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Article

Phasing out of Technical School Leaving Certificate (TSLC) Programs in Health: A Scenario Analysis

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Abstract

The education and training to the mid-level health workers has been provided in Nepal through the institutions run under the CTEVT. Currently, CTEVT is running various Diploma programs in health sectors like General Medicine, Nursing, Medical Lab Technology, Ophthalmic Science and Dental Science. However, TSLC (Pre-diploma) programs like Assistant Nurse Midwife (ANM), Community Medical Assistant (CMA), Lab Assistant, Assistant Ayurveda Health Worker, Dental Hygienist have been phased out since 2076 after the enforcement of the National Medical Education Act 2018. Nepal has a shortage of health workers with only seven health workers per 10,000 populations. As a result of the phase out of health related TSLC programs under the CTEVT, there will be scarcity of the mid-level paramedical health workers who have direct relation with the community people and the basic level health services.

This review article has tried to highlight the importance of mid-level health workers and effect of phasing out of TSLC programs by CTEVT in the health sector of Nepal. As per the Mathema Report, the major reasons for phasing out of the programs are lack of proper monitoring and regulatory mechanism of institutions running TSLC programs, as most of the colleges practiced to enroll students without quality and lack of proper supervision to the passed-out students .However, due to the removal of the programs, there might be less access to the skilled training, especially of the poor, women, and disadvantaged groups which has created inequitable development of skills in the health workforce. In response to the issues and challenges in incorporating TVET in the development of health workforce, TVET programs, mostly TSLC, should get top priority and the medical education system should be flexible and should reconsider the provision of the National Medical Education Act 2018 on rethinking for the re-launching the TSLC programs in health so that there will be availability of skilled and technically competent mid-level human resource for health.

Keywords: mid-level health workers, medical education, TSLC programs, phase out

Introduction

Mid-level health workers in the context of Nepal are health assistants, Auxiliary Health workers, CMAs, midwives etc. who are providing basic healthcare services at remote rural parts of the country (Moola et al., 2019). These health workers provide services at all

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levels of healthcare services, particularly in the rural and remote areas to make up for the gaps in health workers with higher qualifications (World Health Organization, 2010). They are playing the role to bridge the gap between community people and the basic healthcare facilities. The services provided by them also empower the community healthcare settings (Desai et al., 2020). The availability of skilled human resources for health has become a crucial determinant of maintaining high quality of health of all the people of every country (Shrestha & Bhandari, 2018). For making mid-level health worker available, their development and production should be ensured. For this, CTVET has been playing a major role in the development and production of skilled mid-level human resource for health (Gupta et al., 2013) .

The skilled and technically sound mid-level health workers have been emphasized in all the national and international policies and guidelines for serving in the underserved remote rural areas (Karkee, 2008). WHO thirteen general program of Work 2019-2023 promotes primary healthcare services that are provided by socially and technically competent and motivated multidisciplinary teams, using strategies and techniques informed by the best evidence available (WHO, 2017). Similarly, one of the objective of Second Long Term Health Plan of Nepal 1997-2017 is to provide the appropriate numbers, distribution and types of technically competent and socially responsible health personnel for quality healthcare throughout the country, particularly in the under-served areas (Sagun, 2017).The National Health Policy 1991 and 2076 has also focused on the development of capable and skilled human resource to improve the quality of health services delivered by health workforce, specially by paramedics to ensure easy access to all those who are under-served (Status, 1991). Technical and vocational education is the primary means used for producing the mid-level health workers needed for the country (Paryono, 2017). Incorporating TVET in the medical education system can help in decreasing the reduction of unskilled human resources in health, especially the mid-level health workers i.e. paramedics (Ahmady & Shahbazi, 2022a). The skilled mid-level human resource is always in high priority in health sector in Nepal because they have direct connection with the community people (Nepal, 2010). In Nepal, as all people are not able to get modern health services from the qualified doctors and nurses and from the sophisticated private hospitals, the mid-level health workers can play a crucial role (Adhikari et al., 2022). The Council for Technical Education and Vocational Training (CTEVT) is the leading organization in TVET sector of Nepal which has focused on community-based vocational trainings and education for the purpose of providing training and skills to human resource for health (*Overview of Technical and Vocational Education in Nepal - Nepal Economic Forum*).

