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Article

Enhancing Performance of Health Assistants through TVET for Better Healthcare Access

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Abstract

This is a review article exploring critical role of Technical and Vocational Education and Training (TVET) programs in advancing capacities of health assistants and consequently strengthening healthcare access to the rural population in Nepal. The review was planned in the wake of the existing literatures on the study area that lacks a comprehensive examination to explores the role of health assistants in Nepal's healthcare delivery and assess the importance of TVET on their performance. A methodical literature search was conducted using various electronic databases like Google scholar and PubMed applying specific keywords, such as “Health Assistant", "Health Care Access", "Technical Education", "Vocational Education and Training”. It encompassed the studies published in the English language without limiting publication date, while the involved two authors independently evaluated the published articles' eligibility. These authors also carried out data extraction, culminating in a narrative summary of the findings. Of the total 37 literatures, most of them reported health assistant trained through TVET, play a vital role in improvement of healthcare access, thereby addressing the challenges. They bridge gaps in medical access, provide essential care, and promote community well-being, particularly in the underserved areas. TVET programs enhance skills through practical experiences and comprehensive training, resulting into significant improvement in healthcare access, especially in rural regions. Integrating innovative teaching methods and collaborations further enhances health assistant preparedness. Challenges, such as funding limitations and rural-urban divides persist, but opportunities exist in e-learning initiatives, partnerships, and professional development to improve health assistant education. Improving healthcare in Nepal by inculcating better skills to health assistants can address many healthcare problems.

Keywords: health assistant, healthcare access, technical and vocational education and training

Introduction

Healthcare access refers to the capability to acquire services related to healthcare, encompassing activities like prevention, diagnosis, treatment, and the overall handling of diseases, illnesses, disorders, and other health-affecting conditions (“Health Care,” 2024). Health assistants are the professionals who assist healthcare providers in delivering medical care and aiding patients. Their roles vary based on the healthcare setting, typically working under the supervision of doctors, nurses, or other healthcare

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professionals (Jensen, 2016). They perform tasks, such as taking vital signs, preparing patients for examinations, administering medications (under supervision), maintaining medical records, and offering basic patient education (*Health Care Assistant*, 2024). The health assistants play a key role in improving healthcare access, particularly in regions lacking higher-level healthcare providers(Pakenham-Walsh & Bukachi, 2009). Acting as a bridge between patients and healthcare providers in primary care settings, they enhance basic healthcare provision (Hartley, 2004). To help with this, they have special training called TVET that teaches a lot about medical things, practical skills, and how to help communities stay healthy (Van Weel& Kidd, 2018). Powell in 2014 defined "TEVT" as educational programs that offer practical skills and knowledge for specific trades, crafts, or professions, preparing individuals for targeted careers through hands-on training at various educational levels. According to UNESCO and ILO (2002), TVET encompasses a broad concept that includes elements beyond general education which involves the study of technologies and related sciences along with the acquisition of practical skills, attitudes, understanding and knowledge pertaining to individuals in different sectors of economic and social life. In Nepal, becoming a health assistant involves undergoing technical education and training programs overseen by the Council for Technical Education and Vocational Training (CTEVT). These programs are designed to impart necessary skills and knowledge essential for effective healthcare delivery. Spanning duration of three years, the curriculum covers a range of subjects, such as anatomy, physiology, pharmacology, healthcare management and community health that aims to equip trainees comprehensively. This training occurs across various educational institutions, including government establishments, private centers, and non-governmental organizations, incorporating crucial practical experiences through clinical rotations in hospitals and healthcare facilities (Asian Development Bank & Australian Agency for International Development, 2014). Following certification, registration with the Nepal Health Professional Council (NHPC) is mandatory for their professional practice.

The healthcare landscape in Nepal reflects a story of progress amid persistent challenges. Urban centers now showcase improved medical facilities, bringing healthcare within easier reach (Adhikari et al., 2022). Educational initiatives focusing on preventive healthcare have empowered individuals with essential knowledge for better health maintenance (Paterick et al., 2017). Moreover, the introduction of advanced medical technologies, such as telemedicine has extended medical aid to remote corners, enabling distant communities to connect with healthcare professionals (Haleem et al., 2021). Collaborative efforts between the government and international bodies signify a dedicated push toward nationwide healthcare advancement(Beran et al., 2016). However, Nepal's diverse terrain, ranging from plains to towering mountains, poses substantial hurdles in reaching remote areas with limited infrastructures and difficult access. In these regions, access to basic healthcare remains a struggle, compounded by financial constraints and a shortage of healthcare professionals, especially in rural settings (Cothran, 2016).

