundance should provide a rich

source of traditional medicines with long histories, yet only 2% of complementary medicines registered in Zimbabwe are indigenous. In contrast, the Kingdom of Eswatini has no registered complementary medicines. This kingdom is similar to California but has only 1/9 of its population. Although Eswatini has only two nationally recognised official languages, it boasts 3,500 plant species—approximately ten times the plant species density of Zimbabwe.

Documentation of traditional medicine use is limited in Eswatini, Zimbabwe, and the broader SADC region. Additionally, many African countries have conflicting definitions of complementary and conventional medicine, complicating the regulatory and registration processes. Traditional medicines are often regulated as complementary medicines, which creates confusion within the body of knowledge and regulatory framework. The regulatory aspects of conventional medicines need urgent review, as they are often branded as sorcery in the public consciousness. This perception can influence policymakers and lawmakers, leading them to have misguided views on traditional medicine.



Bias against traditional medicine may stem from religious beliefs. For instance, Galatians 5:20 in the Christian Bible refers to 'sorcery' as a work of the flesh. The Koine Greek term translated as 'sorcery' is 'pharmakeia,' the root word for the English word 'pharmacy.' Therefore, neither traditional nor conventional medicines are inherently good or bad; their negative connotations should be based on whether they are used responsibly or abused. Scientific validation of traditional medicines can demystify them, making them more acceptable to the sceptical religious community.

How would one select a 'good' traditional healer to work with?

First, one must distinguish between the drug types that can be created using the limited resources available. Eroom's law states that as drug discovery technologies have improved, the cost of bringing a drug to market has steadily increased. A way to get around this would be using science to confirm that traditional medicine is safe and effective¹⁰. This would be followed by identifying active ingredients in traditional medicine. However, not all traditional medicines are created equal, as the medicine is only as good as the person who prepared it.

One would need to access traditional medicines from a reputable traditional healer. In some countries, Traditional Healers of repute would be registered with a regulatory body, such as the Traditional Medicines Practitioners Council of Zimbabwe (TMPCZ). In countries that lack a regulatory body, reputation would have to be assessed based on a relationship between the Traditional Healer and a university or research institute. Either way, the selection of a Traditional Healer to work with must be based on the following:

1. Their experience in practising traditional medicine over a long period.
2. Exposure to operating methods that can be used to grow their traditional healing practice, either in the form of a registered business or a trust.

Can Scientists work with Traditional Healers to develop registered medicines? The SADC - Support to Industrialization and Productive Sectors (SIPS) grant-funded project was awarded to the South African-based Council for Scientific and Industrial Research (CSIR) in partnership with the University of Eswatini (UNESWA) and the Harare Institute of Technology (HIT) to



develop Traditional/complementary medicines for helping in the management of HIV and associated opportunistic infections. Traditional medicine is used concurrently by patients on ART in SADC countries such as Zimbabwe⁴ and Eswatini⁵. While traditional healers have played a role in the management of HIV in rural South Africa, there is still widespread scepticism about their contribution from biomedical practitioners⁶. As such, the SADC-SIPS project aimed to demystify traditional healers' use of traditional knowledge and traditional medicine, allowing for broader acceptance and loosening the registration process to encourage registration of more traditional drugs in Southern Africa. Three traditional healers were selected as indigenous knowledge (IK) holders: Zimbabwe and Eswatini. They were asked to provide a range of traditional medicines used to treat a particular condition based on whether all the constituent plants in the medicine are cultivable and whether they have a history of use for the medication exceeding a decade. Using this criteria, each IK holder provided three traditional medicines.

The traditional healer from Eswatini provided UNESWA with a single, well-known traditional medicine, while the

two Zimbabwean traditional healers were asked to provide three traditional medicines each. The three institutions used science to demonstrate that the traditional medications tested in the project worked. However, injecting science into indigenous knowledge gathered by traditional healers requires trust. Trust could only be established once the rights of the IK Holders were protected by strict adherence to the Nagoya Protocol through the signing of non-disclosure agreements and observance of sound access and benefit-sharing agreements.

Indigenous knowledge is intellectual property.

The form of 'Intellectual property' protection traditionally used by IK holders is the 'trade secret'. This is where the description of the creation remains a closely guarded secret. Such a method works when only the creator knows the ingredients or the formulation procedure of the creation. An example is the Coca-Cola recipe, where a handful of company members can access the formula. While this method has been highly efficient, it assumes that the selected 'heir' to the knowledge would protect it as diligently as the creator. An 'heir' may disclose the constituent plants and formulation



procedure to a third party, such as a scientist, who may study and inform the 'trade secret' in pursuit of research publications. Knowledge holders need a more efficient way to protect their intellectual property. If third parties earn their trust by ensuring appropriate IP protection and benefit-sharing agreements are provided, then they would be willing to disclose their knowledge. In the SADC-SIPS project, it was of utmost importance that the IKHs retain their intellectual property rights and gain from commercialising their products via the Nagoya protocol guidelines for benefit sharing. This allowed the IKHs to develop trust and be willing to empty their knowledge, knowing that it was duly protected. Traction was achieved when the legal documentation/ agreements (crafted in a way the IKHs understood) were signed between the scientists and the IKHs, allowing for mutual trust between the two parties.

Working with traditional healers

From the onset, working with traditional healers was going to be demanding, given the mistrust of the IK holders. How would one select the best out of a range of conventional medicines? This is where science plays an essential role. Two Scientists

from Harare Institute of Technology were sent to the Council for Scientific and Industrial Research (CSIR) in South Africa with the six traditional medicines. They leveraged the expertise and access to equipment to screen the six traditional medications based on safety and efficacy. Two medicines were selected, and procedures for the mass production of quality products were developed. The procedure was supplied to a local pharmaceutical manufacturing company, while the results relating to efficacy and safety were compiled and used to submit the medicines for registration as complementary medicines to the local regulatory authority.

Policy framework

But why are traditional medicines being registered as complementary medicine? Let us consider the definitions: traditional medicine is "the total of the knowledge, skill, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness"⁶. A complementary medicine is "a broad set of health care practices that are



not part of that country's tradition or conventional medicine and are not fully integrated into the dominant health-care system.”⁶ Whilst pursuing the commercialisation of traditional medicines in this study, an interesting observation made was that of a notable disjoint between specific regulatory frameworks operating within the country's medical space. The *Medicines and Allied Substances Control (MASC) Act* [Chapter 15:03] (1969) empowers the Medicines Control Authority of Zimbabwe (MCAZ) to register and regulate medicines in Zimbabwe. The MCAZ published the *Guideline On Submission of Documentation for Registration of Complementary Medicines* to aid in registering Complementary Medicines in Zimbabwe. The MCAZ is empowered by the MASC Act to assume responsibility for safely handling all medicines in the country. Against the background of a missing formal definition of traditional medicine, MCAZ oversees the control of conventional medicines presented in complementary formats. The *Traditional Medical Practitioners Act* [Chapter 27:14] (1981) empowers the TMPCZ to regulate Traditional Medicine Practitioners, not their medicines. By definition, the regulation of traditional medicine

practice should correctly fall under the ambit of the Traditional Medical Practitioners Council of Zimbabwe (TMPCZ). Upon inspection of the TMP Act, there is an emphasis on rules revolving around the interface between the practitioner and patient and the practitioner's general professional conduct. Within the TMP Act, there are no regulations to direct the formulation, handling and dispensation of the actual medications. As such, there is no legal definition of Traditional Medicine in either Act. Traditional Medicines must be registered as Complementary Medicines for sale and distribution in Zimbabwean pharmacies. Ironically, the Standards Association of Zimbabwe (SAZ) has standards for manufacturing traditional medicines. In any case, Traditional medicines must be scientifically validated urgently, as only 2 % of registered Complementary Medicines are of Zimbabwean origin. This includes Cofsol, developed by the National Biotechnology Authority of Zimbabwe as a registered complementary medicine to aid in treating COVID-19.

Conclusions

It should be emphasised that there are several gaps in the knowledge and understanding of how traditional



medicines exert their effects, apart from what may be explained scientifically in the laboratory. Therefore, it becomes imperative that the oversight of conventional medicinal formulations be co-shared between the two bodies to give balanced information to the user public, vis-à-vis the scientific and the traditional perspectives. This arrangement could also influence the appeal, acceptability and uptake of conventional medicines by various consumer groupings. Therefore, the TMPCZ needs to evolve from a loose coalition of isolated traditional healers to a more cohesive body guided by modern, internationally acceptable standards and precepts for medicine formulation and handling. The authors recommend, therefore, the formulation of a national pharmacopoeia-equivalent for herbal remedies and formulations. This will see the transition of Zimbabwe and African traditional medicine practice into a more recognised art and science, as are other forms of herbal medicine practice like Chinese conventional medicine, Ayurveda, etc. The SADC-SIPS project set out to remedy the translational research problem, whereby most medicinal plant research was not leading to the

development of commercialised products and services.

