CHALLENGES OF UNDERGRADUATE PHARMACY STUDENTS DURING THEIR HOSPITAL CLERKSHIP (ATTACHMENT): CASE OF SELECTED PRIVATE HEALTH COLLEGES IN AA

By

Abera Bezabih

Advisors:
Jamie Kellar (Dr.)
Damite Shimelis (Dr.)

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DECLARATION

I hereby declare that the work which is being presented in this thesis entitled “Challenges of Undergraduate Pharmacy Students During Their Hospital Clerkship (Attachment): Case of Selected Private Health Colleges in AA” is original work of my own, has not been presented for a degree to any other university and all the materials used for the thesis have been duly acknowledged.

_____ _____

Abera Bezabih **Date**

(Candidate)

This is to certify that the above declaration made by the candidate is correct to the best of my knowledge.

_____ _____

Jamie Kellar(Dr.)Date **Date**

Damite Shimelis(Dr.)

(Thesis Advisors)

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LIST OF ABBREVIATIONS AND ACRONYMS

AAU Addis Ababa University

ACCP American College of Clinical Pharmacy

CPS Clinical Pharmacy Services

IPD In Patient Department

NGO Non-Government Organization

SOP Standard Operating Procedure

SPSS Statistical Package for Social Sciences

WHO World Health Organization

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Clerkship is a clinical experience in the education of a student of the health professions in which he or she is introduced to the practical care of patients with particular illnesses or characteristics. This study aimed to assess the challenges experienced by pharmacy students as they start their clinical training in the context of private colleges in Addis Ababa. The study focused on final year undergraduate pharmacy students during their hospital clerkship (attachment) in AA. Using descriptive research method, this study identified lack of supervision, inopportune feedback and dispiriting current environment were the key challenges of final year undergraduate pharmacy students during their hospital clerkship (attachment) in private health colleges in AA. This study helps students gain familiarity with clerkship expectations and settings and it generally focus on orienting students to workplace logistics and roles and helps to enhance their clinical skills. It recommends that the necessity of careful preparation for clinical clerkship, uncertainty when starting clerkship lasted only a few days transition from pre-clinical to clinical training went smoothly and a need time to adjust to the new environment.

Keywords: Challenges, Clinical Orientation, Environment, Supervision

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Pharmaceutical care (PC) is the overall responsibilities of the pharmacist to fill the gap of the patient's drug-related needs through direct patient care and cooperation with other members of the health care system. PC is an evidence-based practice that ensures the rational use of drug therapy for diseases and prevention of drug-related problems (Hepler, 1990).

Several studies have shown that PC services can influence optimal drug therapy, save lives, and enhance a patient's quality of life (Bond et al., 1999; Westerlund and Marklund, 2009). Therefore, in an attempt to keep pace with the evolution in the scope of pharmacy practice, and in order to meet the needs of healthcare systems, many pharmacy schools have integrated PC education into their curricula to prepare pharmacy graduates with the necessary PC skills (Martin-Caleroet al., 2004; Kheiret al., 2013).

In 2008, a new clinical pharmacy program was established with the aim of training patient-centered pharmacy practitioners by extending the 4-year undergraduate pharmacy program to a 5-year clinical pharmacy program with clerkship in Ethiopia (Odegardet al., 2011). Obviously pharmacy students are the future health care practitioners who will provide not only quality pharmaceutical services but also health promotion guidance to communities .If they are not well trained in the community health needs, this will directly effect on the future quality of care in the community(SCPP, 2009). As a result of this it is crucial to implement clinical clerkship that involves active experiential rotations of pharmacy students in various clinical wards and provides opportunity to assist PC services in various pharmacy practice sites under the supervision of expert preceptors, guiding them to build the patient–pharmacist interaction and ensure positive working experience with interdisciplinary healthcare teams in the clinical decision-making processes. So far there is no research done at Addis Ababa University evaluating the challenge of final year undergraduate pharmacy students during their hospital clerkship in providing PC. Hence, this study will determine challenges of final year undergraduate pharmacy students during their hospital clerkship toward providing PC.

1.2 Statement of the Problem

Patient-focused practice has been a rule for pharmacy career at the moment. This is because clinical pharmacy services focuses on patient-oriented services that helps to promote the rational use of medicines and more specifically to maximize therapeutic effect, minimize risk, minimize cost and respect patient choice. Increasing emphasis has been given to integrating a caring concept (Hicks, 2000). The transitions period are characterized by several challenging experiences, ranging from new roles with their associated tasks, to unfamiliar settings and colleagues (Teunissenand Westerman, 2011).

It could be very complicated for students' as they are still in student-focused practices. Providentially, a preliminary study of selected students in Addis Ababa shows that students were not well prepared for any transition and they act like their preclinical years even if learning often needs to be at a faster pace, constant, and self-directed. The students are not capable of self-reflection and do not recognize gaps in their knowledge and skills, and seek information to close these gaps (Alemayehu, Elias, Peggy and Sultan, 2013). Some students say they have a feeling of unpreparedness that exacerbates their stress and anxiety as they start their clinical training. These may impede the transition and hinder learning and participation in clinical activities. As result, students are also faced with increased workload, insufficient time to study, dealing with seriously ill patients, and limited feedback and supervision from clinical mentors. These may contribute to students' dissatisfaction and increase their anxiety and distress. Ina addition, students not well recognized whether it is resulted from not knowing what was expected from them in the new clinical setting, and not being able to apply what they had learned during their preclinical years to patients' problems. Moreover, there are undisclosed factors that aggravated their sense of uncertainty like a considerable variation in approaches towards patient care by different clinical mentors.

Evidence suggests that stress and uncertainty are a cause for negatively impact students' cognitive function and learning (Westerlund and Marklund, 2009, Kheiret al., 2013 and Odegardet al., 2011). Others found contrary causes as starting from lectures in a classroom setting to learning from real patients' issues in a clinical setting (Surmon, Bialocerkowskiand Hu, 2016); shifts in the educational environment, pedagogical strategies, and assessment methods have been reported to be sources of the challnges (Bosch et al., 2017).

Accordingly, these studies addressing the difficulties faced by students during the transitional phase of their educational journey were conducted primarily in western countries such as North America and Europe, with very limited information from studies in the Ethiopia. Thus, this study investigated the challenges experienced by pharmacy students as they start their clinical training in the context of private colleges in Addis Ababa. The study is focused on final year undergraduate pharmacy students during their hospital clerkship (attachment) in case of private health colleges in AA.

1.3 Research Questions

1.3.1 Main Research Questions

- What are the major challenges of private pharmacy students during transition to the clerkship phase in Addis Ababa?

1.3.2 Specific Research Questions

- To what extent transition and stress challenge private pharmacy students during the transition to the clerkship phase in Addis Ababa?
- How does a clerkship orientation challenge private pharmacy students during the transition to the clerkship phase in Addis Ababa?
- How does clinical supervision and feedback challenge private pharmacy students during the transition to the clerkship phase in Addis Ababa?
- To what extent current environment challenge private pharmacy students during the transition to the clerkship phase in Addis Ababa?

1.4 Research Objectives

1.4.1 General Objective

- To assess the major challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa

1.4.2 Specific Objectives of the Study

- To assess transition and stress challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa

- To examine clerkship orientation challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa
- To investigate clinical supervision and feedback challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa
- To identify current environment challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa

1.5 Significance of the Study

This study helps students gain familiarity with clerkship expectations and settings with a general focus on orienting students to workplace logistics and roles. It helps to enhance their clinical skills and to adapt their nascent clinical skills to deliver hypothesis-driven presentations that communicate their findings and clinical reasoning. In addition, it helps students to devote significant mental energy and time to acquiring these foundational skills at the start of the clerkships, which limits their ability to fully engage with other valuable aspects of workplace learning.

This study provides pertinent information to a shift in the pharmaceutical educational environment in Ethiopia. It helps to review medicine pedagogical strategies, medical education curriculum and teaching methodologies.

On other hand, the findings of the study inform policy makers, civic society, NGOs, medical colleges, and other stakeholders about a need to implement measures to ease this transition through a structured orientation about clerkship for both students and clinical faculty. It highlights the growing concerns about the capability of the current educational model to equip medical school students with essential skills for future career development. In the field of pharmacy, it focuses on the problem of the decreasing teaching time and the increasing load of course content and whether there is a need to reform the current pharmacy teaching strategies in private colleges. Thus, it helps as input for medical teaching and education policy revision and helps for future studies in the area.

1.6 Scope of the Study

This study was delimited to the preparation for clinical clerkship, transition and stress, clerkship orientation, workload, preparation, knowledge and skills, patient contact, clinical supervision and feedback, assessment, and academic advising. It focused on preparation for clinical clerkship,

clerkship expectation, experiencing clerkship stress, the transition time and their adoption to the new environment. It also concentrated on orientation to the clerkship program, orientation environments, and information provided about the structure and organization of the clerkship. In addition, it emphasized observation and experience during patient contact (a medical history or physical examination reports) on the clerkship time including provision of sufficient supervision and constructive feedback about performance. Clerkship stimulated me to think and reflect on students' strengths and weaknesses.

Moreover, the study used only descriptive research design as it required assessing and explaining the challenges of clerkship of private pharmacy students in Addis Ababa. Further the study was conducted from December 2019 to March 2020 in Addis Ababa.

1.7 Limitation of the Study

The study is limited by numerous topics. This study did not use focus group discussion due to Covid 19 outbreak and students and their supervisor were busy. Accordingly, to validate the respondents' responses, the study used key informants' interview and gathered information and data from international and local studies.

Further, limited time, resource and budget influenced the researcher to plan in a narrow context. Accordingly, the study did not include regional private colleague or university students and it also was limited by time since there are only few months given to conclude the research. Due to this, clerkship visit and assessment are restricted as far as limited observation was taken places; so that sample is very limited. This doesn't mean the study of students' clerkship study was inadequate and unsatisfactory. The study was conducted in great care to find appropriate challenges and other findings. There is so much to do and very limited budget to conduct the research. This is one of the reasons for planning the research in limited area (in Addis Ababa).

