

TRADITIONAL MEDICINE INTEGRATION INTO NATIONAL HEALTH SYSTEMS: A COMPARATIVE STUDY OF CHINA AND SOUTH AFRICA

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ABSTRACT

Achieving SDG 3 (Good Health and Well-Being) requires ensuring healthy lives and promoting well-being for all at all ages, including access to safe, effective, quality, and affordable essential medicines and health services (Target 3.8). Traditional medicine, including herbal medicine, acupuncture, traditional birth attendance, bone-setting, and spiritual healing, is widely used globally, particularly in low- and middle-income countries, serving 60 to 80 percent of the population in some regions. However, traditional medicine integration into national health systems varies dramatically across countries, shaped by historical recognition, regulatory frameworks, research investment, medical education, and political will.

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This study conducts a comparative analysis of traditional medicine integration into national health systems in China and South Africa, two countries with rich indigenous medical traditions, contrasting colonial histories, and divergent policy trajectories. China has achieved the most comprehensive integration of traditional medicine into a national health system globally, with constitutional recognition, legal protection, health insurance coverage, and widespread integration into public hospitals and primary care. South Africa, despite having a diverse indigenous medical heritage and enabling legislation, faces significant implementation gaps, including slow registration of traditional healers, lack of integration into health insurance and medical education, and limited research funding.

Using a qualitative comparative case study methodology, the study analyzes secondary data from government reports, WHO documents, peer-reviewed literature, and program evaluations over the period 2000 to 2025. The study finds that China's successful integration is attributable to strong political commitment, investment in research, education, quality control, and health insurance coverage. South Africa's integration lags due to colonial and apartheid legacy, weak political will, lack of funding, professional resistance, and a fragmented regulatory framework.

The study concludes that traditional medicine integration requires legal recognition, regulation, education, research, health insurance coverage, and collaboration between biomedical and traditional practitioners. Recommendations for both countries and the international community are provided.

Keywords: Traditional medicine; integration; China; South Africa; SDG 3; Traditional Chinese Medicine; sangoma; inyanga; national health system

RÉSUMÉ

Atteindre l'ODD 3 nécessite l'accès à des services de santé essentiels. La médecine traditionnelle est largement utilisée. Cette étude analyse l'intégration de la médecine traditionnelle dans les systèmes nationaux de santé en Chine et en Afrique du Sud. La Chine a intégré la médecine traditionnelle chinoise (MTC) dans son système national de santé : reconnaissance constitutionnelle (1982), loi sur la MTC (2017), prise en charge par l'assurance maladie (80 à 90 pour cent), universités (plus de 50), hôpitaux (90 pour cent des hôpitaux de comté). L'Afrique du

Sud a adopté la loi sur les praticiens de santé traditionnelle (2007), mais la mise en œuvre est faible : seulement 5 000 des 200 000 à 300 000 guérisseurs traditionnels (sangomas, inyangas) sont enregistrés, pas d'intégration dans l'assurance maladie, pas d'enseignement universitaire. L'étude conclut que l'intégration nécessite une reconnaissance juridique, une réglementation, une éducation, une recherche et une couverture par l'assurance maladie. Des recommandations sont fournies pour les deux pays et la communauté internationale.

Mots-clés : médecine traditionnelle, intégration, Chine, Afrique du Sud, ODD 3, médecine traditionnelle chinoise, sangoma, inyanga, système national de santé

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11. INTRODUCTION

Achieving SDG 3 (Good Health and Well-Being) requires ensuring healthy lives and promoting well-being for all at all ages, including access to safe, effective, quality, and affordable essential medicines and health services (Target 3.8). Traditional medicine, which encompasses the sum total of knowledge, skills, and practices based on indigenous theories, beliefs, and experiences used to maintain health, prevent, diagnose, improve, or treat physical and mental illness, includes herbal medicine, acupuncture, traditional birth attendance, bone-setting, spiritual healing, massage, and dietary therapy.

The World Health Organization estimates that 80 percent of the population in some African and Asian countries rely on traditional medicine for primary health care. Traditional medicine is accessible, often available in remote areas where biomedical facilities are absent. It is affordable, with lower cost than modern medicine. It is culturally acceptable and trusted by communities. It is holistic, treating physical, mental, social, and spiritual dimensions. However, traditional medicine also faces challenges, including lack of scientific evidence for safety and efficacy due to few randomized controlled trials, quality control issues such as adulteration, contamination, and

misidentification of herbs, adverse effects including herb-drug interactions and toxicity, and regulatory gaps involving unlicensed practitioners and no pharmacovigilance.

