





Table of content

Table of content.....	i
Acknowledgement	iii
Acronym.....	iv
List of table.....	v
Abstract.....	vi
1. Introduction.....	1
1.1. Statement of the problem	2
1.2. Rational of the study	2
2. LITRATURE REVIEW	3
2.1. Conceptual framework	4
3. Objective.....	5
3.1. General objective:	5
3.2. Specific objective:.....	5
4. Methodology	6
4.1. Study settings	6
4.2. Study design.....	6
4.2.1. Source population	6
4.2.2. Study population	6
4.2.3. Study unit	6
4.3. Inclusion criteria	6
4.3.1. Exclusion criteria	6
4.4. SAMPLE SIZE DETERMINATION AND SAMPLING TECHNIQUE.....	7
4.4.1. Sampling technique.....	7
4.4.2. Sampling methods and procedures	7
4.4.3. Participant selection	7
4.4.4. Sample size	7
4.5. Data collection methods and process	7
4.5.1. Data collection process	7

4.5.2. Data collection method	7
4.5.3. Data collection tools.....	8
4.5.4.Role of investigator.....	8
4.5.5. Data management and analysis procedure	8
5. Result	9
5.1. General strengths and weakness of the curriculum.....	10
5.2 Time allocation	13
5.3.Teaching and evaluation	16
6.Discussion	Error! Bookmark not defined.
7.Conclusion	20
8. Limitation of the study.....	21
9.Recommendation	22
10. Reference	23
11. Interview guide	24
መጠይቅ	25
12. Participant recruitment guide line	26

Acknowledgement

I would like to express my heartfelt gratitude to my advisors Dr Malika Sharma, Dr Sophie Soklaridis and Mr Derje Geleta who are giving me a very important suggestions and comments regarding my proposal work.

I would also like to extend my appreciation to those who helped me a lot in giving additional advice.

Also I would like to express my thanks to AAU, CHS, and School of medicine department of medical educations for giving me a chance to conduct this proposal.

Acronym

AAU	Addis Ababa
BSc	Bachelor of Science
FMoH	Federal Ministry of health
FMoE	Federal Ministry of education
HPE	Health professionals education
MPH	Master of public health
NPO	Non physician clinician
PHO	public health officer
RN	Registered nurse
WHO	World health organization

List of table

Table 1: Characteristics of the study participant

Table 2: Strength and weakness of the curriculum

Abstract

Background: public health officer is a field of study in Ethiopia for non physicians' clinicians. This was started in 1954 EC in Gonder college of Public Health to meet the health needs of rural communities.

Objective- To explore the perceptions of public health officers on whether the curriculum prepares them for clinical practice in the real environment.

Methodology-A qualitative research design will be used to explore health officers perceptions of whether the curriculum prepares them for clinical practice. Data collection will done using semi-structured interview guide with open ended questions. The questions will be developed using personal experience and key informants. The source population for this study will be a graduated public health officers who will be interviewed until saturation of data is reached.

Data analysis was begun with translation from Amharic to English during the transcription process. A thematic analysis approach was used.

Result- the result of the study has revealed that some major curriculum related gap which contributes for perceived knowledge gap of public health officers. The main gap are disproportional time allocation for very crucial courses of basic sciences and clinical. The curriculum lack strict monitoring system of its implementation.

Conclusion- Based on the result of this study some strength and weakness of the curriculum are identified. Some of the strength is mentioned are strong course content of both clinical and public courses. The main weakness in the curriculum is some of the courses are not proportionally allocated with adequate time and course contents like that of basic science and clinical courses.

1. Introduction

Health officer teaching began in 1954 EC, and was the first degree program in health professional training at the then college of public health at Gonder, in the north west of Ethiopia. At the time, there was no training of medical doctors in Ethiopia. The college was established to meet the need for health professionals to work in rural communities. The program began with a four year post high school training program with a unique curriculum that incorporated clinical skills and public health activities to meet the urgent needs of the country

The Ethiopian population is primarily rural. Health officers carried out most of the activities in Ethiopia's rural hospitals and health centers. Health officers made an enormous contribution for many years, providing comprehensive services to rural communities.

Even after the first medical school was established in Addis Ababa 40 years ago, the health officer training program continued. But when the college of public health was transformed into the Gonder college of medical science and started training medical doctors, health officer training ceased. Subsequently, some of the health officers entered medical school to become physicians; others pursued public health to the MPH or PhD level; a few remained as health officers doing primarily public health administrative work.

