

Capacity building in Nigeria's healthcare sector: A review of skill development and mentorship initiatives

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Abstract

This paper delves into the critical realm of skill development and mentorship within Nigeria's healthcare sector, aiming to dissect and evaluate the current state of healthcare capacity building. Set against the backdrop of Nigeria's complex healthcare landscape, the study navigates through the intricacies of healthcare training, mentorship practices, and the challenges inherent in the system. The primary aim is to scrutinize the effectiveness of existing skill development initiatives and mentorship models, and how they align with the healthcare needs of Nigeria. Employing a comprehensive literature review as its methodological backbone, the paper systematically examines various government and NGO-led programs, mentorship practices, and the integration of skill development with mentorship. This approach enables a thorough analysis of the historical evolution, current challenges, and gaps in healthcare capacity building in Nigeria. The findings reveal a healthcare sector that, despite facing infrastructural and educational challenges, is witnessing progressive strides in skill development and mentorship. The study highlights the transformative impact of these initiatives on healthcare delivery, emphasizing the synergy between skill enhancement and mentorship in elevating healthcare standards. It also identifies the critical role of mentorship in fostering professional growth and leadership among healthcare practitioners. Conclusively, the paper underscores the need for a multi-faceted and collaborative approach in enhancing healthcare capacity. It recommends robust skill development programs, innovative mentorship models, and strategic policy interventions aimed at creating a sustainable, resilient, and efficient healthcare system. The study advocates for a united effort from government bodies, educational institutions, healthcare organizations, and international partners to achieve these goals. This paper is a clarion call for a renewed focus on capacity building in Nigeria's healthcare sector, highlighting the path towards a more competent and responsive healthcare system.

Keywords: Nigeria; Healthcare Capacity Building; Skill Development; Mentorship; Healthcare Training.

1. Introduction

1.1. Overview of Nigeria's Healthcare Landscape

Nigeria's healthcare system, like many in sub-Saharan Africa, faces a myriad of challenges, ranging from infrastructural deficits to inadequate funding and policy implementation. Dada et al. (2022) provide an insightful look into the Nigerian healthcare system, emphasizing the need for a responsive healthcare framework that caters to the dignity, confidentiality, autonomy, and prompt attention of patients. Their study, centered around the Federal Medical Centre

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in Lagos, highlights the critical issues plaguing the system, including service failure, financial and material leakages, human resource challenges, infrastructural deficits, and the lack of technological support. The authors underscore the importance of strategic planning and quality improvement initiatives, such as human resources development, service quality improvement, infrastructure renewal, financial re-engineering, and technology utilization, to enhance healthcare delivery.

The COVID-19 pandemic has further exposed the fragility of Nigeria's healthcare infrastructure. Arimoro (2020) discusses how the pandemic has laid bare the country's healthcare challenges, emphasizing the significant infrastructure deficit and the inefficiency of the public sector in managing healthcare facilities. The paper suggests that public-private partnerships (PPPs) could be a viable solution to address these challenges. PPPs, according to Arimoro (2020), could play a crucial role in bridging the infrastructure gap and aiding Nigeria in achieving healthcare-related Sustainable Development Goals. The study also examines two healthcare-based projects as case studies, providing valuable lessons for future healthcare infrastructure development in Nigeria.

Furthermore, the decentralization of health insurance, as explored by Shobiye et al. (2021), is a critical aspect of Nigeria's healthcare system. Their study focuses on the determinants and perceptions of health insurance participation among healthcare providers following the decentralization of the National Health Insurance Scheme (NHIS) in 2014. The research reveals that larger healthcare facilities with higher patient volumes are more likely to participate in health insurance schemes. The study also identifies motivating factors for provider facilities to participate in insurance, such as increased patient volume and revenue, and inhibiting factors like low tariffs and delayed payments. This highlights the complex interplay between healthcare financing and service delivery in Nigeria.

The Nigerian healthcare system is characterized by a range of challenges, including infrastructural deficits, financial constraints, and human resource issues. Strategic approaches, such as quality improvement initiatives, public-private partnerships, and effective health insurance schemes, are essential for addressing these challenges and improving the overall healthcare landscape in Nigeria.

1.1.1. Key Characteristics and Infrastructure of the Healthcare System

The healthcare system in Nigeria, characterized by its unique challenges and opportunities, has been the subject of various studies, especially in the wake of the COVID-19 pandemic. Arimoro (2020) delves into the impact of the pandemic on Nigeria's healthcare infrastructure, highlighting the significant infrastructure deficit and the inefficiency of the public sector in managing healthcare facilities. The study advocates for the adoption of public-private partnerships (PPPs) as a solution to these challenges, suggesting that PPPs could be instrumental in bridging the infrastructure gap and aiding Nigeria in achieving healthcare-related Sustainable Development Goals.

The primary healthcare system in Nigeria, as a cornerstone of the nation's health infrastructure, has been under intense scrutiny, particularly during the COVID-19 outbreak. Isere (2022) emphasizes the need to strengthen the capacity of the primary healthcare system, especially in response to the pandemic. This involves addressing diverse health needs at every stage of life and ensuring the system's resilience and responsiveness to public health emergencies.

Shobiye et al. (2021) explore the determinants and perceptions of health insurance participation among healthcare providers in Nigeria. Their study, conducted in the context of the National Health Insurance Scheme's decentralization, reveals that larger healthcare facilities with higher patient volumes are more likely to participate in health insurance schemes. This finding underscores the relationship between healthcare infrastructure and financing, highlighting the role of insurance in facilitating access to healthcare services.

The Nigerian healthcare system is marked by a dichotomy between public and private healthcare providers. While public healthcare facilities often struggle with resource constraints and inefficiencies, private healthcare providers are typically more agile and better equipped but may not be accessible to the broader population due to cost factors. This dichotomy poses a significant challenge in ensuring equitable access to healthcare services across different socio-economic groups.

Technological integration in healthcare delivery is another key characteristic of Nigeria's healthcare system. The adoption of technologies such as cloud computing and e-health platforms is seen as a potential solution to some of the systemic challenges, including managing medical records and integrating healthcare information. However, the implementation of such technologies is often hampered by infrastructural limitations and a lack of technical expertise.

The geographical distribution of healthcare facilities in Nigeria also presents a challenge. Urban areas tend to have better healthcare infrastructure and more skilled healthcare professionals compared to rural areas. This urban-rural divide contributes to disparities in healthcare access and quality, with rural populations often facing significant barriers to accessing basic healthcare services.

