

Low enrolment in health personnel education program for tutors in health training institutions in Tanzania: Case of seven selected health training institutions

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Abstract

Background: Centre for Educational Development in Health Arusha was established in 1983 by Ministry of Health, aimed at strengthening and support the health care system through provision of health personnel education (HPE) program for tutors in Health Training Institutions (HTIs). CEDHA has capacity to enroll and accommodate 40 HPE program trainees per year.

But in the past five (5) academic years, enrollment of HTI tutors in HPE program decreased critically to 3(7.5%) in 2022/2023 academic year

Methods: This cross-sectional study employed quantitative methods for data collection conducted between November 2022 and July 2023 in seven (7) purposively selected public and private Health Training Institutions (HTIs).

Results: We recruited 57 HTIs stakeholders (7 HTIs employers and 50 HTIs tutors) in the study, 39(68%) of the stakeholders had bachelor degree and 25(44%) had 1-4 years' experience in teaching. 33(58%) of the respondents had not attended short or long course in teaching methodology. Most 44(93%) of stakeholders had low to moderate knowledge on HPE program offered at CEDHA while 49(86%) showed features of positive attitude toward studying the HPE program. Eight (8) short courses related to HPE program are offered in three (3) HTIs. Only teaching methodology short course was active in all three (3) institutions. Management of Health Training Institution and Instructional Assessment Skills were active only at CEDHA. This study could not establish type of recognition for HPE program graduates at their work stations as no one was found in the selected HTIs. Tuition fees, meal and accommodation were outlined more frequently as type of support needed by tutor willing to study HPE program.

Conclusions: This study indicated that low awareness, positive attitude to HPE program, lack of recognition, availability of long or short courses related to HPE program and lack of support may be contributing factors to low enrolment in HPE program. There is a need for marketing the HPE program to HTI stakeholders and to offer support to tutors willing to pursue HPE program

Keywords: Centre for Educational Development in Health Arusha (CEDHA); Health personnel education (HPE); Program; Health Training Institution (HTI); Tutors

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1. Introduction

Health Personnel Education (HPE) program is a one year course with seven modules and offered in two semesters, which was developed to suit the needs of the medical teachers in Health Training Institutions (HTIs). The programme aims at equipping teaching staff with educational, managerial and research skills for them to be better teachers and managers in HTIs. This program is only offered at Centre for Educational Development in Health Arusha (CEDHA) which was established in 1983 by Ministry of Health, aimed at strengthening and support the health care system, the centre has capacity to enroll and accommodate forty (40) HPE program trainees per year [1]

Tanzania has a total number of 192 registered health training institution (HTIs). Among them, 103 have private ownership, 47 HTIs belong to government and 42 HTIs belong to Faith Based Organizations (FBO). Therefore the number of HTIs reflects that, there is high number of teaching staff in Tanzania needed engaged teaching activities in Health training institutions [2]

Moreover, the government of Tanzania directs on the improved provision of tertiary education and training that will provide the critical mass of high quality human resources required to effectively respond to and master development challenges at all levels [3]

The above directive led to adoption of Competence-Based Education and Training (CBET) approach in the country in year 2000; and in the year 2002 its implementation started in technical colleges. Currently, the approach is used in the Technical and Vocational Education and Training sector; specifically in Vocational Education and Training centres and Technical Education and Training colleges. The introduction of CBET was intended to facilitate a paradigm shift from the traditional Knowledge-Based Education and Training [4]

In additional, there is shortage of full-time teaching staff in most of health training institution in Tanzania which can also contribute to limited opportunity for short courses. Studies have shown that in most of the health training institutions, full time teaching staff constitute less than half of the teaching staff and this is also compounded with high turnover rate of between 26% in public health training institutions to 46 % in private and faith-based organization health training institutions. However, to bridge this gap majority of HTIs hires part time teachers from teaching hospitals, who are not trained in teaching methodology [5]

Trainers need to be aware of the process of selecting suitable teaching methods that match with the contents to be taught or skills that need and developed among students during the process of teaching and learning. Trainers also need to have sound knowledge and skills on the assessment and evaluation methods as quality of assessment is of paramount importance in order to provide competent graduates [6]