Traditional medicine integration into national health systems, defined as the formal inclusion of traditional medicine in health policy, regulation, education, research, health insurance, and clinical practice, varies dramatically across countries. China has achieved the world's most comprehensive integration of Traditional Chinese Medicine (TCM). South Africa is making progress but faces significant challenges. This study compares these two countries.

China, with a history of TCM spanning more than 3,000 years, has achieved comprehensive integration. TCM is constitutionally recognized. The 1982 Constitution, as amended, states that TCM is an important part of the nation's medical heritage, and the state shall develop TCM. TCM is legally protected under the Law on Traditional Chinese Medicine of 2017, the first national law on TCM. TCM is integrated into the national health insurance system, with the Medical Insurance Catalogue covering TCM services including acupuncture, tuina massage, and moxibustion, as well as TCM herbal medicines, with coverage rates of 80 to 90 percent. TCM is taught in more than 50 universities, with over 300,000 students enrolled. TCM is present in 90 percent of county-level hospitals, with more than 3,000 TCM specialist hospitals nationwide. TCM is integrated into primary care through community health centers and village clinics. Quality control is ensured through the Chinese Pharmacopoeia, Good Manufacturing Practice for TCM, and a national pharmacovigilance system.

South Africa, with a population of 60 million, has a rich indigenous medical heritage from Zulu, Xhosa, Sotho, Tswana, Venda, Ndebele, Swati, Tsonga, Pedi, and Khoisan traditions. Traditional healers include sangomas (diviners and spirit mediums who diagnose spiritual causes, perform rituals, and communicate with ancestors), inyangas (herbalists who prescribe herbal remedies known as muthi from indigenous plants, minerals, and animal parts), traditional birth attendants (ababelethisi who assist childbirth using herbs), and bone-setters who reset fractures and treat sprains). Colonial and apartheid history suppressed indigenous medicine. The Witchcraft Suppression Act of 1957 criminalized traditional healers, equating them with witchcraft. The apartheid era marginalized traditional medicine and promoted Western medicine only.

Post-apartheid, since 1994, South Africa has made progress. The 1996 Constitution does not explicitly recognize traditional medicine, but section 27(1) states that everyone has the right to access health care services, and section 31 recognizes cultural rights. The Traditional Health Practitioners Act No. 22 of 2007 established the Interim Traditional Health Practitioners Council of South Africa (ITHPCSA) to regulate traditional healers through registration, training standards, and an ethical code. The Traditional Medicine Policy of 2001, revised in 2005, promotes integration into the national health system. However, implementation gaps remain. The Traditional Health Practitioners Act is not fully implemented. The ITHPCSA was only established in 2014, and registration is slow, with only 5,000 of an estimated 200,000 to 300,000 traditional healers registered as of 2023. Traditional medicine is not integrated into the national health insurance system. The National Health Insurance (NHI) launched in 2023 does not cover traditional medicine. Traditional medicine is not taught in medical universities, with only elective short courses available. Traditional medicine is not integrated into public hospitals, except for a few pilot projects. Quality control is absent, with no regulation of herbal medicines (muthi), no national pharmacopoeia, no Good Manufacturing Practice for traditional medicine, and no safety monitoring. Research funding is minimal.

The contrast between China and South Africa illuminates critical questions for traditional medicine integration, national health systems, and SDG 3, which this study addresses.

2. LITERATURE REVIEW

The literature on traditional medicine integration is extensive. The WHO Traditional Medicine Strategy (2014-2023, updated 2022) provides a framework for countries to integrate traditional and complementary medicine into national health systems, focusing on policy, regulation, research, and practice.

2.1 China's Traditional Chinese Medicine Integration

China's TCM integration is well documented. Xu and Yang (2009) analyzed the role of TCM in the Chinese health care system, noting its constitutional recognition and widespread use. Tang et al. (2008) provided an overview of TCM in China, highlighting its integration into hospitals, primary care, and health insurance. Chinese government white papers and reports from the

National Administration of Traditional Chinese Medicine (NATCM) document the policy framework, including the Law on Traditional Chinese Medicine (2017), which established licensing, education, insurance coverage, research funding, and intellectual property protection for TCM.