Nigeria's healthcare system is characterized by a complex interplay of infrastructural deficits, financing challenges, public-private dynamics, technological integration, and geographical disparities. Addressing these challenges requires a multifaceted approach that includes strengthening primary healthcare, leveraging public-private partnerships, enhancing health insurance coverage, integrating technology in healthcare delivery, and addressing the urban-rural divide in healthcare access.

1.2. The Critical Role of Skill Development and Mentorship in Nigeria's Healthcare Sector

Skill development and mentorship are pivotal in enhancing the capabilities and performance of healthcare professionals in Nigeria. The healthcare sector in Nigeria, like many developing countries, faces significant challenges, including a shortage of skilled healthcare workers and a need for continuous professional development. In this context, innovative approaches to skill development and mentorship are not just beneficial but essential for the advancement of healthcare services.

Awotiwon et al. (2018) discuss the implementation of the Practical Approach to Care Kit (PACK) program in Nigeria, a mentorship model originally developed in South Africa. This program was localized and piloted in 51 primary healthcare facilities across three Nigerian states. The PACK program is a health systems strengthening initiative that provides up-to-date clinical guidance and continuous learning opportunities for primary healthcare clinicians. The study highlights the effectiveness of this remote mentorship model in rapidly localizing the program to suit the Nigerian context. The success of the PACK program in Nigeria underscores the value of mentorship in enhancing clinical skills and knowledge among healthcare workers.

Stewart, Egbunefu and Onyegbule (2021) explore the concept of entrepreneurial mentorship in the context of business education in Nigeria. While their study focuses on business education, the principles of entrepreneurial mentorship they discuss are applicable to the healthcare sector. Entrepreneurial mentorship involves guiding mentees to develop innovative solutions, critical thinking, and problem-solving skills. In healthcare, this approach can empower healthcare professionals to address systemic challenges, improve service delivery, and foster a culture of continuous improvement and innovation.

Ugwa et al. (2020) present a study comparing two training methods for healthcare workers in Nigeria: a simulation-based low-dose, high-frequency plus mobile mentoring approach and traditional group-based training. The study found that the simulation-based training coupled with mobile mentoring led to better retention of knowledge and skills among healthcare workers. This finding highlights the importance of hands-on, practical training and the role of mentorship in reinforcing learning and skill development.

The shortage of healthcare professionals in Nigeria necessitates a focus on maximizing the potential of existing personnel. Mentorship programs can play a crucial role in this regard by providing ongoing support, guidance, and knowledge sharing. This approach not only improves individual competencies but also contributes to building a more resilient and capable healthcare workforce.

In addition to formal training programs, informal mentorship relationships are also crucial. These relationships provide a platform for experienced healthcare professionals to pass on their knowledge and insights to less experienced colleagues, fostering a learning culture within healthcare organizations.

The integration of technology in mentorship and skill development is another area of potential growth. Digital platforms can facilitate remote mentorship, e-learning, and the sharing of resources, making continuous professional development more accessible to healthcare workers, especially in remote or under-resourced areas.

Skill development and mentorship are critical components in strengthening Nigeria's healthcare sector. Programs like PACK demonstrate the effectiveness of mentorship in enhancing clinical skills, while entrepreneurial mentorship approaches can foster innovation and problem-solving abilities among healthcare professionals. The combination of practical, hands-on training with ongoing mentorship support is key to building a competent and resilient healthcare workforce in Nigeria.

1.2.1. Defining Skill Development and Mentorship in Healthcare in Nigeria

Skill development and mentorship in healthcare are critical components for enhancing the quality of healthcare services in Nigeria. These concepts, though distinct, are often intertwined in the context of healthcare education and practice. Skill development refers to the process of acquiring new competencies and refining existing ones, essential for healthcare professionals to meet the evolving demands of patient care. Mentorship, on the other hand, involves guidance, support, and sharing of expertise by more experienced professionals to foster the personal and professional growth of less experienced colleagues.

Awotiwon et al. (2018) provide a practical example of mentorship in the Nigerian healthcare context through the localization of the Practical Approach to Care Kit (PACK) program. This program, initially developed in South Africa, was adapted for Nigeria through a mentorship model involving South African developers and Nigerian clinicians. The PACK program demonstrates how mentorship can facilitate the transfer of knowledge and skills across different healthcare settings, emphasizing the importance of contextualization in skill development.

Stewart, Egbunefu and Onyegbule (2021) explore entrepreneurial mentorship in the context of business education in Nigeria. While their focus is on business education, the principles they discuss are applicable to healthcare. Entrepreneurial mentorship in healthcare could involve guiding healthcare professionals to develop innovative solutions to healthcare challenges, fostering a culture of continuous improvement and problem-solving. This approach aligns with the broader concept of skill development, where healthcare professionals are not only trained in clinical skills but also in areas such as leadership, management, and innovation.

Mcwalter, AlKhenizan, and Ahmad (2023) discuss the role of mentorship in developing leadership skills among hospital residents. The study highlights the positive association between mentorship and successful training outcomes, including exam success. In the Nigerian healthcare context, this underscores the importance of mentorship in developing not just clinical skills but also leadership and management competencies among healthcare professionals.

The concept of skill development in Nigerian healthcare also encompasses continuous professional development (CPD). CPD involves ongoing learning and training activities that enable healthcare professionals to maintain and enhance their knowledge and skills throughout their career. This is crucial in a rapidly evolving field like healthcare, where new treatments, technologies, and best practices are constantly emerging.

Mentorship in healthcare often goes beyond formal training programs. It includes informal relationships where experienced professionals provide guidance, feedback, and support to their less experienced colleagues. These relationships can be particularly valuable in resource-limited settings like Nigeria, where formal training opportunities may be limited.

The integration of technology in skill development and mentorship is another important aspect. E-learning platforms, virtual simulations, and mobile mentoring are examples of how technology can be leveraged to enhance learning and mentorship experiences for healthcare professionals in Nigeria.

Skill development and mentorship in Nigeria's healthcare sector are multifaceted concepts that encompass a range of activities and relationships. From formal training programs like the PACK to informal mentorship relationships and the use of technology, these concepts play a crucial role in enhancing the competencies and capabilities of healthcare professionals. This, in turn, is essential for improving the quality of healthcare services and addressing the health needs of the Nigerian population.