1.8 Operational Definitions and Terms

- **Clerkship -** A clinical experience in the education of a student of the health professions in which he or she is introduced to the practical care of patients with particular illnesses or characteristics (Medical Dictionary, 2019).
- **Attachment theory** is a theory of interpersonal behaviour and is thought to affect how a person thinks, feels and behaves in close relationships (Waters et al, 2000).

- **Pharmaceutical care (PC)** is the overall responsibilities of the pharmacist to fill gap of the patient's drug-related needs through direct patient care and cooperation with other multidisciplinary members of the health care system (Hepler, 1990).

CHAPTER TWO
REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework of the Study

2.1.1 Socialization Theory

Transitions in pharmacy education are expressively and socially dynamic processes through which students increase expertise by acquiring new knowledge and expertise (Teunissen and Westerman, 2011). Institutions with rotation-based clerkships propel students through common environmental changes. It includes different clinical sites within the same institution or different institutions. These numerous transitions within clinical training are possibly challenging. To address these difficulties, colleagues evaluated the use of peer to peer handoffs to smooth transitions between dissimilar clerkship environments programs (Georgeet al., 2010).

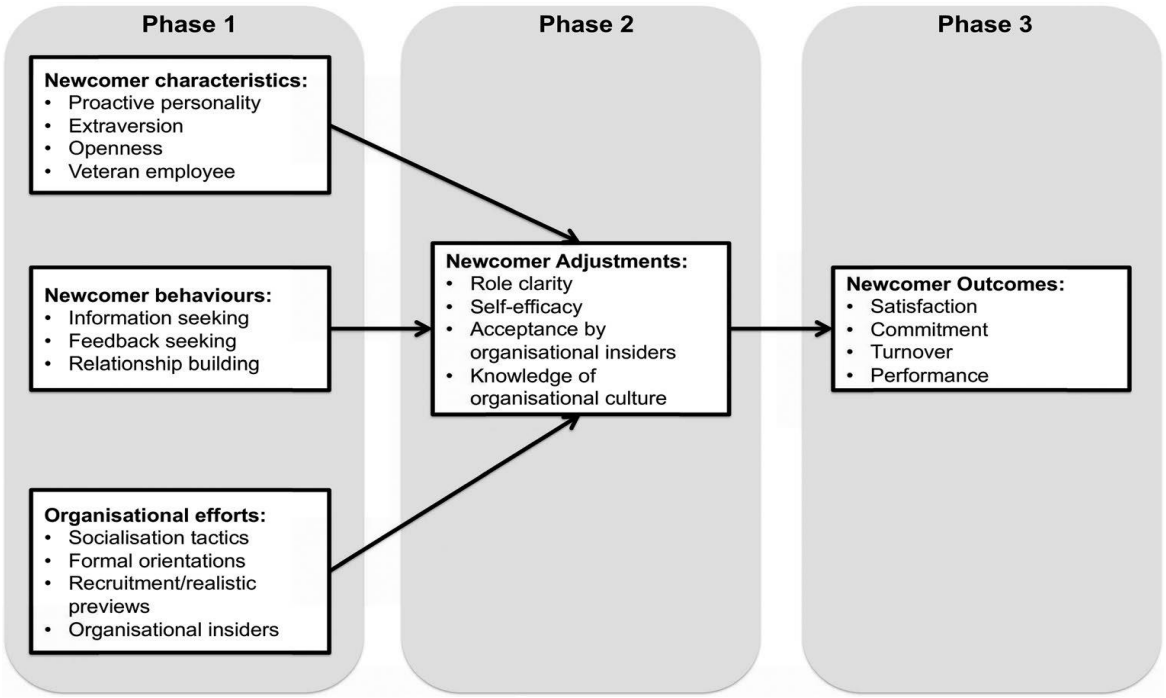


Figure 1: Summary diagram of the organizational socialization

Organizational socialization describes the three phased process of a newcomer gaining knowledge, skills and behaviors that are necessary to succeed in a work environment. During phase one, in includes seeking information and feedback, and building meaningful relationships, that will help a smooth transition (Waters et al, 2000).During phase two, factors such as role

clarity, self-efficacy, acceptance by insiders and knowledge of the organizational culture determine how well the newcomer adapts. Finally, during phase three describe outcomes for the newcomer to include satisfaction, commitment, turnover and improved performance (Bauer and Erdogan, 2011). Thus, this theory helps to understand clerkships environmental changes and different clinical sites within the same or different institutions.

2.1.2 Attachment theory

Attachment theory is a theory of interpersonal behaviour and is supposed to affect how a person thinks, feels and behaves in close relationships. It clarifies why people have different behavioural tendencies or patterns towards approaching others and in building relationships (Waters et al, 2000). The attachment system is said to serve as a homeostatic mechanism to reduce anxiety in relationships with other people by seeking proximity to others and is activated in conditions of fear, illness, stress and fatigue (Hunter and Maunder, 2001). It has been proposed to be stable over time because underlying working models function to direct attention and influence interpretation of interpersonal events to be consistent with those representations.

Attachment theory proposes two underlying cognitive dimensions: relates to an individual's perception of others as responsive and supportive, and describes self-appraisals relating to lovability and worthiness of receiving support from others (Pietromonaco and Barrett, 2000). They are maintained through subjective perceptions and appraisals which confirm already held beliefs (Shaver and Mikulincer, 2002). This attachment theory has been labeled as attachment anxiety and attachment avoidance. Attachment anxiety represents the level of distress experienced in relationships and vigilance for rejection or abandonment by others whereas attachment avoidance, the second working model, refers to the behavioral response (Ahrens *et al*, 2012). High levels of attachment anxiety or attachment avoidance are linked with more difficulty in forming and maintaining relationships (Shaver and Mikulincer, 2002). Attachment anxiety is associated with a negative self-image and attachment avoidance is associated with a negative image of others (Berry et al, 2007).

In consequence, this theory is linked with clerkship as it influences future interpersonal experiences and behaviours. By influencing expectations about future relationships, and guiding attention, it is associated with collaborative efforts and it is the functional and healthy lifelong development that would be grounded in the quality of the parental attachment relationship

(Feeney, 2000). Attachment theory offers a useful framework for understanding the impact and transmission of teaching and learning attachment (Miller, 2008).Bowlby (1988) articulated the implications of attachment behavior for development and for current and future relationship functioning. In adulthood, this style could negatively influence the physician–patient relationship, health-related behaviors and adherence to treatment recommendations, thereby negatively influencing the patient's physical and psychological health (Feeney, 2000).

In brief, socialization theory helps to advance knowledge, skills and behaviors that are necessary to succeed in a work environment and attachment theory is essential to realize a theory of interpersonal behaviour and person's feeling, behavior in close relationships. It illuminates different behavioural tendencies or patterns towards approaching others and in building relationships.

2.2 Concepts and Definitions on Clinical pharmacy

The discipline of pharmacy practice has changed over the previous 30 years into a clinical service tailored to pharmaceutical care and has started to become an indispensable component of the multidisciplinary team. The definition and responsibilities of a hospital pharmacist have improvedintensely, with the focus of practice changing from product oriented to patient-outcome orientedin many countries across the globe.Nevertheless, pharmacists and hospitals often face unique challenges in embracing these changes due to human resources shortages and economic hardships in developing countries(LeBlanc and Dasta, 2005).

In the developed world, hospital pharmacy practice has developed as a clinical service and has transformed itself from mere dispensing to provision of care, advice, and counseling to patients. Accordingly, therapeutic drug monitoring and nutrition support, bedside rounds, and efficient and safe drug delivery systems have been provided with evolution of critical care pharmacy satellites and other innovative programs (George*et al*., 2010).

Clinical pharmacists possess in-depth therapeutic knowledge and scientific skills that allow them to act as drug therapy experts in healthcare settings (Saseen *etal*., 2017). Clinical pharmacy is defined as a discipline with specialized pharmacists concerned with the science and practice of rational drug therapy by the American College of Clinical Pharmacy (ACCP, 2008). Clinical pharmacists use scientific evidence to ensure and recommend on best use of medications for optimal drug therapy. Further, they also engage in various research activities to generate new

knowledge and practical skills that furthermore can improve patients' health and quality of life (Gubbins*et al*., 2014).

Unnecessary and avoidable morbidity and mortalitycan be created by inappropriate use of medicines. A study by Lesar, Briceland, and Stein (1997) shows that a total of 2,103 clinically significant medication mistakes were identified by pharmacists over a one-year period in a teaching hospital. The study further reveals that medication errors related to inappropriate dose were estimated at 58%, failure to modify therapy in accordance with hepatic or renal function at 14%, failure to account for patients' history of hypersensitivity at 12%, use of wrong drug name or dosage form at 11%, and incorrect calculation at 11%.

Clinical pharmacy services (CPS) are muchundevelopedand in its infancy stage in the Ethiopian context. In addition to absence of clear policy and strategic directions, inadequate number of pharmacy personnel qualified in the provision of CPS is prominent. Though, numerous efforts have been made in Ethiopia to introduce CPS in the health care system and education. They includerevision of the undergraduate pharmacy curriculum in public universities in 2008; launching of the clinical pharmacy postgraduate program at Jimma University and practice postgraduate program at Addis Ababa University and at University of Gondar in 2015; inclusion of clinical pharmacy services in the Pharmacy Section of the Ethiopian Hospital Reform Implementation Guidelines (EHRIG) by the Federal Ministry of Health (FMOH) in 2010. Ethiopian Food, Medicines and Health Care Administration and Control Authority (FMHACA) in 2012 endorsed that pharmaceutical care should be provided as a minimum regulatory standard (SOP, 2015).

2.2.1 Challenges and Opportunities of Pharmaceutical Clerkship

Clinical Pharmacy needs no further introduction to pharmacists' as it is the heart of pharmaceutical care. It has significantly peripheral specialized pharmacy knowledge that is equally vital to optimize the quality of health care. It is a global issue in the pharmacy world. It is important for us to first accept the fact that the task in facing the challenges is the responsibility of the individual professionals forming the profession. This purely means it is our responsibility. Many of us, for many reasons, regard the responsibility entirely to the pharmacy professionals, individuals holding certain posts and positions in the managerial level and that should be abolished negligent view as it brings more harm than good to us all (Hailstorm, 2012).