To progress towards universal health coverage, there is the need of health workforce that is aligned with population and community health needs, and who is capable of adjusting to the growing demand for healthcare delivery as per the transition in demography, epidemiological transition and transition in the disease pattern (Resources et al., 2016). A meta-analysis conducted in 2013 concluded that such type of health

services can be provided by the mid-level healthcare providers. As per the review, there is significant difference in the healthcare services provided by the specialist doctors and mid-level workers (Lassi et al., 2013). In addition, the services provided by the mid-level health workers are more cost-effective than the services provided by the specialist doctors or physicians (World Health Organization, 2010).Moreover, the specialist doctors are concentrated in urban areas, and most of them often migrate to abroad for better accommodation and better earning (Rao et al., 2013). So, there is a need of mid-level health workers who are responsible to provide the essential healthcare services in the rural areas of Nepal, and for producing such kind of human resource in health sector, CTEVT has been playing a great role for long (Ahmady & Shahbazi, 2022b). TVET institutions are major suppliers of mid-level health workforce who will be in the forefront in dealing directly with the community people (European Union and the Britian Nepal Medical Trust, 2012).

Human resources for health are formally produced in Nepal by CTEVT, different universities like Tribhuvan University, Purbanchal University, Pokhara University, Patan Academy for Health Sciences, BP Koirala Institute of Health Sciences, etc. through different mechanisms under the Ministry of Education, and Ministry of Health. They are regulated by the Ministry of Health through Nepal Medical Council (NMC), Nepal Nursing Council, Nepal Pharmacy Council, Nepal Health Professional Council, and Nepal Ayurveda Council (Magar, 2013).However, the need of mid-level health workers was being fulfilled only through the TSLC (pre-diploma) program of CTEVT. Thus, this review has tried to highlight the impact of the phase out of TSLC program in the health sector in Nepal. As CTEVT institutions and stakeholders can play significant roles, including training and skill development education for the development of highly competent mid-level human resource for health, it will cause lack of health human resources with the phased out of the TSLC program.

Materials and Methods

We have reviewed different literatures available on internet such as websites of CTEVT, Nepal Medical Council, Department of Health Services, Medical Education Commission and other concerned authorities. All the relevant documents and information were analyzed and the final review included in this article. The titles and abstracts of studies as per the objective were screened. After that, the full text articles of eligible studies were reviewed. We independently reviewed all the full texts of the articles and summary provided by both reviewers have been included in this article.

Situation Analysis

Globally, the shortage of healthcare workers as per need is estimated to be 17.4 million, of which, nearly 2.6 million are doctors, almost 9 million nurses and midwives, and the remaining represents other paramedical health workers (Resources et al., 2016). The largest needs-based shortage of health workers is in south east Asia which is almost 6.9 million (Gupta et al., 2013). It has been projected that the shortage of healthcare workers will reach 122.9 million by 2035 (*Global Health Workforce Statistics Database*, WHO). Similarly, half of the

world's population resides in the rural areas; however, only 25% of the doctors and 38% of the nurses work in those areas creating a shortage in the health workforce (Dolea, 2009). The shortage of health workforce is more prevalent in the developing countries. Nearly 57 countries, majority of the Africa and Asia, face severe healthcare workers' crisis (Lehmann, 2008). Similar shortage also exists in Nepal as the need of human resource for health has not been fulfilled- because of shortage of technically competent health professionals (Baral et al., 2013). Although universities and medical colleges are producing numerous number of doctors and nurses, there is still huge shortage of qualified mid-level health workers like health assistants, midwives, and CMA (C& Bhandari, 2012). The market has been supplying a good number of human resources for health; still, there is a shortage of critical human resource for service delivery. As per the latest data, there is a need of 7,000 trained skilled birth attendants, but the supply is only 1,000 (C & Bhandari R, 2012). Similarly, there are 0.67 doctors and nurses per 1,000 population which is significantly lower than the World Health Organization's recommendation of 2.3 doctors, nurses and midwives per 1,000 individuals (Resources et al., 2016). The data of Nepal health system shows that only 4% of the total healthcare providers are doctors, 12 percent nurses, excluding ANMs, 47% paramedics, 0.92% public health officers and 3.1 % traditional healthcare providers (JICA, 2000). This suggests that there is a high number of unskilled health staff, nearly 29 % of the total healthcare workers (Sherchand, 2013). This has created a challenge for the health system of Nepal- urgency to reduce the volume of unskilled and semi-skilled health human resource. One of the major challenges of human resource in health is lack of skill manpower and low opportunity for pre and in-service training (WHO, 2017). In Nepal, the largest group of health sector workers i.e. 33% is from the health management and support staffs (cleaners, ward helpers and other non-clinical support staffs) followed by paramedical practitioners (mid-level) i.e. 26 % (Magar, 2013). These mid-level health workers are mainly produced through the medical institutes under CTEVT. However, CTEVT has discontinued the Pre-Diploma programs from the year 2077 BS as per the National Medical Education Act 2018. The mid-level health worker requirement is still not fulfilled at the grassroots level of Nepal.