1.3. Historical Context and Evolution of Healthcare Training in Nigeria

The evolution of healthcare training in Nigeria is a reflection of the country's broader historical, social, and economic changes. Since gaining independence, Nigeria has witnessed significant transformations in its healthcare education system, influenced by various internal and external factors.

Osoba et al. (2021) provide a comprehensive overview of the undergraduate medical education system in Nigeria. Post-independence, Nigeria established several medical schools, modeling their curriculum after British universities. This period marked the beginning of structured medical education in Nigeria, laying the foundation for the current healthcare training system. However, the authors note that the curriculum has seen little modification since its inception, leading to challenges such as a biased admission process, emphasis on irrelevant pre-medical courses, and a lack of advanced technological teaching aids. These issues highlight the need for curriculum reform to meet contemporary healthcare demands.

Idowu (2018) focuses on the evolution of postgraduate radiology education in Nigeria, which began in 1976 at the University College Hospital, Ibadan. The study chronicles the development of the specialty, emphasizing the current status of the training program and areas needing improvement. Despite delivering a quality healthcare workforce, the program faces significant challenges, including resource constraints and the need for curriculum updates. This reflects a broader trend in Nigerian healthcare education, where postgraduate training programs struggle to keep pace with global advancements in medical knowledge and technology.

Oladejo and Suberu (2016) provide a historical analysis of vocational education in Western Nigeria, including healthcare training. Their study highlights the evolution of vocational training from the 1930s to the 1960s, a period that saw a shift from colonial-driven training schemes to more locally driven educational initiatives. This transition was crucial in shaping the current landscape of healthcare training in Nigeria, emphasizing the importance of aligning educational programs with local needs and contexts.

The historical evolution of healthcare training in Nigeria has been influenced by various factors, including colonial legacies, economic changes, and global trends in medical education. The initial focus on replicating Western models has gradually shifted towards a more localized approach, recognizing the unique healthcare challenges and needs of the Nigerian population.

Despite these advancements, the healthcare training system in Nigeria continues to face challenges. These include inadequate infrastructure, limited access to modern medical technologies, and a shortage of qualified educators. These issues are compounded by the growing demand for healthcare services due to population growth and the increasing burden of both communicable and non-communicable diseases.

The need for continuous professional development (CPD) for healthcare workers is another critical aspect of the evolving healthcare training landscape in Nigeria. CPD programs are essential for keeping healthcare professionals up-to-date with the latest medical knowledge and practices. However, access to these programs is often limited, particularly in rural and underserved areas.

The historical context and evolution of healthcare training in Nigeria reveal a complex interplay of factors that have shaped the current state of medical education in the country. While significant progress has been made since independence, ongoing challenges persist. Addressing these challenges requires a multifaceted approach, including curriculum reform, investment in infrastructure and technology, and the expansion of CPD opportunities. This will ensure that the Nigerian healthcare workforce is well-equipped to meet the health needs of the population.

1.3.1. Milestones and Shifts in Healthcare Education and Training

The landscape of healthcare education and training in Nigeria has undergone significant transformations over the years, marked by key milestones and shifts. These changes reflect the country's evolving healthcare needs and the global advancements in medical education and practice.

Osoba et al. (2021) provide an insightful analysis of the current state and historical evolution of undergraduate medical education in Nigeria. The establishment of medical schools post-independence was a significant milestone, marking the beginning of structured medical education in the country. These institutions initially mirrored the British medical curriculum, reflecting the colonial influence on Nigeria's educational system. However, the authors note that the curriculum has seen little modification since its inception, leading to challenges such as outdated teaching methods and a lack of alignment with contemporary healthcare needs.

Elechi and Nsirim (2015) discuss the broader context of educational development in Nigeria, including healthcare education. Their analysis points to the challenges faced in achieving the Millennium Development Goals related to education. The inconsistency in educational leadership and policy implementation has impacted the quality and effectiveness of healthcare training programs. This highlights the need for a more focused and consistent approach to healthcare education reform in Nigeria.

Okoro (2018) examines the specific area of ethics education in contemporary clinical pharmacy practice in Nigeria. The shift towards patient-centered pharmacy services globally has necessitated a corresponding change in pharmacy ethics education. However, in Nigeria, there is a notable shortfall in this area, with little emphasis on ethics in the pharmacy curriculum. This gap underscores the need for curriculum reform to include essential components like ethics, which are critical in modern clinical practice.

The historical shifts in healthcare education and training in Nigeria can be characterized by a gradual move from a predominantly Western-influenced model to a more localized approach. This transition is crucial for addressing the unique healthcare challenges and cultural contexts of Nigeria. However, the pace of change has been slow, and many aspects of healthcare education remain outdated.

One of the key challenges in healthcare education in Nigeria is the lack of resources, including inadequate infrastructure and a shortage of qualified educators. This has hindered the implementation of modern teaching methods and the integration of advanced technologies in healthcare training.

Another significant shift is the increasing recognition of the importance of continuous professional development (CPD) for healthcare practitioners. CPD is essential for keeping pace with the rapid advancements in medical knowledge and technology. However, access to CPD opportunities is limited, particularly in rural and underserved areas.

The milestones and shifts in healthcare education and training in Nigeria reflect a complex interplay of historical, cultural, and global influences. While significant progress has been made since the country's independence, ongoing challenges remain. Addressing these challenges requires a multifaceted approach, including curriculum reform, investment in educational infrastructure, and the development of sustainable CPD programs. This will ensure that Nigeria's healthcare workforce is well-equipped to meet the evolving healthcare needs of the population.

1.4. Current Challenges and Gaps in Healthcare Capacity Building

The healthcare sector in Nigeria faces numerous challenges and gaps in capacity building, which are crucial to address for improving healthcare outcomes. These challenges range from infrastructure deficits to training inadequacies, impacting the overall effectiveness of healthcare delivery.

Owoade et al. (2022) highlight the significant gaps in research training, particularly in oncology, among Nigerian physicians. Their study reveals that focused symposia and educational programs can effectively build capacity for oncology research in low- and middle-income countries like Nigeria. However, the study also underscores the broader issue of inadequate research training across various medical fields in Nigeria, which is a critical component of healthcare capacity building.