Moving forward, Scientists must capitalise on the standardised dosages of complementary medicines to study their effects on ART, also known as drug-herb interactions¹¹. At the same time, Traditional Healers should be empowered by receiving training to improve their quality of work. Currently, two HEXCO-accredited courses in Zimbabwe target that demographic: the Foundational Certificate in Traditional Medicine and the National Certificate in Traditional Medicine. Workshops and seminars on Intellectual Property can be designed and tailored to them, giving them a jargon-free understanding of IP protection.

SADC states should be encouraged to pursue more collaborative projects relating to traditional medicines. An example is the work by the Harare Institute of Technology, representing SADC-SIPS Zimbabwe, benchmarked against similar efforts by the University of Eswatini, representing SADC-SIPS Eswatini. This provided a sense of camaraderie between representatives of three SADC states. The SADC region is roughly the same geographical and population size as the USA and has 206 nationally or



regionally recognised official languages. This represents 206 cultures and traditions across Equatorial, Arid and Warm Temperate (Koppen-Geiger) Climatic Zones⁷ with 45 000 plant species⁸ that provide a rich source of traditional medicines with long histories of use that could serve as a reservoir of active ingredients. If the collaboration of three SADC member states resulted in developing three Complementary drugs as candidates for registration within one year, then imagine what all 16 states could accomplish.

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Towards a more coordinated use of traditional, complementary and alternative medicines in Zimbabwe.



Figure 4 MRCZ Secretariat

Zimbabwe is in the process of incorporating traditional medicine (TM) into its national healthcare system. A comprehensive policy is being developed to establish a legal framework and guidelines for implementing TM in the country, with a strong focus on its safe and effective use.

A crucial strategy for advancing and integrating TM involves enhancing local and international collaboration to research and evaluate its

effectiveness. The Medical Research Council of Zimbabwe (MRCZ) regulates all national health research. It has established a technical committee to review and approve research proposals related to traditional medicine.

This essential role of the MRCZ has necessitated the development of guidelines for the review, approval, conduct, monitoring, and evaluation of research in conventional medicine. These guidelines aim to assist researchers in crafting proposals that meet local regulatory standards, uphold methodological rigour, conform to international guidelines, and align with the healthcare priorities of Zimbabwe.

The guidelines serve as a comprehensive reference for researchers, healthcare providers, traditional health practitioners (THPs), manufacturers, traders of conventional African medicines, and health authorities. Key objectives include defining the regulatory framework for reviewing, approving, monitoring, and evaluating the country's traditional medicine research and evaluation projects. When followed, guidelines ensure the ethical conduct of traditional medicine research and evaluation, including community engagement.



The Role of Traditional Medicine in Health Care

Traditional medicine (TM) has deep roots in Africa, playing a crucial role in healthcare. According to the World Health Organization (WHO), over 70% of births in Africa are assisted by Traditional Birth Attendants (TBAs), and about 80% of Africans rely on traditional medicine for their health needs. Despite its importance, conventional medicine is often overlooked by national healthcare systems and marginalised by modern medicine practitioners.

Recently, interest in traditional medicines has resurged, offering economic and social benefits while raising concerns about safety and efficacy. In Zimbabwe, many people seek services from traditional health practitioners (THPs), but this is not reflected in government and stakeholder investments.

Research on TM has increased, driven by the HIV pandemic and chronic diseases like diabetes. Some countries have developed infrastructure for herbal medicine research, indicating a shift toward evidence-based practices. However, traditional knowledge is mainly passed down orally, highlighting the need to document and research to

find effective and affordable health solutions.

What we must overcome

Numerous challenges remain within traditional medicine in Zimbabwe, requiring a comprehensive and adaptive approach for resolution. The most significant issue is the widespread stigma surrounding conventional medicine, which discourages individuals from seeking help from Traditional Health Practitioners (THPs). The government recognizes the importance of traditional medicine and enacted the Traditional Medical Practitioners' Act after independence. However, policies and resources are insufficient to support the institutional framework necessary to advance traditional health practices.



Figure 5: Traditional Medicine

There remains a dearth of scientific data regarding the quality, safety, and efficacy of conventional African



medicines, which hampers their acceptance within national health systems. This deficiency in research can be attributed to several factors, including inadequate health policies, obsolete research methodologies, the absence of laboratories dedicated to traditional medicine research (Phytopharmaceutics), as well as insufficient financing. Researchers are increasingly interested in traditional medicine. These actors should create confidence in traditional medicine practices, facilitate evidence for endorsements from conventional health practitioners, and aid the integration of traditional medicine into national healthcare systems.

Insufficient research activity has hindered the development of national standards to ensure the quality, safety, and efficacy of traditional medicines. The lack of technical guidance, limited information on regulatory development, and minimal registration requirements for conventional medicines have obstructed the establishment of national surveillance systems for the

monitoring and evaluation of their quality, safety, and efficacy. Currently, there exists an inadequate quantity and quality of scientific data to support the widespread commercial utilization of Zimbabwean traditional medicine.

To address these challenges, it is essential to cultivate a substantial pool of researchers dedicated to traditional medicine and to standardize terminology and research methodologies for evaluating the quality, safety, and efficacy of these medicines across Africa. Additionally, the World Health Organization's provision of methodological guidance has generated renewed optimism regarding the potential for traditional medicine to undergo rigorous scientific scrutiny, thereby producing evidence of its safety, efficacy, and quality. However, it is imperative that scientific approaches acknowledge and respect the holistic nature and principles inherent in traditional medicine practices.



The Process of Traditional Medicine Research in Zimbabwe

By MRCZ Secretariat

Research often begins with traditional knowledge related to medical practices, which can come from individuals or communities. Today, information about medicinal plants is widely accessible and can provide inspiration for research ideas and hypotheses. Regardless of the source, the research process should acknowledge the origin of these ideas or knowledge. Researchers should develop a proposal to investigate the safety and efficacy of traditional medicine. Guidelines emphasize the importance of human clinical trials to confirm the safety and effectiveness of conventional treatments for managing or treating diseases. The standard clinical trial phases (Phases I-IV) also apply to traditional medicine. However, these human clinical trials must be supported by ethnomedical evidence and demonstrable safety in animal studies.

The research process for traditional medicine should involve several essential steps to ensure the safety, efficacy, and quality of the treatments derived from traditional knowledge. Here's an overview of the typical process:

1. **Ethnobotanical Surveys:** Researchers begin by documenting traditional knowledge from indigenous communities, including using plants and other natural substances for medicinal purposes.
2. **Collection and Identification:** Medicinal plants and other natural materials are collected and accurately identified. This step often involves collaboration with botanists and traditional healers.
3. **Phytochemical Screening:** The collected materials undergo phytochemical screening to identify the active compounds. This involves various laboratory techniques to isolate and characterise the chemical constituents.
4. **Preclinical Studies:** The identified compounds are tested *in vitro* (in the lab) and *in vivo* (in animal models) to



evaluate their biological activity, safety, and potential therapeutic effects.

5. Clinical Trials: Promising compounds move on to clinical trials conducted in phases to test their safety and efficacy in humans. This step is crucial for ensuring the treatments are safe for human use.
6. Standardization and Quality Control: Researchers develop standardised methods for preparing and administering traditional medicine to ensure consistency and quality. This includes setting guidelines for dosage, purity, and potency.

7. Regulatory Approval: The final step involves obtaining regulatory approval from health authorities. This ensures that traditional medicine meets all safety and efficacy standards before being marketed and used by the public.

This multidisciplinary process involves ethnobotany, pharmacology, chemistry, and clinical medicine, among other fields. It highlights the importance of integrating traditional knowledge with modern scientific methods to develop effective and safe treatments.



Strategic Framework for Regulating Traditional and Complementary Herbal Medicines in Zimbabwe



Figure 6: Professor Takafira Mduleza Biotechnology & Biochemistry Department University of Zimbabwe

Abstract

The widespread use of traditional and complementary herbal medicines (TCHMs) across Africa highlights the need for a strong regulatory framework to ensure their safety, efficacy, and quality. This article discusses the importance of such a strategic framework, emphasizing the

integration of TCHMs into broader healthcare systems to improve healthcare access, preserve cultural heritage, and promote sustainable practices. Effective regulation is essential for safeguarding public health, fostering economic stability, and maintaining trust in traditional practices. The benefits of regulating the TCHM sector are numerous: it ensures standardized quality and safety, enhances public confidence, supports local economies, and protects traditional knowledge. Furthermore, a well-regulated TCHM sector can contribute to sustainable resource management, encourage scientific research and innovation, and expand market opportunities both domestically and internationally. By fully harnessing the potential of traditional herbal and complementary medicines, Zimbabwe can improve healthcare delivery, support economic growth, and preserve its rich cultural heritage. This strategic framework offers a comprehensive approach to achieving these goals, emphasizing collaboration, research, education, and sustainable practices.