Importance of TSLC Programs in Health

Healthcare need of developing country, including Nepal is rapidly increasing. In Nepal, two-thirds of the people live in rural areas and only one third of the population live in urban areas , whereas two thirds of the healthcare staffs are working in either Kathmandu or cities, leaving rural areas under-staffed, with absenteeism of the staffs (C & Bhandari R, 2012). Over half of poor population (52.4 %) live in rural areas with less access to health care services (National Planning Commission [NPC], 2021). Similarly, the health facilities are also inadequate to meet the demands of the people. To get over with health issues Nepal requires healthcare professionals and healthcare facilities for providing required healthcare support (*Accessing Quality Health and Care in Nepal - Nepal | ReliefWeb*). Mid-level health workers can thus fulfill this demand of healthcare services of the rural people who have less access to healthcare services(Lama

et al., 2017). Evidence suggests that where the mid-level health workers are adequately trained, supported and supervised, they can deliver essential health services with similar quality standards as specialist doctors at low cost (WHO, 2017). Mid-level health workers should therefore be included as part of general health planning and management of health system so as to provide the health services to the underserved remote rural areas of Nepal. These healthcare providers constitute the base of the Health Care Pyramid and are required in adequate numbers for the better and optimal performance of the healthcare system (Chhina et al., 2017). Mid-level paramedical health workers are responsible for providing preventive, promotive, curative and rehabilitative services as well as primary health services for individuals, family, groups and communities through various level of health delivery system, such as Sub Health Post, Health Post, Primary Health Care Center and District Level hospitals (Karkee, 2008). These health workers are directly linked with the community people and their emotions and are very essential to provide the basic level health service (Hartzler et al., 2018). These health workers are mainly involved to support the health system of Nepal by providing the basic healthcare, community healthcare, including basic medicine, health management and environment sanitation, basic medical procedures, basic surgery and first aid and MCH, FP, nutrition either directly at home or in the grassroots level healthcare centers (World Health Organization, 2007). Evidences suggested that mid-level health workers have improved access to and coverage of health services, and that often well trained and well-motivated mid-level health workers provide superior quality and more accessible services than better qualified, specialists but less motivated professionals (World Health Organization, 2010). Because of the poor career prospects and lack of sanctioned posts, there is demotivation to the specialized doctors and physicians and are not providing the healthcare services as per need (Nguyen et al., 2015). In such case as well, mid-level health workers can fill the gap and TSLC health related programs of CTEVT were responsible for producing such health workers. Mid-level health workers developed through the TSLC program succeeded in developing a functional tier of health professional at different level of health care delivery system (Perry, 2013).

A severe and growing shortage of health workers has been a major concern of Nepal healthcare system with high disease burden. At such situation, one strategy to fulfill the vacant post and to reduce health worker shortage and improve access to and quality of health services is to accelerate the use of mid-level health workers (Ministry of Health, 2015). In the shortage of doctors and specialists, the shift in role to mid-level health care provider will relieve the overburdened doctors and specialists, especially in rural areas (Okyere et al., 2017). These level healthcare providers will help to provide easy and affordable health services to the people of Nepal and also play a key role in achieving the targets of Universal Health Coverage (*Nepal | Universal Health Coverage Partnership*).

Major Reasons behind Phasing out of TSLC Programs

The main reason behind the phase out of TSLC program was due to the recommendation made by the Kedar Bhakta

Mathema-led panel report 2072 B.S. The report had argued that many institutions have been passing out students without proper education and training which have led to lack of quality health persons. The National Medical Education Act 2018 had incorporated the Mathema panel report with the provision of phasing out of the TSLC courses of CTEVT. The level of understanding regarding importance of mid-level health workforce, its ownership, the will or commitment of the stakeholders and capacity of the policymakers and practitioners also vary (Kruk et al., 2018). Considering the backgrounds of the human resource in health and difference in socio-political status, the focus of health sector for developing technically competent human resource in health may also vary and thus the focus of human resource for health has been shifted to specialized medical doctors (Kabene et al., 2006).