2.2 South Africa's Traditional Medicine Policy

South Africa's traditional medicine policy is documented by several authors. Makhubu (1988) and Gumede (1990) provided early perspectives on traditional healers. Morris (2001) analyzed the politics of traditional medicine in South Africa, noting the colonial legacy of suppression. Strehlau (2003) provided a legal analysis of traditional health practitioners in South Africa. Gqaleni et al. (2007) described traditional and complementary medicine in South Africa, documenting the post-apartheid policy framework. Makhura (2012) analyzed the Traditional Health Practitioners Act. Nxumalo et al. (2011) and Peltzer et al. (2008) studied the utilization of traditional healers in South Africa. WHO Traditional Medicine Country Profiles for China and South Africa provide comparative data.

2.3 Comparative Studies

Comparative studies of traditional medicine integration across China and South Africa are rare. Most studies focus on either country separately. This study fills that gap by providing a structured comparison of traditional medicine integration into national health systems in China and South Africa.

3. RESEARCH QUESTIONS

This study addresses the following research questions:

1. What is the status of traditional medicine integration into national health systems in China and South Africa across legal, regulatory, education, research, health insurance, and clinical practice dimensions?
2. What explains China's successful integration and South Africa's lag in traditional medicine integration?

3. How can traditional medicine integration be achieved while ensuring safety, efficacy, and quality?

4. METHODOLOGY

This study employs a qualitative comparative case study methodology to examine traditional medicine integration into national health systems in China and South Africa. The comparative approach is appropriate for examining how different historical, political, and institutional contexts shape traditional medicine policy outcomes. China and South Africa were selected as cases offering maximum variation. China has a long continuous history of TCM spanning thousands of years, comprehensive integration including constitutional recognition, legislation, education, research, insurance coverage, and quality control, and a high-income economy. South Africa has a diverse indigenous medical heritage but a colonial and apartheid history that suppressed traditional medicine, emerging integration with enabling legislation but weak implementation, and an upper-middle-income economy. The research design integrates secondary analysis of multiple data sources spanning the period 2000 to 2025. Government sources include, for China, the National Administration of Traditional Chinese Medicine (NATCM), the Ministry of Health, the National Medical Products Administration, and the Law on Traditional Chinese Medicine (2017); for South Africa, the Department of Health, the Interim Traditional Health Practitioners Council of South Africa (ITHPCSA), and the National Institute for Traditional Medicine. International sources include the WHO Traditional Medicine Strategy and WHO Traditional Medicine Country Profiles for China and South Africa. Peer-reviewed literature from journals including *The Lancet*, *Health Policy*, and the *Journal of Southern African Studies* was also analyzed. The analytical framework examines six dimensions: legal recognition (constitutional or statutory protection), regulation (registration, licensing, ethical standards), education (university programs, curriculum, licensing exams), research (evidence base, clinical trials, safety monitoring), health insurance coverage (reimbursement for TM services), and clinical integration (TM in hospitals, primary care, referral systems). The study has several limitations, including reliance on secondary data constrained by availability, quality, and comparability. Chinese data are more extensive than South African data. The comparative case study design cannot establish causality as rigorously as experimental methods. No primary data collection, such as interviews with policymakers, traditional healers, or biomedical practitioners, was conducted. The study period (2000 to 2025)

captures recent trends but does not fully explore longer-term historical dynamics. Despite these limitations, the comparative analysis provides valuable insights for policy and future research.

5.

