



ADDIS ABABA UNIVERSITY

**SCHOOL OF GRADUATE STUDIES COLLEGE OF EDUCATION AND
BEHAVIOURAL STUDIES DEPARTMENT OF SPECIAL NEEDS
EDUCATION**

**CHALLENGES AND OPPORTUNITIES OF THE BLIND IN ACCESS
FOR LABELED PRESCRIPTIONS AND PHARMACEUTICAL RELATED
INFORMATION IN ADDIS ABABA**

BY

ABATE HAILU ABEBE

June,2015

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**A RESEARCH TEHSIS SUBMITTED TO THE SCHOOL OF GRADUATE
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Approval of Board of Examiners

Advisor : _____ Signature: _____ Date: _____

Examiner: _____ Signature: _____ Date: _____

Examiner: _____ Signature: _____ Date: _____

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Acronyms

| | |
|--------|--|
| ACPF | American Society of Consultant Pharmacists Foundation |
| ACB | American Council of the Blind |
| AODA | Accessibility for Ontarians with Disabilities Act |
| CDC | Centers for Disease Control and Prevention |
| ECDC | Eden Center for Disabled Children |
| ENAB | Ethiopian National Association for the Blind |
| ENDAN | Ethiopian National Disability Action Network |
| ICF | International Classification of Functioning |
| JVIB | Journal of Visual Impairment & Blindness |
| MINO | Medicines Information Needs of Older People with Sight Loss |
| NCBI | National Council for the Blind of Ireland |
| OATS | Open Source Assistive Technology Software |
| PWD | Persons with Disabilities |
| RNIB | Royal National Institute of Blind People |
| UNCRPD | United Nations Convention on the Rights of Persons with Disabilities |

Abstract

The aim of this study was identifying the challenges and opportunities of access of labeled prescription and pharmaceutical related information for the blind in Addis Ababa. With the assumption of meeting the purpose, quantitative and qualitative methods were applied. The researcher selected three groups of respondents. They were: thirty blind people, ninety two pharmacists and two key government offices (i.e. Ministry of health and Ethiopian food and drugs control authority). A questionnaire that include demographic characteristics of the respondents, barriers and opportunities the blind have to access for labeled prescriptions and pharmaceutical related information presented in an open-ended, FGD, interview and liker scales were designed. After the data has been collected, analysis was made. Data from the quantitative survey were analyzed using percentages, mean; standard deviations and t-test .While the qualitative using inductive thematic analysis. Thus, the t-test result shows pharmacies are not equipped with medicines with various formats (medicines with audio, tactile materials and Braille writings) that can make access of the blind to such information easier. The study also found that even though pharmacists prove their readiness to assist the blind, lack of equipments and consistent polices remains a challenge .The qualitative findings shows the blind are at risk in their day to day life as a result of missing those assistive aids. This missing information resulted to taking wrong medicines, inability to identify exact locations of medicines and difficulty in getting assistance. The research further established marginalization of blind women is far worse than their male counterparts due to gender-specific challenges. Finally, based on the major findings, the research comes up with recommendations that help overcome the existing problems.

CHAPTER ONE

INTRODCUTION

1.1 Background of the Study

Ensuring the smooth delivery of health service system is manifestation of guaranteeing patients to have all the information they need. Patients may have a lot of query about schedules, medical proceedings, and the services. Therefore, coming back those short comings in convenient way is fundamental.

In this regard, how it is received and delivered takes the maximum possibility of efficiency of the information. Melkote (2008), underscored bringing about smooth flow of communication of ideas, knowledge and skills are vital to make successful decisions.

Though it is a vital element, people suffer lacking access to information for different reasons. For example- gender difference, economic background, disability type and lack of accessibility. Particularly In accessibility of resources cause more challenges to the blind in contrast to their counterparts. Pertaining to the importance of providing the appropriate support, Marion & Michael (2008) ,indicated self reliance of the blind can be fostered through assistive technology.

According to WHO (2012), the effect that is likely to happen as a result of loss of vision has not got due attention particularly when it comes to accessing and following medical prescriptions. It is a big concern particularly in the developing world. This implies the importance of dealing with access of the blind to such crucial information.

Equally, prescription and pharmaceutical information are a major component of health systems. They are central to most aspects of medicine; from primary to specialized treatment (Steve,

2010). Many literatures also argue on the importance of understandable medical information. Pamela (2010) mentioned healthcare organizations should ensure that all medications are provided in clearly labeled unit-dose packages.

Various researches out puts show in Ethiopia, In addition to physical and infrastructural obstacles such as lack of accessibility to buildings and services, access to medicines and pharmaceutical related information remains a challenge as most of them are found in ink print which the blind cannot read. This can also be considered as one of the hindrance for the blind to access for information. This means there is no or tape recorders.

As a result of the inaccessibility to proper pharmaceutical related information, they are getting exposed for various problems. Few of such problems are inability to locate the place of their medicine, taking the wrong one and inability to see production and expiry dates.

On the contrary, recent studies show that new technologies are being introduced to facilitate the information needs of the blind. The recently introduced technology are making ease of access for various sources of reading materials through scanned and converted into Braille (Khoo, 1998).

In Ethiopia, with regards to addressing health care services the five year Growth and Transformation Plan (GTP) indicated the government envisages the realization of better results. The plans shows allocation of adequate budget to ensure sustainable national pharmaceutical and service supplies to health facilities at all levels including 100% of availability of essential drugs at health facilities. Besides, pharmacists were expected to focus on patient oriented service.

As pharmaceutical services are made more available, the health care status would get better on condition that barriers get curbed.

The global data on visual impairment (2010) ,shows there were 39 million blind population and 246 million having low vision in the world. Accordingly there were 805,492 persons with disabilities in Ethiopia of which 94,015 of them are blind and 154,634 have difficulty seeing (CSA, 2007).

The UNDP Human Development Report 2013 discloses the main causes of blindness are cataract (50%), trachoma (11.5), corneal scarring (8%), refractive error (8%) and glaucoma (5%). As for CDC report (2006), by 2030 the number of the blind and visually impaired people is estimated to double. To control its associated hazards, taking preventive actions is vital. In Addis Ababa alone, the total number of persons with disabilities was 32,630 of these 3090 are blind and 4149 are visually impaired. Blasch and Stuckey (1995) stated that the blind by tradition are seen as dependent on others in search of assistance; and this would also be achieved, upon the willingness of others.

The Constitution of the Federal Democratic Republic of Ethiopia 1995 in Article 41(5) substantiates the need to facilitate the necessary services for people with disabilities to ensure the right to access equal service by all citizens.

The United Nations CRPD Convention (2009), Article 1 also utters that promoting, protecting and enshrining full and equal enjoyment of all human rights and fundamental freedoms for all persons with disabilities is crucial.

Ensuring quality health care service, adjusting risky conditions and understanding the benefits of the blind should be the feature of good health care delivery. Beaudin (2011), with the new opportunities however, the challenge are not well curbed. In other words, the availability of technology that creates in dependency may not guarantee of inclusiveness.

Therefore with the assumption of creating conducive environment for the blind, analyzing the existing problem and providing notable solution is fundamental. Information provided on a prescription label in a way the blind can understand is so essential for correct taking of medication. This research intends to identify challenges and opportunities the blind encounters when it comes to access to labeled prescriptions and pharmaceutical related information.

1.2 Statement of the Problem

Fundamentally, the issue of access recognizes the challenges and opportunities to get to the root of possible solutions. The major challenges people with disability face in health services may be economical, social and environmental. For the blind when accessing health care service, the major issue confronting them is getting proper information. American Society of Consultant Pharmacists Foundation (2008), highlighted:

There are many medication safety issues associated with vision loss. Low vision and blindness affect the ability to read prescription labels and information sheets about medications; determine the color, shape and markings distinguishing a medication; or see markings on measuring or testing devices.

Willettts (1997) , indicated that vision is one of the factors that restrict the ability to handle medication. In other words, people with visual disability are more likely to have difficulty in managing medication. That is why it is essential to give due emphasis to possible solutions that can ensure the right to access labeled prescription and medicine related information. Accordingly, the Ethiopian Pharmaceutical Association (2011), stresses providing quality pharmaceutical services could have economic impact particularly, in the delivery of efficient communication and by providing drug information to patients and prescribers. For this, drug

supply management is established to serve as an action for quality pharmaceutical services that have an impact on drug selection, quantification distribution and use. A study conducted by Azenkot (2012) ,recommends it would be safe to use Braille for the blind as it guarantees privacy adding speech output was difficult to hear on a busy street, it compromises privacy, unsafe using headphones because as it requires cues to navigate and understand their surroundings. To this end pharmaceutical service has to be looked from the patient's side.

In Ethiopia as part of addressing such challenges the blind encounters Braille came in introduction in 1924 yet, now days it is limited to schools (ENAB, 2011).

Despite the fact that provision of ease of access has incalculable importance for the blind, public investment in this critical pharmaceutical related issue is currently almost none in the study area.

The availability of this service is instead left to non blind people.

The intervention in the area demonstrates little in the way of effort to bring about facilities for the blind. Therefore, this research goes to identify the challenges and opportunities of the blind in accessing labeled medicines and pharmaceutical information.

To achieve the purpose of the study, the following research questions were generated:

1. What kind of opportunities do the blind have to access labelled prescriptions and pharmaceutical information?
2. What is the magnitude of the problems the blind are facing to secure access to labelled prescriptions and pharmaceutical information?
3. Are pharmacies in Addis Ababa having special and inclusive service to make the blind have access to such information?

4. How far do the current policies & strategies guarantee the rights of the blind to get access to pharmaceutical information?
5. What has to be done to enable the blind to have access to labeled prescriptions and pharmaceutical related information?

1.3 Objectives of the Study

1.3.1 General Objective

The objective of this research is to establish the opportunities and challenges the blind face in their effort to get access to labeled prescriptions and pharmaceutical information, and to come up with solutions.

1.3.2 Specific Objectives

It derives the following specific objectives:

- ❖ Indicate available opportunities for the blind so as to have access for labelled prescriptions and pharmaceutical related information in Addis Ababa.
- ❖ Identify the problems the blind face to access labelled prescriptions and pharmaceutical information in Addis Ababa.
- ❖ Trace the existence of special and inclusive service in pharmacies for the blind to meet their need for proper pharmaceutical information.
- ❖ Examine the existence of policies & strategies that guarantee the rights of the blind to access information of medications.
- ❖ Put forward possible solutions to curb the problems the research will establish in due process.

1.4 Significance of the Study

The study would attempt to investigate the barriers the blind encounter in their bid for properly labeled prescriptions and pharmaceutical related information. And it demonstrates possible solutions. In doing so, the researcher believes, it would have the following significances:

- Serve as an input for health care professionals, pharmaceutical businesses and policy makers among others, regarding the nature and extent of the problem to improve the problems that that the blind face.
- by indicating the gaps suggest remedies to curb the barriers and
- Serve as a reference material for further study

1.5 Challenges of the Study

Irrespective of its strength, the study may have these limitations:

- ✓ As the research entirely conducted in three subs city of Addis Ababa and limited to 30 blind people, it doesn't generalize to all pharmacies and blind people.
- ✓ Some of the participants show little interest to fill questioners. They told the researcher that their participation in previous research undertakings brought no significant change even though orientations have been made.
- ✓ Some considers the researches driven by NGO's and ask for pocket money even though orientations have been made which would also be one factor affect the quality of the response.

1.6 Operational Definition of Terms

The following are definition of terms that are frequently used in the study

- ❖ **Assistive Technology**- A tool, equipment or technical system used by a the blind, aimed at preventing, compensating or alleviating the inability.
- ❖ **Labelled** - distinctive name or trademark identifying a product or manufacturer affixed to packing material which provides the necessary information about a drug.
- ❖ **Prescription**– Any order for drug written or signed by duly licensed or authorized medical practitioner issued to a patient in order to collect drug from dispensing unit.
- ❖ **Medicine** -A drug or remedy used in treating disease or illness.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter comprises various related literatures on the importance of information; its accessibility and challenges to access for the blind.

2.1 The Concept of Blindness

Various sources characterize blindness in different forms for instance in Spungin (2002), indicates Legal visual impairment as follows by considering the visual acuteness of a person:

Blind person: is having visual acuity of less than or equals to 20/200, even if supported with some other optical devices. This means; a person with blindness can see an object at 20 feet whereas a sighted person can see at 200 feet.

Low vision: is a person having visual acuity of 20/70. In other words, there is the possibility to seeing at 20 feet while a person with normal vision sees at 70. In Douglas and Mclinden (2005) identified that there are different features of visual function, such as; visual acuity (the ability to resolve detail), accommodation (the ability to focus), field of vision (the area that can be seen), color vision, and adaptability to light.

Equally it is indicated in PWD Act (1995), “Person with low vision,” as a person with limited function even after treatment or standard refractive correction but who uses or is potentially capable of using vision for the planning or execution of a task with appropriate assistive device. With regards to the limitation to perform a certain activities in Trustees (1997), depicts the limitation of the ability of the individual to read small print, and to some extent of personal and socioeconomic independence. Similarly indicated in Baker (2013), states:

“The term visually impaired persons refers to blind or partially sighted people.....However, when referring to problems of access to published, written works, a more appropriate term would be “print disabled” or “reading disabled “people”.

