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**THE INFLUENCE OF SERVICE PROVIDERS' GENDER ON THE
CUSTOMERS' PERCEIVED SERVICE QUALITY**

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1. Introduction

Research has claimed the relationship between the service environment and the customer's service quality perception. Factors such as the physical service environment where the service encounter takes place and customer's expectations have been found to influence customer's evaluation of the service received and their satisfaction. (Bitner, 1992; Fischer, 1997). However, the gender of the service provider has not been adequately studied as a potential factor that could influence the customers' perceived service quality. Little attention has been given to the possibility that customers' ratings to the service provider's performance may be biased due to gender stereotypes in the service settings.

Service quality is a competitive advantage that many firms use it to differentiate their services from their competitors (Fitzsimmons & Fitzsimmons, 1994). The success in achieving a high service quality lies in how well the service delivery matches a client's expectations. Studies indicate that service providers are the main tools that play an important role in customers' perception of service quality (Heskett et al., 1994; Mattson, 1994). The interaction between service providers and customers is a critical part of the service delivery processes that lay a foundation for customers' evaluations of service quality. Customers form perceptions based on pre-established expectations, the employee's performance, personal appearances, and the environment in which the interaction occurs. When information is scarce, individuals pass judgment based on observable cues about others to form impressions of them. Such observable cues include race, age, occupations, gender, and physical attractiveness that allow on to form inferences about a stimulus person. This study focuses on gender as a factor that influences customers' evaluation.

The motive of this study is the researcher's personal experience as a lecturer. The researcher always wanted to know how her students feel about her service, how they relate her gender with the quality of the service, and what their expectation was before the service and their perception of service quality at the end of the course. The researcher's desire to know about her student's perception stems from the gender inequality issues in Ethiopia, where mostly females are regarded as subordinate than their male counterparts. A couple of her female colleagues have faced gender bias from both students and their male colleagues. For instance, students in the engineering department complained about their female instructor that they want her replaced by a male instructor because they think that she does not know how to teach. Another incident was

where a senior female instructor was disrespectfully accused by her students for her dressing and appearance. The students complained that they do not like the way she dresses. These stereotypes made the researcher curious about how students perceive their female instructors. Besides, the fact that Ethiopia has poured a lot of effort to maintain gender equality by designing different campaigns and mainstreaming gender equality made the researcher more curious how far the attitudes of not only students but the society at large has changed regarding believing that females are not any less than men.

To the researcher's knowledge, no recent research has yet examined the influence of the service provider's gender in customers' evaluation of the service quality in Ethiopia. There is a scarce of scientific research on the area. The majority of the studies in Ethiopia that aim at assessing the service quality are conducted with the motive of finding out the service quality gap. There is a lack of literature that is focused on investigating the gender influence on service quality. Little attention has been given to the fact that the gender of the service providers could affect the customer's perceived service quality. Therefore, university and hospital were selected for this study with the belief that the employees in the selected two service settings (Physicians and instructors) are ideal target group to conduct the study on because both female and male employees work in these service sectors and the service settings are more prone to stereotypes.

Ethiopia is among the nations that have the most minimal gender balance pointers in Sub-Saharan Africa. As indicated by the Global Gender Gap Report (2010), Ethiopia is positioned at 121 out of 134 nations as far as gender disparities. Expanding national endeavors since the center of the 1990s has been outfitted towards the making of approach and operational systems that address the pervasive holes and difficulties in accomplishing gender equality. Recent advancements in Ethiopian political situation have raised hopes of many people in seeing more females in significant areas and leadership positions. Women presently hold 37% of Ethiopia's parliamentary seats. In an ongoing extraordinary and notable move, the nation's first historically speaking female president has been chosen and half of Ethiopia's bureau is filled by women including the new Minister of Science and Higher Education (The worldview, 2018). However, upgrades in female representation have not been substantial because of a pile of socioeconomic, cultural, religious, and historical reasons that keep on obstructing the progress.

Globally, men represent a higher share of faculty members. Women faculty are disproportionately represented in many fields of specialization. In Europe, women are a minority

among senior faculty members holding only 21% of academics in 2013 (European Commission, 2016). Out of the full-time faculty members in Canada, women academics accounted for 40 % in 2016-2017, and women full professors accounted for 28% of full-time teaching staff in 2017/2018 (Statistics Canada, 2017). In Australia, women held 45 % of senior faculty members in 2016 (Australian government, 2016). In Japan, women represented only 24 % of full-time faculty members in 2016 (Gender Equality Bureau Cabinet Office, n.d). In 2015, 32 % of full Professors in the US were women. (National center for education statistics, n.d). In the same year, Indian women held 25% of professors and equivalent faculty positions (All India Survey on Higher Education, n.d). In South Africa, only 25% of full professors were women in 2012 (Africa check, 2014). The women faculty members' share is worse in Ethiopia. Women have entered in Ethiopian higher education over the previous decades notwithstanding; progress on gender balance in academic positions is underneath objective. The underrepresentation of women in higher education has been unavoidable in teaching, research, and leadership. Some progress has been made concerning the incremental of female faculty members, yet the sector remains one of the areas where huge gender disparity exists. Only 18% of the current academic staff in the Ethiopian higher education sector is female (Anouka et al., 2015).

The representation of female staff is even worse when qualification and field of studies further segregate it. Only 24% of academic staff at the bachelor's level are women instructors where their share drops significantly to 12 % at the master's level and goes even down to 8% at the Ph.D. level. Women only hold 8 % of the share in Engineering and Technology faculties of public universities, 7.4% women in natural and computational sciences; 15% in medicine and health sciences; 11% in agricultural and life sciences; 9.8% in business and economics; and 11% in social sciences and humanities (The world view, 2018).

Due to gender biases, female faculty members face challenges such as negative attitudes and norms in public roles. Generally, it is expected that women are not able and capable to perform and that they will not succeed. This stereotype of ‘expected failure’ implies that society does not trust in women’s capacity to achieve. Affirmative actions also feed ideas that women are not able to achieve by themselves (Anouka et al., 2015).

Situations are the same for women in the healthcare sector. Women physicians hold a small share in Ethiopia. In the year 2004/05, out of 48,597 health professionals working in the sector, women represented only 23 %. Of the 2,453 total physicians, female physicians were 11% only. Out of the total field-level health workers (Traditional Birth Attendant, Community Health Workers, and Primary Health Workers), women hold 11.5% (Wabekon Development consultant, 2006).

The underrepresentation of women in the lecturing and health care services could aggravate gender stereotypes in the two service settings. Thus, this study aims to explore if the gender of the instructor and physician could influence students’, patients’ perceived service quality respectively, and if customers believe that services rendered by women are not as quality as services rendered by men.

2. Literature review

2.1 The concept of service quality

Three decades have passed since the theory and practice of service quality gained considerable attention from experts and researchers. Service quality was introduced as an element of competitive advantage, which became a major factor for competitive companies to differentiate their service (Marshall & Murdoch, 2001). Service quality is known to contribute to customer satisfaction and market share (Zeithaml, 2000), thus it has become the need to survive and remain competitive for many companies operating in the service sectors (Hsin-Hui et al., 2009). Although different authors have defined service quality, the generally accepted definition is “the overall assessment of service by the customers” (Eshghi et al., 2008, p.121). Parasuraman et al. (1985) define service quality as the difference between consumers’ perceptions of services offered by a particular retail business and their expectations about the services. Zeithaml et al. (1990) further explain that service quality is the customer's perception of an attribute based on the customer’s experience about the service in and through the service encounter. Asubonteng et al. (1996) define service as the extent to which a service meets customer’s needs or expectations. Many researchers have developed the concept of service quality. Chang (2008) argues that service quality should be generally approached from the customer’s point of view because they may have different values, a different ground of assessment, and different circumstances. Kumar (2008) described that service quality is not only involved in the final output rather it is involved in the delivery process, thus employee involvement in process redesign and commitment is very crucial to producing final tourism services. Quality in service literature is also defined as the characteristics of service reflected in the ability to meet consumer’s needs (Kotler & Armstrong, 2011).

According to Brady & Cronin (2001), service quality is defined by either or all of a customer’s perception regarding 1) an organizations’ technical and functional quality; 2) the service product, service delivery, and service environment; or 3) the reliability, responsiveness, empathy, assurances, and tangibles associated with a service experience.

The quality of service is measured not only on the outcome but also during the service encounter and its effect on customer’s perception. As stated by Goetsch & Davis (1997), quality consists of every aspect of business that consumers experience it physically and emotionally.

Consumers want to feel good that they have made a good decision in purchasing the service and they need a service that gives the best value. Oakland (2000), however, defined quality as the way of managing the business process to ensure complete consumer satisfaction at every stage, internally and externally.

Lehtinen & Lehtinen (1992) present another research study on service quality where the basic concept is produced in the interaction between a customer and elements in the service organization. According to the concept, service quality has three dimensions: (1) Physical quality, which includes such items as the condition of buildings and enabling equipment; (2) Corporate quality, which refers to the organization's image and profile; (3) Interactive quality, which derives from the interaction between service organizations' personnel and the customer as well as the interaction between customers. In their argument, the authors mentioned that during reviewing the determinants of service quality a due examination is needed to differentiate whether the quality is associated with the process of service delivery or the outcome of the service. Because service is interactive, consumers begin to assess the quality immediately after the delivery and performance of the service. As a result, satisfaction and dissatisfaction of the service could be influenced by memories of previous service experiences in the delivery of similar services.

2.1.1 Service encounter

Service encounter is defined as the point where the service provider and customers directly interact (Surprenant & Solomon, 1987; Czepiel et al., 1985). It is the time where both customers and service providers perform their role (Solomon et al., 1985). Service encounters comprise all the elements with which both parties interact including the physical facilities and personnel (Shostack, 1985). The interactions in service encounters are a critical determinant of customer satisfaction (Czepiel et al., 1985). The service provider is the ultimate person who directly interacts with customers and is the responsible body to represent the service and define it to the customers. (Booms & Nyquist, 1981). This means customers perception and evaluation of the service quality is determined by the performance of the service provider.

2.1.2 Customer expectations

The term expectation in service quality literature has been defined in different ways by different authors (Ekinci, 2002). According to Parasuraman et al. (1988), expectations can be viewed in two different ways. The expectation is depicted as the desires or wants of consumers in service quality literature. This shows what customers feel a service provider should offer rather than would offer. Whereas in satisfaction literature, expectations are viewed as predictions of customers about what is likely to happen during a service delivery process. In this study, the expectation is defined as the desires or wants of customers because the study deals with what customers expect from physicians and instructors as quality service.