Keywords: herbal, traditional medicine, healthcare, regulation



Introduction

Traditional and complementary herbal medicines (TCHMs) are prevalent across Africa due to their accessibility and cultural significance [1,2]. However, proper regulation is crucial to ensure their safety, efficacy, and quality and integrate them into the broader healthcare system [3]. This strategic framework outlines a comprehensive approach to regulating TCHMs in Zimbabwe, aiming to protect public health and enhance the credibility of these traditional practices. Traditional herbal medicine has been used for centuries in Zimbabwe to treat various ailments and maintain overall well-being. The rich biodiversity of the African continent has provided a vast array of medicinal plants traditionally utilised by indigenous communities [4-6]. These traditional healing practices often involve using herbs, roots, bark, and other natural substances to address health issues. In recent years, there has been a growing interest in harnessing the potential of traditional herbal medicine in Zimbabwe to complement modern healthcare systems. Researchers and healthcare professionals are exploring integrating traditional medicine into mainstream healthcare to improve access to healthcare services and

promote holistic healing approaches [7].

While traditional herbal medicine in Zimbabwe offers a wealth of knowledge and healing potential, challenges are associated with its integration into modern healthcare systems. One key challenge is the need for scientific validation and standardisation of traditional remedies to ensure their safety and efficacy [8]. Additionally, a lack of regulation and quality control measures for traditional medicine products raises concerns about their safety and consistency [9]. Despite these challenges, there are opportunities to leverage the benefits of traditional medicine through research collaborations, capacity building initiatives, and policy development [10]. By promoting collaboration between traditional healers, researchers, healthcare providers, and policymakers, it is possible to harness the full potential of traditional herbal and complementary medicine in Zimbabwe for improved health outcomes [10].



Harness the traditional herbal and complementary medicine in Zimbabwe

Harnessing traditional herbal and complementary medicine in Zimbabwe offers a robust strategy for improving healthcare access, preserving cultural heritage, and promoting sustainable practices. One of the primary steps involves rigorous research and documentation of ethnobotanical knowledge, collaborating with local healers to record traditional medicinal practices [11]. Scientific validation of these remedies is crucial for integrating them into mainstream healthcare, ensuring their efficacy and safety are established [12]. Education and training programs should be developed to inform communities about the benefits and proper use of herbal medicines and update traditional healers with the latest scientific advancements. This approach helps mitigate the risks associated with improper use and enhances herbal treatments' overall safety and effectiveness [9].

Integrating traditional medicine with modern healthcare systems can create a more holistic approach to health. Encouraging collaborations

between traditional healers and modern healthcare practitioners can bridge gaps and foster mutual respect and understanding [13]. Policy support is essential to recognise and regulate traditional medicine and maintain quality control and safety standards. Sustainable practices, such as promoting the sustainable harvesting and cultivation of medicinal plants, are vital to prevent overexploitation and ensure a steady supply of these resources. Additionally, developing and commercialising herbal products can open new markets and support small-scale producers, boosting local economies. Cultural preservation efforts, including documenting and promoting traditional practices, are crucial to ensure this valuable knowledge is passed down to future generations. Implementing a regulatory framework to standardise and protect herbal medicines can further enhance public trust and safety while integrating these practices into public health initiatives can significantly improve healthcare delivery, particularly in rural areas.





Figure 7: Herbal Medicine

The importance of controlling Traditional Herbal Medicines in Zimbabwe.

Controlling traditional herbal medicines in Zimbabwe is crucial for several reasons, including public health, economic stability, cultural preservation, and global health security [1, 15]. One primary aspect is ensuring public health and safety. Traditional herbal medicines are widely used in Zimbabwe due to their accessibility and cultural acceptance. However, these medicines' quality, safety, and efficacy can vary significantly. Implementing control measures ensures the medicines are free from harmful contaminants like heavy metals, pesticides, and microbial

toxins [3]. It also ensures that only those herbal medicines that are scientifically validated for their therapeutic benefits are promoted and used. Moreover, regulation helps document and manage adverse reactions, allowing for timely responses to public health threats. Effective control also involves establishing robust regulatory oversight and standardisation [2, 4, 19]. This includes setting clear standards for producing, processing, and distributing herbal medicines. Quality assurance mechanisms must be implemented to ensure consistency in these products' strength, purity, and composition [9]. Additionally, regulating the licensing of practitioners and manufacturers and conducting regular monitoring and inspections are vital components. The regulatory framework ensures that traditional herbal medicines meet safety and efficacy standards, thereby protecting consumers and enhancing the credibility of these products [14].

Economically, traditional herbal medicine plays a significant role in the livelihoods of many communities in developing countries, including Zimbabwe. Many individuals rely on the trade of medicinal plants and



herbal remedies. Regulation helps prevent the exploitation and depletion of these resources, ensuring their sustainable use and conservation. Furthermore, proper regulation can enhance market confidence and expand the market for traditional herbal medicines domestically and internationally. This not only supports local economies but also fosters broader economic growth through the export of high-quality, safe, and effective products.

Cultural preservation and integration are also critical reasons for controlling traditional herbal medicines. These medicines are deeply rooted in the cultural heritage of many developing countries. Control measures can help preserve indigenous knowledge and practices, integrating them into modern healthcare systems. By validating and regulating traditional practices, countries can respect their cultural heritage while ensuring these practices meet modern health standards. This strengthens cultural identity and fosters a sense of respect and validation for traditional knowledge, which can be passed down through generations and incorporated into broader healthcare frameworks.

Benefits from regulation of traditional herbal medicine sector.

Regulating the traditional herbal medicine sector can provide numerous benefits, enhancing its credibility, safety, and integration into modern healthcare systems. Firstly, improved safety and efficacy are the primary advantages of regulation. It ensures that herbal medicines are produced under standardised conditions, producing consistent quality, strength, and purity. Regulatory oversight helps monitor and control contaminants and adulterants, reducing the risk of adverse health effects [3]. Moreover, scientific validation and clinical testing can confirm the therapeutic benefits of herbal medicines, ensuring that only effective remedies are marketed.

Secondly, regulation significantly improves public confidence in traditional herbal medicines. With regulatory approval and quality assurance, consumers can trust the safety and efficacy of these products. This trust enables consumers to make informed choices about their healthcare, knowing that regulatory bodies back the products they use. Increased confidence in herbal medicines can lead to broader acceptance and use,



further integrating these remedies into daily health practices and promoting overall public health.

Thirdly, economic growth and market expansion are notable benefits of a regulated traditional herbal medicine sector. Regulatory compliance can open new domestic and international markets for herbal medicines. A regulated sector is more likely to attract investments from both local and international investors, fostering economic growth. Moreover, ensuring sustainable and fair practices in the harvesting and producing of herbal medicines supports local economies and communities, providing them with stable income sources and economic resilience.

Lastly, regulation protects traditional knowledge and promotes sustainable resource management. By preserving traditional knowledge and practices, regulation helps integrate them into formal healthcare systems while respecting cultural heritage. Protecting the intellectual property rights of traditional knowledge holders ensures they benefit from their contributions. Furthermore, regulation can enforce sustainable harvesting practices, ensuring the conservation of medicinal plant species and their

habitats, preventing over-exploitation, and maintaining the long-term availability of these valuable resources. This sustainable approach benefits the environment and the communities that rely on these resources for their livelihood.

The Strategic Framework

Zimbabwe benefits from traditional and complementary herbal medicines due to their accessibility and cultural significance. A strategic framework is required to provide a comprehensive approach to regulating the sector in Zimbabwe, addressing the need for pragmatic oversight to protect public health and enhance the credibility of traditional practices. The regulation is crucial to ensure the safety, efficacy, and quality and to integrate the practices into the broader healthcare system [16-18].

Setting the Vision and Objectives

The vision of this framework is to establish a robust regulatory structure that ensures the safety, efficacy, and quality of TCHMs, thereby fostering public trust and integrating these practices into national healthcare systems across the country. The key objectives include ensuring the safety, efficacy, and quality of TCHMs; promoting their integration



into national healthcare systems; protecting and preserving traditional knowledge; enhancing public and professional trust in TCHMs, and fostering economic growth through sustainable practices and market expansion [1, 5].