Other literatures highlighted the existence of individual difference in acquiring information. For instance Bishop (1996), indicates if it occurs during early childhood, the result would be of negative for the development of cognitive and language skills. But if it is after five years, there will be some visual memories. This idea is also shared by Webster & Roe (1998) as visual memory is essential to learn a given process during formation and collections of order to integrate the newly acquired with the earlier life.

All in all in order to come up with the appropriate meaning of blindness analyzing the different forms of vision remains vital. In Willetts (1997) ,indicated human beings absorb as much as 80 per cent of information about in their surroundings through sight.

2.2 The Prevalence of Blindness

Literatures show knowing the prevalence of disability would help to design and implement programs aimed at providing services to persons with disabilities. However there is still a gap to know the number of people with disability.

In order to produce consistent and internationally comparable disability data in Ethiopia, all disability information or data producers need to fully and meaningfully implement ICF and Washington Groups’ standards in collecting and measurement of data collection. However, actors involved in collecting disability data in Ethiopia have not fully used ICF as a model conceptual

framework in their work. Same is true in respect of Washington Group standards.
(ENDAN, 2010).

Adding that there is incompatibility of disability statistics where the prevalence figure WHO's estimate shows 1.85%, 1.09% and 2.95% during 1994 and 2007 Census Reports and the 1995 Survey Report respectively. According to WHO (2011) persons with disability in Ethiopia accounts 17.6% of the population.

While according to the national blindness survey (2006), Ethiopia alone contributes for 2.7% of the total blindness worldwide.

2.3 An Overview of Pharmaceutical Service for the Blind

Dahiyaetal (2102) ,stated now days, the pharmacy profession has shown changes from being focused on managing the production and dispensing of drugs, to being primarily concerned with the safe, effective and appropriate use of medication and enhanced pharmacy services to patients. This implies, public health communication scheme must apply use of effective strategies for the promotion and protection of health. This can be achieved through using the various mechanisms.

At the same time in providing prescription and medicines requires the recognition of patient-centered communication. Within the circumstance of serving the blind, it is important to keep in mind individual differences; some may need prescription drug container labels in an audible format, while others may need Braille, and still others may need large print.

Without having access to prescription labeled information, the blind are at risk of taking expired medications, of not be able to obtain refill in a timely manner, and even unable to detect pharmacy errors(ACB,2013).

In doing so, medical practitioner and policymakers need to be aware of what is known about the benefits, risks and costs of communication interventions aimed at promoting equal opportunity at all level.

2.4 Laws and Policies towards Accessibility

With regards to the importance of laws and policies in accessibility Lawson (2006), pointed out possibilities of equal participation must be created for employment, health and education among others. To achieve these purposes removal of socially created barriers is essential. To this effect various countries introduce policy frameworks. For instance the American Braille Forum, on July 9, 2012, unveils that the country decided the accessibility of medics and prescriptions to blind people aimed at practicing the trend at all level under the law of Food and Drug Administration Safety and Innovation Act (P.L. 112-144, 126 Stat. 993):

In addition it emphasizes the importance of considering individual differences mentioning blind people have diverse preferences. What is deemed helpful and appropriate by one person may not be so for another. Adding the best way to identify the most appropriate way to help a customer is to ask the person how to assist.

According to Marrakesh (2013), facilitating access to published works for the blind or otherwise print disabled is adopted by the Diplomatic Conference in Article 3 which states that ;

A blind or a perceptual or reading disability which cannot be improved to give visual function substantially equivalent to that of a person who has no such impairment or disability and so is unable to read printed works to substantially the same degree as a person without an impairment or disability; requires the use of all possible medical diagnostic procedures and treatments.

2.4.1 International Laws

The UN Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1992) pointed out that facilitating is a means by which ensuring the societal and environmental services, including information and documentation are made available to all particularly to persons with disabilities. The rule number 5 of UN indicates States should;

- ❖ Introduce program of action to make the physical environment accessible; and
- ❖ Undertake measures to provide access to information and communication.

Similarly UN CRPD Convention 2009 Article 1 advocates the value of promoting, protecting and ensuring equal pleasure of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity and article 9&11, mentioned:

Article 9 “To provide disabled persons an independent life and the opportunity to participate fully in all aspects of life, appropriate measures will be taken ‘to ensure to persons with disabilities access [...] to the physical environment [...], to information [...] and to other facilities’”

Furthermore article 11 stated the needs for measures to be taken to ensure the protection and safety of persons with disabilities in situations of risk. Similarly, the Covenant on Economic, Social and cultural Rights (1996) stressed the importance of equalization in social security there by standard of living.

In UNICEF 2013 reported that the recently adopted international agenda ‘the post MDGs disability beyond 2015 agenda’ doesn’t give attention to people with disability in general. Stating the millennium development goals, are not for the most part disability inclusive as a result,

people with disabilities have not fully benefited from many development and humanitarian response.

2.4.2 Ethiopian Laws and Policies towards accessibility

The country has got various policies and standards in a bid to promote the rights of people with disabilities. Such as;

- ❖ The Constitution of the Federal Democratic Republic of Ethiopia 1995 Article 41(5) stipulates the State's responsibility for the provision of necessary rehabilitation and support services for people with disabilities.
- ❖ The 2012 -21the national plan of action of persons with disabilities promotes inclusive society.
- ❖ Labor law no.377/2003, equality of employment opportunity
- ❖ The five years growth and transformational plan (GTP) targeting the years 2010-2015, stress equal access and opportunities to persons with disabilities, Provision of assistive devices and Promotes activities done for people with disabilities among others.

There seemingly an attention is given to equal access of service delivery yet; nothing has been stated concerning health information to blind people. The nation also signed different international conventions. According to Mulatu et al. (2000), the country is signatory of United Nations 2002 Convention on the Rights of People with Disabilities and that signifies the keens of the government to ensure the rights of people with disabilities.

However concerning the implementation a lot still remains to be done. As what it was also raised in disability and risk management conference on October 2013 Addis Ababa the problems are;

- ✓ Formal commitment has not yet sufficiently manifested in action.
- ✓ There are still legislative and policy gaps.
- ✓ There is still a need for harmonizing the domestic law with the content of the convention on the rights of persons with disabilities as required by article 4 of the treaty.
- ✓ Disability laws are more-urban-oriented with little significance to those living into eh countryside and
- ✓ Little policy influence in the private sector.

2.5 Trends in Accessibility of Labeled Prescriptions and Pharmaceutical Related Information for the Blind

2.5.1 Accessibility

Concerning the importance of accessibility in Harshet al., (2008), stated the existence of multifaceted technology plays pivotal role for the ease of information exchange. On the other hand, to enjoy the benefits of the information needs familiarity with those technological advancements and accessibility. Accordingly in Baker (2013), indicated:

“The term visually impaired persons refers to blind or partially sighted people.....However, when referring to problems of access to published, written works, a more appropriate term would be “print disabled” or “reading disabled people”.

Other literatures also highlighted the existence of individual difference in acquiring information. For instance Bishop (1996) mentioned if it occurs during early childhood, the result would be of negative for the development of cognitive and language skills. But if it is after five years, there will be some visual memories. This idea is also shared by Webster & Roe (1998), as visual memory is essential to learn a given process during formation and collections of order to integrate the newly acquired with the earlier life.

OATS (2010), shows the blind face three major problems; Access to print reading materials, moving safely and easily and computers. Creating conducive environment in health service institutions may include; making proper signal, easily understandable information and locate the required direction. Various literatures show accessibility issue in developing countries seems neglected. Kleinitzetal (2012), Health services from around the world are often difficult for people with disabilities to access as many barriers and inadequate processes exist; for example, health services are often hard to reach and people cannot afford the service fees. The negative attitudes of people in the community are often reported by people with disabilities as their greatest barrier. Some health care workers reflect negative attitudes regarding people with disabilities. If the services are not trustworthy and friendly, then people may not come back.

Also Daniel et al., (1997), underscored access of the disabled persons to appropriate services in developing countries is generally inadequate. The estimate of those who get such services is generally less than 3 per cent. Research Commentary on Poor Access to Health Services(2007)also highlighted that weak infrastructure and limited distribution systems in low income countries complicate access to health services Some programs are underway in Ethiopia whose successes do not depend on the availability of strong infrastructure.

Similarly Chernet and Endrerud (2004), even though the prevalence of people with disability is high the provision of services is insignificant. There for the problem in access for information for blind people is likely to be high. As it is mentioned in Nick (2000), when information is provided the possible means needs to be considered. In relation to access for laded prescriptions and pharmaceutical related information the blind encounters many challenges Chamari (2102),

The blind had difficulties in obtaining accurate and safe administration of medicines, some medicine-related mishaps were of a serious nature such as taking acidic liquid instead of the medicine and administering eardrops to the eyes by mistake. Medicine-related mishaps of a serious nature have likewise been reported in the MINOPS study where a visually disabled diabetic was admitted to hospital with hypoglycemia as he had mistakenly taken his fast-acting insulin instead of the slow-acting one because both vials were similar in shape and size.

2.5.2 The Trends of Accessibility for the Blind in Addis Ababa

In Eden Center for Disabled Children (2011), states: Most studies conducted in selected school setting of Ethiopia shows blind students suffer from societal and educational support, in terms of lacking Braille and audio study material, dependency on the sighted in writing class tests and assignments.

Likewise in VSO (2011) ,indicates some educational institutions in Addis are supposed to be resourced to support blind students. However, in practice there is little support for them. More over the blind themselves build support systems with friends and frequently seen walking and travelling around the busy, crowded streets of the capital, where pavements are uneven at best,

and at worst are nonexistent, or with gaping holes and surfaces resembling building sites which they often are. Very recently measures are being taken place to curb those sufferings.

Accordingly, in 2000 in Ethiopia, Adaptive Technology Center for the Blind (ATCB) was established to introduce and facilitate information accessibility to the blind. Since then, it has actively been engaged in ICT training with adaptive technology for the blind and computerized Braille printing projects (UNESCO, 2004).

In a similar move of considering the need for specific HIV/AIDS interventions in 2014 DKT Ethiopia introduced a Braille-based condom use instruction mixed Amharic and Braille Condom Use Instructions. Although these and other client oriented service system seemingly promising to propose the next steps to address health care spending, a lot remains to be done.

However, according to USAID (2011), people with disabilities face many barriers that hamper their inclusion in health care. An important problem is the lack of physical access, caused by limited possibilities for transportation and great distances to services. Other barriers are the lack of accessible facilities, information, materials and sign language interpreters. Further, many persons with disabilities have to do with health providers without knowledge and skills on disability and are faced to a lack of funding or insurance. Eventually, one of the main barriers is the limited awareness in society for disabled people.

Like any one the blind have different requirements and preferences. However, they face many challenges mainly access to social services like education and health. In addition to meet the specific needs of individuals Bernardi (2010), recommends the importance of holistic approaches;

What are the information needs of the visually impaired and in what ways are those needs being met? What is the role of digital information in meeting their needs, and what are the barriers? A literature search revealed a poverty of studies about information needs and information seeking behavior of this group of people.

Similarly Bhargava (2002), in his research identified that blind come to rely on their tactile and auditory senses more, leading to presume that activities around sensing would generate interest for learners. Therefore, creating objects with electronic sensors would lead to thinking about how their own bodies interact with the world around them. Likewise in NCBI (2008), regarding information delivery for customer service indicated, the blind fancy to know about their medical condition and what their treatment might involve. So, while giving the person a prescription, medical certificate or appointment card, it recommends clarifying for the patient. At the time of communication it is important that people to consider accessibility of services and provide appropriate information. A pharmacy named as CVS pharmacy based in America (2014), stated the needs to consider ways of providing accessible medical information;

The pharmacy provides Scrip Talk talking prescription labels The Scrip Talk labels provide a safe and convenient way to access information on prescription labels for individuals who cannot read standard print. The Scrip Talk labels are free to CVS.com pharmacy customers who are blind or visually impaired. Customers can also obtain a free Scrip Talk reader that will enable them to listen to the information on the Scrip Talk label.

2.6 Features that Determine to Create Access for the Blind

Williamson (2000), Independence in information seeking can be defined as the freedom to choose to rely on other, or to use technology or other methods to access information. There is no one particular way of providing information which necessarily assists people who are blind or sight impaired. From this it is possible to say that proper accessibility of information particularly in health service is fundamental. Taking independent movement by itself is can be regarded as one of the challenge faced by blind people. Even they have the possibility to use other means of identifying their environment by through the various senses, social obstacle are seen as hindrance to the development of functional movement.

A survey made by American Foundation for the Blind (2014),about the access to labeled drug indicated, people who had trouble reading prescription or over-the-counter medication information, about 100 individuals likely showed severe negative consequences of unreadable drug labeling information including illness, emergency room visits, hospitalization, additional expense, and increased anxiety.