Grönroos (2007) argues that long-term quality can be improved by measuring and communicating customers' expectations. In his model, he distinguished three types of customers' expectations in which the characteristics of the quality develop over time (Figure 2.1). The model is explained as follows (Grönroos, 2007, p. 100):

1. **Fuzzy expectations** exist when customers do not have a clear understanding of what should be done but still expect the service provider to solve the problem.
2. **Explicit expectations** happen when customers have a clear idea in mind ahead of the service delivery. However, their expectations could be either realistic or unrealistic expectations.
3. **Implicit expectations** are those dimensions of service that are obvious to customers and customers believe the service provider should be able to provide them but customers do not consciously think about them.

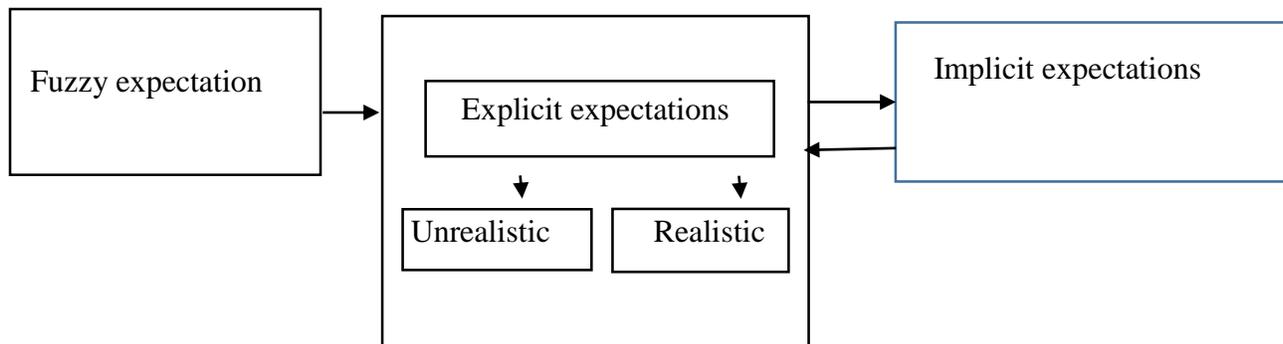


Figure 2.1 A dynamic model of expectations, Source: Grönroos, 2007

Grönroos (2007) further illustrated that each level of expectation is equally important to understand because of the interrelated nature of the expectation and the possibility that the expectations can affect customer satisfaction. The service provider should understand every customer expectation otherwise; customers will be disappointed in a case where the service provider fails to fulfill it. The characteristics in the expectation model show that customers may feel that the service provider need to meet these needs and wants, however, they do not have a clear knowledge of how and what would meet their need. The author also mentioned that there is this expectation from customers, which they do not exactly know. Sometimes their expectation could be more than what is needed to be done; however, they do not know how it should be done. In such cases, the service provider has to be able to adjust the unrealistic expectations of customers into more realistic ones so as the service delivery will meet customers' expectations. This is a critical stage where the service provider needs to understand the unclear promises they make because it can cause unrealistic expectations, which in return leads customers to believe that the service offered, will include features that are not included.

It is important to assess fuzzy and implicit expectations at the early stage because of the tendency of those expectations to build another explicit expectation (Grönroos, 2007). Customer's judgment of service quality is based on the comparison of their expectations with what they think they have received from the service provider. When their expectation is met, they tend to believe

that the service is high quality (Lovelock & Wirtz, 2007). According to Kabir & Carlsson (2010), expectations can be influenced by three determinants. These are as follows:

1. Positioning strategy of a different service provider and marketing communication; exaggerated service promises by the service provider could lead to an unrealistic expectation of customers. Message sent to audiences while promoting the services should be met and delivered as promised.

2. Previous experiences of customers: expectations could be built based on prior customers' service experience in the same industry or related services in different industries. Sometimes if customers never had any previous experiences, they base their expectations on word of mouth and marketing information of the particular company.

3. Innovations and technologies: customers' expectations are more likely to vary under the influence of the ever-growing market and social trends

2.1.3 Customer perception

Perceptions are based on what customers receive from the service encounter (Douglas and Connor, 2003). Zeithaml (1988) defined perceived service quality as the overall excellence or superiority of the service assessed by customers. Service quality is a multi-dimensional phenomenon (Vandamme & Leunis, 1993) where different factors are involved to assess the quality. The conceptual framework of Fiore & Kim (2007) presents the concerns that consumption experience can be influenced by different environmental variables such as person-environment variables, individual attributes, individual variables, and the service environment. As much as such an environment influences customers' perception, they can also influence satisfaction (Baker et al., 2002; Minor et al., 2004). The physical environment is more likely to be associated with the perception of the brand image. Customers' perceptions of service quality are formed on the bases of multiple factors. Likewise, a customer considers different determinants when they evaluate service quality (Zeithaml & Bitner, 2000). Lovelock & Wirtz (2007) argue that satisfaction and delight are highly related to the degree of confirmation and disconfirmation of expectation. Some researchers say perceived service quality is one component of customer satisfaction, which is the result of price/quality tradeoffs and other factors such as personal and situational factors (Kabir & Carlsson, 2010). According to Baker et al. (2002), three components influence the service

encounter element. The first component is a physical environment which includes external and interior designs, the second component is the interaction of customers with intangible and tangible elements in the service delivery process. However, other researchers such as Andaleeb & Conway (2006) and Wu & Liang (2009) argue that the second component is the customer-service provider relationship. The third component is the appearance and behavior of other customers. As Baker & Cameron (1996) mentioned the behavior of other customers affects perceptions and the service provider must be able to create a good interaction between customers although it is difficult to do it practically.

2.2 Service quality in higher education

Service quality in the higher education context is defined as the discrepancy between students' expectation of the service and their perceptions of what they receive (O'Neill & Palmer, 2004). Higher education service quality is known to increase student satisfaction and educational business performance; as a result, it has gained much attention from both academics and managers (Noaman et al. 2013; Ali & Mohamed 2014; Shauchenka & Bleimann, 2014).

Higher education as one global business is in a continuous exploration of new ways for exporting higher education services (Yusof et al., 2012). Service industries aim at meeting the needs and wants of their users. Likewise, higher education institutions strive to satisfy their primary customers (the students) by providing quality education (Redmond et al., 2008; Borges et al., 2014). Quality education is the key to survive in a competitive business environment. The success of universities is judged by how well students are satisfied with the service they receive (Habibulah et al., 2012; Maguad, 2007). However, satisfying customers in the higher education sector where no true products are involved could be challenging than most other service industries because of the “pure service” and “interactive” nature of the education service. There is no physical product involved in education, which makes the quality of the service to be mainly determined by the interaction, and relationship that exists between the students and their instructors (Evans & Lindsay 2002; Redmond et al., 2008). Creating unique experiences and delivering high-quality service has become a competitive demarcation amongst universities (Khodayari & Khodayari, 2011). Like business organizations which are always under constant pressure and obligations to satisfy and meet the needs and wants of their customers (Calvo-Porrall et al., 2013), higher education institutions also need to maintain a sustainable student satisfaction (Srikanthan & Dalrymple, 2007) by providing quality education (Teeroovengadum et al., 2016). Students'

satisfaction is ensured when all university staffs adhere to principles of quality service, regardless of management and administrative staff or front-line staff (Banwet & Datta, 2003). However front-line staff plays a major role in students' satisfaction and evaluation of service (Sohail & Shaikh, 2004).

The growing competition among universities has made quality education the concern of all institutions across the world (Sohail & Shaikh, 2004) and a very necessary aspect of a higher education that helps attract and maintain students (Green, 2014). According to Crawford & Shutler (1999), service quality is the key to the success of higher education institutions, especially in a competitive market. The need for a higher education institution to provide high-quality service and practice the appropriate administrative process makes service quality measurement an issue of importance (Shekarchizadeh, 2011; Yen, 2013). Therefore, the assessment of the service quality in higher education is essential in providing inputs to the management and administration that enables them to improve the quality of education (Al-Alak & Alnaser, 2012).

Service quality in higher education is a complicated issue and should be addressed as a contextual issue (Sultan & Wong, 2010). Customers perceive service quality from a multi-dimensional perspective and make a judgment based on various relevant factors depending on the context being analyzed (Zeithaml et al., 2009). Service quality in higher education deals with the psychological aspects, institutional aspects, and physical aspects (Sheeja et al., 2014).

Although quality education is important, it can be hindered by different constraints both from the sides of the lecture and the students. For example, students' performance, participation, and interest in the learning styles are reported as personal predictors of student satisfaction (e.g. Kuh et al., 2008). Regarding institutional factors, course methodology and structure, responsiveness of instructors' communication and interaction of the instructor (Eom & Ashill, 2016), instructors' attitudes (Trivellas & Dargendiou, 2009), instructors' performance (Umbach & Wawrzynski, 2005), learning outcomes (Sojkin et al., 2012), curriculum and learning environment issues (Papastavrou et al, 2016) are generally reported as potential significant determinants of students' perceived satisfaction. However, when gender is involved, even with all the basic requirements of service quality being met, there could still exist a gap in perception of service quality. Students may judge the service quality based on the interplay of the instructor's gender and personality traits. In another word, the gender of the instructor could influence the way service dimensions are reflected by the instructor and how the students perceive them.

2.2.1 Students' expectation

According to Zeithaml et al. (1990, p. 51), higher education institution has come far away from the “inside-out approach”¹ to the “outside-in approach”². The “inside-out approach” is where the service provider assumes what the students need and what they expect from the service provider has been replaced by the “outside-in approach” where the service provider research customers expectation of the service and then work to meet the expectation by providing the service to the standards. The adaptation of the latter approach has brought success to service industries. Thompson & Sunol (1994) explained that expectations (What customer would ideally like to occur during the service encounter) are derived from two types

- (1) Predictive expectations (what the customer assumes is probably going to occur) and
- (2) Normative expectation – expectation from the experience of service provision by other similar service providers.

Students' predictive expectation could include the expectation of the gender of the instructor for the given subject. Especially after learning the type of the course/subject, there is a tendency to associate “hard” subjects (Maths, Physics, Chemistry, Economics) with a male instructor while “soft” subjects (History, Sociology, Psychology) are associated with a female instructor (Ayalon, 2003). Such association of subjects with gender seems to be the result of the perception that male is better in a STEM (Science Technology Engineering Mathematics) field than female (Eurydice, 2009).