RESULTS

Table 1: Comparative Summary – Traditional Medicine Integration

Dimension	China	South Africa
GDP per capita (USD)	\$13,000 (high-income)	\$6,500 (upper-middle)
Traditional medicine	Traditional Chinese Medicine (TCM) – 3,000+ years	African traditional medicine (Zulu, Xhosa, Sotho, etc.) – sangoma, inyanga, TBA, bone-setter
Constitutional recognition	Yes (1982 Constitution: “TCM is important part of medical heritage”)	Not explicit (section 27 right to health, section 31 cultural rights)
TM legislation	Law on Traditional Chinese Medicine (2017)	Traditional Health Practitioners Act (2007)
Regulatory authority	National Administration of Traditional Chinese Medicine (NATCM)	Interim Traditional Health Practitioners Council of SA (ITHPCSA) – not fully functional
Registered TM practitioners	300,000+ (TCM physicians, acupuncturists)	5,000 (of estimated 200,000-300,000 healers)
TM universities	50+ TCM universities (Beijing, Shanghai, Nanjing, Guangzhou, Chengdu, etc.)	None (elective courses only at universities of technology – Durban University of Technology, University of the Western Cape)
TM in medical curricula	Yes (all medical students study TCM basics)	No (elective only)

TM in public hospitals	Yes (90% of county hospitals have TCM departments; 3,000+ TCM specialist hospitals)	No (pilot projects only – Mpumalanga, KwaZulu-Natal)
TM in primary care	Yes (community health centers, village clinics)	No
Health insurance coverage	Yes (80-90% of TCM services and herbal medicines covered)	No (NHI does not cover TM; pilot proposals)
Research capacity	National institutes (China Academy of Chinese Medical Sciences), WHO Collaborating Centres	South African Herbal Science and Medicine Research Institute (UWC), limited funding
Quality control	Chinese Pharmacopoeia includes TCM, GMP for TCM, adverse event monitoring	No national pharmacopoeia, no GMP, minimal safety monitoring
COVID-19 use	90% of patients received TCM (Lianhua Qingwen, Xuebijing, Qingfei Paidu)	Some TM used (no official integration)
Source	NATCM 2022; Law on TCM 2017; WHO TCM Profile	Department of Health 2022; ITHPCSA 2023; WHO TM Profile

Table 2: China – Comprehensive Traditional Chinese Medicine Integration

Element	Description
Constitutional recognition	1982 Constitution: “Traditional Chinese medicine is an important part of the nation’s medical heritage, and the state shall develop TCM.” 2009 amendment reaffirmed.
Law on Traditional Chinese Medicine (2017)	First national law on TCM. Provisions: TCM practitioners must pass national licensing exam (registration, continuing education). TCM services eligible for health insurance (national catalogue). TCM drugs subject to GMP, safety monitoring. TCM research funding (state level). TCM education (university degrees, standard curriculum, clinical training). Protection of TCM intellectual property (patents, trade secrets, geographical indications).

TCM education system	50+ TCM universities: Beijing University of Chinese Medicine (founded 1956), Shanghai University of TCM, Nanjing University of TCM, Guangzhou University of TCM, Chengdu University of TCM, Tianjin University of TCM, Heilongjiang University of TCM, Zhejiang Chinese Medical University, Fujian University of TCM, etc. Enrolment: 300,000+ TCM students (bachelor's, master's, doctoral). Curriculum: TCM theory (yin-yang, five elements, meridians, zang-fu organs), TCM diagnostics (tongue, pulse, auscultation, palpation), herbal medicine (500+ herbs), acupuncture (points, techniques, combination), tuina massage, moxibustion, cupping, qigong. Western medicine (anatomy, physiology, pathology, pharmacology, microbiology) integrated (20-30% of curriculum). Licensing: National TCM Practitioner Examination (written, clinical skills).
TCM in public hospitals	3,000+ TCM specialist hospitals (Tertiary, Secondary, Primary). 90% of county-level general hospitals have TCM departments (TCM consultation, acupuncture, herbal pharmacy). TCM hospital beds: 500,000+ (30% of total hospital beds). TCM outpatient visits: 1.5 billion/year (20% of total).
TCM in primary care	Community health centers (50,000+) offer TCM services. Village clinics (600,000+) stock TCM herbs, provide basic TCM. TCM integrated into family medicine training.
Health insurance coverage	National Medical Insurance Catalogue (2019, 2021) includes: TCM services (acupuncture, tuina, moxibustion, cupping, qigong – outpatient, inpatient). TCM herbal medicines (400+ herbs – decoctions, pills, capsules, granules, injections – covered with 80-90% reimbursement, patient co-pay 10-20%). Insurance coverage increased TCM utilization (TCM visits increased 5x 2000-2020).
TCM research	China Academy of Chinese Medical Sciences (Beijing, founded 1955) – national research institute. National key laboratories: TCM pharmacology, TCM diagnostics, TCM syndromes. WHO Collaborating Centres for TCM (10+). TCM clinical trials: registered in Chinese Clinical Trial Registry (20,000+). RCTs for acupuncture (pain, nausea, stroke rehabilitation), herbal formulae (diabetes, hypertension, asthma, depression, hepatitis, COVID-19).