2.3 Empirical Literature

2.3.1 Global Empirical Studies

Tim *et al*., (2014) aimed to develop a blueprint for education in ambulatory and inpatient settings, and in single encounters, traditional rotations, or longitudinal experiences. They concluded that clerkship education takes place within relationships between students, patients, and doctors, supported by informal, individual, contextualized, and affective elements of the learned curriculum, alongside formal, standardized elements of the taught and assessed curriculum. This research provided a blueprint for designing and evaluating clerkship curricula as well as helping patients, students, and practitioners collaborate in educating tomorrow's doctors. Isabel (2014) explored patient preferences and satisfaction with collaborative care for people with depression and comorbid long term conditions using attachment theory. He found that out of 8 studies which explored associations between attachment patterns and illness behaviours, few had strong methodological quality ratings. Attachment avoidance was associated with adherence and healthcare utilisation, attachment anxiety with healthcare utilisation only. The study findings recommended that healthcare utilization, self-disclosure and coping mapped onto the attachment avoidance framework. Adherence behaviours and building rapport with different health professionals did not map against the attachment framework properly. A range of clinical, social and treatment related beliefs were found to underpin illness behaviours. Attachment related cognitions were linked to beliefs about others as pokerfaced. There was no support for associations between attachment patterns and treatment preferences in collaborative care.

Kabimb, Songole, Owino,Kimathi, Ndirangu, Musyoka and Mwangi (2014) studied challenges experienced by undergraduate nursing students during their clinical rotations. They collected data from 38 students who filled the questionnaire and found that those who agreed that basic sciences prepared them well for clinical rotations were 68% , 34% indicated that the skills laboratory prepared them well. Those who reported being comfortable with using the instruments and equipment in the clinical areas were 32%. Most respondents (71%) agreed that most patients in the clinical areas were co-operative. The protocols and procedure manuals in the clinical areas were reported to be inappropriate for learning by 34%. The effectiveness of the evaluation tools was supported by 29% of the respondents while most, 45% indicated that the time allocated for

clinical rotations was inadequate. Mohamed and Sarra (2018) studied the challenges faced by medical students during their first clerkship training using a cross-sectional study from a medical school in the Middle East. They found that almost half of the students (59%) experienced stress at the beginning of their clinical training, while33% thought that they were ready to begin their clerkship training. A majority of the students (81%) reported the need for more time to adjust to the new environment, and 84% indicated that a good introduction to the clerkship would make the transition easy for them. About half of the students (54%) reported receiving feedback during their clinical training.

2.3.2 Empirical Studies in Ethiopia

Tegegn, Abdela, Mekuria, Bhagavathula and Ayele (2018) assessed the opportunities and challenges of clinical pharmacy services from the health practitioners' perspective in University of Gondar (UOG) hospital Ethiopia using a qualitative study that was performed using face-to-face in-depth interviews. They found that a total of 15 health professionals from various specialties were interviewed to express their views towards clinical pharmacists' competencies and identified challenges and opportunities regarding their clinical services. Based on interviewees reports,the opportunities for clinical pharmacists includes acceptance of their clinical services among health specialties, new government policy and high patient load in hospital. However, inadequacy of service promotions, lack of continuity of clinical pharmacy services inwards, poor drug information services, lack of commitment, lack of confidence among clinical pharmacists, conflict of interest due to unclear scope of practice, and absence of cooperation with health workers were some of the challenges identified by the interviewees.

Clinical pharmacy practice has developed internationally to expand the role of a pharmacist well beyond the traditional roles of compounding and supplying drugs to roles more directly in caring for patients and providing medication consultation to staff. This area of practice is at the infant stage in Ethiopia. Alemayehu et al., (2013) aimed to explore key informants' perspective in the implementation of clinical pharmacy practice in Jimma University Specialized Hospital, Ethiopia using a qualitative study through in-depth interviews with the heads of departments (internal medicine, paediatrics, surgery, nurse, pharmacy, medical director, administration) and pharmacy student representatives. Accordingly, all of the respondents interviewed express diverse and conflicting perspectives on pharmacists' roles, varying from a health-care professional to a

business man. Regardless of this, the present pace of change universal takes the professions' mission to that of a provider of clinical pharmacy services. The data established to the transformof pharmacy practice, and amalgamating clinical pharmacy services within the health-care system should be seen as a must. Pharmacists should demarcate from a business perspective and focus on widening the scope of the profession of pharmacy and should come close to the patient to serve directly.

2.4 Conceptual Framework

The conceptual framework of this study on transition and stress, clerkship orientation, workload, preparation, knowledge and skills, patient contact, clinical supervision and feedback, resources at clinical sites, educational activities, assessment, and academic advising. It is grouped by four essential factors such as challenges of clerkship, clerkship orientation, clinical supervision and feedback and current environment. In case of Transition and Stress, the challenges are articulated as prepared for clinical clerkship, clerkship proved to be better than expectation, experienced a great deal of stress, the transition from pre-clinical to clinical training, needed time to adjust to the new environment during the first few weeks. With regard to clerkship orientation, reasonable orientation to the clerkship program, orientation conditions, general orientation, and information provided about the structure and organization of the clerkship, awareness of the competencies to be achieved during clerkship. Frequently observed during patient contact, received sufficient supervision and constructive feedback and reflection on personal strengths and weaknesses are conditions of clinical supervision and feedback. In case of current environment, working environment to be current andto increase motivation towards pharmacy profession and feeling of personal accomplishment are included.

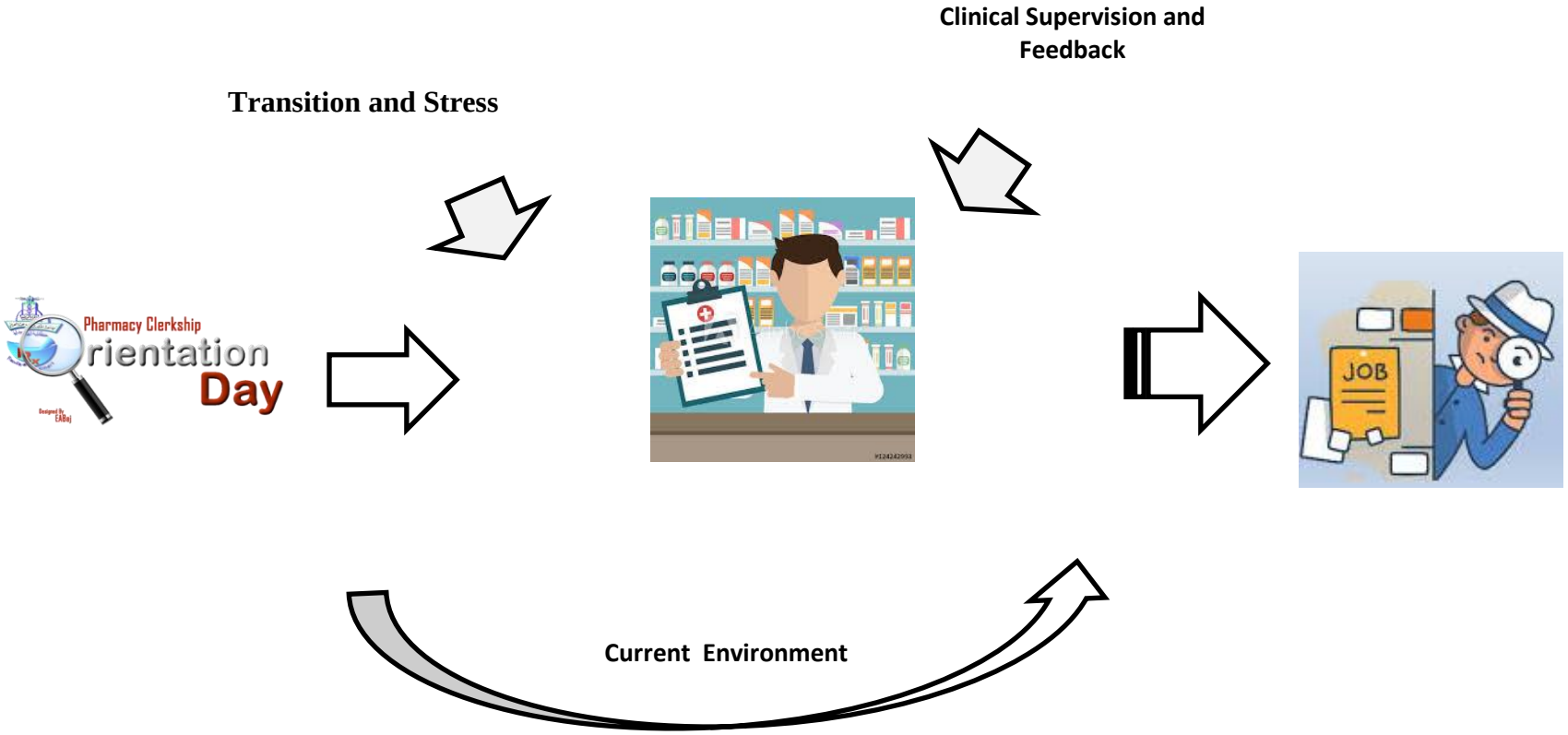


Figure 3: Conceptual Framework adapted from Mohamed and Sarra (2018)

CHAPTER THREE-
RESEARCH METHODOLOGY

3.1 Area of Study

The area of the study was conducted in Addis Ababa, a capital city of the Federal Republic of Ethiopia and Africa Union. The Addis Ababa City is administratively divided into ten (10) sub-city administrations. It hosts the Federal Government sector bureaus, and headquarters of various international organizations. There are more than 500 health facilities in Addis Ababa which range from government specialized hospitals to privately owned ones, from higher clinics to lower clinics and from health centres to health posts. There are 30 hospitals, 26 health centres, 94 special clinics, 99 higher clinics, 146 medium clinics, and 103 lower clinics. Among these health facilities, five hospitals and all the 26 health centres are administered by Addis Ababa City Government.There is one gigantic medical school namely Addis Ababa university which is governed by the government of Ethiopia and various private medical colleges and private and government hospitals (Source: Addis Ababa Health Bureau).