The importance of understanding expectations in human behavior has gained recognition by psychologists. The study is described as the top-down approach to human information processing (Eysenck & Keane, 1995). The same was found to be true for educational research. Researchers have recognized how crucial it is to study customers' expectations. According to Steele (1992), a careful interpretation of student expectations could help in the retention and satisfaction of customers. This finding is important since it addresses the link between comprehending customer expectations and the possible benefits of doing that, which is the

¹ inside-out approach is guided by the belief that the inner strengths and capabilities of the organization will make the organization prevail

² Outside-in approach is instead guided by the belief that customer value creation, customer orientation and customer experiences are the keys to success. <https://knowledge.insead.edu/blog/insead-blog/business-strategy-are-you-inside-out-or-outside-in-3515>

improvement of student outcomes. More researchers have stressed the advantage of applying an expectation driven approach to assure the quality of service in the delivery of education. Since student's expectations and perceptions could change over time, a careful analysis of student's preferences and expectations is needed. Hill (1995); Harrop & Douglas (1996) suggest that students' feedback is valuable data that should be collected and put into consideration.

According to other researchers on student's expectations in the higher education institution, there are different factors, which can affect student's expectations. These include gender, culture, age, university type, mode of study (Shank et al., 1996; Twale et al., 1997; Stevenson & Sander, 1998) and time (Boulding et al., 1993). As the focus of this study is gender as a factor of students' expectation and perception, let us discuss why gender can be a factor in the following subtopics.

2.2.2 Stereotypes, personality traits, and gender roles in higher education

Gender-based stereotypes of students towards the instructor could be favoring either male or female instructors. When students from expectations of educational service, they could base their expectations on the gender of the instructor. What they expect from male instructors could be different from what they would expect from female instructors. Such differences in student's expectations could stem from the personality and role difference between males and females.

Gender stereotype results in the association of women and men to certain behavior and characteristics (Bem, 1981; Ashmor & Del Boca, 1980). For example, characteristics such as independent, logical, and effective were more attributed to males than females (Bem, 1981). Women were perceived to be irrational and dependent. Stereotypes and prejudice at work are too often the results of such gender stereotypes in the public and the grouping of personality as masculine or feminine. Moreover, Eagly (2003) suggest that characteristics such as assertive, ambitious, aggressive, independent, self-confident, daring and competitive are usually recognized in men, whereas communal characteristics such as a concern for other people and being affectionate, helpful, kind, sympathetic, interpersonally sensitive, nurturing, and gentle are identified in women. These interesting findings explain the fact that student's expectations of service may be shaped and constructed by the gender-based characteristics played by male and female instructors. There are certain types of characteristics that students would expect to see from their female and male lectures, which are associated with the lecture's gender. As a result, a student's perceived service quality of female instructors could be different to the perceived service

quality of male instructors and when instructors violate the gender expectation they will be rated less (Chamberlin & Hickey, 2001; Dalmia et al., 2005; Sprague & Massoni, 2005). This statement is supported by the study of Mattson (1994) and Heskett et al. (1994) who explained that since service providers play a major role in customer's perception of service quality, any expectation deviation of the customer in the service providers age, sex, religion, and ethnic affiliation could result in a different perception of the service quality than the possible perception of service quality without any expectation deviation. Gender expectations in the workplace are highly constructed by gender roles (Risman, 2004). Men are expected to have competence, credibility and are considered as professors who have authority, while women are assumed less capable and less competent and are considered as instructors with less power (Johnson, 2003; Miller & Chamberlin, 2000; Morris, 2011). Women and men have certain roles in society that affect individual beliefs and gender attitudes. The belief about what men and women are capable of doing/not doing and how women and men are expected to behave can be influenced by traditional gender roles that are established in the human mind at an early age (Koenig, 2018). Gender stereotypes determine what people think men and women are. Too often society uses negative labels when people personality does not match the gender stereotypical characteristics (Rudman et al., 2012). For instance, being assertive could make a woman labeled as a manipulative but assertive male could be labeled as strong. When instructors exhibit some behaviors outside the traditional gender roles, negative labels could be used by students, which would result in a negative evaluation of service quality (MacNeill et al., 2015). Therefore, the perception of service quality varies according to the student's expectation of the lecture's gender and other variables involved in the service encounter.

2.2.3 Students' evaluation of instructors

Students evaluate the quality of education based on various factors such as the instructor's ability to teach, methods of teaching, and management of the institution. These factors directly affect the level of students' satisfaction (Navarro et al., 2005). Students' feedback on the general education service is taken as an effective way of measuring and monitoring the quality of universities (Hill et al., 2003). Students' evaluation is the crucial source of data used by universities to assess instructors and faculties (Helms et al., 2001). However, a student's evaluation of instructors (SEI) has brought many arguments amongst researchers (Arreola, 1994; Theall & Franklin, 2001 Franklin & Theall, 1990) argued in favor of student's evaluation claiming that

students know better the performances of their instructors as they spend much time interacting and observing them. Therefore, there is no one as qualified as students who can make evaluations of the teaching styles and the ability of an instructor. Scriven (1994) also argued that students are in the right position to judge whether the instructor covers all the portions of the course and whether the courses are delivered to meet the stated objectives forwarded another argument in favor of student's evaluation of their instructor. A study by Aleamoni (1987) also justifies that students are the ideal evaluator of the education quality, instruction methods, and course content. The author provided further evidence that a student's assessment is consistent in the long term. However, several authors (Crumbley et al., 2001; Trout, 1997) have criticized these views. These opponents claimed that students cannot judge the overall aspects of teaching performance. Especially new undergraduate students are not in the position of making any judgment regards to the teaching performance since they do not have a knowledge-based experience to assess the methodology of the teaching.

Another finding by Crumbley et al. (2001) and Emery et al. (2003) shows that students' evaluation of their instructors is sometimes affected by non-instructional factors such as gender, rank, experience, personality traits, students' characteristics (motivation for taking the course, disposition toward instructor and course); course difficulty (grading, leniency); and other environmental characteristics (physical attributes and the ambiance of the classroom) (Martin, 1998). Therefore, administrators in making decisions about the instructor's performance should not use the data obtained from the student's rating. Although there is no one closer to the instructor than the student who knows about the silks, knowledge, and ability of the instructors, yet student's evaluation of instructors could be biased by the aforementioned factors.

2.2.4 Gender bias in students' evaluation of instructors

Quality education takes a major role in a student's assessment of a service. It is known to be the prime indicator of a student's evaluation of the service (Wachtel, 1998). The higher the quality of the service, the better the student's evaluation (Edstrom, 2008). However, different factors could influence student's evaluations such as the gender of the instructor and stereotypes (MacNeill et al., 2015). The evaluation of services may be directly affected by the gender of the evaluator, perceived job-related competence of the service provider (core service), perceived interpersonal abilities of the service provider (relational), and the service provider's gender

(Iacobucci & Ostrom, 1993). Several research results confirm that students may apply different stereotypes when evaluating an instructor's competence. Although female instructors are as efficient as their male counterparts are, evidence shows that female instructors face bias in SEI. Snipes et al. (2006) claimed students' evaluation of instructors was biased against female instructors. Also, Boring (2017) argued that students give lower scores to women than men for the same level of teaching effectiveness. In the study, it was investigated whether a match between the gender of student and professor has an impact on the professor's evaluation score. The findings show that gender biases appear to exist in the student's evaluation. Male students rate significantly higher satisfaction scores to male instructors than to female instructors. Male students were also found to rate male instructors higher than how female students rated both male and female instructors. The author also finds that there is no significant difference between male and female instructors in the actual teaching effectiveness. Students perform well on their exams regardless of the gender of the instructor. Therefore, the results suggest that differences in teaching are not driving gender differences in student's evaluations (Boring, 2017).

The gender biases over the teaching dimension include lecturing style, knowledge of the instructor, course content, and leaning assignments. The finding shows that both female and male students were more likely to favor rating to a male instructor on teaching dimensions, which are related to male stereotypes such as knowledgeability, leadership skills, contribution to student's educational development, and authoritativeness. The average students who rated female instructors, the teaching dimensions were associated with female stereotypes such as nurturing, caring, organization and preparation of classes, clarity of the assessment standards, and ability to understand student's problems and quality lecturing materials (Boring, 2017). This result goes along with the role congruity theory by Eagly & Karau (2002). The theory states that students expect women instructors to behave according to female gender stereotypes and male instructors according to male gender stereotypes. Another theory, which consists of the fact that gender stereotypes may influence student's testing, is the statistical discrimination theory (Arrow, 1973; Phelps, 1972). The theory explains that when evaluators lack knowledge about actual productivity, they may rely on stereotypes when assessing competence (Altonji & Blank, 1999). The theory assumes that the more evaluators are exposed to information, the less they rely on stereotypes, and the less they discriminate. However, being exposed to more information about the instructor does not guarantee a stereotype-free evaluation because as discussed earlier, student's evaluation is

influenced by factors other than the knowledge and information about the instructor. Whether students are exposed to female or male instructors, students continue to discriminate in their SEI rating. Students may not be able to assess their instructors even after an entire semester (Boring, 2017). This means, no matter how many semesters' students spend with their instructor, they still could hold a gender-based stereotype or other forms of bias which could affect the evaluation outcome. Besides, students could sometimes be in denial of the fact that their female instructors are as good as their male instructors. Even if they experience being thought by excellent female instructors, they still may believe that female instructors do not deserve to be acknowledged and get a higher rate than male instructors for social and cultural excuses. Based on the above discussion the following hypothesis was developed:

H1. Instructors' gender will influence students' perceived service quality such that female instructors will be rated less than their male counterparts.

Throughout the world, it is observed that some services are dominated by one gender or the other (Mathies & Burford, 2011; Mokhlis, 2012; Blackburn & Jarman, 2006). When there exists a great significant difference between the number of male and female in services, it contributes to the stereotype in perceived service quality resulting in the conception that one gender best suits the job and one can be better in performing the service than the other gender (Mathies & Burford, 2010). For example, the right gender for the job of a nurse is generally considered to be female and driving is portrayed as a masculine job (Bradley, 1989). Although a lecturing job is not as highly segregated as nursing and driving jobs, still there could be a slightly uneven distribution of women and men in the industry. It is commonly observed that women instructors are outnumbered by male instructors. Such segregation could brainwash students into thinking that a lecturing job is more suited for males rather than females. Consequently, it results in bias in service quality ratings. Evidence shows that students perceive and evaluate their female instructors pretty much different than they do male instructors (Centra & Gaubatz, 2000; Mengel et al., 2017; Wagner et al., 2016; Young et al., 2009).