However, public health needs could not be met with the scarce number of doctors alone. Twenty years after the cessation of the health officers training, the Federal Ministry of Health restarted the program at five centers in the country. Currently the program is being run in most of the Ethiopian universities. The training is designed to prepare graduates to carry out most public health services at the rural health centers, including, preventive and health promotional activities, as well as curative services, like emergency surgery for (caesarean sections, some trauma and appendectomies).

In 1996, there were 50 health officers in Ethiopia; in 2000 there were nearly 500. Although the undertaking is one way of tackling the shortage of doctors in the country, to our knowledge, rural health centers have not yet been upgraded to do emergency surgery. In addition training may need to be tailored to enable health officers to have adequate hands on experience with emergency surgery. (1)

1.1. Statement of the problem

Public health officer are one of non-physician clinicians in sub-Saharan region. The program is started mostly to solve shortage of physicians and to address poorly served regions. It is designed to harvest health professionals with very short time and very less cost than training of physicians.

The duration of the program and the content of the curriculum are not proportional according to some health officers in the practice. Not having more time in some of the courses has impacted negatively their practice after deployment to the real clinical environment.

1.2. Rational of the study

The purpose of the study is to explore the existed perception among some health officers that the curriculum does not prepare them adequately for what they need to know when practicing in the community. To date there is no research on the experiences of health officers in practicing in Ethiopia. This would be the first of its kind to look at the relationship between the curriculum to train health officers and their perceived knowledge gap.

2. LITRATURE REVIEW

Many nations have a history of health-care provision by staff who are not trained as physicians but who are capable of many of the diagnostic and clinical functions of medical doctors. These types of health workers are now known as health officers, clinical officers, physician assistants, nurse practitioners, or nurse clinicians.(2)

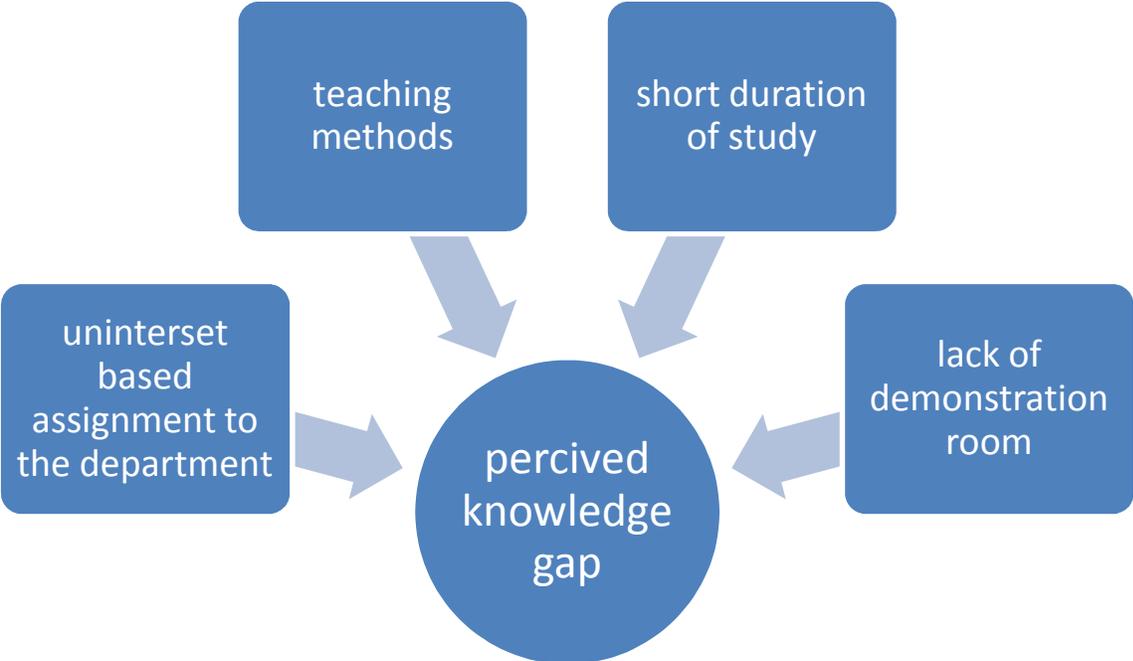
The rationale for development of NPC programmes before and after independence was the need for personnel to deliver medical services in poorly served regions. (3). All NPC are trained in basic diagnosis and medical treatment and has prescriptive authority. Some received subspecialty and surgical training in fields such as caesarean section, orthopedics, ophthalmology, and hospice care. NPC training programmes relied less on hospitals and advanced Technology than did training programmes for physicians. The training was practical and focused on local health challenges and treatment of indigenous disorders. (4)
The ‘knowing of knowledge’ is no longer enough to perform adequate medical care in the increasingly complex, fluid, and rapidly evolving world in which we live. In order to optimize lifelong learning and potential success it is now widely accepted that young people need to have opportunities to develop personal capabilities and effective thinking skills as part of their well-rounded education (5)