Moreover, this study was conducted in four private colleges in Addis Ababa. First, Universal Medical Collage is a pioneer private owned health sciences college in Ethiopia. About 4500 students were graduated in clinical pharmacy, clinical nursing and health officer in 12 cohorts including regular and extension students. Currently about 1300 students are learning in the college. Second, Africa Medical College is a pioneer private health institution in Ethiopia striving to contribute its share for the betterment of the health sector in the course of training qualified health professionals. To this end, our college has strengthened and diversified its services from TVET (Technical and Vocational Educational Training) to Master's programs. Rift Valley University began operations in October 2000 in Adama Town, with a capital of 1,300,000 Eth. Birr, a total number of 154 evening program students, and five part time faculty staff. **Rift Valley University (RVU)** has been working hard to expand and develop demand driven and nationally recognized academic programs. These academic programs are expected to produce competent graduates in diverse field of studies allied with the university vision and mission.ALKAN Health Science Business and Technology College, formerly known as ALKAN Health Science College, is a private college founded in 2002 by visionary investors as a memorial of Hakim Workineh Eshete, the first and famous former Ethiopian physician. The college offers undergraduate and

technical and vocational trainings in its three campuses namely Addis Ababa campus, Bahirdar campus and Dessie campus (Source: respective colleges' web sites).

3.2 Research Design and Approach

This study applied descriptive research that consisted of the assessment of challenges of undergraduate students during their hospital clerkship survey. The main purpose applying descriptive research was the study explained the main challenges of undergraduate private medical students during their hospital clerkship survey. The term Ex post facto research has been used to elaborate this type of research in different areas or subjects of research. The main feature of this method is that the scientist does not have direct control over the variables; can only report what is happening or what has happened. The study considered as a cross-sectional descriptive study design, utilizing quantitative and qualitative study methods, was employed to describe the challenges of clerkship implementation program in private medical institution. In short, the study applied mixed research approach. This study has been conducted from Octoeber 2019 to June 2020 in Addis Ababa.

3.3 Sampling and Sampling Techniques

3.3.1 Target Population

As per the information obtained from Higher Education Relevance and Quality Agency (HERQA), currently there were eight active private health colleges in Addis Ababa providing clinical pharmacy education. Out of which, four of them did not have active undergraduate pharmacy students who registered for clerkship program. Hence, private health colleges functioning in AA during this research period are considered as the target population of the present study. Among the list of health colleges operating in AA, private health colleges were selected as a sample frame of the study. Hence, four private medical colleges were selected to conduct a survey for the present study. Organizations found for the purpose of this study were Africa Health College, Rift Valley University, Alcan Medical College and Universal Medical College. Based on the selected private health colleges' registrar office information, currently there are 150 final year undergraduate pharmacy students who were under their clerkship program.

3.3.2 Inclusion and Exclusion criteria

- **Inclusion criteria** – Private medical colleges selection criteria for the study considering teaching experience in pharmacy education, number of active students currently, capacity, quality of education, students' preference, and area of coverage they are working in.
- **Exclusion criteria** –Healthcare provider or officers who did not satisfy the above criteria were excluded from the study.

3.3.3 Sampling Techniques

3.3.3.1 Sampling for Questionnaire

A sample design is an exact sketch determined prior to any type of data collection for obtaining a sample from a given universe. There are two types of sampling: non-probability and probability sampling. Non-probability sampling uses a subjective method of selecting units from a universe, and is generally easy, quick, and economical. The reason why the researcher prefers to use judgmental sampling method is aiming to collect comprehensive and reliable information from the sources having relevant knowledge and/or experience directly related to the subject of the study (Shanti and Shashi, 2017). Accordingly, final year undergraduate pharmacy students who are under their clerkship program in the above mentioned organizations were selected as a sample unit of the present study. Purposive sampling was chosen to select the private medical colleges; students were taken from their respective assigned colleges and replacement by similar college students was used for those who dropped their clerkship program.

3.3.3.2 Qualitative sampling respondents for semi-structured interviews

The qualitative methods presented for detailed investigation on challenges of private medical students' clerkship included semi-structured interviews. Since the study aimed to get an overview of clerkship problems, it was best to select a wide range of individuals. Accordingly, snowball sampling was selected as it was the most common sampling method used in selecting respondents for semi-structured interviews.

3.3.4 Sample Size

3.3.4.1 Sampled Students Sample Size

Survey population is the collection of units (individuals) about which the researcher wants to make quantitative statements.

$$\frac{\frac{z^2 \times p\,(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p\,(1-p)}{e^2 N}\right)}$$

Figure 4: Sampling Formula

Sample size is the small fraction of the population which is considered a vital element to reduce the sampling error. This study used sampling his calculator uses the following formula for the sample size n: n = N*X / (X + N – 1), ... and Zα/2 is the critical value of the Normal distribution at α/2 (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), MOE is the margin of error, p is the sample proportion, and N is the population size(Shanti and Shashi, 2017). Thus, 88 sampled students were taken as the sample number per the above formula using 10% margin of error and 90 % confidence level.

3.3.4.2 Interview Sample Size

Anita, Catherine and Daphne (2004) interviewed Julia Brannen, Thomas Coram Research Unit, Institute of Education; University of London for his reply about how many qualitative interviews was enough. The answer was that there is no rule of thumb. In qualitative research it seemed to be common among those carrying out qualitative interviews for sample size to be around 40 persons. Since then the number seems to have shrunk, and as medical professionals were busy and the hospitals and clinics were full of medical activity, it was difficult to conduct interview sessions, thus, the sample size for interview was selected as 40 and chosen to be the interview response rate was minimal.

3.3.4.3 Pilot Test Sample Size

This study used Julious (2005) recommendation for minimum of 12 subjects or sampled students for pilot test. Thus, the pilot testing of the questionnaire was conducted with 12private medical students in the clerkship phase in Addis Ababa.

3.4 Data Type and Source of Data

There are two types of data, which are used, in research. These are primary data and secondary data. Gathering of data is also very important task in writing a research thesis. In order to achieve the objective of this research, both primary and secondary sources of data were used.

3.4.1 Primary data

The researcher used primary data for the entire analysis of this study. The researcher distributed a standard questionnaire to sample of respondents/ students in selected private colleges in AA. Hence, the data collected from the respondents through standard questionnaires, interview sessions key informants interview and observation were used as primary data. Moreover, the study used articles, journals and international published researches.

3.4.2 Secondary Data

Most common source to get secondary data in medical science include medical records, prescriptions, surveys, hospital records and through research and qualitative methods. It saves time that will otherwise be spent to collect data. Secondary data can be obtained from the previous research, journals, and other study literature, which may help in one's study research. The researcher also used secondary data to construct the basic framework of the study before proceeding with the primary data. Medical and pharmaceutical journals, medical magazines and documents, and reports were reviewed as source of secondary data.

3.5 Data Gathering Instruments

Different data collection tools were used in the study area of these indicators' questionnaire, interview, observation and key informants' interview. This study used data gathering tools appropriate to quantitative and qualitative research method. These tools used to increase the validity of the data and minimize dropping of information.

3.5.1 Questionnaire

A validated questionnaire will be adapted from a similar study conducted by Prince, Boshuizen, Vleuten and Scherpbier(2005) at Maastricht University .The original questionnaire was tailored to the local context after discussion among the researchers and subsequently; it was then tested in a pilot study. The questionnaire included transition and stress, clerkship orientation, workload, preparation, knowledge and skills, patient help, clinical supervision and feedback, resources at clinical sites, educational activities, assessment, and academic advising. Responses were collected using a Likert scale where 1 for "Strongly Disagree" and 5 for "Strongly Agree" for the questions. It also included open ended questions to collected students opinion and their suggestions.

3.5.2 In-depth Interview

Interview is not simply a matter of questions and answers, but it is a data collection method used to explore people's experiences, motivation and views in-depth. In-depth interview is the most widely used data collection method in qualitative research which can be described as a 'conversation with purpose' and has been described as the gold standard of qualitative research methods '.The interview used as a means of generating data in-depth through asking questions in detail. In interviews, the participants discussed their interpretations of the questions asked and express how they regard situations from their own and society point of view. In this regard, 20 interview session were prepared, accordingly, 40 students and their mentors were involved in the discussions of how, when and by whom are given to know the practices clerkship and its educational and health values. This method was selected as it is flexible for probing questions to get the required data. For this interview, specific questions were prepared to explore and probe the meanings in ways that address the research questions.

3.5.3 Key Informants Interviews

Qualitative information was also obtained through interviewing key informants. Individual informants of different social status were selected from the research site. The selection of the participants was made based on their expert knowledge, past experience and knowledge based on the naming practices. During the interview, five key informants were asked, among others, about the practices clerkship challenges in Addis Ababa and their perceptions in the society.

3.5.4 Clerkship Visit/Observation

In this research, the researcher visited six hospitals and four specialized clinics to observe pharmaceutical clerkship of private students in Addis Ababa. The observations were engaged around one hour for five days taken place in AA. For every hospital visit, consent was obtained from hospitals and specialized clinics administrations. Students and hospital administrator were guaranteed that the data would be anonymous: No real names of the students and their mentors were mentioned. For a careful handling of the data, the exact dates of the visit were also not mentioned in the outcomes of this research.

3.6 VALIDITY AND RELIABILITY

Checking the validity and reliability of data collecting instruments before providing to the actual study subject was the core to assure the quality of the data.

3.6.1 Validity Test

Validity is the extent to which difference found with measuring instrument reflecting true differences among those being tested (Shanti and Shashi, 2017).To ensure the quality of the research design content and construct validity of the research were checked. Construct validity was established correct operational measures for the concepts being studied. The literature review was conducted and thoroughly examined to make sure that the content of measuring was relevant to the study. Experts' opinions in the area of medical education, pharmacy and medicine were taken. To ensure validity of instruments, initially the instrument was prepared by the researcher with guidance from the advisor.