Irrespective of the importance of access for information as it is indicated in AODA (2005) ,people use various means of searching for information as per their personality and needs. There for it is important to value the complexity nature of information from the perspective of individual difference. Similarly in as to the challenges World Access for the Blind (2013), wrote the blind may got challenges to move freely and comfortably adding as the society restricts movement of the blind individual. In Ethiopia the blind are seen facing many challenges mainly in getting public services, such as education, transport and health service among others. As it is indicated above, like their counterpart has different necessities and preferences. There for,

inaccessible information is can be taken as a major barrier for them to enjoy meaning full way of life. So, well-structured form of information exchange system should be implemented. As it is mentioned in Adaptive Technology Center for the Blind (2008),

Blind people in Ethiopia are suffering from many social inequalities .in the information society of today a very important one is lack of information as well as lack of accessibility to information technology compared to the rest of the society. But like for everyone else accessibility of information and communication technology today is one of the most important core keys for the intellectual ,personal and professional development of a blind or visually impaired person.

The existence of stereotype and wrong attitude may affect interaction among people in any circumstance. The occurrence of this in both the sighted and the blind would result for various psycho social problems. In this regard Hallahan & Kauffman (1991), affirmed in some areas people assume blind people as helpless and dependent. The fact is that with a good attitude and favorable learning experiences blind people are considered as having a strong personality like their counterparts. Inclusion of service delivery is directly linked to the whole marks of service provider's it is also indicated in Shepherd (2012),

societies found to have various problems; A lack of information on what the services offer and their usefulness; lack of knowledge of the rights of persons with disabilities of the services to which they are entitled to, and of existing services; lack of interest in services.

Again it is mentioned in Rhamet et al., (2000), that the negative attitudes of the society are taken as the main challenge for the existence of discrimination against people with disability. Most importantly enabling blind people to have an independent way of life is vital in this regard documents say orientation and mobility is very essential .For Dodds (1988), in defining Mobility: It is the ability to move around the environment safely, independently and efficiently. The skills depend to a great extent on spatial ability .Orientation shows knowing one's position in space and in relation to objects in the environment.

Whereas in Weeraratne (2009), it is recommended that confidentiality is vital in any case that may remain only the affairs of the individual:

Independent access to information is a fundamental element in health care. Blind and partially sighted patients who can't read instructions or prescriptions should not have to choose between having someone else read information for them or doing without the information altogether. This compromises both patient confidentiality and the personal safety of people with sight loss.

In UK (2007), indicated for the blind, health services are more challenging, particularly in appointments, drug information, knowing test results layout of buildings ,proper handling medical information, identifying information and looking others hand to read information compromising privacy. The effect related to in access for labeled prescription and pharmaceutical related information for the blind are many, including pharmaceutical setup, accessible materials and medical information delivery methods. A document of Metrolina Association for the Blind in its annual publication volume 43/2000 states the challenges and option the blind prefer to use where there is no proper accessibility:

Complicating the adjustment to vision impairment is the loss of the ability to read a wide range of print materials that are encountered in everyday life. Bank statements, insurance policies, utility bills and textbooks are just a few of the materials that require reading but are not accessible to those who are blind or severely visually impaired. Without transcription to large print, Braille or compact disc, many visually impaired people are dependent on sighted family members or friends to read these documents for them.

Given that getting assistance of others may not be enough unless the supporter is aware of the way how to help them. Those who do not have an alternative may dare to use medicine by themselves which may exposed them to the extent of loss of life.

People with visual impairment may encounter difficulties at any point in their interaction with healthcare services, from identification of a potential problem to the ongoing management of diagnosed illness. Effective communication and anticipation of difficulties are keys to avoiding and resolving problems.

(Margaret, 2012)

A study made in Sri Lanka in 2012 concerning the challenges blind people encounter in using medicine out of the 63 participants 79% of them who have tried to self-administered medicines came across many problems. Similarly in Pauline (2011), emphasis;

Community based eye health promotion activities should occur in a variety of formats. For example, information can be in writing but use plain language backed up with clear pictures. Also ensure auditory information is delivered, e.g. through radio, TV or announcements in public places where possible. Adding

that when information is delivered in a variety of formats, different members of the community benefit.

Likewise Shepherd (2012),it is indicted that the primary mobility aids used by blind and partially sighted students are likely to be the Guide Dog, the long cane, and personal helpers other technological innovations including tactile maps, various electronic travel aids and personal navigation kits. Inclusion of service delivery is directly linked to the whole marks of Service provider's adding that:

societies found to have various problems; A lack of information on what the services offer and their usefulness; lack of knowledge of the rights of persons with disabilities of the services to which they are entitled to, and of existing services; lack of interest in services.

According to Tirussew (2005),these are all may be due to negative attitudes people have and resulted for the limited accessibility of PWD and not be able to live independently, and even to form a family in Ethiopia.

.Similarly in Sarva S. (2008), noted; *a visually impaired child needs to be trained to use the remaining senses effectively and collect information from the environment. Thus, sensory Training is the training of remaining senses. Blind child does not automatically have a better sense of touch, hearing, smell or taste. The child needs to be trained to use these senses most efficiently.*

In addition creating informative environment in health service providing institutions making proper signal, easily understandable and locate the required direction is important.

Depending on the type of decision to be made (e.g., health/medical, financial or personal), as well as skills and experience, most people with communication disabilities make their own decisions or, like everyone else, they might rely on others for advice. In some special circumstances (e.g., a healthcare or legal setting), you may need to know if the person has a formal supported decision-making agreement that defines the person(s) who can assist in making decisions and a process that fully respects the individual's values, beliefs, experiences and preferences(Accessibility for Ontarians with Disabilities Act, 2005).

In Ethiopia despite the presence of principles, rules and regulation in this issue there are still challenges for the blind in access for labeled prescriptions and pharmaceutical related information.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter encompasses the research method, sources of data, population and sampling techniques, data gathering tools and collection procedures, methods of data analysis and the data collection tools and ethical consideration were discussed in this topic.

3.1 The Research Design

The research design is explanatory called mixed method of both qualitative and quantitative research methods. The researcher employed this to detect occurrence accurately through viewing it from different directions and keep efficiency and well-designed data collection instruments (Key, 2002). In addition key states as explanatory research is used to obtain information concerning the current status of the phenomena to describe challenges and opportunities of the blind in relation to access for labeled prescriptions and pharmaceutical related information.

Explanatory qualitative is for the sake of acquiring relevant information at grass root level and recognize the characteristics of the situation. Concerning qualitative research, in Merriam (1998), indicated it helps to appreciate situations in their exceptionality in a particular context and the associations, rather than predicting the future, therefore it helps to understand the nature of that setting: what it means for participants to be in that setting, what their lives like, what's going on, and their denotation. While, quantitative method is used to measure the incidence of various views and opinions according to (Ashley, 2014). What exists with respect to variables or conditions in a situation, and the method involves description of the status quo and analysis of

correlation. As this study has also focused on, identifying the current practices of the research topic.

3.2 Sample Size and Sampling Techniques

Addis Ababa has ten sub-city and 3 (30%) of them have been involved by applying purposive sampling technique. This is because it provides more detail information to explore the research topic of the city (Carlos, 2003). In addition to this all pharmacies found in the sub-cities were taken as a population since they are closer to the blind and responsible to provide service in action. The pharmacies members such as pharmacists, 30 blind people from the research areas and health experts from the ministry of health and from Ethiopian food and drugs control authority were involved through purposive sampling in the research.

Using the data obtained from Addis Ababa pharmaceutical regulatory bureau of September 2013, the researcher found that there were 64 pharmacies in the three targeted sub cities. Yeka, Gulele and kolfe keranyo were selected as the maximum number of blind people are residing, thus these sub cities were participated through non-probability sampling called purposive sampling technique.

The study incorporates a total number of 124 respondents. Out of the total of 308 pharmacists, 92 which are 30% were involved in this research through simple random sampling, in an effort made by the researcher to include blind people residents of the three sub cities obtaining their exact address became big challenge as a result of this the researcher applied snow ball sampling technique. As Patric (1981), since the sampling made based on refer to behalf of people who know each other and may enjoy same characteristics that are interest of the research. With this technique total numbers of 30 blind people were participated.

There for in order to obtain accurate information all of the pharmacies were chosen using purposive sampling technique. As what it is indicated by Morse (1991), participant selection is based on the study's need to ensure authentic, useful and rich data which represent the phenomenon.

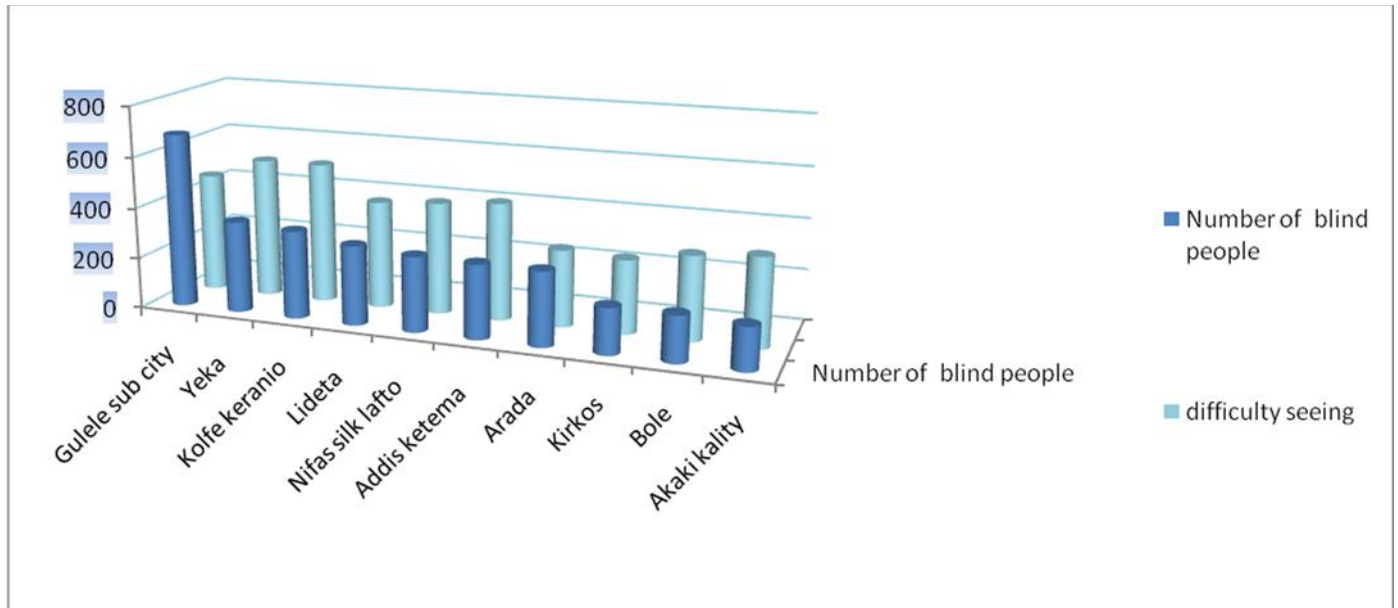
“Purposive sampling is non-probability sampling in which decisions concerning the individuals to be included in the sample. Some type of research necessitates researchers taking decision about the individual participant who would be most likely to contribute appropriate data, both in terms of relevance and depth.”

(Paul, 2013)

Like that of the pharmacies, two expert, one from the ministry of health who is in charge of legal inspection and control office and the other from Ethiopian food and drugs control authority were included through purposive sampling techniques to analyze the national legal frame work related to providing accessibility of health service, since they would have detail information in relation to the country's policy and strategy of the health sector.

For this particular research blind people residing in Yeka ,Gulele and Kolfekerano sub cities of Addis Ababa city administration made involved. The three sub cities are selected as the number of the blind population is high as what it is shown in the graph below.

Graph one: the number of blind population in Addis Ababa



SOURCE: The 2007 Population and Housing Census of Ethiopia

Table 3.1: Total Population and Sample Size

| No | Types of Respondents Total | Population | Sample size |
|----|---|------------|-------------|
| 1 | Sub-city | 10 | 3 |
| 2 | pharmacies | 64 | 64 |
| 3 | pharmacists | 308 | 92 |
| 4 | Blind | -- | 30 |
| 5 | Health legal inspection and control experts | 2 | 2 |
| | Total | 404 | 191 |

3.3 Data Collection Procedure

Prior to data collection the researcher hold talk with ENAB (Ethiopian national association for the blind) as umbrella organization aimed at obtaining relevant information about the different issues in connection with blind people and obtaining the initial address for the success of this research. In order to check the relevancy of the questioner a pilot survey technique was applied among five blind people and three pharmacies. Based on the feedback obtained from the respondents an amendment was made on four questions for the pharmacists and two for the blind people.

For the sake of getting appropriate data from the blind questioners were prepared in Amharic language which is the official work language of the nation and later translated to English language with the help of language expert.

Before, the researcher distributed the prepared questionnaire to the selected samples he checked to ensure the appropriateness of the number of questionnaire, and then distributed it for the selected pharmacists by giving orientation on what and how to fill it.

In order to collect data from the blind the researcher used assistance data collector. The assistance was graduated with diploma in geography from Kotebe teachers training college and experienced in involving to various research undertakings. In addition to this orientation on this research and its importance were given to him. Therefor the interview has been conducted together.