MacNell et al. (2015) performed an experiment where they disguised the gender of the assistant instructors in an online class each operated under two different gender identities. At the end of the semester, the students were told to evaluate the instructors based on accessibility,

effectiveness, and overall quality. It turned out students were gender-biased. There was a significant difference in how the students rated the perceived male and female instructors. They rated female identity significantly lower than the male identity, regardless of the instructor's actual gender. When the actual female instructor was perceived to be male, students gave significantly higher ratings than when they were perceived to be female. In other words, regardless of the actual gender of the instructor, students rated the perceived female instructor significantly lower than the perceived male instructor. Therefore, the lower ratings of female instructors can be explained by failing to meet gendered expectations rather than the issue of performance. Based on the above discussion the following hypotheses were proposed.

H2. Students will expect a better service from a male instructor than a female instructor

H3. Students will prefer male instructor than a female instructor

While dealing with student's evaluation, it is important to raise how gender stereotype leads to bias in SEI and their consequences. Higher education institution uses SEI as a tool to assess the quality of the instructor's teaching (Svinicki & McKeachie, 2010), measure students' satisfaction, (Marsh, 2007; Murray, 2007), select award winner instructors (Benton & Cashin, 2014), decide on instructors contract renewals and promotions (Abrami, et.al., 2007; Davis, 2009; Crumbley et.al,2001). Given this information and the evidence that female instructors are rated less, the bias on SEI could result in a bias on hiring and promotion of instructors in universities, especially against women. Therefore, it has a more negative consequence on woman instructors. In general, SEI is used for personnel decisions (Centra & Gaubatz, 2000), hence any potential gender bias in students' ratings could be of interest to faculty committees and administrators.

The bias could also have a consequence on female students as it impacts the role model effect on female student's performance (Bettinger & Long, 2005; Dee, 2005; Hoffmann & Oreopoulos, 2009). Carrell et al. (2010) provide evidence on how gender biases in SEI could have a further impact on female student's choices of courses and their success in particular fields. According to the author, under STEM fields which are male stereotypical, female students are more likely to participate in math and science courses and perform better when they are taught by a female instructor. However, if competent women instructors are offered fewer courses on such fields due to low SEI scores, it may lessen the interest and motivation of female students to take

part in the STEM. This is a very harmful effect that seeks due attention to university management and administration.

Another important consequence of gender biases in SEI is that it may tend to provoke women instructors to spend more of their efforts on teaching activities which are time-consuming (Boring, 2017). These include giving more attention to students and course preparation. The attempt of female instructors to increase their SET score could cost them a time spent on other activities such as participation in research activities and management. This, in turn, could hinder a female instructor's promotion opportunity. Studies show that women's advancement in their career is hindered by the consequences of gender stereotypes (Peus et al., 2015; Eagly & Sczesny, 2009; Heilman, 2012).

Moreover, in higher education institutions where bonuses are awarded on the base of SEI scores, gender biases may create income imbalances between women and men instructors, women being the least paid academic (Boring, 2017). This result has a significant impact on female instructors, destroying their academic ambition and discouraging them to pursue their academic careers. The result could lead to a lower number of courses delivered by women academics and higher female instructors' drop-out. Gender biases in universities can be corrected by having a gender balance in faculty staff. This way, gender stereotypes associated with teaching could be reduced.

2.2.5 Student's satisfaction

Students' perception and satisfaction go hand in hand. Students are more likely to be satisfied with the service if they have a positive perception of the institution's instructors, facility, infrastructure, and learning environment. The satisfaction of students is affected by their perception and experience of the service during their study period (Palacio et al., 2002). Positive perceptions of service quality have a significant influence on student satisfaction and thus a satisfied student would spread positive word of mouth and attract more students (Alves & Raposo 2010). Organizational harmony, professional development, instructors' intellectual ability, feedback and training, and transparency in students' evaluation are the important features that mentally build students (Spooreen et al., 2007). Yet Cameran et al., (2010) argue that satisfaction depends on the students' perceptions and expectations of services attribute thus, students might develop different perceptions toward the same service experience (Thaichon & Quach, 2015).

2.3 Service quality in the health sector

Although all service sectors have to render quality services to their customers, the quality of health service is critically important because it deals with human lives and the outcome of the service affects the well-being and life expectancy (Sahney et al., 2008; Sabahi-Bidgoli et al., 2011). This has made health service an issue of consistent quality control and improvement (Rezaei et al., 2016). Worldwide healthcare systems have shown a great transformation throughout the past few decades (Purbey et al., 2007).

Like other service sectors health centers are expected to deliver high-quality service and meet the needs and wants of their patients (Ranjbar et al., 2010) while holding themselves accountable for their actions (Price et al., 2015). Many researchers have reported a significant relationship between patient satisfaction and healthcare outcomes such as frequent referrals, patient retention, recovery and clinical readmissions (Faezipour & Ferreira, 2013; Tsai et al., 2015; Youbd et al., 2013; Reader et al., 2014; Ferrand et al., 2016; Trzeciak & Mazzarelli, 2016; Mohammed et al., 2016).

Previous scholar's definitions and conceptualization of patients' satisfaction revolve around the central premise that patient satisfaction is a reflection of the patients' experiences with the quality, service, and conditions of care they received at the visited healthcare facility (Ibrahim and Ahmed, 2019.) However, there hasn't been much research on how the gender of the service provider is associated with a patient's satisfaction. In the following subtopics, the gender of the physician has been discussed in detail as a potential factor of patient's satisfaction.

2.3.1 Gender stereotypes of physicians

With a glimpse of thought, one might think that either masculine or feminine is the character that could best describe a physician. Which gender pops up in your mind first when you think of a doctor? This kind of question has been asked in research to test how people instantly associate gender with the profession which is known as "unconscious stereotypes" or "implicit bias". For example, Cao & Banaji (2016) revealed that consciously the image of a female as a doctor fitted in the minds of people but unconsciously people still hold a stereotype that associates a male with being a doctor and a female with being a nurse. When people are given male and female names and asked which one a doctor is and which one is a nurse, their conscious brain answered both genders can be equally either a doctor or a nurse, but unconsciously they run a

stereotype linking the male name with doctors and the female name with nurses. The authors gave another example of implicit biases by linking the scenario to the old riddle about a father and son who are in a terrible car accident. The father dies, and the son is rushed to the hospital, where the surgeon takes one look and says, "I can not operate on this patient! He's my son." People answered this statement saying that the surgeon could be the biological father of the boy and the father who died in the accident could be the foster dad who adopted the boy. However, the correct answer is that the surgeon is the mother of the boy. The big question is why people are conditioned into thinking the surgeon is men but not women.

Female physicians have been underestimated in their skills and were seen as less qualified in the profession when compared to male physicians (Stamarski & Son Hing, 2015). Different explanations could be given why this thought has been evolving over the centuries. First, it could be because of occupational segregation. Some professions are dominated by either male or female. For example, globally, nursing is dominated by women, and doctors are dominant men (World Health Organization, 2006). Between 2001 and 2004, women represent 32% of physicians worldwide (World Health Organization, 2013). A study in the USA showed that, although the number of women entering medical school has increased over time, women physicians are less likely than men physicians to hold a leading position (Catalyst, 2013). It is a glaring fact that worldwide high-status jobs, in general, are dominated by males (Catalyst, 2018). As in other jobs, female physicians are faced with similar challenges in the medical field. Globally, nurses are dominant women and senior positions like doctors are mainly dominated by men (World Health Organization 2006). For centuries in the medical discipline, doctors were perceived to be males but not females. "Masculinity" persisted as a brand for the medical profession until recently (Couch & Sigler, 2001). Females in a male-dominated job may face stereotypes and their competence may be questioned. Likewise, a male in a female-dominated job may feel intimidated and be prejudiced. Second, stereotypes could also stem from the distribution of male and female social roles (Eagly & Steffen, 1984). In societies marked by deep gender inequalities, women hold a lower position and are regarded as subordinates (Stamarski & Son Hing, 2015). Thus, women physicians in such society experience stereotypes within the workplace and society at large.

2.3.2 Physician-patient interaction

The medical service outcome is at the best level when the medical examination is accompanied by focused interpersonal relations, as showing more support and responding to the emotions of patients (Bradley et al., 2001). When patients learn that their pain and feeling are being shared by the physician as a partner, they become more relieved and put trust in the physician (Stewart, 1995). A good rapport can help bring the desired and speedy recovery of a particular patient. The relationship between physician and patient plays a significant role in healthcare delivery. As depicted in Figure 2.2, the medical visit has a major role in the process of care and has several inputs and outcomes. Both the physician and patient bring their communication styles, attitudes, beliefs, expectations, and socio-demographic characteristics to the medical service encounter. The outcomes of a medical consultation include the utilization of healthcare resources, professional satisfaction, the physician's knowledge of the patient's problems and the patient's immediate (change in concern, satisfaction with the visit, and recall of information given), intermediate (adherence to recommendations), and long-term (change in health status) outcomes (Bertakis, 2009).