3.6.2 The Pilot Study

The pilot study is a mini version of the main study which will be held to check the objectives of the study and the data collection tools. According to this study, for the pilot study, quantitative and qualitative data were collected using interviews and sample questionnaire. The data gathered through these tools were transcribed, translated and analyzed by employing various theoretical and experimental practices and social value. The objectives and data collection tools were tested. In doing so, the data collection tools were validated. As a result of the pilot study, some variables were adapted in this study questionnaire was changed from the original questionnaire to fit with the local curriculum terminology. Some other categories were added to fulfill the purpose of the clerkship improvement study. Concerning research participants, individuals who had active in clerkship mentor activities were involved in the pilot study.

3.6.3 Reliability Test

As it is vital to obtain a reliable measure for the purpose of deriving a scale score, Cronbach's coefficient alpha was used in this study. The below table showed the result of Cronbach reliability test.

Table 6: Results of Cronbach reliability test

	Cronbach's Alpha	N of Items
Transition and Stress	.750	6
Clerkship Orientation	.771	6
Supervision and Feedback	.806	3
Current Environment	.890	3
Overall	.750	18

Survey result, 2020

Cronbach's alpha gives the proportion of the total variation of the scale scores that is not attributable to random error and its values of 0.70 or greater are considered adequate for a scale that to be used to analyze associations (Shanti and Shashi, 2017). The purpose of deriving a scale score by having multiple items is to get a more reliable measure of the construct than is possible from a single item.

3.7 Data Management and Analysis

The collected data were analyzed by using two methods. They were both qualitative and quantitative methods employed for data analysis. Most of the items from the questionnaire were organized and presented in tables. Most of the items in the questionnaire which were convenient for counting and describing were analyzed quantitatively; changed from likert scale to numerical value from 1 to 5. Descriptive statistics were presented in the form of percentage, mean and standard deviation depending on the nature of the items. Difference inferential statistics namely one sample test was employed.

On the other hand, the open-ended questions, the data from the participant observation and the interview were described qualitatively. To supplement the qualitative analysis with an insight from the theory, an attempt wasmade to investigate the challenges of medical clerkship in detail in private students. Qualitative data analysis was an ongoing process which helps to prove and demonstrate the intended result. The quantitative data were organized and analyzed using SPSS version 20.0.

3.8 Ethical Issues

3.8.1 Permission

Since this study is an acedamic research, the study has been recognized and got persmission from Addis Ababa University, College of Health Science Department of Health Science Education In addition, all surveyed colleagues and targeted hospitals and pharmacies have given a permission to collect data and to conduct students and their supervisors.

3.8.2 Informant Consent

All students and participants of the study were be guaranteed that the data would be anonymzed: no real names of the respondents would be mentioned. Participants were appropriately informed as to the purpose of the study and consented verbally.

3.8.2 Confidentiality

For a careful handling of the data, the exact dates of the hospitals visit were also not mentioned in the outcomes of this research. The researcher addressed ethical considerations of confidentiality and privacy of all individual respondents.

3.8.3 Rights

Respondents were be participated on voluntary basis. It was to note that the major ethical issues in this research are based on the dignity and wellbeing of the research participants. Measures were taken to ensure the respect, dignity and freedom of everyone participating and to assure confidentiality in the study.

3.8.4 Methodological Standards

In addition, data, results, methods and procedures, and publication status were truthfully and straightforwardly reported. No attempt was made to any research plagiarism. No attempted were made to fabricate, falsify, or misrepresent data in this study. It was tried to avoid inconsiderate errors and negligence; the research work will be cautiously and critically inspected.I tried to honor patents, copyrights, and other forms of intellectual property. Unpublished data, methods, or results without permission were be taken and given proper acknowledgement or credit for all contributions to research.

CHAPTER FOUR

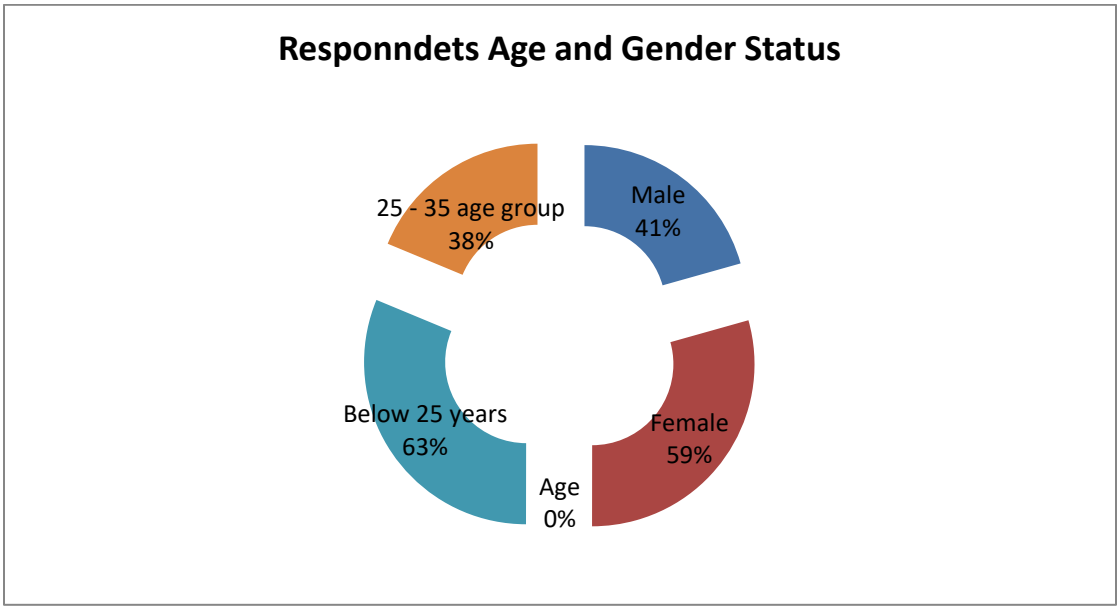
RESULT AND DISCUSSION

4.1 Background of the Respondents

4.1.1 Response Rate

Out of 88 distributed questionnaires only 80 questionnaires were returned and the study achieved a 90% response rate. Regarding face to face interview, the study conducted 26 interview sessions from intended 30 interview meetings which made 86 % of responses rate; 80 of response rate on key informant interview attended also. The overall responses rate rated as excellent and it showed relatively high response rates can be linked to a strong relationship of the researcher with a dominant respondent.

4.1.2 Respondents Profile



Survey result, 2020

Figure 4: Respondents Background Information

Before analyzing data, the background information on the respondents or sampled respondent students at different level has been shown throughout the above table and pi diagram. The study assumes it will be helpful to understand the range of area the study has attempted to cover with the intended research. The study realizes that, among the 80 sampled students the study

conducted the research on, 59%, i.e., 47 sample respondents were female and 41%, i.e., 33 students were male (above figure). The study understands that, among 80 sample students the study conducted research on, 50 individuals are of age below 25 years, 30 individuals are of age 25 -35 years, and none are of age above 36 at all (Above figure).

Table 7: Respondents Background Information

Colleague	Frequency	Percent	GPA	Frequency	Percent
Universal	32	40.0	Less than 2.5	6	7.5
Africa	19	23.8	2.5 -3	11	13.8
Rift Valley	16	20.0	3 - 3.5	42	52.5
Alcan	13	16.3	Abovev3.5	21	26.3
Total	80	100.0	Total	80	100.0

Survey result, 2020

The above table portrays, among 80 sample students the study was conducted research on, 32 students are universal medical college students; meanwhile 19 students from Africa, 16 from Rift Valley and 13 Alcan universities undergraduate students. In addition, few students (6 in count) have less than 2.5 commutative GPA, 11 students have 2.5 up to 3 GPA and 21 students above 3 up to 3.5. But most of the sample respondent's students have from 3 up to 3.5 GOA which indicates most of them have a capability to understand the research and the questionnaire to give appropriate responses.

4.2 Response Analysis

Challenges of Clerkship

The sample students were requested to rate their opinion about their transition and Stress level related to their current pharmacy clerkship. Mohamed and Sarra (2018) used likert scale and took 2.5 as a cut point; above 2.5 as good practices and below it as disagrees. Their responses in this regard have been summarized in the following tables.

Table 8: Respondents about Transition and Stress

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I felt well prepared for clinical clerkship.	4%	0%	10%	39%	48%	4.26
The transition from pre-clinical to clinical training went smoothly.	4%	0%	18%	30%	49%	4.20
I needed time to adjust to the new environment.	4%	25%	11%	24%	36%	3.64
Not experienced a great deal of stress.	11%	8%	10%	23%	49%	3.90
My first clerkship proved to be better than I expected.	10%	0%	24%	26%	40%	3.86
The first few weeks as a clinical clerk were difficult for me.	3%	4%	14%	43%	38%	4.09
Grand mean	3.99					

Survey result, 2020

The above table displays that responses on transition and stress level that were categorized into six different factors; they are well prepared for clinical clerkship, the transition from pre-clinical to clinical, time to adjust to the new environment, experienced a great deal of stress, clerkship proved to be better than expected and clinical clerk difficulties time. The study shows that transition and stress level are not crucial for sampled students in the study. Here, in case of preparation for clinical clerkship, 48% respondents strongly and 39% well prepared for clinical clerkship; meanwhile, none of them disagree with the fact, 10% are uncertain, 4% strongly disagree. In case of the transition from pre-clinical to clinical training period, almost half of the sampled respondents (49%) strongly claimed that their transition from pre-clinical to clinical training went smoothly. Within lower mean (3.64) the study found that the majority of the students have not experienced a great deal of stress. In general, pharmacy students of private medical colleges are well prepared for clinical clerkship, their transition from pre-clinical to clinical training went smoothly, they easily adapted to the new environment, did not experienced a great deal of stress, they got better clerkship than they expected. But their first few weeks as a

clinical clerk were difficult for them. At the beginning of clerkships, students said concern over perceived deficiencies in knowledge and/or skills, which they perceive as a cause of stress.

Clerkship Orientation

The sample respondents were requested to rate their opinion about their level of agreement on clerkship orientation with related to their current pharmacy clerkship. The responses were summarized and organized in the below table.