Ntekim et al. (2020) discuss the implementation of oncology clinical trials in Nigeria, emphasizing the need for capacity building in this area. The study identifies deficits in infrastructure, such as the lack of standard laboratories and diagnostic facilities, trained personnel for clinical trial activities, and standard operating procedures for clinical activities. These gaps highlight the broader challenges in healthcare capacity building in Nigeria, including the need for improved infrastructure and trained healthcare professionals.

Ihemeje and Afegbua (2020) provide a critical appraisal of capacity building and public service delivery in Nigeria, focusing on the healthcare sector. They argue that mediocrity, redundancy, low productivity, and inefficiency are prevalent in the Nigerian civil service, including the healthcare sector. This situation has impaired viable capacity building in the public sector, including healthcare. The study emphasizes the need for a more focused approach to staff development and capacity building to improve service delivery in the healthcare sector.

One of the primary challenges in healthcare capacity building in Nigeria is the lack of adequate infrastructure. This includes not only physical infrastructure like hospitals and clinics but also the technological infrastructure necessary for modern healthcare delivery. The shortage of medical equipment, diagnostic tools, and essential drugs further exacerbates the situation, hindering effective healthcare delivery.

Another significant gap is the shortage of trained healthcare professionals. Nigeria faces a critical shortage of doctors, nurses, and other healthcare workers. This shortage is compounded by the uneven distribution of healthcare professionals, with many regions, particularly rural areas, being underserved. The lack of continuous professional development opportunities for healthcare workers further hinders the improvement of healthcare services.

The quality of healthcare education and training in Nigeria also presents a challenge. Many medical and nursing schools struggle with outdated curricula, inadequate teaching facilities, and a shortage of qualified educators. This situation results in the production of healthcare professionals who may not be adequately prepared for the contemporary challenges of healthcare delivery.

The current challenges and gaps in healthcare capacity building in Nigeria are multifaceted and require a comprehensive approach to address. This includes investment in healthcare infrastructure, improvement in the quality of healthcare education and training, and the development of strategies to attract and retain healthcare professionals, particularly in underserved areas. Addressing these challenges is essential for improving healthcare outcomes and ensuring the delivery of quality healthcare services to the Nigerian population.

1.5. Aim and Objectives the Review

The aim of this review is to comprehensively analyze and evaluate the current state of skill development and mentorship initiatives in Nigeria's healthcare sector, identifying key trends, challenges, and opportunities for improvement.

Objectives

- To assess the existing infrastructure and resources dedicated to skill development and mentorship in Nigeria's healthcare sector.
- To evaluate the effectiveness of current skill development and mentorship programs in meeting the needs of healthcare professionals in Nigeria.
- To identify the main challenges and barriers that hinder the progress of skill development and mentorship initiatives in Nigeria's healthcare sector.
- To propose strategic recommendations for enhancing the capacity and effectiveness of skill development and mentorship programs in Nigeria's healthcare system.

1.6. Significance of the Study in Enhancing Healthcare Outcomes

The significance of this study lies in its potential to influence positive changes in Nigeria's healthcare sector by providing a detailed analysis of the current state of skill development and mentorship. By identifying the strengths and weaknesses of existing initiatives, this review aims to contribute to the enhancement of healthcare outcomes in Nigeria. It underscores the critical role of continuous professional development and effective mentorship in improving the quality of healthcare services. The insights gained from this study are expected to inform policymakers, educators, and healthcare practitioners about the necessary steps to strengthen the healthcare workforce. This, in turn, can lead to improved patient care, increased healthcare access, and overall better health outcomes for the Nigerian population. The study's findings are particularly relevant in the context of Nigeria's growing healthcare demands and the global push towards achieving sustainable healthcare systems.

2. Methods

2.1. Research Design Approach and Data Sources Selection Criteria for the Study

The methodology for this study focuses on a comprehensive literature review, adhering to a systematic approach to ensure the inclusion of relevant and high-quality sources. This approach is pivotal in synthesizing existing knowledge and identifying gaps in the field of healthcare capacity building in Nigeria, particularly in the domains of skill development and mentorship.

Porat-Dahlerbruch et al. (2022) emphasize the importance of selecting appropriate theoretical frameworks to guide research design, particularly in healthcare implementation strategies. This study adopts a similar approach by carefully selecting theories and models that align with the objectives of the review, ensuring that the research design is robust and tailored to the specific context of Nigeria's healthcare sector.

Fatima et al. (2019) highlight the systematic review method based on PRISMA guidelines, which is instrumental in this study. The PRISMA framework guides the selection of literature, ensuring a comprehensive and transparent approach. This involves a meticulous search across multiple databases, including PubMed and Google Scholar, to gather a wide range of studies relevant to healthcare service quality, a key aspect of this review.

Inata et al. (2021) demonstrate the importance of quality assessment in literature reviews. Following their methodology, this study incorporates a quality assessment of the selected literature, using criteria such as relevance to the study's aim, methodological rigor, and the credibility of the findings. This ensures that the review is based on high-quality evidence, providing a solid foundation for the analysis and synthesis of data.

Woodnutt (2018) discusses the use of meta-narrative and integrative methods in systematic literature reviews, which are particularly useful in dealing with diverse and complex topics such as healthcare capacity building. This study adopts a similar integrative approach, combining insights from various studies to create a comprehensive understanding of the challenges and opportunities in skill development and mentorship in Nigeria's healthcare sector.

The selection criteria for studies include relevance to healthcare capacity building in Nigeria, focus on skill development and mentorship, publication in peer-reviewed journals, and publication date within the last decade to ensure the timeliness of the data. The synthesis of literature involves identifying common themes, discrepancies, and emerging trends, which are crucial for understanding the current state and future directions of healthcare capacity building in Nigeria.

The research design and selection criteria for this study are carefully crafted to ensure a thorough and insightful literature review. By integrating various theoretical approaches and adhering to rigorous selection and quality assessment criteria, this study aims to provide a comprehensive understanding of the challenges and opportunities in enhancing healthcare capacity building in Nigeria.

2.2. Data Collection and Analysis Techniques

In conducting a comprehensive literature review on healthcare capacity building in Nigeria, particularly focusing on skill development and mentorship, specific data collection and analysis techniques were employed to ensure the robustness and relevance of the findings.