Effective education offers a balance of theoretical and practical experience to help learners develop competencies that are essential for their ongoing practice in the health professions. Education is intricately linked to social context. Broad social, cultural, historical, and political forces interrelate to form and shape teaching and learning, and thus the essential competencies that learners must develop (6)

The WHO report on health work force strengthening, cautioned that, “HPE approaches and human resource planning that focus on the training of individuals without taking into account the work environment and mobility will have limited success. Scaling up education is an isolated way will not compensate for addressing the increasing challenges for health work forces, such as shortage, imbalance, educational quality and producing concerns.(7)

In recent past there have been many advances in health professional’s education (HPE) with the aim to improve the health of populations. One such innovation is the competency based approach which can potentially transform the health status of the population and could also serve as an objective basis for classification of the various health professions (8)

Increased attention is being placed on the competency-based approach as a means for optimizing the preparation of health professionals; it provides a framework for designing and implementing education that focuses on the desired performance characteristics of health care professionals provided that the essential element of competency based approach remains grounded on the needs of local community.(9-11)



3. Objective

3.1. General objective: To explore the perceptions of public health officers on whether the curriculum prepares them for clinical practice in the real environment.

3.2. Specific objective:

- To identify specific curriculum-related gap of public health officers in the area of clinical practice to make recommendations for curriculum improvement.
- To explore the strength and weakness of the curriculum.
- To explore teaching methods used during study time.

4. Methodology

4.1. Study settings

- The study was conducted on eligible health officers at Dale district, Sidama zone. Sidama zone is one of the districts found in southern regional state with estimated number of population 4 million. The Sidama zone has 19 sub district (woredas) and three city administrations.

4.2. Study design

A qualitative study using Kirkpatrick model, level one was employed. Kirkpatrick four-level approach has enjoyed wide-spread popularity as a model for evaluating learner's outcomes in training programs. Its major contributions to educational evaluation are the clarity of its focus on program outcomes and its clear description of outcomes beyond simple learner satisfaction. (13).

4.2.1. Source population

- All health professionals in Dale district, sidama zone.

4.2.2. Study population

- All public health officers

4.2.3. Study unit

- Public health officers with more than 6 month of experiences.

4.3. Inclusion criteria

- Public health officers with more than 6 month experiences and maximum four years
- Public health officers graduated from government universities
- Public health officers working at government health institution

4.3.1. Exclusion criteria

- Public health officers with less than six month of experience
- public health officers graduate of private medical colleges

4.4. SAMPLE SIZE DETERMINATION AND SAMPLING TECHNIQUE

4.4.1. Sampling technique

Among one general hospital and 10 health center in Dale districts, the general hospital and 6 nearby health centers were selected using purposive sampling technique.

The selection was done by considering the number of health centers, number of public health officers and easily accessible areas in terms of transportation and its distance from yirgalem city.

The sampling technique focuses to involve public health officers from various universities who can reflect the different inputs required to meet the set objective.

4.4.2. Sampling methods and procedures

4.4.3. Participant selection

- The principal investigator will consult with the different personnel from sidama zone administration office and sidama zone health office and other key informants to the most efficient ways, to recruit potential participants for the proposed study.

4.4.4. Sample size

- In-depth interview was done until the theoretical saturation of themes achieved.

4.5. Data collection methods and process

4.5.1. Data collection process

These activities included locating a site, gaining access and building rapport, sampling purposefully, collecting data, recording information, and storing data.

Data collection done using semi-structured interview guide with open ended questions. As data collection the most commonly known data collection for qualitative study, In-depth interview, was employed and audio recorded.

4.5.2. Data collection method

As data collection in-depth interview was employed. Investigators was engaged with participants by posing questions in a natural manner, listening attentively to participants' response, and asking follow-up questions and probes based on participants responses. The interviews were conducted face to face and involves one interviewer and one participant.

4.5.3. Data collection tools

As data collection tools interview guide was used for in-depth interview. In-depth interview was selected to ease the environment for the interviewee to express his/her knowledge gap freely.

4.5.4. Role of investigator

The principal investigator was the center of this study, involved in participant selection, data collection, coding, memo writing, data analysis and report writing.