3.4 Data Collection Instrument

❖ **Questionnaire:** - Questionnaire was used as a major tool to gather data, because it is a tool that help to gather data from large number of respondents (James, P. Key 2002). It is a written question in the form of text (Sarantakos, 1993; Robson, 1993) defining it as “questionnaires are written question, which can be self-administered by the teacher or could be sent by mails. Information is offered by the respondent” The researcher used closed – ended and open ended questions prepared and present for pharmacists, since they are able to read and understand the questions and reply in rating form. Because of the above reason the researcher decided to use this data gathering tools.

In order to obtain quantitative data a five scale type of agree, disagree, undecided, strongly agree and strongly disagree type question with 30 close ended items and five open ended questions used. This is to explore respondents’ perceptions of a wide range of socio-cultural impacts and to get an overall measurement of a particular topic, opinion, or experience and also collect specific data on contributing factors. (Bowling, Burnsetal., 1997).

More over it helps to obtain attitudes by asking people to respond to a series of statements about a topic, in terms of the extent to which they agree with them, and so tapping into the cognitive and affective components of attitudes.

Likert Scales have the advantage that they do not expect a simple yes / no answer from the respondent, but rather allow for degrees of opinion, and even no opinion at all. Therefore quantitative data is obtained.

The questioners were filled by a total of 61 pharmacies found in the three sub cities as it is indicate above three pharmacies were involved in the pilot study and excluded in this phase of data collection.

❖ **Interview:** - it is verbal form of data gathering instrument. “Interview is a form of verbal questioning as its principal means of data gathering. It is one of the most popular techniques in research” Robson (1993), the research used unstructured interviews to collect more detail information about the topic. Interview is more meaningful data collection tool in this research, since blinds were unable write and they are usually more willing to talk than write.

For the qualitative data, an interview and focus group discussions (FGD) as a mean for data collection was helpful because it encouraged dialogue and more in-depth discussion of the study problem were used. 15 in-depth Interview questions were presented to the key participant (i.e. blind people) having two parts ;part one to know demographic background information and part two to obtain the challenges and opportunities they have in getting the services. The FGD were attended under two categories of participant 15 to 15.

Key informant interview was also made with officials of Ethiopian ministry of health and Ethiopian food drug control and inspection authority to assess what the respective organizations have done in the area of creating access for the target group.

In addition articles, research reports, magazines, and the Internet were considered.

3.5 Methods of Data Analysis

Descriptive statistics used to measure central tendency and desparation through SPSS 16.0 version of regular and quantitative data analysis statistical packages. The SPSS is applied to generate summary of statistics and making compression analysis.

Data analysis in explanatory mixed methods research relates to the type of research strategy chosen for the procedures (Cress Well & Plano Clark, 2009:218). For the analysis process, the new version, SPSS.16.0 software was used to maintain the large database and is used for the descriptive data analysis. As indicated in the sampling strategy section, the data collected from different sources have been summarized, categorized and coded to suite for analysis. The qualitative or the open-ended and interview questionnaires have been summarized and presented as it is, while the closed-ended questions have been coded and analyzed using mean, percentages, ratio and frequencies. The outputs of the data were presented appropriately depending on the respondents' response. The end result has been presented in written form and in the form of table. Finally, presentation, analysis, and interpretation of data and conclusions and recommendations have been drawn using analyzing and data out comes.

3.6 Ethical Considerations

To ensure ethical issues were observed, the researcher obtained letter of requesting for support from Addis Ababa university department of special needs education that could allow the researcher to gain access to information from GO's ,NGO'S and individuals were believed to be relevant for this research. An interview informed consent letter was distributed to each interviewee to ensure that the willingness of the participants. The researcher explained clearly the purpose of the study to the respondents before conducting interviews and focus groups discussion. To uphold confidentiality, no identity was revealed. All information given orally through interviews was kept within context to guarantee accurate representation. Another issue taken into consideration was the competency and validity of the answers of the participants.

CHAPTERFOUR

4. RESULT

This chapter incorporates analysis and interpretation of data in line with the research questions and presented in different parts.

4.1 Presentation and Analysis

4.1.1 Demographic profile of respondents

The following table summarizes the demographic profile of respondents' by sex, age, educational level and work experience.

Table 4.1:- Socio Demographic of the Respondents

| No | Item | Characteristics | Respondents | | | | | | Total |
|----|--|------------------------|------------------|-----|-------------|-----|-------------------|-----|-------|
| | | | Pharmacists (92) | | Blinds (30) | | Legal Experts (2) | | |
| | | | No | % | No | % | No | % | |
| 1 | Sex | Male | 39 | 42 | 12 | 40 | 2 | 100 | |
| | | Female | 53 | 58 | 18 | 60 | - | - | |
| | | Total | 92 | 100 | 30 | 100 | 2 | 100 | |
| 2 | Age | 20 Years & below | | | 14 | 46 | | | |
| | | 21 – 30 years old | 38 | 41 | 9 | 30 | 1 | 50 | |
| | | 31 – 40 years old | 31 | 33 | 5 | 16 | 1 | 50 | |
| | | 41 – 50 years old | 14 | 15 | 2 | 8 | | | |
| | | Above 50 years | 9 | 10 | | | | | |
| | | Total | 92 | 100 | 30 | 100 | 2 | 100 | |
| 3 | Total year of work experience | Less than 5 years | 15 | 16 | | | | | |
| | | 5 – 10 years | 31 | 33 | | | 1 | 50 | |
| | | 11 – 15 years | 19 | 20 | | | 1 | 50 | |
| | | 16 –20 years | 17 | 18 | | | | | |
| | | 21 years & above | 10 | 13 | | | | | |
| | | Total | 92 | 100 | | 100 | 1 | 100 | |
| 4 | The current level of Education qualification | Below | | | 18 | 60 | | | |
| | | Diploma | 34 | 36 | 4 | 13 | | | |
| | | First Degree | 58 | 64 | 7 | 24 | 2 | 100 | |
| | | 2 nd Degree | | | 1 | 3 | | | |
| | | Total | 92 | 100 | 30 | 100 | 1 | 100 | |

The table 4.1 item one the demographical sex characteristics sample of this study shows that the total sample pharmacists were 92(100 %). Among these females were 53(58 %). Female ratio to

male is around 1: 35, while the rest were 39(42%) of the pharmacists are male. When we come to the second sample regarding to blind residence, the researcher conducts 18 (60 %) were female which is the majority and the rest 12 (40 %) were to male participate in the research and all of them were 30 (100%). Regarding to the legal health inspectors all 2 (100%) was male.

Regarding to samples demography of age it shows the following facts. The sampled pharmacists 38(41%) were aged between and 21 - 30, 31 (33%) were aged between 31 – 40 years, 14(15%) were aged between 41 – 50 years and the list 9 (10 %) were aged above 50 years old. Regarding to the blind residence 14 (46%) were found below 20 years. 9 (46%) were found under the age scale of 21 – 30 years. 5 (16%) were between the age scale of 31 – 40 years, 3 (8%) mean the least were between 41-50 years old. Regarding to the legal experts 1 (50%) was found under the age scale of 21 – 30 years and the rest 1 (50%) was under the age of 31 – 40 years.

As the table 4, 1 item 3 data shows that the total year of work experience of the selected sample population were 15 (16%) pharmacists were experienced less than 5-10 years. 31 (33%) were experienced 5 – 10 years. 19 (20%) were experienced between 11-15 years, 17 (18%) of the sample pharmacists were experienced between 16-20 years and the rest 10 (13%) pharmacists were experienced above 21 years. Regarding to the legal experts 1 (50%) is experienced between 3-10 years and the rest 1(50 %) is experienced between 11 - 15 years. The sample blinds were not requested this question from the uniformly, since they are not provided the information.

On the basis of the table 4.1 about the current level of Education qualification is presented as follow. 34 (36%) sample pharmacists, were diploma holders, the rest and the majority of 58 (64 %) pharmacists also, first degree holder. Regarding to the blind residence and samples of this research were, 18 (60%) were below diploma, 4(13%) were diploma, 7(24%) also first degree

holder and the rest least minority is 1(3%) second degree holder. Here there were a considerable number of secondary school learners and they categorized under below diploma.

The table shows that the majority of sample sex is female, again the leading of age scale of the samples of the study also lays between 21-30 years, according to the above table the samples work experience accumulated between 5-10 years and finally the major samples the current educational qualification is the first degree.

In general, the table shows the respondents constitute a various ranges of representation in terms of age, academic background, work experience and sex. This would help to enrich with different data from various angles and perspective.

4.2. Opportunity Available in Pharmacies for the Blind to Have Access for Labeled Prescriptions and Pharmaceutical Related Information

This table is mainly prepared to check the sample pharmacy pharmacists, understanding about their blind customers regarding to the pharmaceutical service. Mainly to gather information Pharmacists providing services considering individual's differences, ability to obtain, processed understand basic health and medication information and convey important drug and safety information in a manner that can best be understood by each individual patient as well as Pharmacists. Thus the information that are obtained from these questionnaires were contributed a lot to understand the real challenges of blind patients.

Table 4.2 the available opportunity in pharmacies for the blind to have access for labeled prescriptions and pharmaceutical related information

| No | Statement of awareness and perception | Respondents | Mean | SD |
|-----------|---|--------------------|-------------|-----------|
| 1 | The instructions found in labelled prescriptions and medicines are informative | pharmacists | 2.29 | 1.209 |
| 2 | The current way of providing information in pharmacies to blind people is efficient | pharmacists | 2.26 | 1.166 |
| 3 | Medicines are readily available on the basis of accessibility to all an regularly updated | pharmacists | 2.09 | 1.023 |
| 4 | Medicines with assistive aid are accessible at affordable price | pharmacists | 3.71 | 1.104 |
| 5 | I always ask blind people about their preferred format, for example: audio, or brailled text | pharmacists | 2.35 | 1.055 |
| 6 | Instructions on how to use medicines are clearly told to blind people | pharmacists | 4.09 | 1.322 |
| 7 | There is sufficient information service delivery system for the blind | pharmacists | 2.48 | 1.190 |
| 8 | Special consideration is given to blind people in access for labelled prescription and pharmaceutical related information | pharmacists | 2.35 | 1.209 |

On the basis of the table 4.2 item 1 (The instructions found in labeled prescriptions and medicines are informative) the respondent sample pharmacists mean response is 2.29. The scale range of the item is fall in disagree. This show that sample pharmacists of this research do not believe that the instructions found in labeled prescriptions and medicines are not informative. This indicates that, the instructions which are found on the medicine are not appropriate for the blind patient. Thus even if the medicine is available the instruction is not suitable to the blind.

According to the above table item 2 (The current way of providing information in pharmacies to the blind is efficient). Here the sample pharmacist's response mean is 2.26. The item lies on the range of disagree. This show that the pharmacist's responded as the current way of providing information in pharmacy to blind people is not sufficient. Thus we can understand that the blind peoples are not informed about the medicine instruction and related information.

As we can see from table 4.2 item 3 (Medicines are readily available on the basis of accessibility to all a regularly updated). Respondent pharmacist's response mean is 2.09. The response lie on the scale of disagrees. This mean the sample respondent pharmacist's, response show that blinds have lack of available and accessibility to all a regularly updated medicines readily. This indicate that, the sample area blind portion of the society medication and pharmacy need has gap, in order to fulfill their needs.

The above table item 4 questions was about, medicines with assistive aid are accessible at affordable price. The pharmacist's response mean of the item is 3.72. The scale also lie on the range of agree. We can understand from this, the blind peoples have access to medicines at affordable price. Thus it is possible to understand that the blind peoples have not financial

problem or related problem, however the case of accessibility in terms of transport, geographical setting is not concerned here.

On the basis of the above table 4.2 items 5 is regarding to pharmacists trend of asking blind people about their preferred formats for example audio, or brailled text. The pharmacist response mean shows 2.35. The sample response of mean fall in the scale range of disagrees. Thus we can understand that the sample pharmacist have not experience of asking the blind peoples about their preferred formats of communication.

As the above table item 6 is regarding to the instructions on how to use medicines are clearly told to blind people. The respondent pharmacist mean response is 4.09. The item response mean lie in the scale of agrees. This means the sample pharmacy pharmacists instruct their blind customers regarding to how they use medicines clearly. The item inform us the provide order to the blind people how to use the medicine.

Regarding to the table 4, 2item 7 about the situation that access to sufficient information and service delivery system for the blind. For this item the sample respondent pharmacist responded as there is no access to the sufficient information and service delivery system for the blind. Their response mean for the item is 2.48. Their response mean also fall under the scale of disagree. This indicates that there is lack of access to sufficient information and pharmaceutical service delivery system for the blind, which is fulfilling their actual need.

The last item of table 4, is regarding special consideration is given to blind people in access for labeled prescription and pharmaceutical related information for the blind. The respondent pharmacist's response mean is 2.35. This item response mean range is lie on the scale of disagree. This show that the sample pharmacists are not agree with this idea rather they response as

there is no the blind pharmaceutical information needs are not take in to consideration. That is why this is raise as a problem.