Quality control	Chinese Pharmacopoeia (2020 edition, Volume I) includes 2,000+ TCM herbs and finished products (standards for identity, purity, assay, heavy metals, pesticides, aflatoxins). Good Manufacturing Practice (GMP) for TCM manufacturers (mandatory certification, facility inspection, batch testing, quality assurance, pharmacovigilance). Adverse event monitoring: national pharmacovigilance system (National Center for ADR Monitoring, includes TCM reactions – herb-induced liver injury (HILI), nephrotoxicity, allergic reactions).
COVID-19 response	TCM integrated into national treatment protocol (7th, 8th, 9th editions). Recommended TCM formulas: Qingfei Paidu decoction (clearing lung detoxification), Lianhua Qingwen capsule (for mild-moderate), Xuebijing injection (for severe – inflammation). 90% of patients in China received TCM. Clinical studies (China) showed reduced progression, faster recovery. International exports: Lianhua Qingwen exported to 30+ countries.
Challenges	Quality control: adulteration (herbs spiked with steroids, NSAIDs), heavy metals (lead poisoning cases – aconite, cinnabar, realgar), pesticides. Standardization: TCM lacks RCT evidence for many indications (though increasing). Overuse: unnecessary TCM prescriptions (polypharmacy, injection safety). Scientific skepticism: Western-trained physicians critical of TCM (accuse pseudoscience, lack of plausible mechanism).

Table 3: South Africa – Traditional Medicine Integration

Element	Description
Historical context	Colonial (1652-1910): Dutch, British suppressed indigenous medicine (witchcraft accusations, missionaries). Witchcraft Suppression Act (1895, 1957) criminalized traditional healers (fine, imprisonment). Apartheid (1948-1994): racial segregation, TM marginalized, Western medicine only for whites, but Black African populations relied on TM (state ignored).
Post-apartheid progress (1994-)	1996 Constitution: Section 27(1) “everyone has the right to access health care services”, Section 31 “cultural rights”. No explicit TM recognition. 2001 Traditional Medicine Policy (draft, revised 2005) – promotes integration, research, regulation, safety. 2004

	National Institute for Traditional Medicine (NITM) established (University of the Western Cape – marginal funding). 2007 Traditional Health Practitioners Act No. 22 (signed into law). 2014 Interim Traditional Health Practitioners Council of South Africa (ITHPCSA) established (delayed 7 years). 2023 National Health Insurance (NHI) launched (TM not covered – excluded).
Traditional Health Practitioners Act (2007)	Provisions: registration of traditional healers (sangomas, inyangas, TBAs, bone-setters). Establishment of ITHPCSA (regulatory body – register, code of ethics, training standards, disciplinary process). Categories of practice: diviners (sangomas), herbalists (inyangas), traditional birth attendants, bone-setters. Accreditation of training institutions (not yet).
Registration status	Estimated 200,000-300,000 traditional healers (80,000 sangomas, 150,000 inyangas, 50,000 TBAs, bone-setters). ITHPCSA registered: ~5,000 (as of 2023) – 2% coverage. Registration slow due to: funding (ITHPCSA underfunded, staff shortage), outreach (remote areas), documentation (healers lack formal qualifications, proof of apprenticeship).
TM education	No university degree/diploma in traditional medicine. Elective short courses: University of the Western Cape (traditional medicine module – undergraduate), Durban University of Technology (traditional medicine short course), Sefako Makgatho Health Sciences University (TM introduction). No national curriculum, no clinical training, no licensing exam.
TM in public hospitals	No national integration. Pilot projects: Mpumalanga – traditional healers co-located in selected clinics (2010-2015, not scaled). KwaZulu-Natal – traditional healers referral to clinics (NGO-supported). No integration into care pathways, no referral protocols, no shared patient records.
Health insurance	National Health Insurance (NHI) launched 2023, excludes TM. Medical schemes (private) do not cover TM (some gap cover?). Debates: TM advocates argue coverage would increase access, reduce out-of-pocket; NHI officials cite lack of evidence, regulation.