4.5.5. Data management and analysis procedure

On data management process transcribing data from Amharic audio interview to English written document was the primary step. And continued by coding the data using **Atlas.ti** trial version software. The output of the coding was used to write the result of the study.

5. Result

This research was conducted to explore the perceived knowledge gap of public health officers. In order to address the set objective. Interviews were conducted with different participants employed at different health facilities. A total number of 12 participants were interviewed.

Table: 1 characteristic of the study participants, perceived knowledge gap of public health officers, sidama zone, dale district, No.2016

S/n	Participants	Sex		Types of facility		Year of experience	
		Male	Female	Hospital	Health center	<= 2 year	>2 year
1	Participant	7	5	3	9	6	6

Participant of the study become health officers by different kinds of reasons. Some of them become health officers due to their childhood ambition of being any health professional and external pressure. One of the participant stated that *“Since my childhood I had an ambition to become a health professional and the influence of my big sister, who is a public health officer drives me to become who I am today” (Male, PHO, Masinkala health center, 2 years experience).*

Also some participants decided to become health officers after they have realize that the burden of easily preventable communicable diseases in the country. One of the participants stated that *“It was my desire to study public health officer from the very beginning because of some perspectives, like: Most diseases in Ethiopia are communicable and easily preventable and also to undergo researches on public health issues” (Male, PHO, Megara health center, 3 years experience).*

On the contrary most of the participants did not choice public health officer as primary field of study. But they have assigned to study it by ministry of education according to the entrance result. One of the participants stated that *“My first choice was medicine but the ministry of education gave me my second choice, which was public health officer according to my entrance exam result” (Female, PHO, dagia health center, 1 year experience).*

So, I see from the participants on their way to choice the department we can come across two opposite ideas, those are join the department as their primary choice or interest based and those join by Ministry of Education with entrance result of grade 12 or random assignment.

Three themes are emerged from the interview data. These themes encompass the curriculum related gap which results for the perceived knowledge gap of public health officer. The themes are discussed as follow.

5.1. General strengths and weakness of the curriculum

Participant states different kinds of opinion regarding the strength and weakness of the curriculum they have noticed during their study time. There are some ideas which are really different ideas, where most of the participants share the common ideas regarding strength and weakness of the curriculum.

Regarding the strength one of the participant states that: “ *The strength of the curriculum can be told with three categories of content as, the first one is common courses: As for me all the common courses are fundamental and help you somewhere in your health professional life, the second one is public health courses: Public health courses are very essential to know the distribution of disease, its intervention and to do health researches and finally the clinical courses: all the clinical attachments are helpful but in particular surgical skill still ease my job*”(Male, PHO, Buwabadagalo, 3 years experience).

There is another participant who shares the above statements concerning its component of both clinical and public health contents of the curriculum and its benefit regarding increasing the number of health professionals which results in reducing load of patients in hospitals stated that: “*I believe most of the course contents given both in preclinical and clinical years are very crucial, especially for health officers teaching of statics, research, and population development related public health courses*” (Male, PHO, Masinkal health center, 2 years experience).

Another participant stated that: “*Concerning the strength of the curriculum I could raise few points. It equips students with knowledge to manage health centers, health offices and to do*

operational researches. Also training health officers reduce loads of hospitals since health officers mostly work at the health centers”. (Female, PHO, yirgalem health center,4 years experience).

Regarding the weakness of the curriculum some of the participants briefly stated their opinion which they have noticed while passing through the curriculum. Some of the stated weakness results for knowledge gap according to the participants. One of the participants stated that: *“It doesn’t equip you we with adequate knowledge of basic science and these results for not well understanding the major clinical courses like: internal medicine, pediatrics, surgery and gynecology. And also the curriculum lacks clear scope and boundary. As of me health officers should not be clinicians, they should be public health experts” (Female, PHO, Goida health center, 2 and half year experience).*

Some participants also state the weakness regarding the course content of the curriculum and allotted time for clinical attachment in every ward.

One of the participants stated that: *“To mention some of the weakness of the curriculum according to my opinion are: Taking courses like civic which is already given through high school and preparatory, learning as a common course where there is medical ethics and legal medicine for us health students. Most of the lecture is not accompanied by practice except the clinical one” (Male, PHO, masinkala health center, 2 year experience).*

And another participant states that: *“the main weakness I see on the curriculum is there is no adequate time for the internship and allotting very short time for block courses” (Male, PHO, Bera health center, 3 years experience)*

As I see from the participants quote regarding the strength and weakness of the curriculum some points are summarized in the table below.