Table 9: Respondents about Clerkship Orientation

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I got satisfactory orientation to the clerkship program	0%	4%	8%	49%	40%	4.25
A good orientation would make the transition to the clerkship easier.	1%	4%	9%	45%	41%	4.21
A general orientation should be provided to all new clinical clerks.	3%	1%	9%	43%	45%	4.26
The information provided about the structure and organization of the clerkship was sufficient.	4%	3%	9%	43%	43%	4.18
I was aware of the competencies that I had to achieve by the end of the clerkship.	5%	3%	11%	39%	43%	4.11
The competencies to be achieved during clerkship were explained by the faculty.	13%	13%	6%	34%	35%	3.66
Grand mean	4.11					

Survey result, 2020

There are six ramifications under this factor. In case of orientation to the clerkship program, 89% (as 40% preferred the category of strongly agree and 49 % preferred agree category) respondents satisfied by the clerkship program orientation; meanwhile, 8% are uncertain, 4% disagree and

none preferred strongly disagree category. In the second case, 86% respondents agreed that they got a good orientation that made the transition t easier. More than 80% of the sample students agreed that a general orientation provided to all new clinical clerks, the information provided about the structure and organization of the clerkship was sufficient and the majority of them aware of the competencies that they had to achieve by the end of the clerkship. The most frequently mentioned strategy was the clerkship orientation. Out of six indicated factors, five factors have had more than 4.00 mean (the mean ranges from 3.66 to 4.26) and they showed that clerkship orientation has been well designed to assist students to integrate into the clinical environment and to refresh their knowledge and skills.

Clinical Supervision and Feedback

The sample respondents were requested to rate their opinion about clinical supervision and feedback related to their current pharmacy clerkship. The responses were summarized and organized in the below table.

Table 10: Respondents about Clinical Supervision and Feedback

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I was frequently observed during patient contact (when I was taking a medical history or doing a physical examination)	23%	34%	9%	16%	19%	2.75
I received sufficient supervision and constructive feedback about my performance	24%	38%	1%	15%	23%	2.75
The clerkship stimulated me to think and reflect on my strengths and weaknesses	30%	33%	6%	11%	20%	2.59
Grand mean	2.70					

Survey result, 2020

At this point, in case of attending during patient contact, 57% respondents disagreed that they frequently observed during patient contact (taking a medical history or doing a physical

examination). The majority of them did not receive sufficient supervision and constructive feedback about their performance and clerkship did not stimulate them to think and reflect on their strengths and weaknesses. The majority of the sample students rated lesser to clinical supervision and feedback related to their current pharmacy clerkships as the mean value of the three factors are below 3.00. It violates the general consensus about students who must engage in providing clinical and theory-based practice under the supervision of their tutors, mentors and preceptors while embracing education opportunities and expanding the research window around the globe. The reason may be due to professional incompatibility and students from private colleges are considered as inefficient as they simple from private institution. They should have been evaluated as per their current skills and knowledge instead of considering the cultural difference among private and public medical colleges. In Ethiopia, public or government schools are believed to teach better than private institution as they have been established in recent years (around fifteen years) as per the interviewees' responses.

Current Environment

The sample respondents were requested to rate their opinion about current environment related to their current pharmacy clerkship. The responses were summarized and organized in the below table.

Table 6: Respondents about Current Environment

	ngly Disa	Disa gree	Neut ral	Agre e	ngly Agre	Mea n
I work in an environment which I will find current	36%	15%	4%	25%	20%	2.78
working environment of the hospital helps me to increase my motivation towards my pharmacy profession	40%	21%	3%	20%	16%	2.51
My clerkship gives me a feeling of personal accomplishment.	34%	18%	5%	25%	19%	2.78
Grand mean	2.69					

Survey result, 2020

The above table portrays that in case of work environment, more than half of the sample respondents did not work in an environment which they find current; meanwhile, 45% of them agree with the fact and only 4% are uncertain. In case of working environment of the hospital, 61% of the sampled respondents assumed working environment of the hospital did not help them to increase their motivation towards the pharmacy profession. Within lower mean (from 2.78 to 2.513.64) the study assured that most of the students rated their opinion about current environment related to their current pharmacy clerkship as considerably agreed.

4.3 Difference Inferential

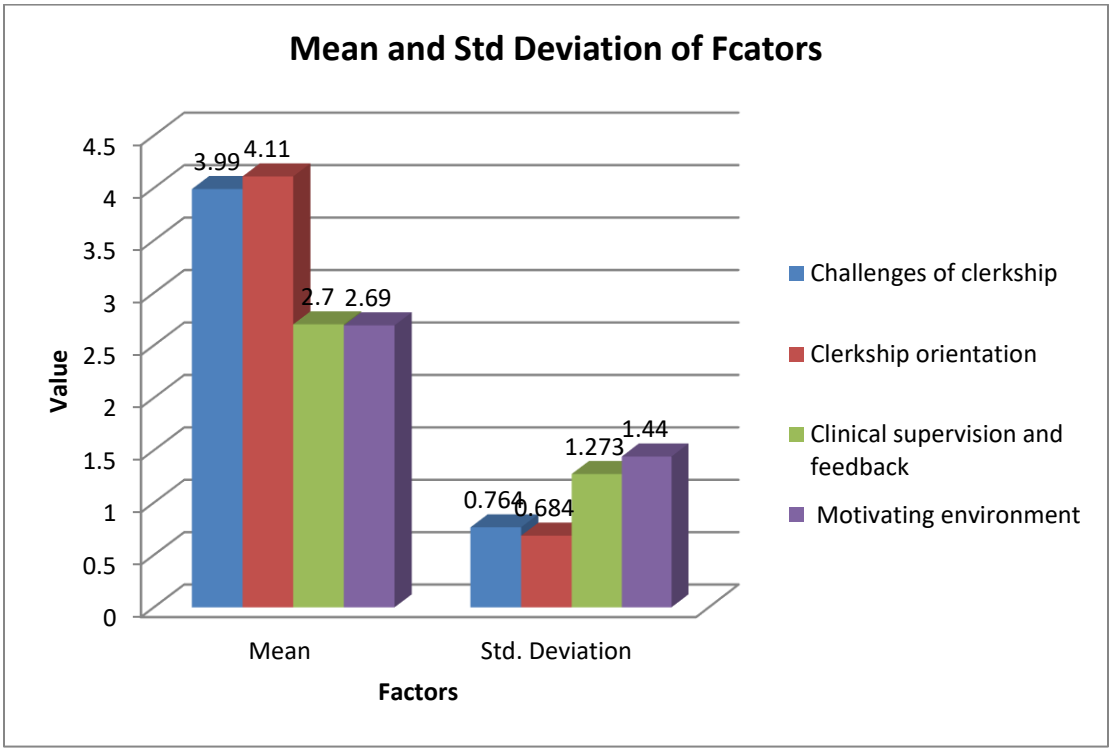


Figure 5: Summary of Mean and Std deviation of factors

The above figure shows that the summary of mean for the four factors. As the figure indicates, challenges of clerkship and clerkship orientation have a greater me than the other two factors. The maximum means were found in two variables as 4.11 and 3.99 for clerkship orientation and transition and stress respectively. It teaches us sample students were prepared for clinical clerkship, clerkship proved to be better than expectation, none experienced a great deal of stress, time for the transition from pre-clinical to clinical training, adjusted to the new environment. In

addition, they got clerkship orientation properly. However, challenges were rotated around on present during patient contact, inadequate supervision and less constructive feedback and reflection on personal strengths and weaknesses. In case of current environment, the majority of the students thundered on working environment not to be current and lessening motivation towards pharmacy profession and less feeling of personal accomplishment were observed.

4.4 One-Sample Statistics

Table 7: One-Sample Statistics

	Test Value = 2.5					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Challenges of clerkship	17.454	79	.000	1.492	1.32	1.66
Clerkship orientation	21.094	79	.000	1.612	1.46	1.76
Clinical supervision and feedback	1.376	79	.173	.196	-.09	.48
Current environment	1.164	79	.248	.187	-.13	.51

Survey result, 2020

In order to determine whether to reject the null hypothesis based on this test statistic, it is a must to determine the probability of obtaining a value more extreme than our test statistic when the null hypothesis is true. This probability is called the *P* value. If the *P* value is less than our chosen α level, we reject the null hypothesis;if the *P* value is greater than our chosen α level, we do not reject the null hypothesis. In the above table, the column labeled “Sig. (2-tailed)” is the *P* value for this test. So, if the null hypothesis were true(factors, on average, minimum or below 2.5 mean), then the probability of obtaining a test statistic with an absolute value at least

t is less than 2.5. This is greater than our chosen α level of .05, so we cannot reject the null hypothesis. We accept H0 and conclude that the average number of factors of mean does not differ from 2.5. Thus, clinical supervision and feedback and current environment have less than 2.5 mean but other have more than 2.5 mean. It mean sample respondents have a complain about clinical supervision and feedback and current environment. Mohamed and Sarra (2018) used likert scale and took 2.5 at a cut point; above 2.5 as good practices and below it as disagree

4.5 Qualitative Analysis

4.5.1 Interview Analysis

Interviewees were requested to respond about how long they worked in clerkship or expected duration, student's clerkship or attachment with hospitals after college schooling, to rate the motivational level of students towards clerkship, about the attitude of hospital administrators, health professional and government towards employee motivation and the main challenges to effectively implementing students' clerkship in private colleges. Out of sampled 40 students, the study conducted 15 modest interview and 12 in depth interviewee sessions. Accordingly, the study attended 68 % of response rate. Their responses were summarized as follows.

Table 8: Summary of Interview responses

Dimensions	Rate	Modest Interview	In depth Interview
Worked in clerkship or expected duration	Maximum 7 months minimum for 3 months	3	7
About student's clerkship or your attachment with hospitals after college schooling		Good	Good
Rate the motivational level of students towards clerkship?	Moderate	85 %	70%
About the attitude of hospital administrators, health professional and government towards employee motivation	Low	65 %	90%

The main challenges to effectively implementing students' clerkship in private colleges	Low	80%	85%
Opinion comparing with government students	Students government colleges have access	75 %	75%
	Accessing limited time and recourses for private students	65%	80%

Survey result, 2020

This study has conducted interview analysis and found that most of the interviewees said that they worked in clerkship or expected duration at maximum 7 months and minimum for 3 months. The majority of the interviewees rated student's clerkship or your attachment with hospitals after college schooling as good. In addition, 85% of modest and 70% in depth interviewees rated moderately the motivational level of students towards clerkship. About the attitude of hospital administrators, health professional and government towards employee motivation, almost 65 % modest interviewees and 90% of attended of in depth interviewee rated as low. The main challenges to effectively implementing students' clerkship in private colleges were rated as low for 80% modest interviewees and 85% attended of in depth interviewee. Finally, opinion comparing with government students, students of government colleges have had access and acceptance by hospitals for clerkship for 75 % of the interviewees participants and but private students were said to be having limited time and recourses accessing their clerkship program for 65% modest interviewees and 80% attended of in depth interviewee.