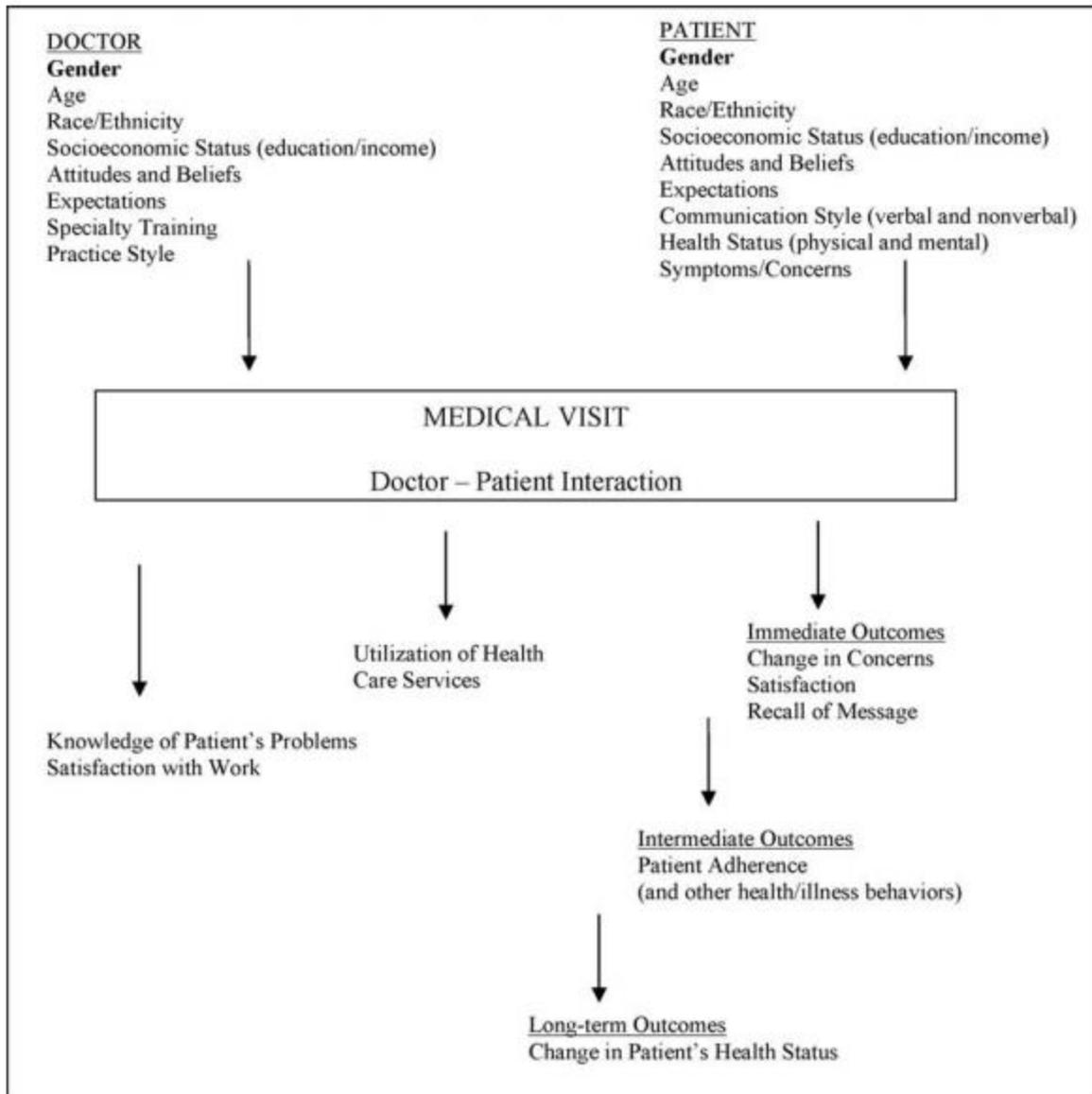


Figure 0.2 Physician-patient interaction inputs and outcomes. Source: Bertakis, 2009

In the hospital industry, a good patient-physician relationship is one of the qualities used to measure service quality. Patients expect their physicians to initiate communication, build a relationship with them, and maintain it comfortably and professionally (Hall & Roter, 1995). Everything being said the gender of the physician could influence the communication level in medical encounters. Gender could be significantly related to communication, and gender-based stereotypes in the service encounter could affect patient-physician communication.

For example, first, basing the physician's gender and the associated stereotype, patients may generate assumptions about the qualification and competence of the physician before the service encounter. It is common in public health centers that patients do not know the gender of the physician until the first service experience. If the patient was expecting the doctor to be a man with the belief that man is the best for the service, the patient may be disappointed if the physician happens to be a woman. The same applies to that patient who was expecting a women physician and ends up with men physician. Such incongruence may result in the discomfort of the patient in communicating the physician. Patients may also show less attention to the comments and advice of the physician if they hold a stereotype that the physician is incapable (Beck, 2001; Street, 2002). Second, the gender of the physician affects the interaction in such a way that for treatments which needs some sort of open discussion between the partner and where patients need to expose their body including their private part, it is highly unlikely that patients prefer to visit the opposite gender physician (Arabia et al., 2003). For instance, women patient would like their gynecologist to be a woman. However, if the physician is male, the patient may be uncomfortable discussing it with the physician. This could limit the communication between the partners which results in dissatisfaction with the patient. Third patients build gender role stereotypes where they expect their female physician to be more compassionate, nurturing, and communal and when women fail to meet this expectation, communication between the patient and the physician could be affected. The same applies to the expectation of masculinity in males (Bradley et al., 2001; Schmid et al., 2007, 2008; Shah & Ogden, 2008).

2.3.3 Patients' attitudes towards physician gender

Gender is one of the factors that influence the patient's perception of a physician's competence. Couch & Sigler (2001) investigated how patients categorize specialties based on the gender of the physician. In their study, respondents were given three categories: feminine, masculine, and neutral. They were told to classify a list of medical specialties under each category. Based on the result respondents were likely to perceive that occupations such as cardiologists, orthodontists, and surgeons are "masculine". Nurses and psychologists were perceived as "feminine", whereas Dermatologists and Psychiatrists are perceived to be "Neutral" specialties. Biased perceptions of medical professions as that of classifying physicians based on their gender rather than their competence and associating gender with the specialties are the stereotypes mostly

seen in the medical field. In the history of the medical profession, women have been regarded as less competent and less experienced than their counterparts all because of the stereotypes people hold towards women. For example, the study of Decker (1986) and Engleman (1974) showed that female physicians were questioned for their skills and competence. Albrecht et al. (1977) also claimed that patients believed that males were better suited to be physicians than females. This belief was reflected by both adults and children. Children of 5 to 10 years old rated a female physician as being less competent than a male physician (Cann & Garnett, 1984). Recent studies show that this biased perception and stereotypes have somehow diminished over time but not vanished. For example, while male physicians are perceived to be more competent than female physicians, female physicians are rated with greater empathy and care to patients (Nicolai and Demmel, 2007)

2.3.4 The differences in behavior between male and female physician

Since physician-patient communication can have a significant effect on the outcomes (e.g. satisfaction and health improvement) (Stewart, 1995), it is worth studying the possibility that the physicians' gender may influence the communication in the medical encounter. Male and female physicians show a considerable difference in behavior (Roter & Hall, 2004). Although the quality of medical information provided is similar between the two genders, a difference exists in how the physician interacts with their patients. The difference is believed to be due to behavioral practice between males and females (Roter et al., 2002). For example, female physicians show interest in socializing and building a relationship with their patients during the consultations. They are more likely to share emotions and information, lead patients to a discussion, encourage them to express themselves, talk more, engage in participatory decision making, building a partnership with patients (Roter & Larson, 2001), ask closed questions, show warmer behavior, display positive nonverbal communication, for example, nodding, smiling and a friendly tone of voice (Roter et al., 2002), and they interrupt patients less than male physicians do (Rhoades et al., 2001). While male physicians were goal-oriented and tend to spend more time on discussing medical-related treatment issues as the pros and cons of the treatment (Bertakis et al., 2003; Nicolai & Demmel, 2007). Studies of Franks & Bertakis (2003) indicated that women physicians spend much more time with their patients and communicate well than male physicians who seem to focus only on information concerning the illness and symptoms of the patients.

Concerning the mechanics of physicians in diagnosing the patient, studies have shown that more of the preventive screening is done by the female physicians than male physicians (Rondeau et al., 2006; Henderson & Weisman, 2001). Women physicians are more likely to spend time on counseling patients while male physicians are more engaged in the technical practice of the medical examination and physical examination (Bertakis, 2009). It has been reported that male physicians emphasize biomedical aspects of illness and referrals for cardiac catheterization procedures than female physicians (Rathore et al., 2017). In sum, women physicians exhibit patient-centered behavior that is more caring and sharing to the patients as they are in the social relations or non-clinical populations (Roter & Hall, 2004; Roter et al., 2002).

2.3.5 Patient-physician dyad in a medical encounter

Gender influences both ends of the physician and the patient. Physician-patient communication can also be associated with patient gender (Hall et al., 2011). Male and female patients exhibit different behavior during a medical examination. For instance, the female patient tends to interact more actively, ask more questions, express emotions freely, engage in partnership easily, and show more interest. While male patients feel reserved, less engage in discussion, and talk more about facts only (Hall & Roter, 1995; Stewart, 1983; Hall et al., 2011). Another interesting finding explains that male patients have shorter and less participatory visits when examined by a male physician. The female patients showed a relatively longer visit when accommodated by female physicians (Kaplan, 1995). Physicians tend to display more emotional and egalitarian behaviors during consulting toward female patients than toward male patients. Moreover, physicians also show more dominance behaviors toward female patients than toward male patients (Rhoades et al., 2001; Hall & Roter, 1995, 1998).

Because of the patient-centered communications shown by women physicians, patients consulted by a women physician have a closer relationship, show more positive interaction such that they agree more, talk more, and give more psychological information and medical information than when consulting with a man physician (Dindia & Allen, 1992). They also show positive nonverbal communication such as smiling and gazing. When compared to a male physician, patients of female physicians act dominantly, feel more empowered, interrupt conversations, and ask more questions. All in all, women physician patients are more likely to be participative than male physician patients (Hall & Roter, 1998; Dindia & Allen, 1992).

Female physician–female patient dyad; as a patient’s behavior differ by gender, so does their satisfaction level with the gender of the physician. A female patient was more satisfied with a female physician than a male physician (Derose et al.,2001) and female patients expressed more willingness to visit female physicians than male physicians (Shah & Ogden, 2006). The dyad is characterized by longer consultation hours (Franks & Bertakis 2003), higher psychological discussion, eye contact (Van den Brink, 2002), an equal amount of speaking time between the physician and the patient (Hall et al., 1994), more patient-centeredness (Law & Britten, 1995), and more coordination of behaviors between the parties (Koss & Rosenthal, 1997). Patients tend to perceive that female physicians’ behavior toward patients as having both technical and interpersonal qualities-while male physicians were perceived by patients as either low on both dimensions or as only instrumental (Shapiro et al., 1983).

Female physician-male patient dyad; the interaction between a female physician and a male patient is characterized by uneasiness felt by both partner, higher incongruence, and discordant behaviors. This can be explained due to the stereotype associated with gender and position. The women physician in a higher position and a male patient in a subordinate position challenges the gender-based stereotype (Carrard & Mast, 2015).

Male physician-male patient dyad; this dyad is characterized by shortest visit time, the willingness to openly disclose symptoms to a physician, power differences between the two parties where the male physician shows high verbal dominance over the male patient. (Carrard & Mast, 2015; Roter & Hall, 1991). The shortest visit time and the highest level of physician verbal dominance.

Male physician-female patient dyad; this dyad accommodates the least amount of physician patient-centeredness (Law & Britten, 1995).