Consequences of Phasing out of TSLC Health Programs

There are many documented cases of comparable results provided by different national level documents that due to shorter duration of trainings, low salaries and benefits, less consultation fee, shorter travelling distance as they live near in rural areas, mid-level health workers are more beneficial than specialist doctors and physicians in case of catering the basic essential healthcare services (Moola et al., 2019). Also the deployment of doctors and specialists in small health centers of remote areas might result in limited use of their skills with ensuring inefficiencies, demotivation and low retention rate (Henry & Hooker, 2008). After the discontinuation of the Pre-Diploma course, there might be shortage of grassroots level human resource in health and all these basic level health services will be affected. Nepal is different in terms of socioeconomic and, political backgrounds and the situation of human resource in health from other countries. The land topography is also very complex, leading to unequal distribution of the human resource in health and inequality in healthcare services up to the remote rural areas. The phase out of the TSLC programs might cause people less access to the basic healthcare services to all those who are marginalized and deprived of the health services.

As per latest data, though there is a marked reduction in multidimensional poverty- still 4.9 million people are multi-dimensionally poor, which is 17.4% of the whole population of Nepal (NPC, 2021). It results in difficulty to cater better healthcare services to the marginalized and rural people. The consultancy cost for medical doctors and specialist physicians are very high. It might cause economic burden to general people and there will be low utilization of the services because of the high cost of the services provided by the specialist doctors (Mosadeghrad, 2014). With this, phasing out TSLC program might increase the cost of the services to the general people. Similarly, the education expenses and the production cost of doctors and specialized doctors are also high, thereby causing economic burden to the country (Cunningham, 2009).

Another consequence of phasing out of the TSLC program is that there will be inequitable distribution of health workers (Wibulpolprasert & Pengpaibon, 2003). If TSLC program has been phased out, then the

task sharing by the mid-level health workers will not be available and all the works from complicated diagnosis and treatment to simple preventive services should be provided by the specialist doctors because of which there will be burden; or the work to medical doctors and specialized health care providers and the quality of the services will also degrade (WHO, 2008).

On the other hand, the Public Service Commission has not stopped advertising the post for the mid-level health workers. So, phasing out of the TSLC program might impact on the production of the candidates requiring for the post and thus there might be shortage of such candidates in future (*Public Service Commission*).

Conclusion and Way Forward

Healthcare provided by the mid-level health workers, especially by health assistants, CMA, midwives in specific health service delivery areas has been found to be quite effective in the absence of care and services provided by physicians and specialist doctors. Mid-level health workers with adequate training, support, supervision, recognition and payment can provide better services to the people of community up to the rural level. For the production of the mid-level health workforce, there will be relatively low costs, reduced education and training duration; and they have potential for success in rural placement. So, their production should not be discontinued. Nepal must ensure that existing skilled human resource in health sector do not become a constraint on improving the health status of people, by investing in skills development and curbing the "brain drain" of skilled human resource in health. Reflecting from what has been happening globally and locally, it is clear that TVET has gained momentum at the global, regional, and national levels for producing technically sound human resources who will serve in remote areas. TVET is the means for development of technically sound and competent mid-level human resource in health sector as well. It, as the major producer of skilled workforce, must play significant roles in addressing the scarcity of the mid-level human resources.

Technical and vocational education and training has been assisting in the medical sector of the country through Diploma and TSLC programs by providing skilled human resource for health. This has created an opportunity to get basic health services like preventive health services, emergency care, first aid services, nutrition education and supplementation, immunization and vaccination, basic maternal and child healthcare services, family planning services etc. by those people who have less access to the sophisticated healthcare services. This will help lead to equitable access to healthcare services, health promotion of the people and public participation in the health sector. One of the principles of the primary healthcare is appropriate skills and technology. This principle can be achieved through the training and educating the mid-level health workers and mobilizing them up to the grass root level.

Such type of mid-level health workers has been playing major roles in the development of health sector. Realizing the importance of mid-level human resource for health, the phase out of the TSLC program in health sector should be revisited and its alternative

solution to make quality TSLC program should be focused. Also, as the mid-level health workforce are cost effective, skilled workers, who occupy a big portion of whole health workforce in a nation, has been generated through TSLC program of CTEVT, so it is necessary for a country to think seriously about phase out of TSLC program.

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