4.5.2 Students' Suggestions

This part of the study analysis sample respondent's opinions who were directed by the questionnaire as to indicate any challenges related to clerkship program of your college, hospitals understanding of clerkship, any related administrative and professional challenges and they were requested to give their suggestions, recommendations and any feedback related to clerkship.

Table 9: Summary of Students' Suggestions

Theme	Suggestions	Rate	%
During Clerkship Orientation	Orientation	Good	45 %
	Students' confidence	Moderate	55 %
	Aid materials	Less	48 %
	Confusion	High	65 %
	Missing Orientations	High	60 %
	Orientation simulation	Less	80%
During Clerkship	Communication among medical doctors and pharmacists, encouragement and support from them	Poor	70%
	Cross functional team	No	40 %
	Feedback and Supervision	Less	75%
	Acceptance for private colleges students	Less	
	Busy schedule of preceptors	Yes	80%
Post clerkship experience	Post clerkship evaluation	No	70%
	Understanding of pharmaceutical care by all	Less	60%

Survey result, 2020

Sample interviewees were requested to respond about their experience on clerkship, to tell about student's clerkship or attachment with hospitals after college schooling, motivational level of students towards clerkship, attitude of hospital administrators, health professional and government towards employee motivation and the main challenges to effectively implementing students' clerkship in private colleges and comparing with government students.

The above table organized from sampled students' suggestions via the distributed questionnaire. Out of 80 returned questionnaire, 25 questionnaires (31%) did not give any comments and it was considered as they were satisfied from the pre, during and post clerkship period. The remains 69% of sampled students gave various suggestions as per the given directive and the results were organized as follows. First during Clerkship Orientation, students received orientation was rated as good by 45 % of the sampled students; meanwhile 55 % of them rated students' confidence as moderate, Half of them indicated there was no aid materials related to clerkship, high number of

students (almost 65%) assured they were confused before their clerkship program; most students given less give consideration for clerkship orientation, it was confirmed as 60 % of them rated missing orientations as high, Others almost 80% of them said no orientation simulation at all at private medical

During Clerkship, communication among medical doctors and pharmacists, encouragement and support from them were rated by 70% participants as poor; 40 % of them indicated there was no any cross functional team to enhance pharmaceutical profession; 75 % of the participants said feedback and supervision were given but not practical particularly in medical and pediatric ward; 80 % of the participants said less acceptance for private colleges students was given and they also said preceptors had very busy schedule and did not give appropriate orientation for clerkship followers. In case of post clerkship experience, the majority of the participants said there was no post clerkship evaluation it meant no supervisors assigned by medical colleges and the colleges did not follow up clerkship program at all. Overall, most (60%) said there was less understanding of pharmaceutical care by all.

4.5.3 Key Informants Interview Analysis

All interviewed described that to achieve the mission of the pharmacy education and training, clerkship and collaboration among the healthcare institution and private and public medical institution are necessary.They added a well-functioning clerkship program and cooperation among the healthcare professionals and the pharmacy staff should be properly long-standing. In fact, the clerkship program and post clerkship profession must become united by all actors through establishing common goals that meet public health need at large. The health-care community must be committed and distinguish that the clerkship practices should help patients as the primary beneficiary of the profession. Clerkship must work together tolerantly, honestly and meaningfully to enhance pharmacy's practice to support a level of patient care that genuinely affects patients' drug therapy outcomes.

Majority of the respondents described that there was no collaboration among the physician, the nurse and the pharmacist as rated from the perspective of patient care. They also rated clinical pharmacy in Addis Ababa as lowly contributed to the society and there were given low benefits to health care ranging from inpatient counseling to drug therapy changes. At large, they said the clerkship or pharmacy profession was recognized and respected by the society.

Majority of the respondents described that private college students' clerkship program was not successful at all. The attitude of hospital administrators, health professional and government towards employee motivation was rated as low. Less communication, collaboration, partnership, team work were the main challenges to effectively implementing students' clerkship in private colleges.

4.5.4 Observation Analysis

This part is composed of the researcher's observation during orientation and clerkship time in selected healthcare places. Most of the students assigned in government and private specialized clinics hospitals for aim of clerkship. Most of them assigned in appropriate place; preceptors and senior pharmacists were their mentors and they were equipped professionally. The majority of them have not stayed for a long time in their clerkship period; on average their clerkship time was half day. The sample students were observed how they learn in clerkships. Accordingly, some of them assigned around dispensing area and some assigned around pharmacy ward but not as expected. There was not a promising patient contact during their clerkship. Preceptors did not give or spend their time on clerkship as they were busy and they were irresponsive for clerkship program. Students were learnt how to dispense drugs, reading prescriptions, and how to counsel patients (mostly) and documentation.

4.6 Consistency with other Studies

It is understood that pharmacists and hospitals often face unique challenges, such as shortage of human resources and economic hardships, in embracing these changes (LeBlanc and Dasta, 2005).Lesar*et al*., (1997) reveals that 14%, failure to account for patients' history of hypersensitivity at 12%, use of wrong drug name or dosage form at 11%, and incorrect calculation at 11% (Lesaret al., 1997). Clinical Pharmacy needs no further introduction to pharmacists as it is the heart of pharmaceutical care. It has significantly peripheral specialized pharmacy knowledge that is equally vital to optimize the quality of health care (Hailstorm, 2012).

Tim *et al*., (2014) concluded that clerkship education takes place within relationships between students, patients, and doctors, supported by informal, individual, contextualized, and affective elements of the learned curriculum, alongside formal, standardized elements of the taught and assessed curriculum. Isabel (2014) to explored patient preferences and satisfaction with

collaborative care for people with depression and comorbid long term conditions using attachment theory.

This study is similar to Kabimb **et al**., (2014) who agreed students well prepared for clinical and protocols and procedure manuals in the clinical areas and time allocated for clinical rotations was inadequate. But this study is opposite to Mohamed and Sarra (2018) as they found that almost half of the students (59%) experienced stress at the beginning of their clinical training.This study is opposite to Tegegn et al., (2018) on acceptance of clinical services among health specialties. However, Tegegn et al., (2018) found similar with this study in related to inadequacy of service promotions, poor drug information services, lack of commitment, lack of confidence among clinical pharmacists, conflict of interest due to unclear scope of practice, and absence of cooperation with health workers were some of the challenges identified by the interviewees.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The study aimed to assess the major challenges of private pharmacy students during the transition to the clerkship phase in Addis Ababa. Using descriptive research design, the study found that

- students did not experience a great deal of stress with little confession on their first few weeks as they well prepared for clinical clerkship, easily adapted to new environment and their transition went smoothly
- Clerkship orientation was rated as good; so orientation is not indicated as a serious challenges as the majority of the students were satisfied by the clerkship orientation program
- Clinical supervision and feedback was rated as less moderate. It was tested as students infrequently observed during patient contact, received insufficient supervision and constructive feedback about their performance, not stimulated them and not reflected their strengths and weaknesses
- sampled students preferred disagree category for current environment and it was understood that they worked in bad working environment, not a current working environment, the hospital did not help them to increase their motivation towards their pharmacy profession

Mean results showed that

- 4.11 and 3.99 recorded as the maximum mean for clerkship orientation and transition and stress respectively; they were rated as best for preparation for clinical clerkship and good clerkship orientation performance; using one-Sample Statistics, it was found that the null hypothesis was accepted and concluded that the average mean responses of two factors of did not differ from 2.5and the factors namely clinical supervision and feedback and current environment were rated as disagree category counted a challenging features of private medical students on their clerkship time.

Interview Analysis

- The majority of the students worked in clerkship or expected duration at maximum 7 months and minimum for 3 months. Good practices were indicated like student's clerkship with hospitals after college schooling and motivational level of students towards clerkship. Fragile practices were indicated as the attitude of hospital administrators, health and government towards employee motivation, and effectively implementing students' clerkship in private colleges. Lastly, students of government colleges have had access and acceptance by hospitals compared to private students who have had limited time and recourses.

Students' Suggestions

- The study finds the following as students clerkship challenges no aid materials related to clerkship orientation, confusion before their clerkship program, lower student's acceptance for clerkship orientation and missing orientations and no orientation simulation at all at private medical institutions; during Clerkship, there were miscommunication among medical doctors and pharmacists, students to be discourage and not getting appropriate support; no cross functional team to enhance pharmaceutical profession; not provided constructive feedback and supervision particularly in medical and pediatric wards; having less acceptance for private colleges students, busy schedules of preceptors; meanwhile post clerkship experience was not practiced at all, accordingly no post clerkship evaluation system, no supervision by medical colleges and the colleges, and less follow up clerkship program. Overall, the study found that the community perceived less awareness about pharmaceutical care by all.

Key informants interview analysis

- As if no collaboration among the physician, the nurse and the pharmacist, it lowly contributed to the society and gives low benefits to health care, described as private college students' clerkship program was not successful and less communication, collaboration, partnership, team work were the main challenges to effectively implementing students' clerkship in private colleges.

Observation Analysis

- The majority of the students have not stayed for a long time in their clerkship period; on average their clerkship time was half day, not observed a promising patient contact during their clerkship, less time was spent by preceptors and students were not satisfied

with the orientation type (content) provided for the clerkships; the current orientation practice was on going session during the clerkship, covering mostly the administrative aspect of working through the clerkship period.