Nepal faces prevalent health issues despite rich history of traditional medicine (Raut & Khanal, 2011). While the government endeavors to address the obstacles through regulations and strategies(Ministry of Health, 2015; *National Health Policy, 1991*), achieving comprehensive healthcare accessibility nationwide remains a difficult task, calling for investments in infrastructure, amplified health education, regulatory reforms, and collective community involvement to pave the way for a more equitable healthcare landscape in Nepal (Adhikari et al., 2022). So for understanding the importance of community involvement in healthcare access and the role of health assistant who assists as community representative, this review has been done.

This review underscores the key role played by technical education and vocational training programs in Nepal in enhancing the capabilities of health assistants. These specialized programs have proven instrumental in fortifying the skills and knowledge of frontline healthcare providers, enabling them to address the diverse and evolving healthcare needs of the population(Curry et al., 2023). By emphasizing practical experiences, community-oriented strategies, and continuous professional development, these initiatives have significantly contributed to bridging healthcare access gaps, particularly in remote and underserved regions where qualified professionals are scarce(Nguyen et al., 2020).

Although there is an increasing focus on the role of TVET in the development of health assistants who assist in advancing healthcare access in Nepal, there is limited exploration in this field. Existing reviews may provide insights into general trends, but a research gap exists in understanding the needs of health assistants trained through TVET programs.

Purpose and Scope

The purpose of this review is to investigate the importance of technical education and vocational training programs in Nepal, specifically on their role in enhancing the skills of health assistants. By doing so, the aim is to contribute to the improvement of healthcare services, examining both the challenges and advantages associated with these programs. The review places a particular emphasis on understanding how these initiatives impact healthcare delivery, community health, and the overall well-being of the population.

Methods

For this review, databases like PubMed and Google Scholar were queried to identify English language papers published between 2010 and 2023. A thorough search was conducted using various combinations of keywords such as "Health Assistant," "Health Care access," "Technical Education," "Vocational Education and Training," and "Role of Health Assistant." Boolean operators "And" and "OR" were employed to refine the search. Altogether 298 articles were searched and among them 37 articles were ultimately included in this review following the examination of titles, abstracts, and full texts.

Findings

We observed different themes for this review, focusing on what we wanted to study and

important information in related articles. We found a total of seven main themes as per followings:

Role of TVET on Performance Improvement of Health Assistants

Technical Education and Vocational Training programs empower health assistants with enhanced clinical skills, covering diagnostic procedures, patient care, and treatment protocols, thereby enabling them to efficiently deliver high-quality healthcare services(Ghosh et al., 2017). Moreover, specific training modules focus on patient-centric care, instilling effective communication, empathy, and patient education skills in health assistants, leading to heightened patient satisfaction and improved overall healthcare outcomes (Ayeleke et al., 2019). The dynamic nature of healthcare is addressed through technical education, ensuring that health assistants stay updated on the latest medical technologies and procedures, allowing them to seamlessly adapt to advancements in healthcare practices and integrate new technologies into their daily routines (Lewis, 2023). Equipped with knowledge on healthcare systems, policies, and administrative procedures, health assistants can navigate complex healthcare environments with efficiency, contributing to smoother workflow and enhanced patient management (Ahmady & Shahbazi, 2022). Vocational training further allows health assistants to specialize in areas like geriatrics, pediatrics, or emergency care, enhancing their capacity to address unique patient needs and challenges (Ghoshal et al., 2018). The commitment to continual professional development fostered by technical education and vocational training ensures that health assistants remain abreast of industry best practices, evolving with the field over time (Filipe et al., 2014). TVET helped to improve interpersonal skills in health assistants, positively influencing team dynamics and ultimately contributing to improvement of overall healthcare delivery (Prasetyo et al., 2021). Additionally, the inclusion of cultural competency and diversity components in technical education and vocational training equips health assistants to provide inclusive and culturally sensitive care, particularly crucial in diverse healthcare settings (Nair & Adetayo, 2019).