Key Components of the Framework

The framework consists of several vital components. Firstly, the regulatory infrastructure involves establishing or strengthening the National Regulatory Authority (NRA), developing comprehensive legislation and guidelines, and implementing practical inspection and enforcement mechanisms [16, 18]. Secondly, safety and quality assurance include enforcing Good Manufacturing Practices (GMP), developing robust pharmacovigilance systems, and establishing standards for the certification of TCHMs and traditional practitioners. Thirdly, scientific research and validation focus on promoting and funding clinical trials and fostering collaborations with research institutions. Education and training involve integrating TCHMs into medical curricula, developing training programs for traditional practitioners, and conducting public awareness campaigns. Sustainable resource management emphasises

conservation practices, sustainable harvesting techniques, and biodiversity protection. Economic and trade development aims to facilitate market access, encourage public-private partnerships, and protect intellectual property rights. Lastly, monitoring and evaluation involve developing performance indicators, conducting regular audits and reviews, and establishing feedback mechanisms [2, 9].

Implementation Plan

The implementation plan is divided into three phases. Phase 1: Planning and Development involves conducting stakeholder consultations to gather input and build consensus, developing detailed regulatory guidelines and standards, and establishing the necessary legislative framework. Phase 2: Capacity Building and Pilot Programs focuses on training regulatory personnel and traditional practitioners, and implementing pilot programs in selected districts to test and refine the regulatory framework. Phase 3: Full Implementation and Scale-Up includes rolling out the regulatory framework across all regions, launching public awareness and education campaigns, and monitoring and evaluating the



implementation process to ensure compliance and effectiveness.

Conclusion

Regulating traditional and complementary herbal medicines in Zimbabwe ensures public safety, promotes integration into national healthcare systems, and fosters economic growth. This strategic framework provides a comprehensive approach to achieving these goals, emphasising collaboration, research, education, and sustainable practices. By implementing this framework, Zimbabwe can harness the full potential of TCHMs while ensuring their safe and effective use. This will enhance healthcare delivery, preserve cultural heritage, and promote sustainable economic development.

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Traditional medicinal plants utilised by the Jahunda people to manage Diabetes.



Figure 8 Moreblessing Dube

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Introduction

The term “diabetes” comes from two Greek words: “dia” meaning “through” and “bainein” meaning “to go.” This implies that diabetes refers to the passage of something through the body. The term “mellitus” is derived from a Latin word that means “sweetened with honey,” which refers to the presence of sugar in urine. Therefore, Diabetes Mellitus (DM) is a metabolic disorder characterized by hyperglycemia, resulting from the body’s inability to effectively produce or use insulin.

Common symptoms of DM include excessive thirst, frequent hunger, increased urination, weight loss, and slow healing of cuts or sores. If not managed properly, diabetes can lead to various complications, such as neuropathy, cardiovascular disease, retinopathy, and organ failure affecting the kidneys, liver, and heart.

Types of diabetes



There are four main types of DM:

1. Type I Diabetes (Insulin-dependent DM)
2. Type II Diabetes (Non-insulin dependent DM)
3. Gestational Diabetes (occurs after the 24th week of pregnancy)
4. Secondary Diabetes (develops due to disorders affecting the endocrine system, such as hormonal disorders, genetic syndromes, or complications from medication)

Secondary diabetes also includes other variations such as Maturity-onset Diabetes of the Young (MODY), mitochondrial diabetes (also known as hereditary diabetes), pancreatogenic diabetes (type 3c diabetes), Latent Autoimmune Diabetes in Adults (LADA), brittle diabetes, and neonatal diabetes. Among these, Type II Diabetes is the most prevalent, affecting 90% to 95% of individuals diagnosed with diabetes.

Globally, an estimated 537 million people are suffering from diabetes, with scientists predicting this number will rise to 643 million by 2030 and 783 million by 2045. Studies indicate that currently, 5.2% of the estimated global diabetes population resides in

Sub-Saharan Africa. While this percentage seems small compared to other regions, the actual number may be underestimated, as many cases of diabetes in Sub-Saharan Africa remain undiagnosed.

In Zimbabwe, the most prevalent type of diabetes is Type 2 Diabetes Mellitus (T2DM). This increase is attributed to a rise in sedentary lifestyles, decreased physical activity, and dietary changes favoring Western foods over traditional diets due to urbanization and industrialization. The costs associated with treating diabetes and its related complications are sharply rising in Zimbabwe, placing a significant strain on the country's economy. These high costs disproportionately affect impoverished and unemployed citizens, leading many to prefer traditional medicine over synthetic options.

Additionally, Zimbabwe has limited government assistance programs specifically for chronic diseases like diabetes, resulting in delayed patient treatment and an increased mortality risk. This poses a serious public health threat to the population. The Jahunda people in Gwanda are also facing similar challenges in managing diabetes and its complications. They have reported



relying on traditional medicine for their primary healthcare needs, including the management of diabetes. The preferences for plant-based treatments over conventional medicines, along with the specific types of plants used, will be explored further as the discussion continues.

Managing diabetes

Diabetes mellitus (DM) is managed through lifestyle and behavioral changes, such as diet and exercise, along with conventional therapies like insulin and oral antidiabetic medications. However, long-term use of these conventional treatments can lead to undesirable side effects, including retinopathy, heart attacks, and other chronic infections.

As a result, there is growing interest among scientists in finding safe and natural alternatives, or complementary approaches, for managing DM, particularly through the use of medicinal plants. These plants have a long history of medicinal use due to the bioactive phytochemicals they contain, such as alkaloids, phenolics, flavonoids, tannins, and saponins, which act as natural antioxidants.

These natural antioxidants and bioactive compounds are believed to possess antidiabetic, anti-

inflammatory, and antihyperlipidemic properties. Additionally, medicinal plants are generally natural, safe, readily available, accessible, and affordable. Research has shown that certain medicinal plants can improve insulin sensitivity, stimulate insulin secretion, and inhibit enzymes involved in carbohydrate and protein metabolism, highlighting their potential benefits in diabetes management.

Traditional medicinal plants used by the Jahunda people.

A cross-sectional case study was conducted in Gwanda district, where people colloquially known as maJahunda amahle reside, from September to December 2023. This district is located in farming region five, characterized by low rainfall, prompting local residents to rely on livestock farming, drought-resistant small grain farming, amacimbi (madora), and illegal gold panning. The area is abundant in semi-arid vegetation, rich in phytochemicals that are active ingredients in medicinal properties, including antidiabetic plants.

Interviews were conducted with a total of fifty participants, purposively



sampled to include ten traditional healers, five herbalists, ten vendors, and twenty-five patients living with diabetes. The traditional medicine practitioners (TMPs) reported having over five years of experience using traditional medicines, particularly plant-based formulations. Fifteen patients indicated that they had also been using traditional herbs alongside conventional medicine for more than five years. Notably, five patients mentioned that they no longer use conventional therapies, successfully managing their condition using only medicinal plant formulations.

All the participants agreed that they use plant-based medicines to manage diabetes for different reasons. Besides affordability, easy access, and preparation, plant-based medicines are believed to be safe, efficient, holistic, and have zero or fewer side effects. On affordability patients alluded that, traditional healers can be given livestock (hen, turkey or goat) or any item worth (such as five litres or bucket of amacimbi) for their consultation and treatment fee, a payment plan which cannot be done in clinics, hospitals or private doctors. The participants indicated that the use of traditional medicine empowers patients to have

ownership, control and responsibility for their healing. Some patients indicated that the use of medicinal plants is convenient for them as the hospitals are a significant distance away and the nearest hospitals' facilities and services are very poor as well as expensive.

In addition, they indicated that traditional medicine can be used as complementary medicine. One participant reported that he used traditional medicine as complementary to conventional medicine and after three months, he quitted using insulin injections up to date, hence, his condition can now be well managed with traditional medicinal plants without the use of insulin injections. Furthermore, the participants indicated that the use of traditional medicine especially plant-based therapies does not only treat the targeted ailment but also other ailments such as cardiovascular diseases, cancer, kidney and obesity and other common sickness as *ngumbane*, headache, stomach ache or wound infection. For example, plants like Intolwane, Umgugudu, Isihaqa and umganu are well known for treating diabetes as well as various common ailments like *ngumbane*, inyongo, headache, fever and diarrhoea.



The Jahundas, also indicated they use a variety of plants (indigenous, naturalized, exotic, and cultivated) to manage diabetes. All the indigenous plants used for diabetes (such as Idolofiya, Icena, Umkhomo, Umnhlonhlo, Uxakuxaku, Mpandula, Inkunzane, Cucuza, Umtswiri, Isihaqa, umganu and ugagu) are mainly found in the locality except for few species that are bought as dried parts from Binga (*Tamarind/Ubusika*), Matobo (*Umnungwane & Nyawutshana*) Esigodini or Filabusi (*Mpaluli*). Most of the plants mentioned belonged to the Fabaceae family. Cultivated and /or exotic plants (such as pawpaw, avocado, garlic, ginger and cinnamon were used as complementary diets alongside the herbal formulations. The patients living with diabetes who participated in the study indicated that they prepare natural foods (small grain mealie-meal – *isitshwala senyauthi or amabele*), less-oily white meat or amacimbi as relish, and traditional vegetables (ibhobola, imbuyayedonki, ulude) instead of processed foods. For snacks they prefer umxhanxa (mixture of boiled maize meal and ijodo), Umcaba (boiled grinded mabele mixed with sour milk) and inkobe (mutakura). Dried fruits of Umnyii,

umviyo and umkojombo or cooked and dried fruits such as Uxakuxaku as well as maputi (roasted maize grain) can be used to reduce hunger pangs between meals.