The researcher has identified and come up with the following responses for the question forwarded on the accessibility of pharmaceutical related information in a way blind people can make use of without any problem from the total of 30 participants majority of them were responded as there is not a special consideration for the blind. Here are the frequently responded and common responses obtained from the blind. These are the ideas that frequently responded by the interviewed blind samples, accordingly the researcher attempt to put the here ideas as follows;

“From the very beginning every pharmacy runs to earn money. It is inconceivable to expect the availability of medicine with various assistive aids. They do not have time to think about us (blind). So, expecting such a thing from them is foolishness.”

In the same way, they went on saying that it has never and ever heard of medicine in such a kind. Moreover, some of them have doubt on its existence even in developed countries.

This implies that it is difficult to get any service found in pharmacies that come up with a medicine with assistive aid. They were also asked about the extent of the provision of inclusive service and majority of them do not believe the service considers the different needs of individuals. While, with regards to the impact of words in general and treatments in particular to people with disability AODA (2012), reads;

“Words can influence and reinforce perceptions of people with disabilities. They can create either a positive view of people with disabilities or an indifferent, negative description.”

In the meantime the publication of Irish Pharmaceutical Union and the Equality Authority regarding providing appropriate Customer service (2013), shows:

“Like everyone else, people with disabilities want to be treated with appropriate respect and courtesy. Like everyone else, they want to be independent and only seek assistance when it is necessary. At the same time they need to know that if they do ask for assistance they will be facilitated efficiently.”

For a given pharmacy to provide superior service it has to be fulfilled in terms of both human and material resource. Pharmacist as an expert believed to play prominent role in identifying and filling the gaps mainly in the area of providing appropriate medication. Various literatures also reaffirm this.

As patient-centered pharmacists need to understand the challenges faced by patients with low vision and tailor pharmaceutical care to best fit their needs. Evidence-based best practices in labeling and written communication have been developed by the American Foundation for the Blind in partnership with the American Society of Consultant Pharmacists. These recommendations include the use of specific font styles, minimum font size, and other standards known to enhance usability for those with limited vision. (Kathleen, 2013)

In the same way the Agency for Healthcare Research and Quality (2012) states pharmacists should provide services considering individual’s ability to obtain, process and understand basic

health and medication information and convey important drug and safety information in a manner that can best be understood by each individual patient

Generally from the table 4.2 response, it is possible to conclude that, instructions which are found in labeled prescriptions and medicines are not enough informative for the blind to administer accordingly. This indicates that, the current way of providing information in pharmacies for the blind customers is not efficient and effective to use the medicine convenience for the blind. As the information gathered from the pharmacist's, medicines are not readily available on the basis of accessibility to all a regularly updated, however medicines are available with assistive aid and accessible condition at affordable price. The sample respondent pharmacists have not trends of asking blind people about their preferred format communication. Pharmacist's providing clear instructions to blind peoples about how they use medicines and related issues. The study revealed that there is no sufficient information service delivery system for the blind customers and there is no special consideration is given to blind people in access for labeled prescription and pharmaceutical related information.

4.3. The Challenges the Blind Have to Access for Pharmaceutical Related Information in Pharmacies

This table discusses the available information and technological opportunities of pharmaceutical related information for blind in the study sample areas. Sine blinds are visual impaired, they have different special needs, among these basic technological information's and technological and other equipments like jaws system and Braille printing materials are irreplaceable information needs. The table mainly consist questions that are more related to the sample blinds

pharmaceutical information and technological opportunities that makes easy blinds life and their exposure to these.

Table 4.3 summary of challenges the blind have to access for pharmaceutical related information.

| No | Statement of awareness and perception | Respondents | Mean | SD |
|----|---|-------------|------|-------|
| 1 | The service provision related to medicines and pharmaceutical related information brings no barrier to blind people | pharmacists | 2.25 | 1.173 |
| 2 | There is no high cost of assistive aids to equip pharmacies, for example: audio, or brail text | pharmacists | 4.09 | .780 |
| 3 | Even if there is assistive aid for information it is challenging for pharmacists to manipulate (brail, audio.) | pharmacists | 2.17 | .885 |
| 4 | Blind people have a lesser level of understanding to instructions given by pharmacist | pharmacists | 1.92 | .975 |
| 5 | Lack of assistive technology for blind people is not a problem for information | pharmacists | 1.91 | .898 |
| 6 | The health facilities are not well equipped to implement inclusive | pharmacists | 1.65 | .543 |

| No | Statement of awareness and perception | Respondents | Mean | SD |
|----|--|-------------|------|-------|
| | health information service | | | |
| 7 | It is difficult to know the type of information needs of every blind people | pharmacists | 2.40 | 1.120 |
| 8 | There is lack of knowledge among health experts to provide medicines with assistive technology for the blind | pharmacists | 2.12 | 1.239 |

As the table 4.3 item 1 indicates the service provision related to medicines and pharmaceutical related information brings no barrier to blind people. The sample pharmacists' response mean was 2.25. The response mean lies on the scale range of disagree. This means the sample blinds of this study were not provide services of medicines and pharmaceutical related information and the sample respondents are not accessed to blinds are exposed to different challenges.

On the basis of the above table item 2, (There is no high cost of assistive aids to equip pharmacies, for example: audio, or brail text) the respondent sample pharmacists response mean is 4.09. This indicate that the sample respondent pharmacists believed that blinds have no assistive aids pharmacies equip to like audio or Braille text, which is suitable to the blind users and it may need high cost. This is a problem that leads the blind to wrong or inappropriate applying of the medicine. This effect for the negative impact on the health of blind or the treatment may lack curacy.

As we can see from the table 4.3 item 3 which is about available of assistive aid for blind medicine information and it's challenge for pharmacists to manipulate (brail, audio). The sample pharmacist's response mean is 2.17. The item mean range is lies on the scale of disagree. This show that the blind pharmacy customers are not access to assistive aid for information and even these equipment's were existed pharmacists challenged to manipulating and to understand (brail and audio). This is one of the challenges that blinds encountered to the accessed medicine services.

On the table 4, 4 item 4 is regarding to blind people have less understanding towards the understanding of instructions that are given by pharmacist. The sample respondent mean response is 1.92. The response mean range also lies on the scale of disagree. As we can understand from the respondent response blind people have less understanding towards the instructions that are given by pharmacists'. That is why blind peoples getting problem from on the medicine services.

Regarding to table 4.3 items 5 about, lack of assistive technology for blind people is not a problem for information. The sample respondent pharmacist's response mean is 1.91. The mean lie on the scale range of disagrees. This gives clue that sample blind people have lack of assistive technology for problem of medicine information. thus one of the problem that the researcher understand from the collected data, absence of assistive technology for blinds affect their life indifference way including their medical treatment.

According to table 4.3 item 6, health facilities are not well equipped to implement inclusive health information service. The mean response of sample pharmacists mean response is 1.65. The item response mean fall in the range of disagree. The response mean is 1.65. This item scale

range is lie on disagree. This shows that blind pharmacy customer's health facilities are not well equipped and implementing in inclusive service. Actually providing inclusive health services responsibility of all health centers and pharmacist. However this may need developed economic and social responsibilities with well trained persons.

As we can see from the table 4, 3 item 7. Difficulty of identifying type of information that, needs by every blind people. The sample respondent mean response is 2.40. The item means is lie on the scale range of disagrees. This indicates that the sample respondent pharmacists were responded as it is not difficult to understanding blinds idea or needs regarding to the health service that they need. Since, it is possible to communicate verbally. Even if the full communication if not depend on only on verbal way.

Based on the table 4,3 item 8,. The respondent sample pharmacists mean response was 2.12 and the item scale range lies on disagree. This means the there is no lack of knowledge among health experts to provide medicines with assistive technology for the blind if the technology is available. This clearly shows that the sample respondents were willing and able to use as well as provide medicine treatments.

Generally, the above table clearly show the, there is problem and barriers of service process provision related to medicines and pharmaceutical information, thus the pharmacists were expected to provide full treatment through informing well their customers regarding to their services. The study revealed that there is no high cost of assistive aids to equip pharmacies, for example: audio, or brail text. This possible so as to fulfill, if there is a commitment and understanding about special need science. Pharmacists are willing to manipulate assistive aid, even if there is information it is challenging for (brail, audio.). One of the barriers was among the

blind peoples have somewhat lesser level of understanding to instructions given by pharmacist, this is mainly due to the concept that is describe to them or due to the person absence of expressiveness. Lack of assistive technology for blind has not a problem for information and health facilities are not well equipped to implement inclusive health information service, in order to provide equity service in the sector. It is difficult to know the type of information needs of every blind people and there is lack of knowledge among health experts to provide medicines with assistive technology for the blind.

4.4. The Existence of Special and Inclusive Service in Pharmacies for the Blind to Get Proper Pharmaceutical Related Information

Here this table questionnaire is mainly related to the problems of pharmacists and their service delivery. This table was served to examine the blind people's pharmaceutical problems and their challenges relation to pharmacists training; skill, service delivery method, psychosocial and the availability of the equipment are treated here under. Considering and to looking the blind people's pharmaceutical problem in different dimensions is very important.

Table 4.4 the existence of special and inclusive service in pharmacies for the blind

| No | Statement of awareness and perception | Respondents | Mean | SD |
|----|--|-------------|------|-------|
| 1 | Pharmaceutical services are people cantered approach | pharmacists | 3.97 | 1.094 |
| 2 | Trainings given for health experts include skills needed for the provision of inclusive service | pharmacists | 3.43 | 1.377 |
| 3 | Professionals trained in inclusive health service alone meet the needs of blind people | pharmacists | 2.49 | 1.330 |
| 4 | The barriers of blind people in access labelled medicines and pharmaceutical related information are well identified | pharmacists | 2.15 | 1.068 |
| 5 | Providing special support to blind people result to negative psychosocial development | pharmacists | 2.03 | 1.010 |
| 6 | The health facilities are not well equipped to implement inclusive health information service | pharmacists | 3.71 | 1.209 |

On the basis of table 4.4 item 1, about pharmaceutical services and the method of their service delivery approach. The sample respondent pharmacist's mean response shows 3.97 and the item mean response fall on the scale of undecided. However the mean response is very close to agreed. Any way the item response indicate that, respondent have doubt regarding to their services are people centered approach or not. Since pharmacies a social service centers they are expected to be providing services following public centered approach. However, the gathered response from the collected data result show that is slightly odd from this fact.

According to the table 4, 4 items 2 is regarding to pharmacists trainings experience and needed skills regarding to provision of inclusive service. The sample respondent mean response is 3.43. The item response mean result lie on the range of undecided scale. This shows that trainings are not provided uniformly for pharmacists regarding to include skills needed for the provision of inclusive service for peoples those who have special needs. As we can understand from the response that some of the respondent got the training but still the training is not provided for all sample pharmacists.

According to table 4.4 item 3, Professionals trained in inclusive health service alone meet the needs of blind people. The respondent mean response is 2.49, and the item scale fall under the range of disagrees. This clearly show that the professionals trained in inclusive health service alone ca not meet the needs of blind people pharmaceutical problems, since the problem has attachments to infrastructure, attitude and equipments and the like, beyond the training.

As table 4.4 item 4 depicts, the barriers of blind people in access labeled medicines and pharmaceutical related information are well identified. The sample respondent mean response mean is. 2.15 The item response mean also lie on the scale range of disagree. Thus it is possible

to understand from the sample respondent response that, the barriers of blind people in access labeled medicines and pharmaceutical related information are not well identified. This means the blind peoples pharmaceutical problems are not well identified by the responsible bodies; this is one of the problems that affect the blinds people service provision.

Regarding to the above table item 5, providing special support to blind people result to negative psychosocial development. The pharmacist's response mean is 2.03. The item scale range lie on disagree. This clearly indicates that providing of special support for blind people cannot be produce negative psychosocial result or development. Because blinds are visual impaired, thus they have special needs, so providing kind and appropriate support considering to their actual needs is important and build positive thought rather than negative psychosocial development.

Table 4, 4 last item is regarding to, lack of health facilities well equipped to implement inclusive health information service. the respondent mean response is 3.71 and respondents also agrees with is item as health centers are not well equipped with important facilities to implement inclusive health service and information service. This item informs that the health centers facilities by themselves have limitation and affect the services which are provided there.

In an interview made almost all of them depict in one way or another they are always at risk. To mention few, out of the 30 respondents they got exposed for unconditional health problems as a result of taking the wrong medicine, in appropriate dosage and not to take on time. Among the conducted interviews and among the most frequently reflected ideas presented as follow.

“I remember a doctor ordered me a liquid type of medicine to be taken using a spoon. Yet I couldn't find a spoon nearby and took it as it is.”

ትንሹ ኮዳ የምትመስል ስለነበረች ቀስ አድርጌ ለመጠጣት ሞክርኩ ከስምንት ሰዓት ቆይታ በኋላ የሚደገም ስለሆነ ሰዓቱን ጠብቄ የአጎቴን ልጅ እንዲሰጠኝ ስጠይቀው ለካ የጠብታ መጠኑን አልፎአለሁ መሰለኝ ከግግሽ በታች እንደሚቀረኝ ነገረንኝ So, I took over dose and exposed for gastric”.