The report from seven randomly selected HTIs indicate that nearly two thirds (61.5%) of tutors in seven selected public and private HTIs were not trained in teaching methodology (Table 01)

Table 1 Number and status of tutors in seven selected Health Training Institutions

SN	Institution's name	Number of tutors per HTI		
		Total	Teaching methodology	
			Trained	Not trained
1	BECUS Health Training Centre	7	3 (42.8%)	4 (57.2%)
2	Sengerema Health Training Institute	37	14(37.8%)	23 (62.2%)
3	Kolandoto College of Health Sciences	36	9 (25%)	27 (75%)
4	City College of Health and Allied Sciences Arusha	11	5 (45.4%)	6 (54.6%)
5	Singida College of Health Sciences and Technology	15	11 (73%)	4 (27%)
6	Mkolani Foundation Health Sciences Training Institute	43	17(40.5%)	26 (59.5%)
7	Tandabui Institute of Health Sciences and Technology	38	13(34.2%)	25 (65.8%)
TOTAL		187	72(38.5%)	115(61.5%)

Source; HTIs academic reports 2022)

The study on the factors affecting production of competent health workers in Tanzania Health training institutions also reported that, among 395 total teaching staff (full part time) involved in the study ,235(59%) were not trained in curriculum delivery methods [5]

Despite the well-known fact that skilled medical tutors play a key role in producing competent health care workers, there has been tremendous decrease in tutor enrollment in short courses in teaching methodology and health personnel education program a one-year course offered at CEDHA for five (5) consecutive academic years (Table 02)

Table 2 Enrollment in HPE program for in the past five years

Academic year	2018	2019	2020	2021	2022
Enrollment Capacity	40	40	40	40	40
Enrolled trainees, N (%)	10 (25%)	8 (20%)	5 (12.5%)	5 (12.5%)	3 (7.5%)

(Source; CEDHA Academic reports 2022)

The consequences of the of untrained tutors are lack of educational, managerial, and research skills and so affecting quality health training offered and so incompetent health care workers leading to poor quality of health care provided to the population.

Objectives

This study aimed to assess the factors contributing to low enrolment of HTI tutors in Health Personnel Education (HPE) program at CEDHA.

The findings are expected to provide an understanding of HTI tutors awareness and attitude towards HPE program, available short courses related to HPE program, type of recognition for HPE program graduates at their work stations and lastly the support needed for HTI tutors willing to study HPE course. Furthermore, suggest actions for improving enrollment in HPE program so as to improve quality of training.

2. Methods

2.1. Study design

This descriptive cross-sectional study used quantitative methods to collect and analyze data. The study was conducted between November 2022 and July 2023. Quantitative methods design was used as we intended to get quantifiable information related to low enrolment in HPE program at CEDHA

2.2. Study setting

Centre for Educational Development in Health Arusha (CEDHA) is the only institution mandated by the MoH to ensure production of competent teaching staff in HTIs, through provision of health personnel education program

The study was conducted in seven (7) public and private owned, purposively selected polytechnic HTIs with 187 tutors. Three (3) types of study populations were involved; HTI tutors, HTI employers and HPE graduates. Minimum Sample size was 65 medical tutors who were expected, calculated by using one sample situation by estimating single proportion with absolute precision. Two employers from each HTI and all HPE graduate expected to be found in the selected HTIs were expected to be studied but more than three quarter of HTI tutors and half of the HTI employers expected from seven selected HTI for study were interviewed. None of the HPE graduate was found in the selected HTIs

A structured questionnaire was used to assess level of awareness, attitude towards HPE program, type of recognition offered to HPE graduates and type of support needed by tutor willing to pursue HPE program while HTI admission systems were to gather information on the presence of short courses related to Health Personnel Education program offered at CEDHA. Using a lottery method, random sampling was done to select tutors in respective HTIs.