The main preparation methods used are infusion of concoctions (mixture of two or more plant parts) or single plant parts followed by decoction. The Jahundas believe that if medicinal plant parts are boiled, they lose their medicinal properties. Preparation of traditional medicine is easy as participants indicated that they prepare the medicine on their own (even if the medicine is prescribed by the traditional healer, the instructions are simple and easy to follow). All the medicines were reported to be orally administered taken in porridge or as tea/juice. The dosage was that the patient should drink one or two cups of warm medicine three times a day. They also store medicinal plant parts for future or emergency use in the form of dried parts or powder.

Conclusion

The Jahunda people prefer traditional medicine (especially plant – based formulations) over conventional medicine due to its affordability, safety, holistic approach and easily accessible.



Various plants are used to treat diabetes, mostly prepared as infusions and are orally administered.

Traditional foods are also preferred by the Jahunda people to reduce DM risk complications.

Perceptions About Traditional Herbs Among Pregnant Women At A University Teaching Hospital In Zimbabwe

Mvumi Netsai¹ (BSc Midwifery); Dr. Danda Grace² (PhD Public health)



Figure 9: Mvumi Netsai



Figure 10: Dr Danda Grace

ABSTRACT

Traditional herbs are unproven medicinal concoctions used for various reasons, and in pregnancy they are believed to improve the well-being of the mother and baby. The study sought to determine perceptions of traditional herbs among pregnant women. The study was conducted at Mpilo Central Hospital, Bulawayo, Zimbabwe. A descriptive design was adopted in which self-administered



questionnaires were used to collect data. A total of 309 pregnant women were recruited for the study using simple random sampling. The data was analysed using SPSS version 27. Results showed that 53% of the respondents used traditional herbs and 47% stated that they did not use traditional herbs during pregnancy. Findings also indicated that 49.8% thought traditional herbs did not affect conventional medicines whilst 30.4% did not know if there was indeed any effect; 19.7% of respondents stated that traditional herbs did affect other medicines. The study concluded that women have insufficient knowledge on the use of traditional herbs and their effects on outcome of pregnancies. However, there is significant use of traditional herbs during pregnancy (53%) of the respondents. The study recommends that there be open relationships between the midwives and the women in order for them to open up about traditional herb use. Further studies should be done in order to establish the effectiveness of traditional herbs and their efficacy and potential interaction with conventional medicines.

Key words: Perceptions; Knowledge; practices; traditional herb use;

pregnant women; Mpilo Central Hospital

Introduction

The development and use of traditional herbs in the antenatal period have a very long historical background that corresponds to the Stone Age and the Middle Ages [1]. Poultices and ointments made from traditional herbs could alleviate several pregnancy-related problems ranging from pica, oedema, and cramps and also ward off evil spirits as well as ensure a quick and relatively easy delivery [2]. From the early centuries to date, the use of traditional herbs has been gradually increasing all over the world with up to 50% of the general population admitting to having tried at least one herbal product [3]. Traditional herbs have been used in pregnancy for a variety of reasons which included improving the well-being of the mother and the baby, treating infections and easing gastrointestinal problems. They have also been used to prepare the birth canal, expedite labour and delivery and in the postpartum period to strengthen them and restore the woman to a pre-pregnancy state.

Research indicates that the use of traditional herbs is deeply rooted in



many cultures; however, a gap exists in knowledge among women and their families regarding the effects of using these herbs. Studies have shown the prevalence of traditional herb use globally [5; 6]. However, there was limited evidence to show whether the women make informed decisions about traditional herb use or just follow cultural dictates.

The World Health Organization (WHO) [7] estimated that traditional and complementary medicine account for 80% of healthcare in the world. However, despite the frequency of their use, there was a distinct lack of knowledge on the adverse health events which include higher rates of pregnancy losses, increased use of caesarean section and increased frequency of maternal complications.

Various studies conducted in different areas in Zimbabwe showed a marked prevalence of traditional herb use in the country. A cross-sectional study on the prevalence of traditional herb use in two rural areas in Zimbabwe found that 69.9% of women used traditional herbs in different forms during pregnancy and labour. The same study also found that some of the women often used more than one type of herb at a given point in time [8]. Another study in Zimbabwe

noted that 80% of the population studied admitted to using traditional herbs for a variety of reasons during pregnancy and in the postpartum period [9]. A separate study in another region in Zimbabwe revealed that 54% of 337 pregnant women interviewed also used traditional herbs to prepare for labour and delivery through cervical dilatation [10]. The same study also showed that knowledge of the herbs was shared from mother to daughter and in some instances the mother-in-law to the daughter-in-law. Pregnant women are in most instances culturally obliged to use the traditional herbs even if it is against their personal preference [3].

The perceived benefits of using traditional herbs include reduced labour time, positive birth outcomes and lesser chance of having stitches to the birth canal. However, adverse effects like fetal distress and obstetric complications were not made known to the women. This, coupled with the secrecy that shrouded traditional herb use created a dilemma in the midwife who was then never sure of what the woman had taken, why they took the herbs and its effects to the baby and mother [3].

A variety of herbs and concoctions were used for various reasons during



pregnancy in Zimbabwe. The most common was the soil from a molehill, which was used by 27.7% of the participants and was believed to conserve a pregnancy and burrow it for protection just as a molehill is visible but the mole itself is rarely seen. A total of 21.6% of the women admitted to using Elephant dung which was believed to be rich in different medicinal herbs because elephants as herbivores ingest a lot of herbs as they forage [8].

Use of holy water was more common in pregnancy and older women were found to be 13 times more likely to use traditional herbs than younger ones [9]. These findings were also supported by another research [10] which concurred that indeed use of traditional medicines was higher in older women than in their younger counterparts. The reason for this was attributed to greater cultural consciousness in the older women as opposed to the younger women.

At Mpilo Central Hospital, the researchers observed that there were unexplained cases of precipitate labour especially among the multiparas and some even expelled matter that looked like leaf derivatives upon delivery. However, probing the women did not give conclusive information. It was

therefore against this background that the researchers embarked on the study to establish the perceptions of traditional herb use among pregnant women at Mpilo Hospital.

Methods

The researchers used a quantitative cross-sectional research design which looked at the study population at a single point in time and recorded the variables for each participant at a specific point in time. The cross-sectional study design helped the researchers to determine the relationship between knowledge of the effects of traditional herb use on the outcome of labour and practices among pregnant women at Mpilo Central Hospital.

The setting for this research was Mpilo Central Hospital in Bulawayo. Mpilo Central Hospital is a 1 000 bedded tertiary level teaching hospital which is located approximately 3 km from the central business district of Bulawayo. The hospital is a referral centre serving five provinces of the country. Pregnant physically and mentally healthy women being attended to at Mpilo Central hospital during the period 1 May to 30 August



2021 were focused and a randomly selected sample of 309 was recruited, calculated using the Dobson formula.

Data collection was conducted using a 25-minute self-administered questionnaire in May to August 2021. The respondents gave informed consent in accordance with the Medical Research Council of Zimbabwe guidelines. Data was analysed using SPSS27 with the help of a biostatistician. A statistical significance was based on a p-value of less than or equal to 0.05. The study complied with the guidelines and regulations of research ethics concerning collection and management of data. Permission to conduct the research was sought from the Mpilo Central Hospital research board and the Medical Research Council of Zimbabwe (MRCZ) prior to conducting the study (Approval MRCZ/B/2138).

Results

Out of a total of 309 respondents, the majority 66.7% were of the Shona tribe; 56% were within the 30-39 year category; 70.9% attained secondary level; 39% were self-employed and 65.7% were married. The area of residence of the respondents showed that 73.5% and 26.5% were from the urban and rural areas respectively.

The highest number of respondents were Christians (53.1%).