Table: 2 Strength and weakness of the curriculum.

S/n	Strength of the curriculum	Weakness of the curriculum
1	Strong course content. (common course, public course and clinical course)	It doesn't give emphasis on basic science courses
2	Teaching of biostatics and epidemiology	It lack clear boundary and scope
3	Teaching of research and population development courses	Redundancy of courses which is given through high school like civic and ethics
4	Enables to manage health centers and health sector offices	Some lectures lack practice
5	Increase no of health professionals	

The participants after stating their opinion regarding the strengths and weakness of the curriculum gave their judgment about the program. Some of the participants suggest that every student should get what they want to study. One of the participant stated that *“I can say that, it is good for those who wish to study PHO as their first choice” (Female, PHO, yirgalem hospital, 2 years of experience).*

Participants judge the curriculum as shallow, because it doesn't go deep enough to teach every detail in the course content due to short time of allocation. This results for not having adequate knowledge to overcome the communities health related problem.

One of the participants stated that *“Am not satisfied with the curriculum because it gives you only an introduction for everything, it doesn't go deeper” (Male, PHO, masinikal health center, 2 years of expirirnce).*

Some participants of the study wishes that the public health officers should not be clinicians, since they are not equipped well with clinical knowledge and the curriculum should be redesigned in such away to make public health officers not clinicians rather public health experts.

One of the participants stated that: *“The curriculum should be re designed to make health officers public health experts not clinicians” (Female, PHO, goida health center, 2 and half years of experience).*

On judging the overall curriculum, participants stated different ideas from their experience passing through it. Some participants say that the curriculum is good for those who wish to join the department by choice. Other participants judge that the curriculum should be rechecked and redesigned to make public health officers a public health expert not clinicians.

5.2 Time allocation

Participants listed different opinions regarding the course credit hour allocation. Most of the participants share the common ideas regarding the course credit hour allocation.

One of the participants stated his opinion regarding under considered courses in terms of credit hour like *“the major courses: internal medicine, pediatrics, surgery and gynecology are given only by 7 credit hours during clinical year one. We had very short time in each ward. There was no enough time to grab more knowledge and clinical skill”.* (Male, PHO, masinkala health center, 2 year experience).

Another participant mentioned the basic courses are the bases or foundation for every clinical course but they are under considered in the curriculum.

One of the participants stated that: *“All the basic science courses are under considered. As the name indicates they are the base for other clinical courses. Unless you have them adequately, you won’t make a difference as clinicians”* (Female, PHO, Goida health center, 2 and half year experience).

Some of the participants say that there is some over considered courses in terms of credit hours and others say some of the courses are adequate for health officers. One of the participants states that: *“some of the common courses like both writing and communicative English, civics and information technology are over considered”* (Male, PHO, Megara health center, 3 years experience).

and another participant stated that *“As I mentioned on the weakness of the curriculum especially the clinical courses and ward attachments are under considered in terms of the credit hour, but I cannot say that there is no over considered courses because some are under considered and the rest are adequate in my opinion”* (Female, PHO, Dagia health center, 1 year experience).

So, I see from the participant’s opinion regarding course credit hour allocation, participants stated three opposite idea. The first one is most of the clinical courses including internal medicine, pediatrics, surgery and gynecology and ward practical attachments are under considered in terms of credit hours. The second one is, a few participants stated that some of the common courses like: both writing and communicative English, civics and ethics and computer skill are over considered and took clinical time. Finally as stated by participants some of the public courses are adequate for public health officers in terms of credit hours.

Concerning the credit hour allocation and other parts of the curriculum participants proposed their modification idea.

Participants stated different kinds of opinion regarding modification of the curriculum or parts. Most of the participants raise the issue of duration of the study and credit hour allocation on especially clinical courses and ward practical attachments.

One of the participants stated that: *“All the courses should be given enough time. If it is possible it is good considering increasing the year of study because the students will have enough time to practice and equip with more knowledge.”* (Female, PHO, yirgalem hospital medical college, 2 years experience)

Another participants also share the same idea with the above statement and stated that *“In my opinion the main thing should be modified is duration of the study. The longer the duration is the more you are exposed to practice and clinical knowledge. The other thing there should be strong monitoring of implementation of the curriculum.”* (Female, PHO, Dagia health center, 1 year experience)

Some of the participants expressed their opinion regarding making some modification on the duration and giving more emphasis to the clinical courses and ward attachments because mostly the health officer will be clinicians after their deployment.