Research capacity	South African Herbal Science and Medicine Research Institute (University of the Western Cape, funded 2018) – limited. National Research Foundation (NRF) grants (few). African Traditional Medicine Research Group. Research gaps: no national pharmacopoeia, limited clinical trials, no toxicity database.
Quality control	None. No GMP for TM products. No national standards for muthi (herbal remedies). Adverse event monitoring absent (no system for herb-induced liver injury, heavy metal poisoning, herb-drug interactions). Research studies document heavy metals in muthi (lead, mercury, arsenic – from mining contamination, mineral ingredients).
Professional tensions	Biomedical practitioners resist TM (safety concerns, lack of evidence, scientific basis). South African Medical Association (SAMA) cautious (requires evidence before integration). Traditional healers feel marginalized, under-resourced.
Challenges	Legislative gaps (Act not fully implemented). Underfunding (ITHPCSA budget <ZAR 10 million/year). Registration slow (only 2% of healers registered). No education. No insurance coverage. No quality control. Professional resistance. Colonial/apartheid legacy (trust deficit).

Table 4: Comparative TM Education and Research

Indicator	China	South Africa
TM universities	50+ (Beijing, Shanghai, Nanjing, Guangzhou, Chengdu, Tianjin, etc.)	0
Annual TM graduates	30,000+ (TCM physicians)	0
TM practitioners (registered)	300,000+	5,000 (of 200,000-300,000)
TM in medical school curriculum	100% (all medical students study TCM basics)	<5% (elective short courses only)

TM research institutes	National (China Academy of Chinese Medical Sciences), provincial, university	1 (South African Herbal Science and Medicine Research Institute – UWC)
WHO Collaborating Centres for TM	10+	0
Clinical trials (TM)	20,000+ registered	<100
National pharmacopoeia (TM)	Yes (Chinese Pharmacopoeia Vol I, 2,000+ herbs)	No
GMP for TM	Yes (mandatory)	No
Pharmacovigilance for TM	Yes (national ADR monitoring)	No
TM in National Health Insurance	Yes (80-90% coverage)	No

6. DISCUSSION OF RESULTS

6.1. Explaining China's Successful Integration

China's comprehensive TCM integration is attributable to several factors. Political commitment has been strong, with constitutional recognition in 1982, the Law on TCM in 2017, and state funding for TCM research, education, and infrastructure. Institutionalization has been robust, with the National Administration of Traditional Chinese Medicine, TCM universities, TCM hospitals, and TCM research institutes. Evidence building has included randomized controlled trials for acupuncture and herbal formulae, creating an evidence base for insurance coverage. Quality control has been ensured through the Chinese Pharmacopoeia, GMP for TCM, and pharmacovigilance. Health insurance coverage for TCM services and herbs has increased utilization and funding for the TCM sector. Cultural pride views TCM as part of Chinese heritage and nationalism. Integration is strong, with TCM taught to all medical students, and TCM and Western medicine coexisting in hospitals through combined care.

6.2. Explaining South Africa's Integration Lag

South Africa's slow integration is attributable to several factors. The colonial and apartheid legacy includes the Witchcraft Suppression Act of 1957, which criminalized healers and created intergenerational distrust. Weak political will is evident, as the Traditional Health Practitioners Act of 2007 was passed but underfunded, and implementation was delayed for 7 years for the Council. Professional resistance persists, as biomedical practitioners dominate health policy and are skeptical of TM. Funding gaps exist, as TM is not a priority in the health budget and ITHPCSA is underfunded. Education gaps mean no TM university programs exist. Research gaps result in a limited evidence base. Fragmentation is a challenge, with 200,000 to 300,000 healers across multiple types including sangoma, inyanga, TBA, and bone-setter, making regulation difficult.

6.3. Legal Recognition and Regulation

China's Law on TCM (2017) is comprehensive, covering licensing, education, insurance, research, and intellectual property. South Africa's Traditional Health Practitioners Act (2007) is aspirational but underfunded and poorly implemented. South Africa needs to increase the ITHPCSA budget from ZAR 10 million to ZAR 100 million, accelerate registration through digital platforms and mobile registration units, standardize training with minimum curriculum and apprenticeship standards, and enforce a code of ethics.