Dicuonzo et al. (2022) emphasize the importance of utilizing big data in healthcare research. In line with their approach, this study leveraged extensive databases such as PubMed, Scopus, and Google Scholar to collect a vast array of literature. The search was tailored to include keywords relevant to healthcare capacity building, skill development, and mentorship in Nigeria, ensuring a broad yet focused collection of data.

AbuSalim et al. (2022) illustrate the application of deep learning techniques in analyzing complex data sets. While this study did not employ deep learning algorithms, it adopted a similarly meticulous approach in data analysis. The collected literature was systematically categorized and analyzed to identify common themes, trends, and gaps in the field. This involved a qualitative synthesis of the data, allowing for a comprehensive understanding of the subject matter.

Churruca et al. (2021) discuss the use of Q-methodology in healthcare research, highlighting its utility in understanding subjective experiences and perspectives. Although Q-methodology was not directly applicable to this literature review, the principle of capturing diverse viewpoints was integral to the analysis. The study aimed to include a range of perspectives from different stakeholders in the healthcare sector, including policymakers, healthcare professionals, and academics, to provide a holistic view of the challenges and opportunities in healthcare capacity building in Nigeria.

The data collection and analysis techniques employed in this study were designed to ensure a comprehensive and nuanced understanding of skill development and mentorship in Nigeria's healthcare sector. By leveraging extensive databases, conducting a qualitative synthesis of the literature, and incorporating diverse perspectives, the study aimed to provide valuable insights into the current state and future directions of healthcare capacity building in Nigeria.

3. Results

3.1. Overview of Skill Development Initiatives in Nigeria's Healthcare Sector

The Nigerian healthcare sector has witnessed various skill development initiatives aimed at addressing the challenges of youth unemployment and enhancing the quality of healthcare services. These initiatives, often supported by international collaborations and local efforts, have been instrumental in shaping the healthcare landscape in Nigeria.

Tunji-Olayeni et al. (2021) discuss the 'Double You Digital Skills Initiative', a program designed to address youth unemployment through digital skills training. This initiative is particularly relevant to the healthcare sector in Nigeria, as the adoption of digital technologies is crucial for improving healthcare services. The program's focus on equipping youths with digital skills can be seen as a step towards creating a more technologically adept healthcare workforce, capable of leveraging digital tools for better healthcare delivery.

Joseph et al. (2017) explore the impact of foreign aid initiatives on the HIV/AIDS epidemic in Nigeria. Their findings highlight the role of international collaborations in enhancing the skills of healthcare professionals dealing with

HIV/AIDS. Such initiatives have contributed significantly to the improvement of healthcare services in Nigeria, particularly in managing and controlling the spread of HIV/AIDS. This underscores the importance of skill development in specialized areas of healthcare, which is critical for addressing specific health challenges in the country.

Ganguly et al. (2019), while focusing on the Indian context, provide insights into the importance of skill development in the agriculture and food sectors. Their approach to skill development, emphasizing the quality of training and the role of government and private players, can be adapted to the healthcare sector in Nigeria. By ensuring high-quality training and involving various stakeholders, Nigeria can enhance the skills of its healthcare workforce, leading to improved healthcare services.

The initiatives in Nigeria's healthcare sector have primarily focused on equipping healthcare professionals with the necessary skills to address the country's unique health challenges. This includes training in digital technologies, specialized healthcare services like HIV/AIDS management, and general skill enhancement programs. The involvement of international aid and collaborations has been pivotal in these initiatives, providing the necessary support and expertise.

However, challenges remain in ensuring the sustainability and scalability of these initiatives. There is a need for continuous evaluation and adaptation of these programs to meet the evolving needs of the healthcare sector. Additionally, fostering partnerships between the government, private sector, and international organizations is crucial for the long-term success of skill development initiatives in Nigeria.

Skill development initiatives in Nigeria's healthcare sector have made significant strides in enhancing the capabilities of healthcare professionals. These initiatives, supported by international collaborations and focused on key areas such as digital skills and specialized healthcare services, are crucial for improving the overall quality of healthcare in Nigeria. Going forward, a sustained and collaborative effort is required to ensure these initiatives continue to evolve and meet the changing demands of the healthcare sector.

3.1.1. Government and NGO-led Programs in Nigeria's Healthcare Sector

The Nigerian healthcare sector has seen significant involvement from both government and non-governmental organizations (NGOs) in implementing various health initiatives. These programs have been pivotal in addressing the diverse healthcare needs of the population, particularly in areas of coverage, affordability, and specialized health services.

Asakitikpi (2019) discusses an alternative model to equitable healthcare delivery in Nigeria, highlighting the challenges faced in achieving universal health coverage. The study underscores the importance of government-led initiatives in reforming health policies and improving healthcare accessibility. It emphasizes the need for an inclusive model that ensures equitable distribution of healthcare resources, a goal that has been central to many government-led health programs in Nigeria.

Ihekweazu (2022) provides insights into Nigeria's adaptation of global health initiatives during the COVID-19 pandemic. The study illustrates how resources from various international health programs were integrated into the country's response to the pandemic. This integration showcases the effective collaboration between government-led systems and international health initiatives, demonstrating the potential for such partnerships to enhance healthcare delivery in Nigeria.

Waiswa (2020) emphasizes the need for a strong government-led multisectoral approach to address sexual and reproductive health issues among young people in Africa. The study calls for comprehensive strategies that involve various sectors, including education, health, and social services. In Nigeria, such a multisectoral approach has been evident in several government and NGO-led programs focusing on sexual and reproductive health, highlighting the importance of collaborative efforts in addressing complex health challenges.

Government-led initiatives in Nigeria have often been complemented by the efforts of NGOs. These organizations have played a crucial role in filling gaps in healthcare delivery, especially in rural and underserved areas. NGOs have been instrumental in providing specialized services, health education, and community-based interventions, which have significantly contributed to improving health outcomes in Nigeria.

Despite the progress made through these initiatives, challenges remain in ensuring the sustainability and effectiveness of these programs. Issues such as funding constraints, limited infrastructure, and the need for capacity building among

healthcare workers are prevalent. Addressing these challenges requires continued commitment from both the government and NGOs, as well as the support of international partners.

The collaboration between government and NGOs in Nigeria's healthcare sector has been vital in addressing the diverse health needs of the population. These partnerships have led to the implementation of various initiatives that have improved healthcare coverage, affordability, and quality. Moving forward, a sustained and coordinated effort is necessary to overcome existing challenges and enhance the impact of these programs on Nigeria's healthcare system.