One of the participant stated that: *“In my opinion more emphasis should be given to clinical courses and practical attachment since most of the health officers going to be clinicians at district hospitals and health centers” (Male, PHO, buwabadagalo health center, 3 years experience).*

On the contrary other participants did not appreciate those health officer become clinicians because they are not well trained with adequate time. One of the participant states that: *“health officers should not be clinicians; they should be public health experts. In order to do this the public health courses should be given much emphasis” (Female, PHO, goida health center, 2 and half year).*

So, I see that participants gave different kinds of opinion regarding curriculum parts to be modified. Some of the participants raise the issue of duration of the study. They believe that the more they stay the more they get enough knowledge and clinical skills.

Also there are two opposite ideas are raised among the participants on whether the public health officer should be clinicians or not. The participant in favor of public health officers should be clinicians; gave their opinion to modify the curriculum to give more emphasis and time to clinical courses and practical session. On the contrary there are some participants who stated their opinion as the curriculum should be redesigned in a way to make public health officers a public health expert. In order to do this much emphasis should be give to public health courses.

5.3. Teaching and evaluation

There were different kinds of opinion raised by the participant during the interview regarding teaching methods in the curriculum. Different teachers use a different teaching method which is suitable for them and helpful to cover the course content.

One of the participants stated that: *“Most of the pre clinical time passed with boring lectures and it was one way presentation from the instructor; Even Anatomy was given by lectures because there was lack of demonstration rooms, like absences of cadaver. But since clinical year one, the teaching methods become very interesting, Interactive and helpful to grab more knowledge and clinical skills. These methods were bedside teaching, ward round teaching and presenting seminars” (Female, PHO, Yirgalem health center, 4 years of experience).*

Another participant also shared the same ideas with the stated quote especially on methods used during clinical years. All the methods used during clinical years helped students to engage with full attention to grab more knowledge and clinical skill. The methods are very interactive and full of activities.

One of the participants stated that: *“After we started clinical year there was different kinds of teaching methods like: round, bed side, seminar and writing case report. The teaching methods used during clinical year were very nice and it engages all the students” (Female, PHO, yirgalem medical college, 2 Years of experience).*

Some of the participants expressed their feeling towards the teaching methods by comparing and contrasting. As participant mentioned some of the instructors use lecture by describing everything in the course briefly. On the contrary ward teaching are very scary for some of the participants because some physicians teaches by humiliating the students in front of their peer friends. One of the participants stated that: *“There was many types of teaching methods, some of the instructors uses lecture and describes everything for us and I like that. The other method is round and it is very scary because some of the teachers teach by humiliating students in front of their peer friends and I hate it!” (Female, PHO, yirgalem medical college, 2 years of experience).*

So, I see that participants have different ideas towards the teaching methods used in the curriculum. Some of them like lecture due to the instructor do all the teaching and this is also boring for other participants because they don't have any role with out just listening. Most of the participants like the clinical teaching methods because it engages every student to the teaching learning process and few of the participants scared of some of the teaching methods used in the ward because some instructors love to teach their students by humiliating in front of their friends.

Concerning the evaluation methods the study has found different kinds of evaluation methods used in the program. Almost all the evaluation methods are very objective but sometimes on application instructors manipulate the objective to punish the students for their wrong doing. Some of the participants gave their opinion regarding the evaluation method they have noticed during their stay in the program as follow.

Participant from Buwabadagalo health center stated that: *“Most of the instructors evaluate us according to the course outline they gave. They use different kinds of assessment method, from all the methods quiz helped us to be alert and prepared every time. Also there are different kinds of assessment methods were used like written exam, case report and oral exam. I think the oral exam sometimes depends on the mood of the examiner” (Male, PHO, buwabadagalo health center, 3 years of experience).*

Participant from Bera health centers *“I have noticed some instructors tries to have their revenge through exam for conflicts with students” (Male, PHO, Bera health center, 3 years of experience).*

So, I see participants stated that their opinion regarding the evaluation methods during their stay in the study. Most of the participants mentioned that they were evaluated according to the course outline and they believe it was objective. As most of them expressed quiz were very helped them to read every time and be prepared. On the other hand some participants noticed that there were some instructors who uses the assessment tools as a weapon to punish the students for their wrong doing.

6. Discussion

Most developing countries with non physician clinicians or mid-level health professionals, choose their candidates using entrance requirements. In most case the requirement would include the successful completion of secondary school with desired result and BSc or RN with 3-5 years of experience (14).

The finding of research is also similar that, the public health officers join the department through the assignment done by ministry of education based on their Higher education entrance exam result and their choice.