6.4. Education and Training

China trains 30,000 TCM physicians annually through 5-year bachelor's programs, plus master's and doctoral programs. South Africa trains none. South Africa should develop university diploma and degree programs in traditional medicine with curricula covering ethnobotany, pharmacology, safety, diagnostics, clinical practice, ethics, and law; accredit existing healers through recognition of prior learning and apprenticeship; and provide continuing education for registered healers.

6.5. Research and Evidence

China has invested heavily in TCM research, including randomized controlled trials for acupuncture (pain, nausea, stroke, migraine) and herbal formulae (diabetes, hypertension, hepatitis, COVID-19). South Africa's research base is minimal. Priorities include developing a

national pharmacopoeia documenting indigenous plants, safety, efficacy, and dosage; conducting clinical trials for sangoma and inyanga treatments for HIV/AIDS (immune support), TB (adjunct), diabetes, and hypertension; and implementing safety monitoring for herb-drug interactions, heavy metals, and hepatotoxicity.

6.6. Health Insurance Coverage

China's national health insurance covers TCM at 80 to 90 percent. South Africa's NHI excludes TM. Inclusion would reduce out-of-pocket spending, as many patients pay for TM out-of-pocket; increase access, especially in rural areas; and formalize the TM sector, as reimbursement requires registration and standards. Pilots are needed, including a voucher scheme for TM services with a small amount, a limited benefit package covering consultation and herbal medicines, and evaluation.

6.7. Quality Control and Safety

China has the Chinese Pharmacopoeia, GMP for TCM, and pharmacovigilance. South Africa has none. South Africa needs Good Manufacturing Practice for traditional medicines covering herbal processing, packaging, labeling, hygiene; a national pharmacopoeia listing indigenous plants with safety data and quality standards; and an adverse event reporting system for health facilities to report TM-related injuries and suspected adulteration.

6.8. Transferability: What South Africa Can Learn from China

South Africa can learn from China in several areas. Political will is essential, requiring a presidential champion and a parliamentary act that is fully funded. Institutionalization requires creating a National Institute for Traditional Medicine with mandate and budget. Education requires establishing university programs at Durban University of Technology, the University of the Western Cape, Sefako Makgatho Health Sciences University, and the University of KwaZulu-Natal to offer diplomas and degrees. Research requires making traditional medicine a National Research Foundation priority area with funding for clinical trials and pharmacopoeia development. Quality control requires extending the South African Health Products Regulatory Authority

(SAHPRA) mandate to traditional medicines. Health insurance requires piloting NHI coverage for TM.

6.9. Implications for SDG 3

Traditional medicine integration is central to SDG Target 3.8, which calls for access to essential medicines and health services. China demonstrates that comprehensive integration through legal, regulatory, education, research, and insurance mechanisms is feasible, improves access especially in rural areas, respects cultural heritage, and contributes to health outcomes, as seen during COVID-19. South Africa demonstrates that even with enabling legislation, implementation requires political will, funding, and professional collaboration. The international community, including WHO, WIPO, and UNCTAD, should support low- and middle-income countries to implement the WHO Traditional Medicine Strategy, fund TM research on safety, efficacy, and pharmacopoeia, promote South-South exchange among China, South Africa, India, Brazil, and Nigeria, and protect indigenous medical knowledge through intellectual property, benefit-sharing, and biopiracy prevention under the Nagoya Protocol on Access and Benefit-Sharing.

7. CONCLUSION

This comparative analysis reveals that traditional medicine integration into national health systems in China and South Africa has achieved different outcomes.

China has achieved the world's most comprehensive TCM integration, including constitutional recognition (1982), the Law on TCM (2017), more than 50 TCM universities with over 300,000 practitioners, TCM in 90 percent of county hospitals, TCM in primary care, health insurance coverage at 80 to 90 percent, research institutes, quality control through the Chinese Pharmacopoeia, GMP, and pharmacovigilance, and COVID-19 use in 90 percent of patients.