3.1.2. Case Studies and Success Stories in Nigeria's Healthcare Sector

The Nigerian healthcare sector has witnessed several innovative initiatives and success stories that have significantly contributed to its development and improvement. These case studies offer valuable insights into the effective strategies and approaches adopted in the healthcare system.

Eboreime (2019) presents a case study on the implementation of national policies in decentralized health systems, focusing on an integrated primary healthcare planning and performance improvement initiative in Nigeria. This study highlights the challenges and successes of implementing national health policies at the local level, demonstrating the importance of tailored approaches to healthcare planning and delivery in decentralized systems.

Ekwunife et al. (2022) discuss a novel approach to healthcare delivery through a crowdsourcing challenge aimed at identifying health-related social innovations to increase universal health coverage in Nigeria. This initiative showcases the potential of crowdsourcing as a tool for generating creative solutions to healthcare challenges, emphasizing the role of community engagement and innovation in enhancing healthcare delivery.

Braithwaite et al. (2017) provide a comprehensive analysis of successful case studies from health systems across 60 countries, including Nigeria. These case studies offer a global perspective on health system reform, highlighting the diverse strategies and approaches that have led to successful outcomes in different contexts. The inclusion of Nigeria in this collection underscores the country's efforts and achievements in health system improvement.

Fasawe et al. (2020) explore the application of a client-centered approach to maternal and neonatal networks of care, presenting case studies from urban and rural Nigeria. This study emphasizes the importance of focusing on the needs and experiences of clients in healthcare delivery, illustrating how such an approach can lead to improved maternal and neonatal health outcomes in different settings.

These case studies collectively demonstrate the diverse and innovative approaches adopted in Nigeria's healthcare sector. They highlight the importance of context-specific strategies, community engagement, and client-centered care in addressing the unique challenges of the healthcare system. The success stories from Nigeria provide valuable lessons and models that can be adapted and replicated in other settings to improve healthcare delivery and outcomes.

The case studies and success stories from Nigeria's healthcare sector offer a rich source of knowledge and inspiration for healthcare reform and improvement. They showcase the potential of innovative approaches and collaborative efforts in enhancing the quality and accessibility of healthcare services. These success stories serve as a testament to the resilience and ingenuity of the Nigerian healthcare system and its stakeholders.

3.2. Mentorship Practices in the Healthcare Sector

Mentorship in the healthcare sector of Nigeria plays a pivotal role in shaping the quality of healthcare delivery and the professional development of healthcare workers. Aluko's study (2013) delves into the gendered impact of corruption in healthcare service delivery, indirectly highlighting the need for ethical mentorship and leadership in healthcare. The study underscores the importance of mentorship in fostering integrity and accountability in healthcare services, particularly in a context where corruption can have devastating effects on vulnerable populations.

Igweh et al. (2020) examine the role of modern innovative HRM practices in enhancing organizational effectiveness in the Nigerian healthcare sector. The study emphasizes the significance of innovative culture, which can be fostered through effective mentorship programs. Mentorship in this context is seen as a tool for nurturing innovation and adaptability among healthcare professionals, thereby improving organizational effectiveness.

Onwujekwe et al. (2022) explore the perspectives of stakeholders on institutionalizing linkages between formal health systems and informal healthcare providers. This study highlights the potential of mentorship in bridging gaps between different sectors of healthcare and in enhancing the skills and knowledge of informal healthcare providers. The

mentorship practices discussed in this study are crucial for integrating diverse healthcare services and improving access to quality care.

3.2.1. Impact and Effectiveness of Mentorship Programs

Aguma and Tende's research (2020) investigates the relationship between workplace spirituality and team effectiveness in private healthcare systems in Nigeria. The study suggests that mentorship that incorporates elements of spirituality can enhance team effectiveness and intergroup relations. This form of mentorship can lead to a more compassionate, mindful, and collaborative work environment, which is essential for high-quality healthcare delivery.

These studies collectively illustrate the diverse aspects and impacts of mentorship in Nigeria's healthcare sector. From fostering ethical practices and innovation to bridging gaps between formal and informal sectors, and enhancing team effectiveness through spiritual dimensions, mentorship emerges as a multifaceted tool for capacity building and quality improvement in healthcare.

Mentorship in the Nigerian healthcare sector is a dynamic and essential component that contributes significantly to the development of healthcare professionals and the overall effectiveness of healthcare delivery. The impact of mentorship programs is profound, influencing various aspects of healthcare from organizational effectiveness to ethical practices and team dynamics. As Nigeria continues to evolve its healthcare system, the role of mentorship remains crucial in shaping a resilient, innovative, and compassionate healthcare workforce.

3.3. Integration of Skill Development and Mentorship

The integration of skill development and mentorship in Nigeria's healthcare sector is a critical approach to enhancing the capabilities and effectiveness of healthcare professionals. Stewart, Egbunefu and Onyegbule (2021) emphasize the importance of entrepreneurial mentoring for business education students in Nigeria, highlighting the transformative impact of mentorship on career focus and sustainable venture creation post-school. This concept can be extended to the healthcare sector, where mentorship can play a significant role in developing entrepreneurial skills among healthcare professionals, thereby fostering innovation and adaptability in healthcare delivery.

Isangula et al. (2022) explore the experiences of healthcare providers with clinical mentorship interventions in Tanzania, which can offer valuable insights for Nigeria. The study reveals that clinical mentorship significantly enhances knowledge, skills, confidence, and changes in healthcare providers' attitudes. This finding underscores the potential of integrating skill development initiatives with mentorship programs to create a more competent and confident healthcare workforce in Nigeria.

Camacho (2015) discusses a skill-gap development model within the healthcare arena, emphasizing the need for a comprehensive approach to professional development. This model can be adapted to the Nigerian context, where integrating skill development with mentorship can address the growing needs and gaps within the healthcare workforce. Such an approach can ensure sustainability and retention of healthcare professionals, catering to the evolving demands of the healthcare sector.

Nwogbe and Haliso (2020) assess the engagement of healthcare professionals in continuing professional development in Lagos State, Nigeria. Their findings indicate a preference for informal, work-based capacity-building approaches, suggesting that integrating these with structured mentorship programs could enhance the effectiveness of professional development in the healthcare sector.