2.3. Data analysis

The collected quantitative data were assessed for completeness and consistency of information on a daily basis. Thereafter data were coded and entered into the computer database using Statistical Packages for Social Sciences (SPSS) Version 26

Anonymous dual entry was performed as a means to ensure accuracy and correctness of the data entered and as a means of validation

Descriptive statistics was used to summarize data, with proportions for categorical variables and means or medians with their respective measures of dispersion for continuous variables.

Dependent variable for this study was low enrolment in health personnel education (HPE) program, while the independent variables included HTI stakeholders' awareness on HPE program, HTI stakeholders' attitudes towards HPE program, type of support needed from HTI employers to tutors willing to pursue HPE program, type of recognition for HPE program graduates and availability of short courses related to HPE program.

3. Results

3.1. Socio-demographic characteristics

A total of 57 HTI stakeholders (7 HTI employers/heads and 50 tutors) were studied.

Over two thirds 39(68%) of the stakeholders had bachelor degree and nearly half 25(44%) had 1-4 years' experience in teaching. Over half 33(58%) of the respondents had not attended short or long course in teaching methodology or curriculum delivery.

Table 3 Characteristics of study participants

Characteristics	Total, N (%)
Profession	
Nurse	8 (14.0)
Clinician	3 (5.3)
Non-medical professions	8 (14.0)
Medical Doctor	9 (15.8)
Health Records	1 (1.8)
Medical Laboratory	20 (35.1)
Pharmacist	8 (14.0)
Qualification level	
Diploma	14(25)
Bachelor Degree	39(68)
Masters	4(7)
Years of teaching	
Less than 1 year	12 (21)
1 -4 years	25 (44)
5 - 7 years	13 (23)
More than 7 years	7 (12)
Attended teaching methodology courses	
Yes	24(42)
No	33(58)

3.2. Awareness on HPE program

Important information were asked to assess level of awareness on HPE program only offered at CEDHA; ever heard about the HPE program, purpose of the program, institution which offers HPE program, eligible candidates, HPE program duration and HPE program modules. The six (6) questions enquired ten (10) correct responses. The ten (10) correct responses were categorized as follows; high, moderate and low knowledge for 7-10, 3-6 and 0-2 correctly answered respectively.

The findings shows that most of HTIs stakeholders 53(93%) had low to moderate knowledge on HPE program offered at CEDHA (Table 04)

Table 4 Awareness on HPE program among HTI stakeholders (employers and tutors)

Level of knowledge	N (%)
Low	25(44%)
Moderate	28(49%)
High	4(7%)
Total	57(100%)

3.3. Attitudes of tutors and employers of HTIs regarding HPE program offered at CEDHA

In order to explore HTI stakeholders' (tutors and employers) attitudes concerning HPE program, six (6) attitude statement categorized in forms of questions with five (5) response options. (Strong agree, agree, don't know, disagree and strongly disagree) were used.

Majority of the HTI stakeholders (tutors and employers) showed feature of positive attitude toward studying HPE program (**Table 05**)

Table 5 HTI stakeholders' attitudes concerning studying HPE program

Statement category	Stakeholders	N (%)					Total (100%)
		Strong agree	Agree	I do not know	Disagree	Strong disagree	
All tutors in HTIs should attend short courses on teaching methodology	Employers	4 (57.1)	2(28.6)	1 (14.3)	0	0	7
	Tutors	22 (44)	23 (46)	4 (8)	0	1 (2)	50
All tutors in HTIs should attend HPE program	Employers	2 (28.6)	3(42.8)	1 (14.3)	1 (14.3)	0	7
	Tutors	14 (28)	21 (42)	12 (24)	2 (4)	1 (2)	50
All academic masters in HTIs should attend HPE program	Employers	2 (28.6)	4(57.1)	1 (14.3)	0	0	7
	Tutors	13 (26)	22 (44)	14 (28)	0	1 (2)	50
All examination officers in HTIs should HPE program attend HPE program	Employers	2 (28.6)	4(57.1)	1 (14.3)	0	0	7
	Tutors	12 (24)	24 (48)	12 (24)	1 (2)	1 (2)	50
All clinical instructors should attend HPE program	Employers	3 (42.8)	2(28.6)	1 (14.3)	1 (14.3)	0	7
	Tutors	13 (26)	24 (48)	10 (20)	2 (4)	1 (2)	50
All heads of HTIs should attend HPE program	Employers	1 (14.3)	5(71.4)	1 (14.3)	0	0	7
	Tutors	11 (22)	26 (52)	11 (22)	1(2)	1 (2)	50

3.4. Available short courses related to HPE program

This study also involved searching online (institutional and Ministry of health and NACTVET websites) for the availability of short courses related to HPE program.