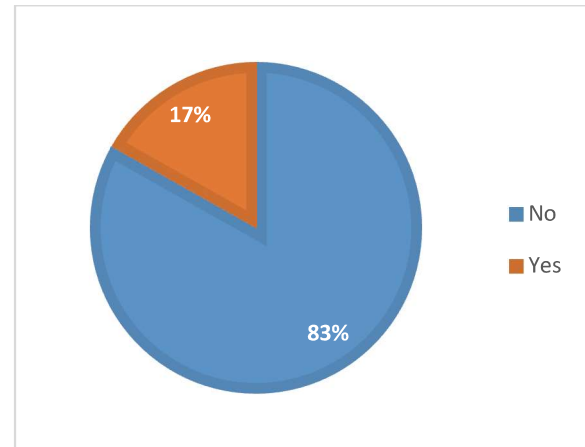


Chart 1: Knowledge of traditional herbs

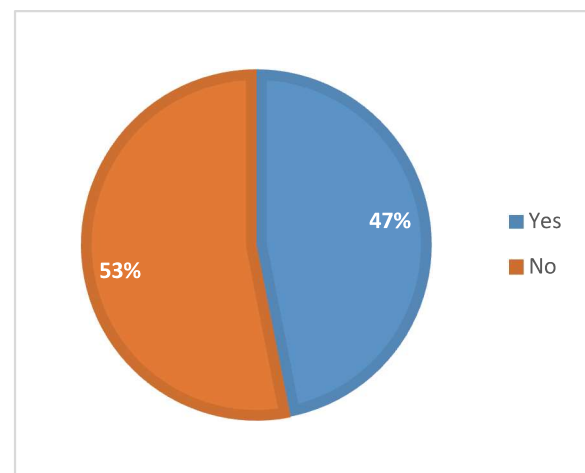


Chart 2: Usage of traditional herbs

Figure 1 shows that 83% and 17% do not know and know about traditional herbs during pregnancy, respectively. On knowledge of the type of herbs used, elephant dung and catfish oil were the most known traditional herbs for pregnancy with 40.1% and 12.9% respectively. A total



of 46.9% of respondents did not have knowledge of traditional herbs during pregnancy.

The correlation of knowledge of traditional herbs and level of education indicated a significant association ($p=0.000$, $x=18.908$); and the correlation of knowledge of traditional herbs and area showed that the relationship was statistically insignificant ($p=0.945$).

Figure 2 Results showed that 53% and 47% stated that they used and did not use traditional herbs during pregnancy, respectively.

On reasons why they used traditional herbs, 40.1%, 30.4%, 20.1% and 9.1% of respondents said that they would do so for the safety of the baby, for their personal decisions, for their own safety and feel embarrassed about it respectively.

When asked whether they would tell a health care provider on their use of traditional herbs, 61.5% said yes and 38.5% said no, this is because respondents might be afraid to disclose their information except when it is life threatening to them.

Correlation of the usage of traditional herbs and tribe indicated a significant association between tribe

and the usage of traditional herbs during pregnancy ($p=0.023$, $X=7.579$).

On questioning on the persons that oriented respondents on the use of traditional herbs, 49.8%, 38.2% and 12% were oriented by aunties, mothers and friends, respectively.

Discussion

This study determined the perceptions about traditional herb use among pregnant women at a university teaching referral hospital.

Knowledge of traditional herbs during pregnancy

Findings showed that 83% and 17% do not know and know about traditional herbs during pregnancy, respectively. The results are consistent with [8] who found out that most women have not used traditional herbs during pregnancy. The similarity of findings suggests that norms and beliefs in society are against the use of traditional herbs. There might also be a general fear of the use of traditional herbs or failure to open up to health care professionals on use of traditional herbs. This was confirmed by participants when asked whether they would tell a health care provider on use of traditional herbs, 61.5% said yes and 38.5% said no.



The results indicated that elephant dung and catfish oil were the most known traditional herbs for pregnancy with 40.1% and 12.9% respectively; similar with [3] who listed these as some of the common traditional herbs used among pregnant women.

Results also showed that 38.8%, 19.4% and 15.5% of respondents use herbs for speeding up the birth process, opening a passage for the baby and reduce blood pressure respectively. These reasons are consistent with [3] and [4]. The similarity points out that there are several challenges faced by pregnant women that need medical attention to reduce chances of banking on traditional herbs.

A total of 49.8% of respondents stated that traditional herbs did not affect other medicines. The results are consistent with [4] who noted that despite the prevalence of the use of traditional herbs, little appears to be known by the users on their potential toxicity and their ability to interact with conventional treatments and also the potential impact on both mother and baby [4].

Practices of traditional herbs during pregnancy

The findings showed that 53% of the respondents stated that they used traditional herbs during pregnancy. The findings are supported by [8], who noted that the use of traditional herbs during pregnancy was on the rise in several countries and needed to be taken into consideration if the Sustainable Development Goals (SDGs) on reduction of maternal mortality were to be reinforced. In their study in Bulilima (Plumtree, Zimbabwe) they noted that 28% of the respondents admitted to using traditional medicines, particularly in the third trimester to quicken delivery.

Findings indicated that 46.9% did not use traditional herbs, 40.1% used elephant dung and 12.9% used catfish oil. The level of usage supports the findings by [3] although there was much variety in terms of the traditional herbs that were used.

Results show that 49.8%, 38.2% and 12% were oriented by aunties, mothers and friends respectively. The issue of orientation is supported by [10] where participants professed to have no specific reason for using traditional herbs during pregnancy except for the fact that it was tradition. The women said their grandmothers, mothers, mothers-in-law, sisters, traditional healers and traditional birth attendants (TBA's)



promoted the use of traditional herbs during pregnancy and they simply followed their advice.

Implications for practice

Midwives should explore the use of traditional herbs in pregnant women at every contact. This will ensure that those who report positively about use of traditional herbs are flagged and midwives be on the look-out for complications like post-partum haemorrhage which was reported by 29.8% of the respondents. The government through the health regulators must invest in pharmacological research and registration of traditional herbs proved to be safe and effective.

Limitations of the study

There were several limitations of the study which included reliance on quantitative data forms from a single research instrument. Several research instruments would have increased reliability and validity of findings. Secondly, the study utilised small sample size which could have been higher had it not been for the COVID 19 restrictions.

Conclusion

The study concludes that women have insufficient knowledge on the use of traditional herbs during

pregnancy but still use them. The study established that the tribe of women has a little significant effect on the use of traditional herbs during pregnancy but that level of education had an effect on the knowledge of traditional herbs during pregnancy. The influence of grandmothers, mothers, mothers-in-law, sisters, traditional healers and traditional birth attendants (TBA's) in promoting the use of traditional herbs during pregnancy was significant where women simply followed their advice.

In service training workshops for midwives to empower them with good communication skills so that women are free to verbalize if they have ingested any traditional herbs during pregnancy. Further research is needed into the active ingredients and traditional herbs so that possible interactions and side effects may be anticipated in order to improve pregnancy outcomes. Engagement with stakeholders to gather more information about traditional herbs practices so as to render care that is culture-sensitive and culture-specific in accordance with the International Confederation of Midwives (ICM).

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The Resurgence of Traditional Herbal Medicines: Ancient Remedies in Modern Times



Figure 11 Joel Tapera Zimuto

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Introduction

In recent years, there has been a notable resurgence of interest in traditional herbal medicines as people seek natural and holistic approaches to health and wellness. With a rich history spanning thousands of years, these medicines have been used by various cultures

worldwide to treat a wide range of ailments. Today, ancient remedies are gaining attention for their potential therapeutic benefits and are being embraced by those looking for alternatives to conventional pharmaceuticals.

Traditional herbal medicines consist of various plant-based remedies, including herbs, roots, and flowers. Often prepared as teas, tinctures, or extracts, they are believed to offer health benefits, such as alleviating cold symptoms and managing chronic conditions like arthritis and diabetes. The increasing awareness of potential side effects from pharmaceuticals has led many to seek herbal remedies as a gentler, more natural approach to health and well-being.

Efficacy of traditional medicines

Scientific research is increasingly supporting the efficacy of certain traditional herbal medicines. Studies have demonstrated the anti-inflammatory, antioxidant, and antimicrobial properties of various herbs and plants, shedding light on their potential to support the body's natural healing processes. In response to this growing interest, traditional herbal medicine practitioners, also known as



herbalists, are seeing a resurgence in their practices. These experts, often trained in the art of herbalism and traditional healing methods are offering consultations, workshops, and educational resources to help individuals incorporate traditional herbal medicines into their daily lives.

However, it is important to note that while traditional herbal medicines hold promise, they also come with their own set of considerations. The potency, quality, and interactions of herbal remedies with conventional medications are areas that require careful attention and further research. As the interest in traditional herbal medicines continues to grow, it is crucial for consumers to seek guidance from qualified practitioners and healthcare professionals when integrating these remedies into their wellness routines. In doing so, individuals can navigate the world of traditional herbal medicines safely and effectively, harnessing the potential benefits while minimizing potential risks.

The resurgence of traditional herbal medicines reflects a broader shift towards embracing natural and traditional approaches to health and wellness. As these ancient remedies gain traction in modern times, it is imperative to strike a balance

between the wisdom of traditional practices and the insights of contemporary science, ultimately paving the way for a more integrated and holistic approach to healthcare.

Traditional herbal medicines and their impact on modern healthcare.