3.3.1. Synergistic Approaches and Strategies

The synergistic integration of skill development and mentorship in Nigeria's healthcare sector involves combining structured learning with experiential and relational aspects of mentorship. Stewart, Egbunefu and Onyegbule (2021) suggest that entrepreneurial mentoring should be formal and organized, employing experienced mentors to maximize its impact. This approach can be mirrored in healthcare, where structured skill development programs are complemented by mentorship from experienced healthcare professionals.

Isangula et al. (2022) highlight the benefits of clinical mentorship, including increased client service uptake, quality, and efficiency. By integrating skill development programs with such mentorship initiatives, healthcare professionals in Nigeria can achieve a higher level of proficiency and service delivery.

Camacho (2015) advocates for a comprehensive approach to professional development, which aligns with the business strategies of healthcare organizations. In Nigeria, this could involve developing synergistic strategies that combine skill development with mentorship to address specific organizational and sectoral needs.

Nwogbe and Haliso (2020) recommend improved government funding and policy support for training and professional development. A synergistic approach could involve aligning these policies with mentorship programs to create a more cohesive and effective professional development framework in the healthcare sector.

The integration of skill development and mentorship in Nigeria's healthcare sector is essential for building a competent, innovative, and adaptable workforce. By employing synergistic approaches and strategies, healthcare professionals can be better equipped to meet the challenges and demands of the evolving healthcare landscape in Nigeria.

4. Discussion

4.1. Analysis of Findings in the Context of Nigeria's Healthcare Needs

The analysis of skill development and mentorship in Nigeria's healthcare sector, as illuminated by the findings of this study, underscores the critical role these elements play in enhancing healthcare delivery. The Nigerian healthcare system, characterized by diverse challenges including limited resources, workforce shortages, and infrastructural deficits, necessitates a robust approach to capacity building (Aliyu et al., 2021). The integration of structured mentoring programs, as evidenced in the mentorship and leadership workshop reported by Aliyu et al. (2021), highlights the potential for such initiatives to bridge gaps in healthcare research and leadership, particularly in areas of high disease burden like HIV and noncommunicable diseases.

The engagement of healthcare professionals in continuing professional development (CPD) in Lagos State, as studied by Nwogbe and Haliso (2020), reveals a preference for informal CPD activities over more structured, formal methods. This trend suggests a need for a more balanced approach that combines the flexibility of informal learning with the depth and rigor of formal educational programs. The findings indicate that while healthcare professionals are keen to develop their skills, there is a need for more structured and accessible CPD opportunities that align with their work demands and professional growth aspirations.

Nicholson et al. (2020) provide a broader perspective on capacity building and mentorship, emphasizing the importance of interdisciplinary collaboration and trainee-led initiatives in community-based primary health care. This approach resonates with the Nigerian context, where interdisciplinary collaboration could be pivotal in addressing complex health challenges. The emphasis on trainee-led initiatives also aligns with the need to empower the next generation of healthcare professionals in Nigeria, fostering a culture of proactive skill development and leadership.

The findings from these studies collectively underscore the need for a multifaceted approach to capacity building in Nigeria's healthcare sector. This approach should encompass both formal and informal learning opportunities, structured mentoring programs, and interdisciplinary collaboration. Such a strategy would not only address the immediate skill gaps but also contribute to the long-term sustainability and resilience of the healthcare system in Nigeria.

The analysis of these findings in the context of Nigeria's healthcare needs points to a clear path forward. By embracing a comprehensive approach to skill development and mentorship, integrating both formal and informal learning methods, and fostering interdisciplinary collaboration, Nigeria can build a more robust, skilled, and resilient healthcare workforce. This, in turn, will enhance healthcare delivery and outcomes, ultimately contributing to the overall health and well-being of the Nigerian population.

4.2. Challenges and Barriers in Implementing Effective Programs in Nigeria's Healthcare Sector

Implementing effective skill development and mentorship programs in Nigeria's healthcare sector is beset with a myriad of challenges and barriers, ranging from infrastructural deficiencies to cultural and systemic issues. These obstacles significantly impact the efficacy of these programs and present a complex landscape for healthcare improvement.

A primary challenge in the Nigerian healthcare system is the lack of adequate infrastructure and resources. Awotiwon et al. (2018) illustrate this through the difficulties encountered in localizing the Practical Approach to Care Kit (PACK) program from South Africa to Nigeria. The scarcity of resources, such as up-to-date clinical guidelines and access to

digital platforms, severely impedes the effective implementation of mentorship and skill development initiatives. This lack of infrastructure not only hinders the dissemination of knowledge but also limits the scope of practical skill development.

Furthermore, cultural and systemic barriers play a significant role in the Nigerian healthcare context. Rohatinsky and Jahner (2016) emphasize the challenges in adapting to rural healthcare environments, which are mirrored in Nigeria. These include limited professional development opportunities and difficulties in establishing effective mentor-mentee relationships. Such barriers can lead to reluctance among healthcare professionals to fully engage in mentorship and skill development programs, thereby limiting their potential impact.

Interprofessional collaboration is crucial for the success of these programs. However, Solomon and Afisulahi (2023) note significant barriers to such collaboration in Nigerian healthcare settings, including resistance from other healthcare professionals and inadequate communication channels. This lack of collaboration can stifle the growth and development of healthcare professionals and impede the holistic improvement of healthcare services.

Financial constraints are another significant barrier. The lack of funding for training programs and the absence of financial incentives for participants can demotivate healthcare professionals from engaging in these initiatives. This financial limitation not only affects the availability of programs but also impacts their quality and reach.

The Nigerian healthcare system is also characterized by workforce shortages, leading to an overburdened staff. This situation leaves little room for healthcare professionals to participate in additional training and mentorship activities, as their primary focus remains on delivering patient care. The excessive workload can lead to burnout, further diminishing the enthusiasm for additional professional development activities.

The effectiveness of these programs is also hampered by the lack of tailored approaches. The diverse Nigerian healthcare landscape requires programs that are customized to meet the specific needs of different regions and healthcare settings. A one-size-fits-all approach often fails to address the unique challenges and resources available in each area.

Lastly, the successful implementation of skill development and mentorship programs also hinges on supportive policies and governance structures. However, in Nigeria, there is often a disconnect between policy formulation and execution, leading to challenges in the practical implementation of these programs. This gap between policy and practice can create an environment where programs are not effectively supported or sustained.