This finding revealed that eight (8) short courses related to HPE program are offered in three (3) institutions namely; CEDHA MUHAS and MWACHAS. Only teaching methodology short course was seemed to be active in all three (3) institutions. Management of Health Training Institution and Instructional Assessment Skills were seemed to be active only at CEDHA (Table 06)

Table 6 Available short courses related to HPE program

Short courses related to HPE program	Institution offered	Duration (weeks)	Comments
Psychology in teaching and learning	CEDHA	2	Not active
	MUHAS*	2	
Instructional Methods and Skills (Teaching methodology)	MWACHAS*	4	Active
	MUHAS	2 to 6	
	CEDHA	4	
Health Learning Materials and Resources/ development	CEDHA	2	Not active
Communication, Guidance and Counseling in teaching and learning	CEDHA	2	
ICT for teaching and learning	CEDHA	2	
Educational Health Research Design	CEDHA	2 to 4	Not active
	MUHAS	2 to 6	
Instructional Assessment Skills	CEDHA,	2	Active
	MWACHAS	3	Not active
Management of Health Training Institution	CEDHA	2	Active
	MUHAS	2 to 6	Not active

*MUHAS; Muhimbili University of health and allied sciences ; *MWACHAS: Mwanza College of Health and allied sciences

3.5. Type of recognition for HPE program graduates at their work stations

NACTVET which is a educational regulatory body in the country, has a mandate to ensure that all HTI tutors trained on curriculum development, implementation and assessment before being registered as tutors and allowed to manage teaching and learning activities in health training institutions. It is more important that the tutors occupying the key positions; Principal, Vice Principals, Academic and Examination Officers in HTIs should be the one who have attended the HPE program or any other long course in medical education

This study aimed at finding out type of recognition available in HTI for HPE graduates. All HPE graduate expected to be found in the selected HTI were to be included in the study. There were no HPE graduates found in the selected HTI, so this study could not establish type of recognition for HPE program graduates at their work stations.

3.6. Support needed from HTI employers to tutors willing to pursue HPE program

In this study HTI stakeholders (tutors and employers) were asked to outline type of support available for tutors willing to pursue HPE program at CEDHA. 33(58%) outlined the available support.

Tuition fees, meal and accommodation were outlined more frequently as type of support needed from HTI employers to HTI tutors willing to pursue HPE program at CEDHA (Table 07).

Table 7 Type of support needed from HTI employers for HTI tutors to pursue HPE program

Type of support available	Number (%)
Tuition fees	32 (97)
Meal and accommodation	27 (82)
Money for conducting research	21 (64)
Travelling and treatment expense	24 (73)
Stationeries/Learning resources	23 (70)
Pocket money/Daily allowance	22 (67)

4. Discussion

Ministry of Health (MoH) is responsible for ensuring the provision of health services of acceptable quality and standards. This is achieved through ensuring that human resource of adequate number and appropriate skill mix is available to all health facilities. The Ministry of Health in collaboration with the private sector run Health Training Institutions and provides basic standard guidelines so as to ensure quality health training services in Tanzania

Among the basic standard requirement for establishing a mid-cadre health training institution is for every HTI to have adequate and competent teaching staff respective to the program offered. [7]

This study was conducted to find the factors contribute to low enrolment of HTI tutors in HPE program offered at CEDHA.

We found that there are several factors that contribute to low enrolment of HTI tutors in HPE program that range from; HTI stakeholders' awareness on HPE program, HTI stakeholders' attitudes towards HPE program, availability of short courses related to HPE program, type of recognition available for HPE program graduates at their working stations and type support needed from employers to tutors willing to pursue HPE program.