Traditional herbal medicines are deeply rooted in the cultural practices of diverse communities around the world. Each culture has its own unique repertoire of herbal remedies, often passed down through generations. From Ayurveda in India to Traditional Chinese Medicine, and from Native American herbal traditions to African herbalism, the wealth of knowledge and insights from these diverse cultural perspectives is invaluable.

The global interest in traditional herbal medicines has sparked conversations about the preservation of traditional knowledge and the ethical considerations surrounding the commercialization of plant-based remedies. The intersection of cultural heritage, biodiversity, and intellectual property rights in the context of traditional herbal medicines is a complex and evolving issue that warrants careful consideration.



As traditional herbal medicines gain popularity, there is a growing need to establish robust regulatory frameworks and quality control standards to ensure the safety, efficacy, and consistency of herbal products. Many countries are grappling with the challenge of integrating traditional herbal medicines into their existing regulatory systems while respecting the unique characteristics of these remedies.

Efforts to promote sustainable harvesting practices, protect endangered plant species, and support fair trade initiatives in the herbal medicine industry is essential for preserving biodiversity and maintaining ethical supply chains. The integration of traditional herbal medicines with modern healthcare practices is an area of increasing interest and debate. Some healthcare systems are exploring integrative medicine approaches that combine traditional herbal remedies with conventional treatments, aiming to provide patients with comprehensive and personalized care.

Research needs

Research into potential herb-drug interactions, herb dosages, and

standardized preparations is essential for facilitating safe and informed integration. Additionally, collaborations between traditional herbal medicine practitioners and healthcare professionals can contribute to a more holistic and patient-centered approach to healthcare.

Public awareness and education play a crucial role in shaping perceptions and understanding of traditional herbal medicines. Providing accurate and accessible information about the benefits, limitations, and potential risks of herbal remedies is essential for empowering individuals to make informed choices about their health. Fostering dialogue and collaboration between traditional herbal medicine practitioners, researchers, and healthcare professionals can contribute to a more integrated and evidence-informed approach to herbal medicine.

Conclusion

The resurgence of traditional herbal medicines represents not only a rediscovery of ancient wisdom but also an opportunity to bridge traditional knowledge with contemporary science and practice. As individuals, communities, and



healthcare systems navigate this evolving landscape, a thoughtful and inclusive approach to traditional herbal medicines can contribute to a more holistic and sustainable model of healthcare. So, to avoid a miss match gap, training of these practitioners is very important in order to interpret information as it comes.

Synergistic
antibacterial activity
of *Catharanthus*
roseus, *Hypoxis*
hemerocallidea
(African potato) and
Urginea sanguinea
against *Escherichia*
coli and
Staphylococcus
aureus



Figure 12: *Hypoxis Hemrocalidea*



Figure 13: *Catharanthus Roseus*



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Abstract

Antimicrobial resistance is a global health, economic, and environmental threat requiring urgent action to save lives. Various indigenous plants contain phytochemicals of great importance to medical fields. These phytochemicals possess multiple properties, such as antioxidant, antimicrobial, anti-aging, anti-carcinogenic, and anti-inflammatory. The main aim of this study was to determine the antibacterial activity of individual and combined selected plant extracts (concoctions) of *Catharanthus roseus* leaves, *Hypoxis hemerocallidiae* corm, and *Urginea sanguinea* against *Escherichia coli* and *Staphylococcus aureus* using the Kirby-Bauer method. The individual plant extracts had the fewest zones of inhibition against *E. coli* and *S. aureus* as compared to the

concoctions. *C. roseus* extract produced the largest average zones of inhibition of 7 mm and 9 mm against *E. coli* and *S. aureus*, respectively. *U. sanguinea* produced the least, with an average zone of inhibition of 6 mm against *E. coli* and 3 mm against *S. aureus*. In plant extract combinations, *C. roseus* and *H. hemerocallidiae* combinations formed a large zone at 13 mm against *E. coli*. The combination of *U. sanguinea* and *H. hemerocallidiae* had the fewest zones in both *E. coli* and *S. aureus* at 9 mm. The three combined plant extracts formed zones of inhibition of 17 mm and 14 mm in *E. coli* and *S. aureus*, respectively. The minimum inhibitory concentration of the three combined plant extracts was found to be 100 thousand folds per dilution factor in *E. coli*. Findings of the study show that the use of concoctions has a stronger inhibitory action than individual extracts, and the use of such combined plant extracts might solve the current antimicrobial resistance the world is facing.

Keywords Antibacterial activity; *Catharanthus roseus*, *Hypoxis hemerocallidiae* (African potato); *Urginea sanguinea*; antimicrobial resistance (AMR)

Introduction



The rapid emergence of drug-resistant bacteria occurring worldwide is a major problem of the 21st century that continues to threaten our ability to prevent and treat common infections (Prestinaci et al., 2015). Currently, approximately 70% of the bacteria that cause infections in hospitals are resistant to at least one of the most regularly used antibiotics. Globally, about 700,000 people die due to antimicrobial resistance related illnesses every year and it is estimated that by 2050 these deaths will reach 10 million (Mhondoro et al., 2019). According to World Health Organization, medicinal plants are the best sources to obtain a variety of potential, safe and novel drugs (Yadav and Agarwala, 2011).

Several studies have highlighted the importance of *H. hemerocallidae*, *C. roseus* and *U. sanguinea* in pharmacology and medical therapeutics. *C. roseus* has proven to contain antidiabetic, antihelminthic, antibacterial and have pesticidal properties but it is mostly grown for its alkaloids which offer anticancer activities (Jaleel et al., 2008). *C. roseus* contains more than 70 different alkaloids and therapeutic agents that are effective against cancer. Moreover, studies have

revealed that *C. roseus* has an antibacterial activity against *Vibrio cholera*, *Mycobacterium pyrogenes* and *Salmonella typhi* (Kaushik et al., 2017; Fabricant and Farnsworth, 2001). *H. hemerocallidea* is one of the medicinal plants used for the management of HIV/AIDS symptoms in Southern Africa (Mills et al., 2005). Furthermore, *H. hemerocallidea* is effective against intestinal parasites, urinary infections, infertility, common cold, flu, wounds, arthritis, cancers, hypertension, diabetes, psoriasis, STIs and gastric infections ((Elujoba et al., 2005; Nsibande et al, 2018; Ncube et al., 2013). Additionally, the corn extracts indicated the presence of terpenoids, saponins, cardiac glycosides and tannins which are of importance in drug development (Matyanga et al., 2020). *U. sanguinea* powdered bulbs are being used for the treatment of bronchitis, asthma and influenza while the tea is been used for the treatment of venereal disease, abdominal pain, back ache and hypertension (Marx et al., 2006). Moreso, *U. sanguinea* have shown antiviral, antibacterial, antioxidants, anticancer and anti-inflammatory properties (Mahlangeni and Moodley, 2021). Secondary metabolites such as salicylic acid, scillaren A, phloroglucimol, phlorin3-



hydroxy-4-methylbenzoic acid and 5a-4, 5-dihydroscillaren A have been isolated from *U. sanguinea* and these compounds have incredible medicinal benefits which must be evaluated for cytotoxic properties (Manganyin *et al.*, 2021). The aim of this study is to determine the *in-vitro* antibacterial activity of *H. hemerocallidea*, *C. roseus* and *U. Sanguinea* when used individually and in combination against *E. coli* and *S. aureus*.

Materials and methods

Plant sampling

H. hemerocallidae and *U. sanguinea* were randomly collected from the mountainous areas of Matopo in March 2022 in Matebeleland South Province. However, *C. roseus* was collected from the homestead as it is used as a decorative plant from the same area. The plants were thoroughly washed in running water to remove debris and dust particles and then rinsed using distilled water and finally air dried in the laboratory.

Preparation of plant extract

The fresh samples of *H. hemerocallidea* corm, *C. roseus* leaves and *U. sanguinea* bulb were rinsed with distilled water and crushed with pestle and mortar. 10g

of the crushed samples were collected from each of the 3 samples and placed in reagent bottles. The samples were macerated with 50ml of 90% methanol then shaken overnight at 2000rpm. The extracts were filtered using Whatman filter no. 1. The filtrates concentrated in a rotary evaporator at 67°C. The crude extracts were suspended in methanol solvent and stored at 4°C.

Antibacterial Activity

Preparation of susceptibility test discs

The discs of 6ml were prepared from Whatman no.1 filter paper using a paper puncher. The discs were placed in a 50ml reagent bottle and sterilized by autoclaving at 121°C for 15 minutes. The discs were dried in hot air oven at 50°C to remove moisture (Arunkumar *et al.*, 2009). The discs to be used for the antimicrobial activity were impregnated with each formulated stock solution of 100mg/ml of *H. hemerocallidae*, *C. roseus* and *U. sanguinea*. The impregnated discs were stored in a refrigerator at a 4°C before being used for the antimicrobial susceptibility test.