2.3.6 Patients' evaluation of medical service and satisfaction

Since medical services are characterized by a high level of uncertainty and risk, patients assess the service quality on the base of therapeutic value and physician-patient relationship rather than professional knowledge (Berry & Bendapudi, 2007). A well-constructed patient-physician relationship helps to resolve a patient's dilemmas and uncertainties in medical services (Spake & Bishop, 2009).

The relationship between the physician and the patient is shaped by many factors lying on both the patient's and the physician's side (Bishop, 2009). The relationship is the result of interactions between both parties at the physician's office (Leventhal, 2008). These factors include the assessment of a physician's competence, the psychological comfort level of the patient, empathy, the understanding capacity of the physician, attention, kindness displayed by the physician (Winsted, 2000), privacy, confidentiality, as well as integrity (Gruber & Frugone, 2011). All these factors fall under the service dimension that is essential in measuring the quality of service. Research shows that age, gender, or the nationality of a physician may influence the relationship between patient and physician and, in effect, the results of treatment (Shaha & Ogdenb, 2006; Bradley et al., 2001).

Patient-centeredness has shown a positive outcome for the patients as well as for the physicians. Patients of patient-centered physicians trust their physician more and are more satisfied (Bensing et al., 2001; Aruguete & Roberts, 2000), comply better with the physician's comments, and recommendations on the treatment. Consequently, qualities of female physicians such as the ability to behave in a patient-centered style, providing emotional support, positive talk, and partnership building have shown to be related to a positive outcome which could also lead to customers' satisfaction (Bertakis et al., 2000; Ambady et al., 2002a; Aruguete & Roberts, 2000; Ambady et al., 2002b; Bensing et al., 2001). If patient-centeredness is indeed a major factor in determining patients' satisfaction, this would make female physicians' patients more satisfied than patients of a male physician. Unfortunately, that is not always the case. The fact does not guarantee female physicians to have more satisfied patients or a higher evaluation compared to a male physician due to stereotypes (Eagly & Carli, 2007). Although it was reported that female physicians are more focused on patients' emotional concerns and patients treated by female physicians are more likely to show progress in their health (Franks & Bertakis 2003). There is only a very small difference in patient satisfaction between female physicians and male physicians with

a difference favoring a female physician (Hall et al., 2011). Here we can observe a paradox that can be explained by the stereotype (Carrard & Mast, 2015). Now that we have seen with evidence that women's physician behavior and orientation are more regarded as interpersonal and patient-centered that leads to higher satisfaction of patients, it is clear that “stereotypes” take the role of underestimation and devaluation of women physician. Based on the discussion the following hypotheses were proposed.

H4. Physicians' gender will influence patients' perceived service quality such that female physicians will be rated less than their male counterparts.

H5. Patients will expect a better service from male physicians than female physicians.

H6. Patients will prefer male physicians than female physicians.

The lack of fit model (Heilman, 1983, 1995) can be applied in the healthcare profession. Women are stereotypically seen as low in status but if a female physician who is expected to be low in status, caring, and communal behave in a man typical way as powerful and agentic, she will be negatively evaluated. Thus, female physicians showing less patient-centered communication will receive more negative evaluation and when the female physician behaves in a female-typical way, she is positively evaluated (Carrard & Mast, 2015). Another finding also supports this argument. Patients reported more satisfaction with a female physician when her behavior matched what is stereotypically expected from her gender i.e. softer and gazing. However, patient satisfaction ratings for male physicians seemed less dependent on their gender-congruent behavior (Schmid et al., 2008).

Patriarchal societies marked by deep gender inequities also affect female physicians' interactions with their patients that consequently influence the output (Govender & Penn-Kekana, 2008). Women physicians in such societies experience discrimination within the workplace and the society, which could be reflected in their interaction with their patients (Mumtaz et al., 2003). For example, a qualitative study of the experience of female community-level workers in Pakistan reported the frustrations, discrimination female workers face, and its impact on their interaction with patients: “When I leave home to come to the Basic Health Unit I need to travel by local transport, and there are men who offer a lift or pass comments. I feel so bad and insulted that when I reach the Basic Health Unit I misbehave with my patients” (Mumtaz et al., 2003, p. 264).

2.3.7 Patient preference of the physician gender

Patients, regardless of gender, often vary their preferences depending on the physician's gender. Traditions, religion, culture, and experience serve as a foundation for customers to form the preference of physician gender (Govender & Penn-Kekana, 2008). These factors should not be forgotten when researching a patient's satisfaction in service quality as they significantly influence a patient's choice of physician. Patients' preference for the physician's gender could be structured by norms such that the patient or its family may feel it is unacceptable to see a healthcare worker of another gender (Govender & Penn-Kekana, 2008).

Gender concordance between provider and patient is important in highly patriarchal societies, where socio-cultural and/or religious norms and practices demarcate gender roles and restrict social and physical contact between men and women (Govender & Penn-Kekana, 2008). For example, in some regions where Islam is strictly practiced, it is unlikely for a woman to go to a male physician if she has to choose between males and women. The cultural restriction on women not to interact with man leave women patients into difficulties to be diagnosed by a male physician. The gender of the physician affects the patient's degree of comfort during the medical examination. Especially where a female patient has to go naked in front of a male physician. A qualitative study carried out in Cuba, Thailand, Saudi Arabia, & Argentina, examined the experiences of women seeking antenatal care found that due to cultural reasons female physicians were more highly preferred by Saudi & Thai women (Arabia et al., 2003).

Other studies show that both female and male patients prefer male physicians (Schmittiel et al., 2000). However, it is also revealed that there is a tendency of patients to choose the same-gender physicians (Weisman & Teitelbaum, 1989; Pearse, 1994; Bensing, 1993) The preference for a same-gender physician tends to be higher for intimate medical care such as obstetrical and gynecological and care (Elstad, 1994). Such preferences are due to the patient's embarrassment and discomfort during the discussion of sensitive matters across gender lines and physical exposure.

2.4 Service quality models

Different authors developed different service quality models. For instance, Service performance model (SERVPERF) by Cronin & Taylor (1994); Service quality model, (SERVQUAL) by Parasuraman et al. (1988); Evaluated performance (EP) by Teas (1993); Higher

Education Performance, HEdPERF model by Firdaus (2005); the Importance performance analysis model (IPA) by Martilla & James (1977); Total perceived service quality by Grönroos (2007) and Gilbert et al. (2004) suggested multiple ways of service quality measurement. These are as follows:

1. Performance-only model: this approach is concerned with the level of satisfaction with various service features after a service has been delivered.

2. The expectancy-disconfirmation model: this model is measuring the difference between customers' expectations and the service customers received. It compares the service performance with customers' expectation.

3. Service quality versus service satisfaction: this approach evaluates specific and overall service quality. It links perceived service quality and satisfaction at the point of the service encounter.

4. Attribute importance model; this approach mainly focuses on the value the customers give to the service attributes which is linked to their satisfaction.

5. Technical and functional dichotomy; the technical quality of the product is based on product attributes and physical features whereas functional quality is concerned with the service provider-customer relationship such as empathy, promptness, and reliability. This study used the expectancy- disconfirmation model where the model measures the difference between customers' expectations and the service customers received.

A service quality model (SERVQUAL) developed by Parasuraman et al. (1985) is one of the most widely known conceptual models which is discussed in the most service quality literature. As indicated in Figure 2.3, the model shows five gaps that could influence the consumer evaluation of service quality. The model was developed after assessing four different service companies; retail banking, credit card services, repair and maintenance of electrical appliances, and long-distance telephone service. These gaps were are as follows:

Gap 1: Consumer expectation - management perception gap; inaccurate perceptions of management about what customers expect from the service may cause Gap 1. Not able to meet the level of performance that brings high-quality service is another reason. Service firms sometimes fail to understand the features a service must have and fail to meet customers' needs and wants which affects the way consumers rate the service quality. Proper market and customer focus may close this Gap and bring service quality. The presence of the marketing department does not always guarantee service quality. Enough attention and proper marketing analysis are required to get the

desired market focus.

Gap 2: Management perception - service quality specification gap: this gap is created when a company knows what consumers want but could not deliver to expectation. This could be due to resource constraints, and the inability of the management to translate expectations into service quality specifications. Market conditions and management indifference are also other factors affecting this gap. Aspects of service design are highly related to this gap, which could affect the service quality perception of customers.

Gap 3: Service delivery gap: although companies have standards and guidelines for service performance, these do not always guarantee the delivery of high service quality. Several reasons such as lack of sufficient support for the frontline staff, service provider performance variability, and process problems could hinder service providers to meet the service standards. Employees play a significant role in assuring service quality; however, because of the heterogeneity of service, it is difficult to standardize the performances of employees. This affects the way consumers perceive service quality.

Gap 4: Service delivery – external communications gap: external communication of organizations can shape consumers' expectations in different ways. Every service organization must ensure that marketing communication exactly describes the service features and the way it is delivered. Inaccurate promotion could lead to unrealistic consumer expectations of service which also impacts consumer's perception of delivered service.

Gap 5: Expected Service – perceived service gap: satisfaction or dissatisfaction of service depends on the difference between expected service and perceived service. Service quality can be achieved by meeting or exceeding the consumer's expectation. The judgment of high or low service quality entirely lies on how consumers perceive the actual service delivery compared to what they expected from the service performance. Gap 5 is all about the SERVQUAL instrument which is connected to the consumer's evaluation of service performance, while the first four gaps are connected to a service provider and the way service is delivered from the service provider to the customer. It is very important to understand and measure customer's expectations to identify any gaps in the service delivery process and ensure satisfaction (Negi, 2009).