The other interviewer also “Just a month now I had had a medicine to be taken every eight hours interval, unfortunately in one of those days no one was around and I couldn’t take the medicine on time.”

Generally the researcher collected data revealed that the sampled interviewed blind responded regarding to, their challenges they listed down the challenges according to their frequency as follow, *taking someone else’s medicine, taking a receipt to the pharmacy instead of the prescription and the like were responded by the blinds.*

As to the respondents the above consequences is mainly due to the inability to use medicines independently. As to the need for support and follow up from the sided of pharmacists a study conducted by Shleagh (2002), shows;

“The one out standing finding of this study is the lack of initial counseling and support for people facing serious and permanent sight loss. Seventy percent wanted someone to talk to about their concern.”

In addition from the response obtained for the interview questions from the total of 30 respondents 24 of them said given that the likely of the problem they take medicines

alone. Of those respondents, 5 of them stated that those who got blindness after birth can easily identify medicines.

There is a clear difference between those who are blind from birth and those who developed blindness later; as it is mentioned in Ifan Shepherd (2001);

Those who has been blind from birth is more likely to have developed mature adaptive mechanisms, whereas someone who has recently become blind may still be learning to cope, and therefore require considerably more support and assistance while undertaking fieldwork. Another difference lies in the development of spatial concepts. Congenitally blind children, for example, may find it more difficult making sense of tactile maps than adventitiously blind children, because they have not previously acquired spatial awareness through visual interaction with their environment.

The discussants also expressed their fear that even if medicines are prepared in such a way supported with brail; those people who do not have the skill would face challenges. It is also indicated in Alessandro, Emilio (2013);

Braille is very useful for identifying objects and transposes information but it remains a technique limited by the high rate of illiteracy in the present population of the blind. In the last decade, electronic devices have been introduced into the world of the blind in order to facilitate the lives of these people.

Similarly it is also indicated in Sudhir and Ashok,et al., (2008) indicated;

The most important aspect of social support extended to a blind person. After the family comes the role of friends and relatives and the community as a whole. Social support to the blind includes: Accepting them as a useful part of society. Encouraging them to participate in social functions, providing them proper guidance and advice, Giving them physical assistance by sharing their tasks. Helping them regain their self-esteem and relieving them of their attitude of self-pity etc.

In an interview made regarding the technique how they used to handle medicines by themselves. the sampled blind responded the following,

Some of them responded as; “whenever they buy more than one medicine, they try to recognize them using their shape. But, if they are of the same shape, they will ask pharmacists to tag one of the them using a plaster”

Most of them responded as; “most people think that blind people unless they got assistance from others do not have the ability to identify things .this is wrong assumption we have unique ability to perceive our environment easily. Concerning medicine usage, for example: if it is just like aspirin by counting its number, if it is in a glass and more than one with the same shape by putting in different places.”

But for some of them challenge rate is more difficult related to the assistant skill, knowledge and knowhow to provide assistance.

“For some of them the biggest challenge is getting others assistance because their families are not educated and can’t help them through reading instruction .there for they dare to use it by theme self, they do not bother about the consequence.”

On the whole, the above response identifies the lack of accessibility of labeled prescriptions and pharmaceutical related information remains a daunting for the blind.

Furthermore the qualitative assessment in an open ended question forwarded to pharmacists revealed the presence of similar challenges. Here is a response obtained from one pharmacy;

“most of the time they receive problems from the clients side related to getting exposed due to exchanging medicines and taking over the prescribed amount.”

In a similar case study conducted in Glasgow (2004), shows;

Measuring the ability of people with various visual acuity abilities to read the directions on an eye drop bottle identified ; comprehension and adherence of older patients with a best visual acuity reading of 20/60 (6/24 meters) to 20/80 (6/24 meters) were significantly improved if the labeling was printed in 22-point Arial font. Currently, most prescription directions are printed in a font size that is two to three times smaller than this 22-point Arial font.

Generally, the followings are obtained result from the table. The collected data assure that, the pharmaceutical services are not providing through people centered approach. Since, the respondent exported doubt regarding to their service. Trainings are very important thing in a given professional life's. However, the data obtained from this research revealed that, as there is no provided training for health experts regarding to, skills needed to the provision of inclusive

service in order to meet the needs of blind people. Information that this research provide is blind people have not well identified access to labeled medicines and pharmaceutical related information. This by itself makes difficult the problem in terms of providing immediate solutions. Providing of special support for blind people cannot be produce negative psychosocial result or development. Because blinds are visual impaired, thus they have special needs, so providing kind and appropriate support considering to their actual needs is important. Health centers are not well equipped with important facilities to implement inclusive health service and information service. This is affecting the service level and the quality of blind peoples and the rest.

4.5. The Existence of Policies and Strategies that Guarantee the Blind to Have Access for Labeled Prescriptions and Pharmaceutical Related Information.

This table is aimed to collect important information regarding to the country policies and policy issue related activities. the table consist the following basic ideas, the policy promote need of blinds, guidelines of disability inclusive service, awareness of policy makers regarding to blind people's needs and the like related issues. Hopefully this table clearly provide information regarding to the country health sector policies regarding to blinds.

Table 4.5 the existence of policies & strategies that guarantee the rights of the blind to access information of medications.

| No | Statement of awareness and perception | Respondents | Mean | SD |
|----|--|-------------|------|-------|
| 1 | The existing policy clearly identifies and promote the need for information to blind people | pharmacists | 2.89 | 1.236 |
| 2 | There are guidelines to implement disability inclusive service in pharmacies | pharmacists | 2.84 | .975 |
| 3 | Less attention is given to promote the provision health information service to blind people on the side of pharmacies | pharmacists | 3.96 | 1.185 |
| 4 | There is ignorance about blind people mobility on the side of stakeholders(policy makers, health experts, pharmacists) | pharmacists | 3.41 | 1.344 |
| 5 | There are challenges to implement the policy on information needs of blind people. | pharmacists | 3.64 | 1.314 |
| 6 | Assisting blind people is an extra work load to pharmacists | pharmacists | 2.11 | .943 |

As we can see from table 4.5 item 1st, is about, the existing policy identification and promotion to the needs for information to blind people. The sample pharmacist's response mean is 2.89. Thus item is lie on the scale range of agreed? This indicate clearly that, the existing policy identify and promote to the needs of blind people. Thus the policy has stated and promote about the blind people. Thus the country health policy have not leached regarding to these special need portion of the society, what matter is the implementation.

On the basis of the table 4, 5items 2 is regarding to availability of guidelines to implement disability inclusive service in pharmacies. The item respondents response mean is 2.84 and the scale range lie on undecided. These mean the sample respondents have very limited information regarding to the item. Thus even if, the guide line is exist most respondents have not information regarding to this. For the professional practice guideline is more important in order to guide the profession with responsibility. Availability of guide alone can't be guarantee for the effectiveness of the guide; rather it needs introduction and providing trading on it how it implemented.

Regarding to table 4, 5items 3 is about, less attention is given to promote the provision health information service to blind people on the side of pharmacies. The sample pharmacist response mean is 3.96. The scale range also lie on agrees. This mean the concerned party does not provide appropriate attention regarding to the careless attention is given to promote the provision health information service to blind people on the side of pharmacies.

The above table item 4 is, about, there is ignorance about blind people mobility on the side of stakeholders (policy makers, health experts, pharmacists). The respondent sample response is 3.41. The item mean response scale lies on the range of undecided. This show that the ignorance of acknowledging of policy makers, health experts, pharmacists the blind residence mobility on

the side of stakeholders. As the gathered information show that pharmacists have doubt about this fact, however the blind people have very surprising mobility skill if the situation is arranged.

Regarding to table 4.5 items 5, there are challenges to implement the policy on information needs of blind people. The sample pharmacists response mean is 3.64 and the item mean lie on the scale of agree. This show there is various challenges that hinder to implement according to the policy and providing information those needed by the blind people.

Based on the above table, item 6, assisting blind people is an extra work load to pharmacists. The respondent sample pharmacist's response mean is 2.11. The item also fall between the scale ranges of disagrees. This clearly indicate that the pharmacists are ready to assisting blind people properly with positive attitude than considering it as extra work load.

Responses obtained from the FGD held with the blind shows the activities remains insignificant. A response from FGD –A regarding to, current policies & strategies guaranteeing the rights of blind people to have access for information in pharmacies

"ስለኛ መብት ስና ግዴታ የሚጠነቅቅ ማን ይመስለዎል? ስብሃኞቻችን የምንገነዘበው ስንደሴሳው ስው ተመሳሳይ መብት ስንዳለን ነው"

Who do you think cares about teaching us our right and responsibility? Many of us understand we are all equal.

ስለ ስካልጉዳተኛ ሰዶ ደጋፊ ስለ ስየተባለ ይወራሪ ስንጂ ምንም ስደነት መብት ስንዳለን ስንኳን በደንብ ስባቀም

I heard about the presence of special support to people with disability yet, I have no idea to the very specific disability right.

From this it is possible to conclude that it is crucial to create awareness on the rights of people with disability particularly the blind. A hand book of disabilities 2013 in its publication on blindness & low vision stress the importance of introducing any societal undertakings to blind people says;

“The person needs to be aware of all the resources available through independent living centers, advocacy groups and federal programs like social security issues”.

While a document obtained from the ministry of health under the Health Sector Development Program IV (HSDP IV) for the period 2010/11 to 2014/15 incorporates the objectives to democratize and to increase access to medical care, to improve quality and to decentralize health care. Regarding the provision of equal health service to all people in an interview made with an expert from ministry of health the policy inspection directorate said the national policy framework prepared in 19 95 entails as it is the right of all people to be served equally.

However, he said there is no policy that to the very specific indicates the right of accessibility of health information to people with disability in general and to the blind in particular. The experts also noted given that, as the current national health policy framework is expected to be amended by 2015 and expected to include the specific needs of people with disability.

Similar interview was also made with medical accessibility inspection expert of Ethiopian food, drug inspection and control agency. The expert indentified that the issue has never been given attention and pointed out the problem goes to the policy makers. This implies that there is a gap in the national policy to ensure the right of accessibility of health service for the blind. Different

literatures assert the role of the society and institutions to curb related problems. In Sharma and Bhavnaetal, (2008) ,indicates;

The most important aspect of social support extended to a blind person. After the family comes the role of friends and relatives and the community as a whole. Social support to the blind includes: Accepting them as a useful part of society. Encouraging them to participate in social functions, providing them proper guidance and advice, Giving them physical assistance by sharing their tasks. Helping them regain their self-esteem and relieving them of their attitude of self-pity etc.

In the same manner In Singh (2012); *Organizations for the blind are extremely important in disseminating information which is printed and family and friends are, as always, information sources. While a consumer society often stimulates more choice through competition, it also tends to converge on ways of disseminating information which are the cheapest. It is becoming clearer to many (**particularly government departments**) that it is cheaper and more convenient to provide information to the public.*

Likewise CDC (2006) stressed that, *Public health programs aim to prevent diseases and conditions by promoting healthy lifestyles, changing the health system to encourage appropriate provider and patient behaviors, and modifying environmental determinants. Programs, policies, and systems changes should focus their priorities among all the life stages to increase awareness of vision*

health and vision disorders, prevent unnecessary vision loss, and increase access to care.

In this case the two state owned institutions are supposed to play prominent role in addressing the gap seen in ensuring equal access for health information service. Equally

Generally on the light of the provide questionnaire and collected data the following conclusions are produced. The collected data from the purpose of this research revealed that, the existing policy clearly identifies and promotes the need for information to blind people is still need improvement. Another one of important information that, this study discloses that is pharmacies is not clearly informed that weather there is guidelines to implement disability inclusive service in pharmacy or not. The sample respondent responded as there is reluctant attention is given to promote the provision health information service to blind people on the side of pharmacies. This becomes challenge to make the effective inclusive pharmaceutical services in the study area. There is ignorance about blind people mobility on the side of stakeholders (policy makers, health experts, pharmacists) this is clearly shown on the collected information. The matter of policy implementation has very factors that contribute as a permissive of as hinders to be implemented or not. Like this the collected data informed as there is various challenges that hinder to implement according to policy and providing information those needed by the blind people. Finally the collected data pass information as; pharmacists are ready to assisting blind people properly with positive attitude than considering these activities as extra work load.

4.6. Possible Solutions to Enable the Blind Have Access for Labeled Prescriptions and Pharmaceutical Related Information

This table discuss the following two key questions regarding to assistive materials and its access for the blind. Since this questions provide valuable information in order to determine the future life of the blind.

Table 4.6 activities needed to be done to enable the blind have access for labeled prescriptions and pharmaceutical related information

| No | Statement of awareness and perception | Respondents | Mean | SD |
|----|--|-------------|------|-------|
| 1 | Blind people need assistive materials | pharmacists | 4.27 | .757 |
| 2 | The needs of blind people can easily be fulfilled. | pharmacists | 3.03 | 1.124 |

As it can be seen from table 4.6 item 1 and 2 (Blind people need assistive materials and the needs of blind people can easily be fulfilled.) the mean response of respondent for item 1 and 2 are 4.27 and 3.03 respectively. These items scale lie on the ranges of agree and undecided respectively. This means the first item indicate that, blind people needs various assistive materials like jaws and printing Braille, which are basic assistive materials for the blind. To make their life easier and to create good communication with their surroundings these materials are needed. Regarding to the 2nd item is about fulfilling of blind people needs easily. For this question the pharmacists responded as they have not clear and well known information about the issue. Actually fulfilling the blind people needed materials are somewhat not easy easily.