Overcoming these barriers requires a multifaceted approach that includes improving infrastructure, fostering interprofessional collaboration, providing adequate funding, tailoring programs to specific needs, and ensuring supportive policies and governance structures. Addressing these challenges is essential for the successful implementation of skill development and mentorship programs in Nigeria's healthcare sector, which is crucial for improved healthcare delivery and outcomes.

4.3. Opportunities for Enhancing Capacity Building in Nigeria's Healthcare Sector

The Nigerian healthcare sector, while facing numerous challenges, presents a myriad of opportunities for enhancement, particularly in the realms of capacity building, skill development, and mentorship. These opportunities, if harnessed effectively, can significantly contribute to the improvement of healthcare outcomes in the country.

Nwogbe and Haliso (2020) highlight the importance of continuous professional development (CPD) among healthcare professionals in Nigeria. Their study in Lagos State's public secondary hospitals reveals a leaning towards informal CPD activities, such as conferences, seminars, and in-service training, over more structured educational methods. This preference underscores the need for a more integrated approach to CPD, blending both formal and informal methods to cater to the diverse learning preferences of healthcare professionals. The study also emphasizes the need for improved government funding and policy support to facilitate these training opportunities, suggesting that a strategic investment in CPD can significantly enhance the capacity of healthcare workers (Nwogbe & Haliso, 2020).

Samuel (2021) discusses the broader context of capacity building in Nigeria, focusing on youth involvement in agricultural extension services. Although the study is centered on agriculture, its insights are pertinent to the healthcare sector, particularly in terms of engaging and empowering the youth. The study suggests that capacity development is crucial for absorbing young professionals into various sectors, including healthcare. This approach can be mirrored in

the healthcare sector by developing targeted programs to harness the potential of young healthcare professionals, thereby addressing both unemployment and the skill gap in the healthcare workforce (Samuel, 2021).

Afolabi et al. (2021) provide a perspective on integrating palliative care within primary healthcare in Nigeria. Their study emphasizes the need for building the information and communication skills of healthcare providers and engaging patients in care decisions. This approach is indicative of a broader need for capacity building in specialized areas of healthcare. By focusing on specific domains such as palliative care, the healthcare system can develop niche expertise and improve overall healthcare delivery. The study also points out the importance of delineating roles within the healthcare system to ensure that staff work within their competencies, highlighting the need for clear and structured training programs (Afolabi et al., 2021).

The synthesis of these studies points to several key opportunities for enhancing capacity building in Nigeria's healthcare sector. Firstly, there is a need for a balanced approach to CPD, combining both formal and informal learning methods. This approach can cater to different learning styles and preferences, thereby maximizing the impact of training programs. Secondly, engaging young healthcare professionals through targeted capacity development programs can address workforce challenges and bring fresh perspectives to the sector. Thirdly, focusing on specialized areas of healthcare, such as palliative care, can help develop niche expertise, contributing to the overall improvement of healthcare services.

Moreover, the role of government and policy support cannot be overstated. Strategic investments and supportive policies are crucial for the successful implementation of capacity building initiatives. This includes funding for training programs, support for study leave opportunities, and the development of metrics for evaluating CPD engagement. Such measures can create an enabling environment for continuous learning and professional development among healthcare workers.

The opportunities for enhancing capacity building in Nigeria's healthcare sector are manifold. By adopting a multifaceted approach that includes balanced CPD, youth engagement, specialization, and strong policy support, the sector can make significant strides towards improving healthcare outcomes in Nigeria.

4.4. Implications for Policy and Practice in Enhancing Healthcare Capacity Building in Nigeria

The enhancement of healthcare capacity in Nigeria necessitates a strategic integration of policy and practice, as highlighted by recent studies. Onwujekwe et al. (2020) emphasize the importance of capacity-building interventions tailored to both evidence producers and users, ensuring that research is relevant and translatable into practical policies. This approach is crucial for bridging the gap between research and policy implementation, facilitating evidence-informed decision-making. Onwujekwe et al. (2019) further reveal the disparity between the awareness and actual use of health policy and systems research (HPSR) evidence in policymaking, indicating a need for empowering decision-makers with the autonomy to utilize evidence effectively.

Dada et al. (2022) demonstrate the practical application of these principles through their work in building a responsive healthcare system in Nigeria. Their approach, which includes patient experience surveys and quality improvement methodologies, led to significant improvements in service quality. This case study underscores the importance of strategic planning and implementation in healthcare system enhancement.

Enhancing healthcare capacity in Nigeria requires policies that focus on integrated capacity-building programs, the formation of knowledge networks, empowering decision-makers, and adopting quality improvement methodologies. These elements, when combined, can lead to significant advancements in healthcare delivery and outcomes in Nigeria.

5. Conclusion

This study embarked on a comprehensive exploration of skill development and mentorship initiatives within Nigeria's healthcare sector, aiming to provide a detailed analysis of current practices and their efficacy. Through meticulous research and analysis, this study has successfully met its objectives, offering a nuanced understanding of the landscape of healthcare capacity building in Nigeria.

The main findings of this study reveal a healthcare sector at a crossroads. Despite facing significant challenges, including infrastructural deficits and a lack of standardized training protocols, there are notable strides in skill development and mentorship. Government and NGO-led programs have emerged as pivotal in shaping the healthcare workforce, fostering a culture of continuous learning and professional growth. The integration of skill development with mentorship

practices has been identified as a particularly effective strategy, creating synergies that enhance both the quality and impact of healthcare services.

The study also highlights the critical role of mentorship in healthcare, which extends beyond traditional training. Mentorship programs, both formal and informal, have been instrumental in bridging knowledge gaps, enhancing professional competencies, and fostering leadership qualities among healthcare professionals. These initiatives have not only improved individual performance but have also contributed to the overall resilience and adaptability of the healthcare system in Nigeria.

In conclusion, this study underscores the imperative for a concerted effort in strengthening healthcare capacity in Nigeria. It recommends a multi-faceted approach that encompasses robust skill development programs, innovative mentorship models, and strategic policy interventions. These should be aimed at not only addressing the immediate challenges but also at laying a foundation for a sustainable, resilient, and efficient healthcare system. The study calls for a collaborative effort involving government bodies, educational institutions, healthcare organizations, and international partners to realize this vision. By harnessing the power of effective skill development and mentorship, Nigeria can pave the way for a healthcare system that is capable, responsive, and equipped to meet the evolving health needs of its population.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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