Most of the participant believe that the curriculum is strong due to its course contents (common courses, public and clinical courses), its inclusion of research and population development knowledge, which Enables public health officers to manage health centers and health offices. Finally the curriculum and the program are important because they create opportunities to increase health professionals who can work at health centers which in turn result in reducing hospital load.

The result of this study shows that the curriculum enables the trainees to be competent public health officers to undertake promotive, preventive, curative services. This is in line with one of the objective of the curriculum.

It also enhances the trainee's skills, knowledge and attitude towards the needs of the population and producing health professionals who can conduct problem solving health research, manage health institutions and health offices. (15)

The result of this research found that some weakness in the curriculum. Accordingly the public health officers in the study, the curriculum doesn't give much emphasis for basic science courses. Many trainees believed that a lack of knowledge in the basic sciences contributed to a lack of understanding of the major clinical and related courses, which is one of the contributor factors for knowledge gap in public health officers trainees. The curriculum lack clear boundary and scope of practice, redundancy of courses which is given through high school like civic, basic to computer. It is also identified that some lecture lack practice.

The result of this study revealed that most of clinical and basic science courses are under considered in terms of credit hour. Mostly public health officers works at the front line of health arena at district hospital and health centers. For this reason most participants believe that under consideration of the above courses contributes for the perceived knowledge gap among public health officers.

Regarding the curriculum modification or parts, the majority of participants found to agree on that, the curriculum should focus to make health officers clinicians by giving more time for clinical courses and practical sessions. On the contrary a few participants suggested that the public health officers should be public health experts rather than clinicians.

This could be achieved by redesigning the curriculum to give more time and practical attachments for public health courses. But the objective of the curriculum differs from these findings and incorporates both clinical and public health aspects. As stated in the curriculum the objective of the program is to produce competent Public Health professionals who undertake promotive, preventive, curative and rehabilitative services including management and implementation of PHC services compatible to the needs of the population (15)

Concerning the teaching methods lectures found to be boring for some participants as it is only one way presentation in most of the cases. There are few participants stated that lecture method is very helpful for covering the course contents at the given time.

Other teaching methods which are used in the clinical year 1 and 2 are very interesting and engaging students for the teaching learning process. Almost all the teaching methods mentioned in this study found in the curriculum and not implemented well in practice due to limited resources and lacks of strict follow up of the implementation of the curriculum.

The study found that all the evaluation methods in the curriculum were very strong on assessing whether the students retain the intended course matters or not and these assessments were deemed by most participants as objectively measured. But sometimes instructors manipulated the evaluation tools to punish the students for their wrong doing and thus seemed to lack objectivity.

Study result revealed two findings on the overall judgment of the curriculum. The Majority of the participant judged the curriculum as very good and well designed for those who wish to study public health officer as their primary choice. The rest of the participants judge the curriculum as weak for those, who wish to become a clinician. They have suggested that the curriculum should be rechecked and redesigned in a way to make health officers a public health expert.

7. Conclusion

Based on the result of this study some strength and weakness of the curriculum are identified. Some of the strength is mentioned are strong course content of both clinical and public courses. The main weakness in the curriculum is some of the courses are not proportionally allocated with adequate time and course contents like that of basic science and clinical courses.

Regarding the teaching methods lecture and clinical teachings found to very strong and effective by majority of participants. Also few participants fund the lecture to be uninteresting since its only one way of presentation from the instructor.

The result of the study has found most of the evaluation methods found very objective and told the students at the very beginning of the courses. Except those some instructors who manipulates the evaluation tools to punish the students for their wrong doing.

8. Limitation of the study

- Social desirability bias as the interview was conducted by face to face
- This was a pilot study so results may not be generalizable.

9.Recommendation

Based on the finding of this study, the following recommendation are forwarded for different institutions those have direct and indirect influence on the curriculum development for Public health officers in the Ethiopian context

1. Federal Ministry of Health/FMOH:

FMOH

- There should be strict and strong monitoring system for the implementation of the curriculum.
- Introducing the curriculum from the very beginning to the student.