South Africa has made progress, including the Traditional Health Practitioners Act (2007) and the establishment of ITHPCSA in 2014. However, implementation lags. Only 5,000 of an estimated 200,000 to 300,000 healers are registered. There is no TM education, with no university programs. There is no TM in public hospitals, only pilot projects. There is no health insurance coverage, as

NHI excludes TM. There is no quality control, and research is limited. The colonial and apartheid legacy suppressed indigenous medicine.

Several cross-cutting insights emerge from this comparison:

1. Political will is essential, including constitutional recognition, legislation, and funding.
2. Institutionalization through regulatory councils, research institutes, and university programs creates capacity.
3. Education through TM university degrees and licensing exams professionalizes TM.
4. Research through randomized controlled trials, pharmacopoeia, and safety monitoring builds an evidence base.
5. Health insurance coverage through reimbursement increases access, utilization, and formalization.
6. Quality control through pharmacopoeia, GMP, and pharmacovigilance ensures safety.

For South Africa, priorities include fully implementing the Traditional Health Practitioners Act by increasing the ITHPCSA budget tenfold and accelerating registration through digital platforms and mobile units; integrating TM into National Health Insurance by piloting coverage for sangoma and inyanga services and herbal medicines; developing TM education through diploma and degree programs at Durban University of Technology, the University of the Western Cape, Sefako Makgatho Health Sciences University, and the University of KwaZulu-Natal; conducting TM research by developing a national pharmacopoeia, clinical trials for HIV, TB, diabetes, and hypertension, safety monitoring, and herb-drug interaction studies; establishing quality control by extending SAHPRA's mandate to traditional medicines and implementing GMP for muthi; and addressing professional tensions through cross-disciplinary dialogues and clinical guidelines for referral between biomedical and TM practitioners.

For China, priorities include strengthening quality control by combating herbal adulteration, heavy metals, and pesticides; improving the evidence base through RCTs for TCM, international standards, and publication in high-impact journals; reducing overuse through rational prescribing guidelines and avoiding unnecessary polypharmacy; and sharing experience with South Africa

through technical cooperation, training, research collaboration, and twinning programs between TCM universities and South African universities.

For the international community, the lessons are clear. Traditional medicine integration is feasible and beneficial, improving access and respecting culture. However, it requires political will, legislation, regulation, education, research, insurance coverage, and quality control. South-South exchange among China, South Africa, India, Brazil, and Nigeria accelerates learning.

The ultimate measure of success for TM policy is not laws passed or practitioners registered, but whether a rural woman in Limpopo can access safe, effective, affordable traditional medicine, and whether a sangoma in KwaZulu-Natal can refer a patient to a clinic, confident that her knowledge is respected.

8. LIMITS OF THE STUDY

This study has several limitations. First, reliance on secondary data from government reports, WHO documents, and peer-reviewed literature means the analysis is constrained by data availability, quality, and comparability. Chinese data are more extensive than South African data, which have gaps. Second, the comparative case study design cannot establish causality as rigorously as experimental or quasi-experimental methods. Third, the study does not include primary data collection, such as interviews with policymakers, traditional healers, or biomedical practitioners, which would provide richer insights. Fourth, the study period (2000 to 2025) captures recent trends but does not fully explore longer-term historical dynamics. Fifth, the focus on national-level systems obscures subnational variation within China (provinces) and within South Africa (provinces). Sixth, the study does not quantify the cost-effectiveness of different traditional medicine integration strategies. Despite these limitations, the comparative analysis provides valuable insights for policy and future research.

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10. AUTHOR CONTRIBUTIONS

TSAFACK NANFACK Dalida conceived the study, designed the methodology, conducted the literature review and document analysis, synthesized findings, and drafted the complete manuscript.

11. COMPETING INTERESTS

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential competing interest.

12. FUNDING INFORMATION

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13. DATA AVAILABILITY

All sources are publicly available documents cited in the bibliography and accessible through the referenced publications and organizations, including the National Administration of Traditional Chinese Medicine, the Law on Traditional Chinese Medicine, the Chinese Pharmacopoeia, the South Africa Department of Health, the Traditional Health Practitioners Act, ITHPCSA reports, the WHO Traditional Medicine Strategy, and WHO Country Profiles.

14. DISCLAIMER

The views expressed in this article are solely those of the author and do not necessarily reflect the views of any institution or organization with which the author may be affiliated. The analysis is provided for scholarly purposes and should not be construed as policy guidance or programmatic advice.

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