Role of Health Assistants in Healthcare Access in Nepal

Health assistants play a multifaceted role in enhancing healthcare access by engaging in community outreach programs, providing primary care services, and promoting health education (Busza et al., 2018). They actively participate in community outreach to raise awareness about available healthcare services and preventive measures (Zulu et al., 2015). They deliver basic healthcare services, including vaccinations, health screenings, and medical care, particularly in underserved areas where access to primary healthcare is limited (Gauchan et al., 2018). Similarly, the health assistants educate community members on hygiene practices, disease prevention, and healthy lifestyle choices, empowering individuals to take control of their health (Kumar & Preetha, 2012). They conduct health assessments, referring individuals to appropriate healthcare facilities for further diagnosis and treatment, thereby facilitating timely and targeted care(Kruk et al., 2018). Medication management, maternal and child health

support, chronic disease management, and emergency response are integral components of their responsibilities (Bezbaruah et al., 2021). Health assistants, often possessing cultural competence, contribute to building trust and understanding between healthcare providers and patients within diverse communities (Bezbaruah et al., 2021). They also advocate for the healthcare needs of vulnerable populations, striving to ensure equitable access to essential healthcare services (Gauchan et al., 2018).

Health assistants stand as pillars within the healthcare system, operating health posts and primary healthcare centers, and contributing significantly to healthcare delivery across both public and private sectors (Adhikari et al., 2022). They play a fundamental frontline role, offering primary and preventive healthcare services (Gauchan et al., 2018). Their responsibilities encompass conducting health assessments, providing treatments, administering medications, offering health education, and steering community health program (Woldie et al., 2018). Their crucial presence in remote and underserved areas substantially enhances healthcare access, catering to communities that might otherwise struggle for essential medical care (Curry et al., 2023). These contributions effectively address immediate health needs, prevent illnesses, and promote overall community well-being, making them vital in pursuit of equitable healthcare and improved public health outcomes(Adhikari et al., 2022). Despite challenging geographical diversity and limited healthcare infrastructures, health assistant program initiatives strive to achieve fundamental right of the people, including marginalized communities' access to quality healthcare in Nepal(Wasti et al., 2023a).

Role of TVET on Empowerment of Health Assistants

The empowerment of health assistants is significantly enhanced through TVET. Professional development initiatives encompassing technical education and vocational training programs are available to health assistants (Šulinskaitė et al., 2022). These programs offer comprehensive instruction in fundamental medical procedures, patient care, and specialized skills relevant to diagnostic or clinical laboratories, including proficiency in drawing blood samples and handling specimens (Scott et al., 2022). The training also includes the acquisition of emergency medical care skills, such as first aid, cardiopulmonary resuscitation (CPR), and basic life support techniques(Lassi et al., 2013). Moreover, health assistants will be equipped with expertise in essential administrative tasks, such as medical billing, coding, record-keeping, electronic health records (EHR) management, and office administration (Ghoshal et al., 2018). This multifaceted training contributes to enhancement of organizational skills and data management capabilities, providing health assistants with a adequate skill set conducive to advancing their careers in the healthcare field(Ghosh et al., 2017). These educational initiatives provide health assistants with specialized skills, knowledge, and practical training necessary for their roles in the healthcare sector(Mastellos et al., 2018). Technical education equips them with a deep understanding of medical procedures, patient care, and the use of healthcare technologies(Guze, 2015). Vocational training, on the other hand, focuses on hands-on experiences and practical applications, enabling health assistants to efficiently

perform tasks related to community outreach, primary care services, and emergency response(Curry et al., 2023). Through a combination of theoretical knowledge and practical skills, technical education and vocational training programs contribute to the overall competency and professionalism of health assistants (Woldie et al., 2018). This education empowers them to effectively navigate the dynamic healthcare landscape, providing quality care and health education to diverse communities (Scott et al., 2022). As a result, health assistants emerge as skilled professionals capable of addressing the evolving needs of the healthcare sector and promoting community well-being (Cao et al., 2021).

Case studies highlight successful vocational training programs like the utilization of mobile health camps equipped with trained health assistants to reach remote communities, providing essential care and health education (Banzhaf et al., 2022). The impact assessment of enhanced training programs reveals tangible improvements in healthcare access, showcasing expanded services, reduced health disparities, and increased community engagement(Ranabhat & Acharya, 2020). These advancements underscore the transformative power of innovative training approaches in empowering health assistants, ultimately strengthening Nepal's healthcare infrastructures and fostering improved health outcomes across diverse communities(Mahat et al., 2013).

Challenges Facing Healthcare Access and Empowerment of Health Assistants through TVET Programs in Nepal

In the Nepalese context, there is a lack of robust healthcare infrastructures, particularly in remote and rural areas, where basic medical facilities, such as hospitals and clinics are scarce or nonexistent (Bitter et al., 2021). This deficit intertwines with profound accessibility issues, exacerbating healthcare disparities because difficult terrains and inadequate transportation hinder the delivery of crucial medical services to these remote regions (Cothran, 2016). Scarce healthcare resources, where only 60% can access essential services, alongside a shortage of professionals in rural areas, worsen the issues of accessing quality healthcare (Gauchan et al., 2018). Compounding these challenges is a persistent shortage of healthcare professionals, including doctors, nurses, and midwives, especially in underserved areas, resulting in compromised healthcare delivery and limited access to essential treatment (Tamata & Mohammadnezhad, 2022). These deficiencies collectively contribute to existing gaps in healthcare services, leaving sizable population without adequate medical care, thus underscoring the urgency of comprehensive strategies to address these pressing healthcare challenges in Nepal (Wasti et al., 2023b).