2. Federal Ministry of Education/FMOH:

FMOE should:

- Assignment of the department should be interest based.
- There should be adequate resources, demonstration room, cadaver room,
- The teaching institutions should own their teaching hospitals

3. For Universities/ curriculum reviewers

- Balancing the content with the allocated time

10. Reference

1. Public health officer curriculum, in ethiopia
2. Mullan, F., & Frehywot, S. (2007). Non-physician clinicians in 47 sub-Saharan African countries. *The Lancet*, Volume 370, Issue 9605 (). Retrieved from http://hsrc.himmelfarb.gwu.edu/sphhs_policy_facpubs/334
3. Fulop T, Roemer MI. Reviewing health manpower development. Public Health Paper 83. Geneva: World Health Organization, 1987.
4. Mullan, F., & Frehywot, S. (2007). Non-physician clinicians in 47 sub-Saharan African countries. *The Lancet*, Volume 370, Issue 9605 (). Retrieved from http://hsrc.himmelfarb.gwu.edu/sphhs_policy_facpubs/334
5. Active learning and teaching for key stage 1&1, p.1
6. Effective teaching, A Guide for educating healthcare providers, Reference manual, Module one, p.1
7. Malaj A, Dias C, Miller S, Galmol E: WHO Regional office for Europe Toolkit for country health work force strengthening. 2012 Accessed from URL: <http://www.euro.who.int/en/what-we-de/health-topics/Health-system/health-workforce>.
8. Julio F, Lincoln C, Bhutta ZA, et al: "Health professionals for a new century: transforming education to strengthen health systems in an independent world". www.thelancet.com published online November 29, 2010 doi:10.1016/S0140-6736(10)61854-5.
9. Gruppen LD, et al: The promise of competency-based education in the health professionals for improving global health. *Hum Resour* 2012,10:43, <http://www.humanresourcehealth.com/content/10/1/43>
10. Leung WC: competency-based medical training: review. *BMJ* 2002, 325:693-696
11. Harden RM: AMEE guide no 14: outcome based education: part 1-An introduction to outcome based education. *Med teach* 1999,21(1): 7-14. Doi:10.1080/0180/0142/51979969
12. Harrison D: pocket Guide to District Health systems. Durban Health system Trust; 2007
13. program evaluation models and related theories: AMEE Guide No. 67
14. Mid-level health worker, the state of evidence on program, activities, costs and impact on health outcomes. Literature review. Uta letemann school of public health, university of western cape
15. Nationally harmonized public health offices curriculum.

11. Interview guide

1. Would you tell me, how did you join the department, please?
2. Do you tell me what do you think the strength and weakness of the PHO, curriculum through your study time?
 - What is strength? How?
 - What is weakness? Why?
3. Do you tell me the course/courses you think over/under consider in terms of credit hour and practice session?
 - Over considered course?time/credit hours
 - Under considered?
4. Would you tell the curriculum parts to be modified, as you were practiced through the curriculum, please?
 - For which and why modification is needed?
5. Would you tell me your opinion regarding the Evaluation methods used in the PHO curriculum?
6. Do you tell your opinion regarding the teaching methods used in the PHO curriculum,from your experience?
 - Strong method/s?Why?
 - Weak method/s? Why?
7. Finally, how would you judge the overall curriculum for PHO officers, please?

መጠይቅ

1 እባክህን የጤና መኮንንነት የትምህርት ክፍል እንዴት እንደገባህ ልትነግረኝ ትችላለህ/ሽ?

2 የስረአተ-ትምህርቱን ጠንካራ እና ደካማ ጎኑን ልትነግረኝ ትችላለህ/ሽ?

- ጠንካራው ምንድን ነው እንዴት ?
- ደካማ ጎኑስ ለምን?

3 በዛ ያለ ጊዜ እና አነስ ያለ ጊዜ የተመደባቸውን የትምህርት አይነቶች ልትነገረን ትችላለህ/ህ?

4 እባክህ/ሽ የስረአተ ትምህርቱ መሻሻል አለበት ብለህ /ሽ ምታስብዉ/ምታስቢዉ ካለ ልትነግረኝ /ልትነግረኝ ትችላለህ/ሽ?

- መሻሻሉ ለምን አስፍለገ?

5 በየስረአተ-ትምህርት ውስጥ ስላሉ የተማሪዎች ምዝና ዘዴዎች ልትነገረን ትችላለህ/ሽ?

6 በየስረአተ-ትምህርት ውስጥ ስላሉት የማስተማሪያ ዘዴዎች ያለህን /ያለሽን የግል ሀሳብ ልትነግረኝ /ልትነግረኝ /ትችላለህ/ሽ

- ጠንካራ ዘዴ ምንድን ነው ?ለምን?
- ደካማ ዘዴስ ምንድን ነው ?ለምን?

7 በስተመጨረሻ ሥርአተ-ትምህርቱን እንዴት ትገመግማለህ/ሽ?

12. Participant recruitment guide line

First a nearby hospital and health center is identified with a potential candidate of study participants. The head of health centers and case team leaders in hospital communicated to select study participants.