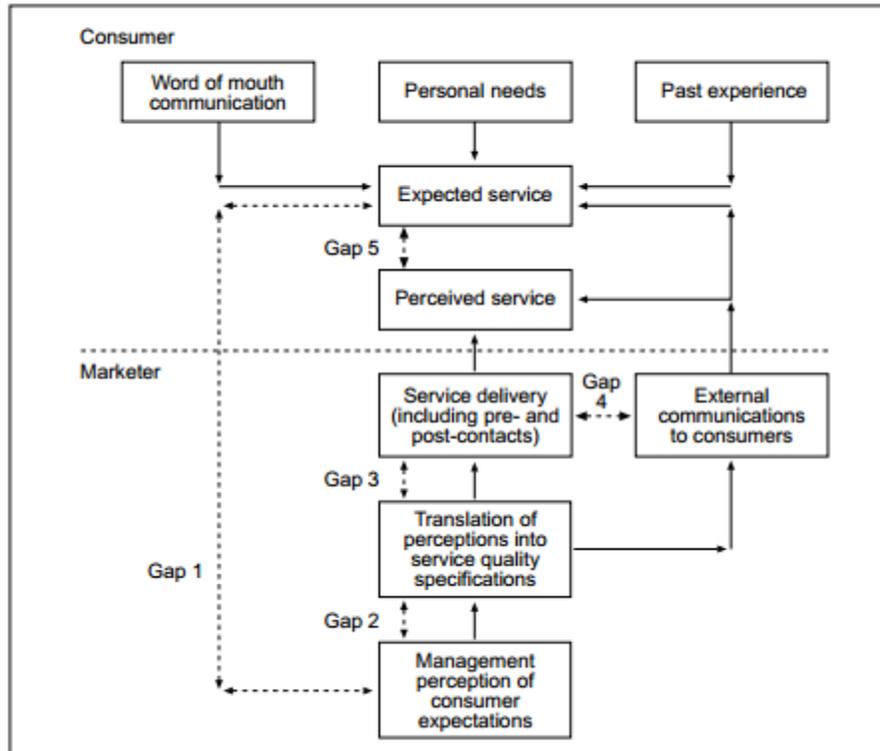


Figure 2.3 Service Quality Gap Analysis Model

Source: Ghobadian et al., 1994

Parasuraman et al. (1988) also introduced the SERVQUAL model which is designed to measure customer perception of service quality in retail businesses. The model was composed of ten dimensions when created (tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding the customer, and access). Because some dimensions overlapped it was reduced to five dimensions which are tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1985) (Figure 2.4). These dimensions are one of the most popular models for evaluating service quality (Pakdil & Aydin, 2007; Abu Hasan et al., 2008; Khodayari & Khodayari, 2011; Zarei et al., 2012; Al-Alak & Alnaser, 2012).

Tangibles assess the appearance of a company's physical facilities, equipment, staff appearance, and communication material.

Reliability measures the ability to perform the promised service dependably and accurately.

Responsiveness represents the willingness to help customers and provide prompt service. Assurance measures the knowledge and courtesy of employees and their ability to inspire trust and confidence.

Empathy assesses caring, individual attention the firm provides its customers. (Parasuraman et al., 1988, p.23).

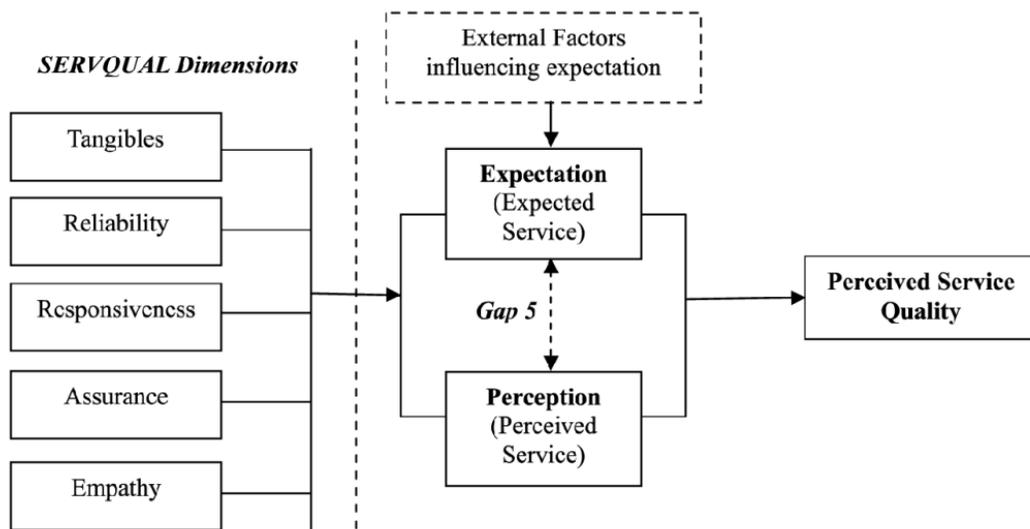


Figure 2.4 SERVQUAL model

Source: Parasuraman et al., 1988

The last three dimensions mainly focus on the human aspects of service delivery (responsiveness, reliability, assurance, and empathy). All dimensions base on capturing the gap between customers' expectations and experience in the service encounter which could be either negative or positive if the expectation is higher than experience or expectation is less than or equal to experience, respectively. Parasuraman et al. (1988) argue that a customer's evaluation of overall service quality depends on the gap between expectations and perceptions of actual performance levels. This makes it an attitude measure. If what is perceived is below expectation, consumer judge's quality as low and if what is perceived is meets or exceeds expectation then consumer sees the quality to be high. Consumer's expectations can be influenced by his/her personal needs, experience, word-of-mouth, and service provider's communications (Parasuraman et al., 1985).

The SERVQUAL scale measure of service quality was developed following generally recommended psychometric procedures (Parasuraman & Berry, 1988). The scale measures 22 pairs of items designed to assess five dimensions of service quality. Respondents are first asked to tell their expectations of service performance of any service (e.g. Hospital, University, and Bank) on a set of 22 expectations items. The responses on each item are assessed on a seven-or five-point scale with end anchors “strongly agree” and “strongly disagree”. Next, respondents provide their evaluation of the actual level of service provided by a specific firm on a corresponding set of 22 perception items. Finally, Perceived service quality is obtained by subtracting the expectation rating from the perception rating for the 22 pairs of items.

With the insight of overcoming some problems associated with the gap conceptualization of service quality, Teas (1993) developed the evaluated performance model (EP). This model focuses on the performance of service rather than customers’ expectations. It measures the difference between perceived performance and the degree of service features. According to him, the perception- expectation framework does not meet the question of validity due to the ambiguity in the conceptual definition of expectation. He claims that expectations could be better defined as the ideal amounts of the service attribute. Brady & Cronin (2001) explained service quality in three dimensions where each dimension consists of three sub-dimensions. The first dimension is interaction quality and it comprises behavior, attitude, and expertise. The second dimension, which is the physical environment, consists of design, social factors, and ambient conditions. The third dimension is outcome quality and is made up of tangibles, waiting time, and valence. In their study, they further illustrated that three things can help managers to improve service quality. These are 1) “what defines service quality perception”, 2) “How service quality perception is formed”, and 3) “how important it is where the service experience takes place”. (Michael & Joseph, 2001, p.44).

Grönroos (2007) presented a model named “total perceived service quality “which shows the comparison of customer expectations about the service and the experience of the service they have received before. Emphasizing on what customer is looking for and what they evaluate, the model of service quality is divided into two dimensions. Technical quality is the first dimension, which refers to the outcome, what is delivered, or what the customer gets from service. The second dimension is the functional quality and it presents the way the service is delivered or how it is delivered. Both Dimensions tends to affect the corporate image in multiple ways. According to the total perceived service quality model, the perceived quality of service can be affected by the

experiences of the quality dimensions that the consumer used for evaluating as well as the outcome of the evaluation process. Therefore, the definition of service quality is derived from the tangible and intangible elements of a product. However, consumers often use the tangible attributes to assess the intangible elements of service- heterogeneity, perishability, and inseparability which are the critical determinants of service quality and need to be assessed separately. Cronin & Taylor (1994), proposed the SERVPERF which measures service quality based on consumers' perceptions of the service provider's performance rather than the gap between expectation and perception of consumers. The Model applies to any service context and it has been used by various researchers.

Saravanan & Rao (2007) proposed six factors that perceived service quality is measured. These are (1) Core service: this is the main part of the service which is the features and contents (2) Human aspect of service: This included reliability, assurance, empathy, and responsiveness. (3) Systemization of service delivery, which consists of procedures, processes, systems, and technology (4) Social responsibility: this is mainly improving corporate image. (5) service marketing (6) Tangibles of service which are machinery, equipment, signage, and employee appearance factors all together lead to better perceive service quality, customer satisfaction, and loyalty.

The IPA model was developed by Martilla & James (1977) which is based on identifying the most important service attributes that are influential in consumer satisfaction. It assesses which attributes and qualities are most important to customers based on customer's criteria and at the same time measure customer satisfaction by comparing it with the perceived service quality HEdPERF model was proposed by Firdaus (2005) which is the modified version of the SERVPERF model that is designed to measure service quality in the higher education sector. The model is tailored with the intention of coming up with a more comprehensive performance-based service quality measuring scale in the higher education sector. The objective of the model is to capture the determinants of service quality within the higher education sector.

2.4.1 Critics of the SERVQUAL model

Although many researchers have used the SERVQUAL model, several authors have criticized the validity of the model. Due to the heterogeneity of service industries, it is highly likely that the service dimensions may vary from one service firm to the other, which puts the universality of the model into question. The major concern raised by many researchers regarding the shortcomings of the SERVQUAL model focuses on the dimensions of service. Cronin & Taylor (1994) proposed the SERVPERF model in justification of the limitation of the SERVQUAL model. In their model, they explained service quality should be measured based on consumers' perceptions of the service provider's performance. The authors believe that measuring customer's expectations of the quality of service is unnecessary and measuring perceptions is enough. This opposes the SERVQUAL model, which is based on the gap between the customers' expectations and performance perception. They claimed SERVPERF measures service quality better than the SERVQUAL model. Kuo & Ye (2009) also supported the SERVPERF model arguing that students will assess the service based on their current experience rather than their expectations, which will be influenced by real situations they experienced during their education time. Thus, the authors suggested perceptions as a measure of perceived quality than the difference between expectations and perception as proposed in the original SERVQUAL model.

Another concern was raised by Carman (1990) arguing that although SERVQUAL was originally designed to measure service quality in service firms, it needs to be customized to fit the service firm being studied. It cannot provide a generic measure that could be applied to any services. This may include adding items or altering the wording of items. The author also suggested the need for more dimensions than the five, which are currently used in SERVQUAL. Moreover, he argued that the item factor relationships in SERVQUAL are unstable and that the measurement of expectations is a problem. Finn & Lamb (1991, p. 487) find out that "the SERVQUAL measurement model is not appropriate in a retail store setting" causing them to conclude that "retailers and consumers researchers should not treat SERVQUAL as an 'off the shelf' measure of service quality. Much refinement is needed for specific companies and industries" (p.489). However, SERVQUAL has been most widely used because it 'provides a basic skeleton, which can be adapted or supplemented to fit the characteristics or specific research needs of a particular organization (Parasuraman et al., 1988).