Antimicrobial assays (Disc diffusion assay)



The antimicrobial efficacy test was carried out using Kirby-Bauer method (Newall *et al.*, 1996). Muller Hinton agar was used for antibacterial test. The microorganisms were spread using sterilized cotton swabs. The discs impregnated with extracts were placed on Muller Hinton medium with equal distance between them. Positive control standard discs containing 3µg of Chloramphenicol were used against *E. coli* and *S. aureus* and 50% methanol was also used as negative control. After 24 hours of incubation at 37°C, the plates were observed for clear inhibition zones by the plant extracts against the test organisms. The diameter of clear zones was measured using a Vernier caliper.

Combined effect test

The concoctions of *C. roseus* (CR), *H. hemerocallidae* (AP) and *U. sanguinea* (US); CR/AP, CR/US, AP/US and CR/US/AP were prepared using the concentrations of 0.5ml of each 100mg/ml of each extract in making a combination the ratio of 1:1, 1:1:1 for two and three plant extracts concoctions, respectively. The combined plant leaf extracts were used against *E. coli* and *S. aureus*, and the inhibition zones were measured. The average zones of inhibition formed when the extracts

were applied in combinations against the test microbes were compared with those of inhibition when used singly. *E. coli* and *S. aureus* are resistant to Fluroxime and Methicillin respectively and these were used as negative controls for each.

MIC for combined plant extracts

MIC of 3 combined plant extracts was determined by mixing *C. roseus*, *H. hemerocallidae* and *U. Sanguinea* in 1:1:1 ratio. A volume of 1ml of 50mg/ml of the each of the CR/US/AP concoction was placed in the test tube and mixed well to prepare a stock solution of combined plant extract. The 6 test tubes with Tryptic soy broth were prepared. Serial dilutions were performed to reduce concentrations from test tube 1 with 10^{-1} dilution to test tube 6 with 10^{-6} dilution. The test tube containing Tryptic soy broth only was used as a control. The test tubes were inoculated with 20µl of the organism (*E. coli* and *S. aureus*) and incubated for 24hours at 37°C. The test tube containing Tryptic soy broth only was used as control and for comparison. The change in turbidity was determined where MIC is the lowest concentration of plant extracts inhibiting the growth of organism.



Results

Antibacterial activity of individual and concoctions plant extracts

The diameter of clear zones of inhibition excluding antibiotic disc were measured using a Vernier caliper and the results were presented in a **Table 1**. The concoction CR/AP/US extract formed the largest zones of inhibition of 17mm and 14mm in *E. coli* and *S. aureus* respectively. Individual plant extracts demonstrated minimal antibacterial inhibition.

Table 1: Average zones of inhibition in millimetres of plant extracts used individual and/or in concoctions against *E. coli* and *S. aureus*

Plant extracts	Test microorganisms		Urginea Sanguinea (US)	
	<i>E. coli</i> (mm)	<i>S. aureus</i> (mm)		
Catharant hus roseus (CR)	7	9	6	3
Hypoxis hemerocallidae (AP)	8	4	11	10
			9	9
			13	10
			17	14
			17	15
			2	0
			—	3
			3	—



Plant extracts	Test microorganisms	control for <i>S. aureus</i>	control for <i>E. coli</i>
	<i>E. coli</i> (mm)	<i>S. aureus</i> (mm)	
Catharanthus roseus (CR)	7	9	Fluroxim (negative control for <i>E. coli</i>) 3
Hypoxis hemerocallidiae (AP)	8	4	
Urginea Sanguinea (US)	6	3	
US/ CR	11	10	
US/AP	9	9	
AP/CR	13	10	
CR/AP/US	17	14	
Chloramphenicol (positive control)	17	15	
Methanol (negative control)	2	0	
Methicilin (negative control)	—	3	

Minimum Inhibitory Concentration for concoction CR/AP/US extract

Minimum inhibitory concentration against *E. coli* and *S. aureus* of the concoction CR/AP/US extract with 50mg/ml concentration in each plant extract was determined using Macrodilution method. The MIC was expressed per dilution factor. The MIC against *E. coli* was found to be at 100 thousand-fold (1×10^{-5}) of dilution factor while in *S. aureus* the MIC was found to be a thousand-fold of dilution factor (1×10^{-3})

Discussion

Medicinal plants like *H. hemerocallidiae*, *C. roseus* and *U. sanguinea* play important roles in therapeutics, they have antibacterial effect as indicated in **Table 1** above. The concoction CR/AP/US extract formed the largest zones of inhibition of 17mm and 14mm in *E. coli* and *S. aureus* respectively compared to other plant extracts; CR/AP, CR/US, US/AP and individuals. No previous



study has assessed the antibacterial activity of the concoction CR/AP/US extract against *S. aureus* and *E. coli*, zones of inhibition were comparable to the chloramphenicol antibiotic which was used as the positive control. Furthermore, other concoctions; CR/AP, CR/US, US/AP demonstrated better antibacterial activity than when plant extracts were used individually. The findings agree with other studies that concluded that combining plant extracts improved the antibacterial activity against *E. coli* (Nascimento *et al.*, 2000; Alzoreky and Nakahara, 2003).

An interesting study was performed that demonstrated that *Hypoxis* corn has a significant inhibition against *E. coli* and less activity was observed in *S. aureus* (Katerere and Eloff, 2008). Similarly, in this study *U. sanguinea* and *Hypoxis* individually had a significant inhibition in *S. aureus* than in *E. coli*. This might be due to the differences in the architecture of the bacterial cell walls, Gram positive bacteria have a thick peptidoglycan layer than the Gram negative, thus *Hypoxis* and *U. sanguinea* target the bacterial cell wall. Contrarily, leaf extracts of *C. roseus* showed enhanced inhibition against *S. aureus* than *E. coli*, (**Table 1**), and these results

concur with other researchers (Khalil, 2012). Plant extracts are known to target different components of the bacteria to kill the cells, hence each extract has a different effect on each class of bacteria.

Conclusion

All the plant extracts displayed antimicrobial activity when used against *E. coli* and *S. aureus*. Combined plant extracts demonstrated good synergistic antimicrobial activity against *E. coli* and *S. aureus*. We recommend assessing the plant extracts' cytotoxic effects in mammalian cell culture and *in vivo*.

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Conflicts of interest: The authors declare no competing interests with regard to contents of this article.

The founding sponsors had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, and in the decision to publish the results.

Author Contributions: A. Sibanda-Makuvise and A. Ndudzo conceived and designed the study; B. Dube did the experiments. All authors



contributed to the writing of the manuscript and approved the final version.

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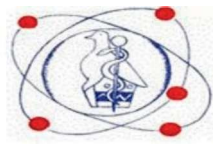
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Medical Research Council of Zimbabwe

Traditional and Complimentary Medicine in Zimbabwe.

Traditional and complementary medicine has varied forms across regions, reflecting specific cultural contexts. Recognising the rich history of traditional and complementary medicine in Zimbabwe is important. The Medical Research Council of Zimbabwe (MRCZ) invited Zimbabwean researchers to submit articles for this Newsletter focusing on Traditional and Complementary Medical Health Research in Zimbabwe. The purpose was to present an opportunity to showcase work in this field and increase visibility.

Contribute to the ongoing debate:

Traditional Medicine: Traditional medicine has a diverse and storied history. It encompasses various knowledge, skills, and practices rooted in various cultures' theories, beliefs, and experiences. These practices preserve health, prevent illnesses, diagnose conditions, and enhance physical and mental well-being. Traditional medicine often reflects the cultural heritage of local communities and may involve modalities such as herbal medicine, acupuncture, and massage.

Complementary Medicine:

Complementary medicine encompasses a wide range of healthcare practices that are vital to our overall health and well-being. These practices are not part of conventional medicine but serve to complement it. While not fully integrated into the mainstream healthcare system, they address specific needs and can help alleviate side effects, ultimately enhancing the quality of life. For example, healthcare professionals may utilise complementary treatments to manage symptoms associated with conventional medical interventions, underscoring their significance in healthcare.

Specific Herbal Medicines:

Herbal medicines form a crucial component of traditional and complementary medicine, encompassing herbs, herbal materials, preparations, and finished products. These natural remedies typically comprise active ingredients sourced from different plant parts. Across diverse cultures, herbal medicine has been employed for centuries to support wellness and address various conditions.

Submission information:

The next issue will be published in June 2025. Interested researchers and practitioners are encouraged to submit original articles in English, Shona, or Ndebele on a topic of interest. Your article should be based on evidence, including from practice, and will be subjected to peer review before publication.

Send your article in a recognised text editor by emailing

mrcz@mrcz.org.zw and copying tkureya@mrcz.org.zw. The length of articles should be 3-5 pages maximum (Arial font size 11, single spacing).

For more information, contact: the Medical Research Council of Zimbabwe,

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