Likewise in an open ended question given to pharmacists in this regard majority of them mentioned the value of trainings and courses related to inclusive education. According to them it would further help to provide best service by identifying the diverse needs of people and strengthen smooth relationship with them. Here are some of the responses were reflected like this:

*“Had we not taken such courses, my pharmaceutical service would have faced a bankrupt. All the time we receive constructive comment from my clients. We have got clients from all walks of life including elders, **disabled people**”.*

Another respondent has this to say;

“The courses we took in different times were all recommends treating people equally, so now we are applying it and become considerate.”

One pharmacist in his response mentioned that he took special need education at diploma level in teachers training institute said that as a pharmacist it helps him to know how to service people according to their needs and interest: one of interviewed respondent stated as,

“People may think that experience and age is the most important thing to learn the world, but for me it is not enough. Experience has to be aligned with education. If you take a pharmacist it is not an office work you just to do your job in closed environment, but you always meet different people having different behavior. So, you have to have better knowledge to fulfill their needs based on their interest.”

Meanwhile related question was also forwarded for the blind. The response obtained from both of the FGD recommended that in order to avoid hindrances, there has to be well organized policy and strategy at all level. From this it is possible to conclude that creating awareness, implementing feasible policy and promoting accessibility among others in different areas is critical.

Generally Blind people need assistive materials, thus blind people need various assistive materials like jaws and printing Braille. The needs of blind people can easily be fulfilled which are basic assistive materials for the blind and for this question the pharmacists responded as they have not clear and well known information about the issue.

Table 4.7 Sample t-test on regarding the current policies on the accessibility of pharmaceutical related information for the blind.

| | Test value =0 | | | | | |
|--|---------------|----|----------------|-----------------|---|-------|
| | t | Df | Sig.(2-tailed) | Mean difference | 95%confidence interval o the difference | |
| | | | | | Lower | upper |
| The existing policy clearly identifies and promote the need for information to blind people | 38.126 | 39 | .000 | 4.525 | 4.28 | 4.77 |
| There are challenges to implement the policy on information needs of blind people. | 58.06 | 39 | .000 | 4.35 | 4.24 | 4.63 |
| There is ignorance about blind people mobility on the side of stakeholders(policy makers, health experts, pharmacists) | 38.126 | 39 | .000 | 4.425 | 4.19 | 4.66 |
| Assisting blind people is an extra work load to pharmacists | 92 | 39 | .000 | 4.950 | 4.885.02 | 5.02 |

The table above indicates the equality of variance and the actual t-test for significant mean difference. As can be seen from the table, the p value is 0.000. The mean difference is found nearly between the upper and the lower range. And also the data shows the respondents are free from personal bias.

From the table it is possible to infer that the exiting policy and the ignorance on the side of concerned stake holders significantly affect the delivery of proper pharmaceutical information for the blind.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with summary, conclusions and recommendation. In the first case a brief summary of the study is presented. The next section deals with the major findings and conclusions. The last part presented possible recommendations that the researcher believed to be solutions to the observed problems.

5. Summary

The study was aimed to assess the opportunities and challenges of blind residence have to access for labeled prescriptions and pharmaceutical related information in the study sub - cities of Addis Ababa and come up with relevant solutions. Even if, the blind are facing problems in various life aspects related accessed to services, this thesis focus on the pharmacy services. Assessing the blind residence of Addis Ababa sub - cities challenges of pharmaceutical access, the service information mainly related to medicine instruction, dose and communication with the pharmacists are the center of this thesis concentration.

Accordingly basic questions were set as , What kinds of opportunities are available for the blind so as to have access for labeled prescriptions and pharmaceutical related information?, What is the magnitude of the problems that the blind are facing in access for labeled prescriptions and pharmaceutical related information?, Do pharmacies in Addis Ababa having special and inclusive service to enable the blind have accessible for information?, How far the current policies & strategies guaranteeing the rights of blind people to have access for information in pharmacies? And What has been done to, enable the blind have access for labeled prescriptions

and pharmaceutical related information?. This thesis scrutinizing the above leading questions and providing possible solutions is the ultimate objectives of this study.

In order to gather relevant information from sample Addis Ababa sub - cities pharmacy pharmacists, blind residence and legal related experts from the concerned ministry office were involved to collect reliable and first hand information regarding to sample sub - cities blind residence pharmacy service related challenges. In order to address the problem explanatory mixed research method was employed.

In order to collect relevant data likert scale type, open ended questions and an interview guide were prepared and used. The collected data were analyzed by using different statistical tools like, percent, mean and standard deviation. Lastly information obtained through these tools were presented and analyzed to draw conscious and recommendations in the conclusion and recommendation sections.

5.1 Characteristics of Respondents

As it was obtained from the analysis, most of the respondents were female. But the respondents were a mixture of both males and females even if large portion is males. On the other hand when the age distribution was analyzed most of respondents were found in the age grouped under 21-30 in addition most of the respondent pharmacists and experts were the first degree. Respondent pharmacists and experts working experience is accumulated between 5-10 years.

5.1.1 Analysis of the Main Data

The collected data from the sample respondent pharmacists, blind residence of the sample sub - cities and the experts from the two minister's office revealed the following facts.

1. What kinds of opportunities are available for the blind so as to have access for labelled prescriptions and pharmaceutical related information?

- Instructions which are found in labelled prescriptions and medicines are not enough informative for blind peoples as suitable as administer the medicines accordingly.
- The current way of providing information in pharmacies for the blind customers is not efficient and effective to use the medicine convenience for the blind.
- As the information gathered from the pharmacist's, medicines are not readily available on the basis of accessibility to all a regularly updated, however medicines are available with assistive aid and accessible condition at affordable price.
- The sample respondent pharmacists have not trends of asking blind people about their preferred format. Instead pharmacist's providing clear instructions to blind peoples about how they use medicines and related issues.
- The study revealed that there is no sufficient information service delivery system for the blind customers and there is no special consideration is given to blind people in access for labelled prescription and pharmaceutical related information.
- What is the magnitude of the problems that the blind are facing in access for labelled prescriptions and pharmaceutical related information?

2. The challenges the blind have to access for pharmaceutical related information in pharmacies

The finding shows there is problem and barriers of service process provision related to medicines and pharmaceutical information, thus the pharmacists were expected to provide full treatment through informing well their customers regarding to their services.

- The study revealed that there is no high cost of assistive aids to equip pharmacies, for example: audio, or brail text. This possible so as to fulfil, if there is a commitment and understanding about special need science.
- Pharmacists are willing to manipulate assistive aid, even if there is information it is challenging for (brail, audio.). One of the barriers was among the blind peoples have somewhat lesser level of understanding to instructions given by pharmacist, this is mainly due to the concept that is describe to them or due to the person absence of expressiveness.
- Lack of assistive technology for blind has not a problem for information and health facilities are not well equipped to implement inclusive health information service, in order to provide equity service in the sector.
- It is difficult to know the type of information needs of every blind people and there is lack of knowledge among health experts to provide medicines with assistive technology for the blind.

3. The existence of special and inclusive service in pharmacies for the blind to have proper pharmaceutical information.

- The collected data assure that, the pharmaceutical services are not providing through people centred approach. Since, the respondent exported doubt regarding to their service.
- Trainings are very important thing in a given professional life's. However, the data obtained from this research revealed that, as there is no provided training for health experts regarding to, skills needed to the provision of inclusive service in order to meet the needs of blind people.

- Information that this research provide is blind people have not well identified access to labelled medicines and pharmaceutical related information. This by itself makes difficult the problem in terms of providing immediate solutions.
- Providing of special support for blind people cannot be produce negative psychosocial result or development. Because blinds are visual impaired, thus they have special needs, so providing kind and appropriate support considering to their actual needs is important
- Pharmacies are not well equipped with important facilities to implement inclusive health service and information service. This is affecting the service level and the quality of blind peoples and the rest.

4. The current policies & strategies guaranteeing the rights of blind people to have access for information in pharmacies.

- On the light of the provide questionnaire and collected data the following concussions are produced. The collected data from the purpose of this research revealed that, the existing policy clearly identifies and promotes the need for information to blind people is still need improvement.
- Another one of important information that, this study discloses that is pharmacies is not clearly informed that weather there is guidelines to implement disability inclusive service in pharmacy or not.
- The sample respondent responded as there is reluctant attention is given to promote the provision health information service to blind people on the side of pharmacies. This becomes challenge to make the effective inclusive pharmaceutical services in the study area.

- There is ignorance about blind people mobility on the side of stakeholders (policy makers, health experts, pharmacists) this is clearly shown on the collected information.
- The matter of policy implementation has very factors that contribute as a permissive of as hinders to be implemented or not. Like this the collected data informed as there is various challenges that hinder to implement according to policy and providing information those needed by the blind people.
- Finally the collected data gave information as; pharmacists are ready to assisting blind people properly with positive attitude than considering these activities as extra work load.

5. What has been to be done to enable the blind residence access for labelled prescriptions and pharmaceutical related information?

- Blind people need various assistive materials like jaws and printing Braille. Pharmacists responded as they have not clear and well known information about the issue, whether it is possible to fulfil it easily or impossible.

5.2 Conclusion

The findings of the study draw the following conclusion:

Sample respondents demographic shows the majority of sample sex is female; the leading scale samples age lays between 21-30 years; the samples accumulated work experience is between 5-10 years and the majority of the samples educational qualification is first degree.

The respondents' response concluded that instructions found on labeled prescriptions and medicines are not informative enough. The existing labeled information in pharmacies is not effective for blind customers and it doesn't properly help them take medicine of a kind.

Pharmacists are normally willing to provide clear instructions to the blind but without assistive technology doing so is quite difficult.

There are problems and barriers in providing medication and pharmaceutical service to the blind. Commitment to and understanding about special needs science could help resolve this challenge. One of the barriers for the blind was inability to understand instructions given by pharmacists. This occurrence is either due to difficulty of the concept or due to inability of pharmacists to clearly describe the prescription/medication.

Lack of assistive technology for the blind in pharmacies/medical centers has been a hindrance in delivering vital information. Besides health facilities have not so far been well equipped to implement inclusive healthcare information service. The collected data ascertain that the pharmaceutical services are not fit to people centered approach .i.e. they don't cater to individual needs of customers. The health experts serving there aren't trained to take good care of special needs of the disabled either, in this case, the blind.

Blind people, given the existing situation, don't have proper access to labeled medicines and pharmaceutical information. Providing special support for the blind doesn't pose any negative psychosocial effect either. The research revealed that the existing policy clearly identifies and promotes the need for quality information to the blind; yet it still needs further revision.

One thing that this study disclosed is that pharmacies are not aware whether there are guidelines demanding for inclusive pharmacy service provision; that is why they don't give enough emphasis to provide health information service to the blind. The policy implementation and revision issue is a crucial factor to get rid of the hindrances that hamper the provision of quality pharmaceutical/medication information to the blind.

5.3 Recommendations

The findings and conclusion of the study make the researcher well positioned to recommend the following in the hope that the hindrances for the blind get removed leaving the space to access of quality-labeled-pharmaceutical-information.

The government as the main actor has to commit resources to formulate sound policies and guidelines to ensure the rights of the blind to have access for proper pharmaceutical related information considering the special needs service the blind deserve.

Setting the statistical data straight is one more responsibility of the government to make informed policy decision and to target the special needs service where and when needed.

The government and non-governmental organizations are expected to provide fit-for-the-purpose trainings to help provide inclusive service for those who have special needs. Besides these stakeholders need to fulfil the necessary basic tools that can enhance communication with the blind.

Health experts need to be trained in a way they meet the sundry information needs of the blind. They should also be obliged to strictly abide by professional guidelines set up to ensure the right to have access for equal service. To this effect, pharmacies and pharmacists must play their role be it in provision of assistive technology or/and in catering to special needs of the blind.

The blind themselves need to have the courage to organize and demand relevant stakeholders to do what it takes to quench these unmet needs.

The government has to play the prominent role to address the gap in ensuring equal rights of access to health information service.