5.2 Conclusion

The profession of pharmacy has advanced to the point where clinical pharmacy with patient-focused exercise is no longer the exception but the rule for most pharmacists. Clinical pharmacy services are patient-oriented services developed to promote the rational use of medicines and more specifically to maximize therapeutic effect, minimize risk, minimize cost and respect patient choice.To attain effective clinical pharmacy services, clinical pharmacists should be involved in all pharmaceutical care processes, they should be trained in therapeutics and provide comprehensive drug management to patients. Interacting with the health-care team in patient rounds, interviewing patients, conducting medication histories, providing recommendations on drug selection and follow-up all resulted in enhanced effective and efficient outcomes. Foreseeing the difficulties facing the new clerks and implementing measures to ease their transition should be apriority for any reforms in clinical training. These reforms should include a structured orientation about the clerkship for students and clinical faculty, as well as organization of faculty development workshops focusing on feedback provision and supervision. The clerkship program should be marked in two phases; before and after pharmacy education accomplishments. Aspects of the attachment system, such as motioning constructive supervision and feedback, seeking proximity to a caregiver, and using interpersonal contact to modulate affect appear to be relevant to the interpersonal negotiations involved in seeking, receiving and accepting care at times of illness are crucial. Understanding the patients' attachment styles will allow primary care physicians to focuson successful communication which allows physicians to effectively collaborate with patientsto ensure the best possible patient-centered treatment.

5.3 Recommendations

Data found from respondents, observation and documents were presented and discussed and here conclusions are arrived. Based on the conclusions, the following recommendations are forwarded for the success of the clerkship program in private medical colleges in Addis Ababa.

5.3.1 General Reconditions

- Since clinical pharmacists apply scientific evidence to ensure and advice on best use of medications for optimal drug therapy, further studies should be encouraged to engage in various research activities to generate new knowledge and practical clinical pharmacy skills that furthermore can improve patients' health and quality of life
- Clinical pharmacists' roles may be evolved to include participation in bedside rounds as part of a multidisciplinary health care team, and in patient profile review aimed at the identification and resolution of any drug-related problems.
- Pharmacist interventions may be encouraged in various areas such as counseling the patient to improve their adherence and complianceto a consistent development of clinical pharmacy services all over the country
- Public awareness campaign may be given to alleviate clinical pharmacists' challenges such as poor awareness among general public, lack of specific legislation and recognition from other health care providers.
- Public communication strategies may be developed as possible reasons to change the acceptance of private colleges roles, rejection of pharmacists' professional standing by other health practitioners, to enhance leadership qualities,patients' perceptions, and existence of communication gaps among pharmacists, doctors and others.5-8

5.3.2 Specific Recommendations

This study focused on mainly on transition and stress, clerkship orientation, workload, preparation, knowledge and skills, patient contact, clinical supervision and feedback, resources at clinical sites, educational activities, assessment, and academic advising.

- ✓ Transition and Stress
    - Students may be well prepared for clinical clerkship as it helps them to pass a good time, to reduce experiencing a stress, to minimize transition time from pre-clinical to clinical training and for a better adoption of a new environment.
- ✓ With regard to clerkship orientation,
    - Private colleges may be provide a detailed aiding clerkship materials reasonable to the clerkship program
    - The private colleges may try to advance orientation conditions using orientation simulation, videos,

- Students may present their clerkship in public meetings for experience sharing, they should write an article in Amharic or English in colleges websites about their general orientation expectation, accomplishment, spending time, and information provided about the structure and organization of the clerkship, and their competencies during clerkship

✓ Supervisor, feedback and current environment

- The innovation of new practices in pharmacy should be necessary to a paradigm shift in the profession's mission to improve the supervision activities, feedback and clerkship environment
- Private medical colleges, hospital and specialized clinics and others should recognize that clinical pharmacy services provided by pharmacists are an integral part of the profession and the change in pharmacy practice, and integrating clinical pharmacy services within the health-care system should be seen as a must.
- Technology may be deployed fully to supervision and feedback students' clerkship and to enhance the working environment through dispense most prescriptions, provide drug information to patients and facilitate the exchange of patient-specific data among and within the health-care system. Because of the reasons mentioned, the pharmacy profession is undergoing reformation from time to time and country to country.
- Students may be frequently observed during patient contact, received sufficient supervision and constructive feedback and timely and effectively reflection on personal strengths and weaknesses are conditions of clinical supervision and feedback.
- In case of current environment, working environment needs to be current and to increase motivation towards pharmacy profession and student may feel personal accomplishment during their clerkship period.

5.3.3 Recommendations for Future Studies

Future studies should include participants from government and public medical institutions; it would be better to include more than one cohort to determine the consistency among different batches. Second, new studies should include some factors such as gender, age and job level and this could suggest future research about the relationship between sex and the mentioned factors. Third, new studies may use explanatory research design to test the cause and effect relationship among variables.

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Annex

Questionnaire

ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF HEALTH SCIENCE EDUCATION

Dear Respondent,

My name is Abera Bezabih.I am a post graduate student in the college of health science; specializing in Health Science Education at Addis Ababa University. I am currently gathering data for my thesis entitled ***"Challenges of undergraduate pharmacy students during their hospital clerkship (attachment): case of selected private health colleges in AA"***. As part of my assessment, I will ask you about some issues related to the subject of my study. I will use the information for the fulfillment of the thesis requirement only. Your name will not be mentioned and any information provided by you will be kept confidential. Thank you in advance for your kind cooperation and dedicating your time.

Thank you for your collaboration and participation!

The researcher,

E-mail: medhanit127@gmail.com and Tel: _0909534707

Section I Demographic information

1. Gender	Male	☐	Female	☐			
2. Age	25 below	☐	25 - 35	☐	36 - 45	☐	46 above ☐
3. Medical /university College	Universal	☐	Africa	☐	Rift Valley	☐	Alcan ☐
4. Cumulative GPA	Less than 2.5	☐	2.5-3	☐	3-3.5	☐	Above 3.5 ☐

Section II: Challenges of Clerkship

The following statements describe your **Transition and Stress** level with related to your current pharmacy clerkship. Please also indicate your level of satisfaction with statements in the appropriate answer box by ticking `√`.

Code	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
TS1	I felt well prepared for clinical clerkship.					
TS2	The transition from pre-clinical to clinical training went smoothly.					
TS3	I needed time to adjust to the new environment.					
TS4	I experienced a great deal of stress.					
TS5	My first clerkship proved to be better than I expected.					
TS6	The first few weeks as a clinical clerk were difficult for me.					

- Please indicate your level of agreement on **Clerkship Orientation** with related to your current pharmacy clerkship. Please also indicate your level of satisfaction with statements in the appropriate answer box by ticking `√`.

Code	Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CO1	I got satisfactory orientation to the clerkship program					
CO2	A good orientation would make					

	the transition to the clerkship easier.					
CO3	A general orientation should be provided to all new clinical clerks.					
CO4	The information provided about the structure and organization of the clerkship was sufficient.					
CO5	I was aware of the competencies that I had to achieve by the end of the clerkship.					
CO6	The competencies to be achieved during clerkship were explained by the faculty.					

- Please indicate your level of agreement on **Clinical Supervision and Feedback** with related to your current pharmacy clerkship. Please also indicate your level of satisfaction with statements in the appropriate answer box by ticking `√`**.**

Code	**Items**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
CSF1	I was frequently observed during patient contact (when I was taking a medical history or doing a physical examination)					
CSF2	I received sufficient supervision and constructive feedback about my performance					
CSF3	The clerkship stimulated me to think and reflect on my strengths and weaknesses					

- The following statements describe your **Current Environment**level with related to your current job. Please also indicate your level of satisfaction with statements in the appropriate answer box by ticking `√`**.**

Code	Items	Strongly Dissatisfied	Dissatisfied	Undecided	Satisfied	Strongly Satisfied
CE1	I work in an environment which I will find current					
CE2	working environment of the hospital helps me to increase my motivation towards my pharmacy profession					
CE3	My clerkship gives me a feeling of personal accomplishment.					

- Please indicate any challenges related to clerkship program of your college, hospitals understanding of clerkship, any related administrative and professional challenges.

_____

_____

- Your suggestions, recommendations and any feedback related to clerkship.

_____

Thank you again for completing the questionnaire!!

Interview Checklist

Addis Ababa University

College of Health Science

Department of Health Science Education

Dear participant,

I have made a research on the topic of ***"Challenges of undergraduate pharmacy students during their hospital clerkship (attachment): case of selected private health colleges in AA"***. Your response for the below questions are highly important for my research and the development of employment motivation in work area. .

This interview will be putted as a confidential document and please feel free to respond. Can I continue?

Thank you in advance!

- How long have you worked in clerkship or expected duration?
- What do you think about student's clerkship or your attachment with hospitals after college schooling?
- How do you rate the motivational level of students towards clerkship?
- What do you say about the attitude of hospital administrators, health professional and government towards employee motivation?
- What do you think the main challenges to effectively implementing students' clerkship in private colleges? Please indicate also your opinion comparing with government students?

Key Informants Interview Checklist

Addis Ababa University
College of Health Science
Department of Health Science Education

Dear participant,

I have made a research on the topic of ***"Challenges of undergraduate pharmacy students during their hospital clerkship (attachment): case of selected private health colleges in AA"***. Your response for the below questions are highly important for my research and the development of employment motivation in work area. .

This interview will be putted as a confidential document and please feel free to respond. Can I continue?

Thank you in advance!

- What do you think about student's clerkship with hospitals after college schooling?
- How do you observe the benefits of clerkship on students' future professional care and their challenges including stress and others?
- Please indicate your observation about private college students' clerkship program?
- What do you say about the attitude of hospital administrators, health professional and government towards employee motivation?
- What do you think the main challenges to effectively implementing students' clerkship in private colleges?

Observation Checklist

Addis Ababa University

College of Health Science

Department of Health Science Education

OBSERVATION CHECKLIST

- Where are students assigned for aim of clerkship?
    - Are they assigned in appropriate place?
    - Who are their mentors?
    - Have they stayed for a long time?
    - Do they get appropriate working atmosphere?

      _____

      _____

      _____
- How do pharmacy students learn in clerkships?

  _____

  _____
- What do pharmacy students learn in clerkships?

  _____

  _____
- Under which conditions students learn pharmacy discipline and profession?

  _____

  _____