4.1. Awareness on HPE program among tutors and employers

In this study most of stakeholders had low to moderate knowledge on HPE program offered at CEDHA which may be a factor for tremendous decrease in tutors' enrolment in health personnel education program only offered at CEDHA.

Studies have shown that low program awareness affect student enrolment into training programs [8,9]

The program awareness effect is demonstrated in the study by Mulongo who reported that training institutions with high program awareness have high students' enrollment. [10]

The low awareness findings may be due to nature of study participants, that more than one third of stakeholders were medical laboratory personnel and nearly half had 1-4 years' experience in teaching, this may account for less chances of getting information about the HPE program only offered at CEDHA. The finding that two thirds of the stakeholders had bachelor degree reflects that perhaps HPE program only offered at CEDHA, which is in the category of technical or mid cadre level health training institutions is not well known at higher training institutions.

4.2. Attitudes of tutors and employers of HTI regarding HPE program

In this study, majority of the HTI stakeholders (tutors and employers) showed positive attitude towards HPE program offered at CEDHA.

The finding on the attitude demonstrated by HTI stakeholders towards HPE program does not reflect high enrollment in the HPE program as it is reported that there is significant number of teaching staff in HTIs who are not trained in curriculum delivery [5]

The positive attitude towards HPE program demonstrated by tutors in HTIs may be affected by others factor and some reported in this study.

4.3. Available short courses related to HPE program

This study finds out that, there are eight short courses related to HPE program offered in three institutions. Finding shows only teaching methodology short course was seemed to be active in all three institutions, while Management of Health Training Institutions and Instructional Assessment Skills were seemed to be active only at CEDHA.

The scarcity of human resources in health sector is a key challenge in Tanzania towards achieving goals among health institutions. Therefore, training of health workers through short courses has been seen as a way to improve the delivery of health services. But the package of interventions (set of knowledge, skills and attitudes) to be delivered for competencies has not been delineated. Therefore, participants should be motivated about the training program to enhance long-term impact [11,12]

4.4. Support need by tutors willing to pursue HPE program

HPE program is one of the in-services training programs, so the applicants for this program have number of challenges ranging from family responsibilities, permission from employers and financial support.

HPE program is virtually high-level cadre training but is practically treated as mid cadre training, which according to education policy, there is no government sponsorship for the mid cadre training

This study find out that tuition fees, meal and accommodation allowances are most required support from employers by tutors willing to study the HPE program

Many studies have shown that employer's financial support increases the likelihood of employers to enroll and pursue career development [13,14]

In addition, studies have shown that majority of trainees are unable to pursue career development due to the lack of financial support and discouragement from employers [15,16]

Abbreviations

- CEDHA Centre for Educational Development in Health Arusha
- HPE Health Personnel Education
- HTI: Health Training Institution
- MoH: Ministry of health,
- NTA: National Technical Award
- WHO: World Health Organization

5. Conclusion

Thus, in the light of the findings presented and discussed above, it can be concluded that; there are many factors that contribute to low enrolment in HPE program. Low awareness on HPE program, availability of short courses related to HPE program and lack of support for the tutors willing to pursue HPE program could be one of the factors. There is a need for marketing the HPE program to HTI stakeholders and to offer support to tutors willing to pursue HPED program

Compliance with ethical standards

Acknowledgments

Tutors and HPE graduate in HTIs who participated in this study, Also management of the selected HTIs for permission during data collection

Disclosure of conflict of interest

The authors declare that they have no competing interests financial and non - financial.

Statement of ethical approval

Ethics approval for this study has been granted by the Center for Educational Development in Health Arusha (CEDHA). Permission was sought from Management of selected HTIs prior to the beginning of the study, informed consent was

sought from participants and were assured of the right to refuse to participate or to withdraw from the study at any time without any consequences.

Informed consent was obtained from all individual participants involved in the study sample participation was voluntary and participant could withdraw from the study at any time without any implication

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