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Appendix one: Pictures that show medicines with assistive aids



Picture 1: Medicines with brail



Picture 2: The Audio aid system for medicine

Appendix one

አዲስ አበባ ዩኒቨርሲቲ

ድህረ ምረቃ ትምህርት ፕሮግራም

ልዩ ፍላጎት ትምህርት ክፍል

ውድ የዚህ ጥናት ተሳታፊ

እኔ አባተ ሀይሉ በአዲስ አበባ ዩኒቨርሲቲ በልዩ ፍላጎት ትምህርት ክፍል የድህረ ምረቃ ፕሮግራም ተማሪ ስሆን በአሁኑ ሰዓት የፕሮግራሙ አንዱ አካል የሆነውን የመመሪያ ማሟያ ጥናት በ“ መድሃኒት እና የመድሃኒቶች የአጠቃቀም መመሪያ የመረጃው አቀራረብ ስኬቶች እና ችግሮች ለ አይነስውራን በሚል ርዕስ ” እያከናወንኩ እገኛለሁ። በመሆኑም የእርሶ ተሳትፎ ለዚህ ጥናት መሳካት ወሳኝ በመሆኑ ይህንን መጠይቅ በመሙላት ትብብር እንዲደርጉልኝ ከምስጋና ጋር እጠይቃለሁ።

1. የሚኖሩበት ክ/ከተማ-----
2. ዕድሜ-----
3. ጾታ-----
4. የትምህርት ደረጃ-----
5. የስራ ሁኔታ-----

1. መድሃኒቶችን በመመሪያው መሰረት ለመጠቀም ምን አይነት መንገድ ትጠቀማለህ ?

2. በጤና ዙሪያ ያለ መረጃን ከማግኘት አንጻር ቅድሚያ የምትሰጠው ለየትኛው ነው? ለምሳሌ ወቅታዊነቱን፣ በቀላል አገላለጽ እና ቀጥተኛ አቀራረብ የተዘጋጀ መሆኑን

3. በፋርማሲዎች በኩል የሚቀርቡ መድሃኒቶች ለአይነስውራን መረጃን ተደራሽ በማድረግ ረገድ በምን አይነት ሁኔታ የተዘጋጁ ናቸው?

(በጽሁፍ፣ ማንበቢያ መሳሪያ የተገጠመላቸው፣ በብሬይል)

4. መድሃኒት በምትወስድበት ጊዜ ምን አይነት ችግሮች ያጋጥሙሃል ?

ሀ. መድሃኒቱ ከተቀመጠበት ቦታ ላይ ለማግኘት ያለመቻል

ለ. የመድሃኒቶቹን አይነት የመለየት ችግር

ሐ. ከሚፈለገው መጠን ውጪ የመጠቀም

5. ከመድሃኒት አጠቃቀም ጋር በተያያዘ ያጋጠመህ ችግር ካለ ብትነግረኝ?

6. ከሌለ ምን ምን አይነት ችግር ሊከሰት ይችላል ብለህ ትገምታለህ ?

7. መድሃኒት ለመጠቀም ስትፈልግ የሌሎች ሰዎችን ድጋፍ ታገኛለህ?

8. ከመድሃኒት አጠቃቀም ጋር ተያይዞ ብዙ ጊዜ ችግር ያጋጥምሃል ?

9. በጤና ባለሙያዎች በኩል ሁሉንም ሰው ያማከለ አገልግሎት እንዳይሰጡ ያደረጋቸው ምን ይመስልሃል?

10. አይነስውራን መድሃኒቶችን እና ሌሎች ተያያዥ አገልግሎቶችን መረጃ በቀላሉ እንዲገኙ ምን መደረግ አለበት?

ለጥያቄዎቹ መልስ በመስጠት ስለተባበሩኝ ክልብ አመሰግናለሁ!!!

አዲስ አበባ ዩኒቨርሲቲ

ድህረ ምረቃ ትምህርት ፕሮግራም

ልዩ ፍላጎት ትምህርት ክፍል

ውድ የዚህ ጥናት ተሳታፊ

እኔ አባተ ሀይሉ በአዲስ አበባ ዩኒቨርሲቲ በልዩ ፍላጎት ትምህርት ክፍል የድህረ ምረቃ ፕሮግራም ተማሪ ስሆን በአሁኑ ሰዓት የፕሮግራሙ አንዱ አካል የሆነውን የመመሪያ ማሟያ ጥናት በ“መድሃኒት እና የመድሃኒቶች የአጠቃቀም መመሪያ መረጃው አቀራረብ ስኬቶች እና ችግሮች ለአይነሰውራን በሚል ርዕስ እያከናወንኩ እገኛለሁ።” በመሆኑም የእርሶ ተሳትፎ ለዚህ ጥናት መሳካት ወሳኝ በመሆኑ ይህንን መጠይቅ በመሙላት ትብብር እንዲያደርጉልኝ ከምስጋና ጋር እጠይቃለሁ።

1. ማንኛውም መድሃኒት ያለተጨማሪ ማንበቢያ መሳሪያ ድጋፍ በአስተማማኝ ሁኔታ መጠቀም ይቻላል?
2. የመድሃኒቶችን አጠቃቀም እና አይነታቸውን ለመረዳት በሚያስችል መልኩ በተለያዩ መንገዶች ማግኘት ይቻላል?
3. መድሃኒቶች በማንበቢያ መሳሪያ ድጋፍ ቢቀርቡም አይነሰውራን ካለባቸው ክህሎት ክፍተት አንጻር በቀላሉ መጠቀም አይችሉም?
4. የፋርማሲ ባለሙያዎችን የመረጃ አሰጣጥ በቀላሉ መረዳት ይቻላል?
5. የፋርማሲዎች አገልግሎት አሰጣጥ ሁሉንም ሰው በእኩል ማገልገል ላይ ያተኮረ ነው?
6. የልዩፍላጎት ስልጠና የወሰዱ ሰዎች መድሃኒት አጠቃቀም ጋር በተያያዘ የሚታዩ ክፍተቶችን ለመሙላት ይችላሉ?
7. በፋርማሲ ባለሙያዎች በኩል ለአይነሰውራን ያላቸው የተዛባ ግንዛቤ መረጃ በአግባቡ እንዳይደርስ አንዱ ምክንያት ነው?

8. ለአይነስውራን ተገቢውን የህክምና አገልግሎት ከመስጠት አንጻር ከሚመለከታቸው አካላት በኩል ቸልተኝነት ይታያል (ፖሊሲ አውጭዎች፣ የጤና ባለሙያዎች እና ሌሎችም በዘርፉ የተሰማሩ)?
9. አይነስውራን የህብረተሰቡ አንድ አካል በመሆናቸው ተገቢውን መረጃ የማግኘት መብት እንዳላቸው በፖሊሲ ውስጥ በግልጽ እንዳለ ምንምም ታውቂያለሽ?
10. መድሀኒት ለመጠቀም ስትፈልግ እገዛ የሚያደርጉልህ/ሽ ሰዎች የመድሀኒቶችን አጠቃቀም በቀላሉ መረዳት የሚችሉ ናቸው (ወላጆች፣ አሳዳጊዎች፣ ጓደኞች...)?

Appendix three: Questionnaire for Pharmacists

Addis Ababa University

School of Graduates Studies

Department of Special Needs Education

Dear Respondent

My name is Abate Hailu I am Post Graduate student of Addis Ababa University. I am carrying out a research on the challenges and opportunities of blind people encounters in relation to access for labeled prescriptions and pharmaceutical related information as partial requirement for the award of a Masters Degree in special needs education.

You have been purposively selected for this research and your response to this study will enable the achievement of the above objectives .You are requested to answer these questions and I assure you that the answers will strictly be kept confidential.

Thank you, for your cooperation

Part One

Questions about personal information

1. Read the following items and fill the appropriate terms or encircle the letter of your choice.

1.1 Age: in years _____ don't know _____?

1.2 Sex: Male Female

1.3 Job title :

1.4 Year of work experience

I. Below are hypotheses which may be are causes for challenges and opportunities of blind people to access labeled prescriptions and pharmaceutical related information Please put

() according to the scale given.

| No | Hypotheses | Strongly agree(5) | Agree (4) | Disagree (3) | Strongly disagree (2) | Undecided (1) |
|----|--|-------------------|-----------|--------------|-----------------------|---------------|
| 1 | Blind people need assistive materials | | | | | |
| 2 | The current way of providing information to blind people is efficient | | | | | |
| 3 | Medicines are readily available on the basis of accessibility and regularly updated. | | | | | |
| 4 | The services provision related to information brings no barriers to blind people | | | | | |
| 5 | The instructions found in labeled prescriptions and medicines are informative | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 6 | Instructions on how to use medicines are clearly told to blind people | | | | | |
| 7 | Special consideration is given to blind people in access for labeled prescription and pharmaceutical related information | | | | | |
| 8 | The barriers of blind people in access for labeled prescriptions and pharmaceutical information are well identified | | | | | |
| 9 | lack of assistive technology for blind people is not a problem for information | | | | | |
| 10 | Blind people have a lesser level of understanding to instructions given by pharmacists | | | | | |
| 11 | I always ask blind people about their preferred format; for example: audio, or brailled text | | | | | |

| | | | | | | |
|----|---|--|--|--|--|--|
| 12 | Assisting blind people is an extra workload to pharmacists | | | | | |
| 13 | providing special support to blind people will result to negative psychosocial development | | | | | |
| 14 | The health facilities are not well equipped to implement inclusive health information service | | | | | |
| 15 | Pharmaceutical services are people-centered approach | | | | | |
| 16 | Motivation and trained Professionals alone meet the needs of blind people | | | | | |
| 17 | The needs of blind people can easily be fulfilled | | | | | |
| 18 | Medicines with assistive aid are accessible at affordable price | | | | | |
| 19 | There is enough space entry and path ways to move freely for blind | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| | people | | | | | |
| 20 | There is lack of knowledge among health experts on the use of assistive technology to provide pharmaceutical related information | | | | | |
| 21 | There are guidelines to implement disability inclusive service in pharmacies | | | | | |
| 22 | Less attention is given to promote the provision health information service to blind people on the side of pharmacies | | | | | |
| 23 | Even if there is assistive aid for information it is challenging for pharmacists to manipulate | | | | | |
| 24 | There is high cost of assistive aids to equip pharmacies for example :audio materials ,brail text | | | | | |
| 25 | Trainings given for health experts includes skills needed for the provision of inclusive service | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 26 | Blind people show inability to process and analysis information given from pharmacists | | | | | |
| 27 | There is ignorance about blind peoples mobility on the side of stake holders(policy makers, health experts, pharmacists) | | | | | |
| 28 | It is difficult to know the type of information needs of every blind people | | | | | |
| 29 | The existing policy clearly identifies and promote the need for information to blind people | | | | | |
| 30 | There are challenges to implement the policies | | | | | |

II. Open ended questions

1. Did you take any training related to Special Needs Education?

A. Yes

B. No

2. If your answer is “Yes” mentions how it makes an ease to your service delivery

3. Are there any challenges you face in selling medicines to blind people? If yes please mention them including the techniques did you use to overcome the challenges:

4. If you say ‘no’, can you mention problems you may expect pharmacists to face?

5. What options and support mechanisms do you suggest to provide barrier free pharmaceutical service for blind people? _____

Thank you for your cooperation!

Appendix Four: Questionnaire for Ethiopian Ministry of Health

Addis Ababa University

School of Graduates Studies

Department of Special Needs Education

Dear Respondent

My name is Abate Hailu I am Post Graduate student of Addis Ababa University. I am carrying out a research on the challenges and opportunities blind people encounters in relation to access for labeled prescriptions and pharmaceutical related information as partial requirement for the award of a Masters Degree in special needs education.

You have been purposively selected for this research and your response to this study will enable the achievement of the above objectives .You are requested to answer these questions and I assure you that the answers will strictly be kept confidential.

Thank you, for your cooperation

Questions about personal information

1. Sex: Male___ Female_____

2. Educational back ground (please encircled)

A. High school B. College/university C. other please specify/:

3. Occupation:

4. Year of work experience

Interview questions for Ethiopian ministry of health

1. Is there a system that can support the different information needs of blind people within the general health system?
2. What accessibility problems for blind people did you identify?
3. Does the institution provide blind people health service they need at an affordable price?
4. What kind of activities is being underway to solve the existing barriers related to access for labeled prescriptions and pharmaceutical related information for blind people?
5. Have your ministry /department had plans /program to promote access of health information to blind people?

Thank you for your cooperation!!!

Appendix Five: Ethiopian Food, Medicine and Health Care Administration and Control Authority

Addis Ababa University

School of Graduates Studies

Department of Special Needs Education

Dear Respondent

My name is Abate Hailu I am Post Graduate student of Addis Ababa University. I am carrying out a research on the challenges and opportunities blind people encounters in relation to access for labeled prescriptions and pharmaceutical related information as partial requirement for the award of a Masters Degree in special needs education.

You have been purposively selected for this research and your response to this study will enable the achievement of the above objectives .You are requested to answer these questions and I assure you that the answers will strictly be kept confidential.

Thank you, for your cooperation

Questions about personal information

1. Sex: Male___ Female_____

2. Educational back ground (please encircled)

A. High school B. College/university C. other please specify:

3. Occupation:

4. Year of work experience

Interview questions for Ethiopian Food, medicine and health care administration and control authority

1. Is there a system that can support the different information needs of blind people within the general health system?
2. What accessibility problems for blind people for blind people did you identify?
3. Does the institution provide blind people health service they need at an affordable price?
4. What kind of activities is being underway to solve the existing barriers related to access for labeled prescriptions and pharmaceutical related information for blind people?
5. Have your ministry /department had plans /program to promote access of health information to blind people?

Thank you for your cooperation!!!