Similarly, Nepal is facing distinctive challenges in empowering health assistants through TVET programs. Limited resources and funding limitation present a pose severe challenge, impacting the availability of modern educational tools, and infrastructure(Ghimire et al., 2013). The outdated curriculum is another hurdle, as it may not align with the evolving healthcare needs and technological advancements (Subedi, 2003). Unequal access to quality training opportunities, especially in rural areas, foment disparities in the preparedness of health assistants (Kawakatsu et al.,

2015). Additionally, the scarcity of proper accreditation mechanisms and standardized evaluation procedures poses challenges in maintaining education quality and ensuring that health assistants meet national healthcare standards (Tripathi et al., 2020). The other challenge include inadequate alignment of workforce structures, where there is weak relationships between higher level health professionals who delegate tasks and the health assistants, a lack of confidence or trust in the capabilities of HAs, and hesitancy to delegate tasks within the higher level health professionals' domain (Snowdon et al., 2022). The rural-urban divide further aggravate these challenges with more resources and opportunities concentrated in urban areas (Banzhaf et al., 2022). Additionally, the demand for health assistants often outstrips the supply, leading to shortages in certain regions (Naicker et al., 2009). Retaining trained health assistants in remote and underserved areas can be challenging due to limited amenities and professional isolation (Cothran, 2016).

Opportunities for Improvement

Amidst these challenges, there are significant opportunities for improving health assistant education in Nepal. E-learning initiatives, for example, can spur education to remote areas where physical institutions are lacking (Parajuli et al., 2022). Public-private partnerships can help secure funding and resources for these programs, while international collaborations can provide valuable expertise and best practices(Jensen, 2016).

Similarly, curriculum enhancement is crucial, focusing on practical, community-oriented training modules that mirror real healthcare scenarios (Lateef, 2010). Integrating the latest medical advancements and technology within the curriculum is essential, allowing HAs to adapt to evolving healthcare needs (Guze, 2015). Establishing stronger partnerships between educational institutions and healthcare facilities can provide hands-on experiences and clinical rotations, bridging the gap between theory and practice while providing technical education and vocational training to health assistant program (Saifan et al., 2021). Additionally, investing in modern teaching methodologies like simulation-based learning can better equip HAs with practical skills (Lateef, 2010). To ensure the program's relevance, regular updates and assessments of the curriculum based on evolving healthcare demands are necessary(Couper et al., 2018). Moreover, incentivizing continuous professional development and career advancement opportunities post-training could encourage HAs to work in underserved areas, bolstering healthcare access where it is most needed(Bärnighausen & Bloom, 2009). Strengthening TVET education for health assistants through these avenues can significantly enhance their preparedness and effectiveness ultimately facilitating healthcare access across diverse communities.

Furthermore, continuous professional development and career advancement opportunities can incentivize health assistants to stay in rural areas, where their services are needed the most(Henderson & Tulloch, 2008). By addressing these opportunities, Nepal can not only strengthen its health assistant workforce but also enhance healthcare access for its citizens (Kuikel et al., 2023).

Conclusion

The importance of healthcare access in Nepal is emphasized as a cornerstone for improving public health, addressing prevalent health related challenges, and reducing mortality rates, especially in far-flung areas. However, the country faces pressing healthcare challenges, including lack of robust infrastructures, accessibility issues, scarce resources, and inadequacy of technically sound healthcare professionals. Health assistants, trained through technical education and vocational programs, play vital role to address these challenges by operating health posts and primary healthcare centers. Despite their valuable contributions, challenges in health assistant education programs include funding limitations, inadequate infrastructure, difficulties in recruiting qualified instructors, and the rural-urban divide. Opportunities for improvement lie in provision of career ladder for health assistant, e-learning initiatives, public-private partnerships, curriculum enhancement, integration of technology, and incentivizing continuous professional development for health assistants, which can collectively strengthen Nepal's healthcare workforce and enhance healthcare access across the marginalized and deprived communities. Importantly, political will to attach high priority to this issue is equally important.

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