Despite the concerns over the validity of the instrument, researchers and practitioners generally agree that SERVQUAL is still a useful tool for the measurement of service quality and a good predictor of the overall evaluation of service quality by the customers (Saravanan & Rao, 2007; Buttle, 1996). As indicated by O'Neill et al. (2001) benefits of using the SERVQUAL are, its ability to indicate how well an organization performs to meet the customer's needs and wants concerning their expectation and perception helps the organization to prioritize customer expectations, allows the organization to set quality standards based on customer's expectation and requirement. Butt & de Run (2010) also mentioned that the SERVQUAL model helps to indicate areas service quality gap exists and allows organizations to act and focus on closing the service quality gap. For instance, it can indicate where service staff is performing below customer expectations. Thus, by closing these gaps, organizations can increase the service quality perception that would ultimately lead to higher customer satisfaction.

Therefore, the decision to choose the SERVQUAL method for this study is based on the interest to explore how customers' expectations and perceptions vary across the gender of the service provider. Other models such as SERVPERF, EP, and IP measure service quality based on the perception of the customers on the performance of the service provider only, however, this study aims to include the expectation of customers as well. Ladhari (2009) suggested that that the SERVQUAL model is a good scale to use when measuring service quality in various specific industries but that it is important to choose the most relevant dimensions of this model that fit that particular service being measured to assure reliable and valid results. In this case, since one of this study's objective is to measure and compare the customer's perceived service quality towards the gender of the service provider's in higher education and health sector, it was necessary to choose a single model that can be applied in both context of the service setting. As a result, SERVQUAL was found to best suit this study.

2.4.2 The application of SERVQUAL in higher education and health sector

Many researchers studied service quality in higher education from different dimensions. For instance (Yen, 2013; Abdullah, 2006; Al-Rahimy, 2013; Ana, 2009; Randheer, 2014; Altinay & Ezel 2011; Dennis, 2013; Palli, 2012; Yousapronpaiboon, 2014). The original conceptual model of SERVQUAL and the modified version of it has been used by various researchers based on the context of the study. Soutar & Mcneil (1996) modified the SERVQUAL model to better suit an education service environment. Their model consists of the dimensions of perceived quality of instructors as Reliability, Responsiveness, Assurance, Empathy, Knowledge, and Communication. They suggested the Tangible factor may not be relevant when assessing the quality of instructors rather knowledge and communication. The study of Ljiljana (2014) revealed that students considered Assurance and Reliability, to be the most important dimensions followed by Responsiveness and Empathy. Although the SERVQUAL model has been applied in the higher education sector for different reasons, it was barely used to measure a gender gap in perceived service quality.

Dimensions of service quality are the bases of student's service perception and satisfaction. These service dimensions are the factors that influence the level of student satisfaction (Navarro et al., 2005). According to Mahiah et al. (2006) tangibility, assurance, empathy, and responsiveness tend to increase the level of customer satisfaction towards the service provider. Service features such as the instructor's intellectual ability, transparency in an evaluation, professional development, regular training, feedback, and institutional harmony significantly contribute to the process of student's development of perception (Spooren et al., 2007). Therefore, since the dimensions of service quality are the factors that influence satisfaction, any gender influence on the dimensions of service quality could, in turn, affect student's satisfaction.

SERVQUAL model has also been extensively used by many researchers to monitor service quality in health centers (Heidarnia et al., 2014; Bahadori et al., 2013; Ajam et al., 2014; Pekkaya et al., 2017; Behdioğlu et al., 2017; Ibrahim & Ahmed, 2019). However, most of the studies were made to measure customers' satisfaction and service quality gap in the hospital. Gender biases in the evaluation of service quality in the health care sector have been overlooked. As can be seen in table 2.1 SERVQUAL has been applied in different fields and contexts proving its usefulness and reliability. Therefore, considering a wide range of applications in the literature,

it can be said that an accurate measurement of student's and patients' perceptions can be obtained by using SERVQUAL.

Table 0.1 Applications of SERVQUAL in various fields

Fields	References
Education	Tan & Kek (2004); Abdullah (2006); Stodnick & Rogers (2008); Abu Hasan et al. (2008); Ana (2009); Chatterjee et al. (2009); Al-Alak & Alnaser (2012); Calvo-Porrall et al. (2013); Lupo (2013); Yen (2013); Yousapronpaiboon (2014); Ali & Mohamed (2014); Borges et al. (2014); Al-Rahimy (2013); Randheer (2014); Dennis (2013); Palli (2012); Kumara & Wijenayake (2016); Lodesso et al. (2019)
Health care	Lam (1997); Li (1997); Dean (1999); Lee et al. (2000); Andaleeb (2001); Alden et al. (2004); Yıldız & Erdog̃mus (2004); Lee & Yom (2007); Butt & de Run (2010); Zaim et al. (2010); Chakravarty (2011); Calisir et al. (2012); Zarei et al. (2012); Yunus et al. (2013); Purca^rea et al. (2013); Kitapci et al. (2014); Aghamolaei et al. (2014); Ajam et al. (2014); Li et al. (2015); Behdiođlu et al. (2017)
Banking	Othman & Owen (2001); Okumus (2005); Aydemir Gerni (2011); Shanka (2012); Mersha et al. (2012) Hanzaae & Nasimi (2012); Zalatar (2012); Maswadeh (2015); Abiyot (2016); Buba & Ahmed (2018)
Transportation	Huang (2009); Zakaria et al. (2010); Awasthi et al. (2011); Chou et al. (2011), Irfan et al. (2012); Ojo et al. (2014); Basfirinci & Mitra (2015); Kabir & Carlsson (2010)
Hospitality and tourism	Saleh & Ryan (1991); Lee & Hing (1995); Akbaba (2006); Chang (2008); Yusof et al. (2014); Stefano et al. (2015)
Insurance	Gayathri et al. (2005) Tsoukatos & Rand (2006), Parthiban (2014)

Source: Own creation

2.5 Service quality perceptions and gender

The service delivery has been described as a process where the service provider acts as a performer and the customer as a receiver of the service being offered (Bitner, 1992). It is during this process that customers evaluate the action and behavior of the service provider to measure the service quality (Ferrell & Hartline, 1996). While customers judge the performance of the service provider, they may base their judgments on the gender of the service provider. However, too often managers focus only on the service quality measurement based on the five dimensions Tangibles, Reliability, Responsiveness, Assurance, and Empathy where customers are asked to answer a question on SERVQUAL. The original SERVQUAL instrument does not incorporate gender as a factor that influences the customers' perception of service quality hence bias could occur due to gender stereotypes of customers on the service provider.

With the ever-growing market competition today, customers' perception of service quality has gained the attention of managers. As a result, service providers are being evaluated on customer satisfaction and service quality ratings. With the changing complexion of the labor market in Ethiopia and the effort to increase the number of women in the market, any potential gender bias in these service sectors would be of interest to researchers and practicing managers. Some studies have shown how the aspects of the physical environment influence the customer's satisfaction with the service. Moreover, the results confirmed that the gender of the service provider, as well as the gender of the customers, are connected with the perceived service outcome (Bitner, 1992; Fischer et al., 1997). For example, a man in women-dominated service environments and women in man-dominated service environments are intimidated by their surroundings and, therefore, gave a low rating for the service quality (Blackburn & Jarman, 2006). Other studies such as (Gordon, 1991; Mackie et al., 1996; Basow, 2000) suggested that occupations dominated by one gender are more likely to be stereotyped as being better suited for that gender. Yet, gender-based biases could still exist in occupations that are neither dominated by male nor female. The none-gender dominance of occupation does not guarantee fair customer ratings of employee service performance.

2.5.1 Employees' gender and service quality ratings

Although male and female employees equally socialize with customers and exhibit similar behavior as a service provider, their work role often overrides behavioral or attitudinal differences attributable to gender (Nieva & Gutek, 1980). Despite the similarity in the work role, a previous study has indicated that the rater's evaluation of employees is gender-biased (Snipes et al., 1998; Nieva & Gutek, 1980). Too often raters favor the performance of male employees than female employees although the performances are set equal. The researcher called this kind of bias the "pro-male evaluation bias" because of the rater stereotype on evaluating female employees, which in most cases female employees are rated lower than male employees. Although when actual performances were experimentally held constant, performance evaluation of women employees was lower than their counterparts. This explains how raters make emotional evaluations rather than rational.

Another study on evaluation of performance by gender revealed that female physicians were rated lower than male physicians regardless of the gender of the customer (Feldman-Summers & Kiesler, 1974). Furthermore, a study by Rosen & Jerdee (1973) claimed that women supervisors were only rated as high as male supervisors if they exhibited a masculine management style.

Surprisingly gender biases were not only observed in rate's (customers') evaluation but also in hiring and recruiting applicants in male and female-oriented positions (Snipes et al., 1998). In the study, it was found that job performances were more biased against women applicants than men applicants. From this point, it would not be that hard to imagine the fact that employers are biased to the extent that female employees are not as potent as men employees. This stereotype is likely to pass on customers.

Gender stereotype on female employees was also investigated in university faculty members. Consequently, young female faculty members were rated lower than young male faculty members in their expressiveness in the classroom regardless of the teaching methodology applied by the instructors (Arbuckle & Williams, 2003). It has been reported that people give negative evaluations to service providers when their gender does not match their job (Heilman, 1983, 1995). The lack of fit model by Heilman (1983) explains this statement. When the expectations about the characteristics of a job are congruent with the attributes stereotypically associated with the person's in the job, the evaluation will be positive. However, when there is a lack of congruence between the characteristics associated with the job and those associated with the person, the evaluation of the person will be negative. Since service providers play a major role in customer's perception of service quality (Mattson, 1994), any expectation deviation of the customer in the service providers' age, gender, religion, and ethnic affiliation could result in a different perception of the service quality than the possible perception of service quality without any expectation deviation.

Besides, it has been explained that customers are likely to form a pre-established expectation of the service providers' status, personality, physical appearance and the service environment where the delivery takes place. Therefore, expectation deviation may result in negative evaluation (Heskett et al., 1994). To sum up, the perception of service quality varies according to the customers' expectation of the service providers' gender and other variables involved in the service encounter, which contributes to a biased evaluation

2.5.2 Gender-based stereotypes in the service encounters

In discussing the gender of the service provider and the impact on customers' perception, it is worth mentioning the stereotype and its forms. Different authors have defined a stereotype as follows. Stereotyping is the process of ascribing characteristics to people based on their group memberships (Oakes et al., 1994). "A stereotype is an overgeneralized belief about an individual or people based on their membership in one of many social categories" (Anselmi & Law 1998, p. 195). "A stereotype is a generalization about a person or a group of people in which identical characteristics are assigned to all members of the group, regardless of actual variation among the members" (Aronson et al., 2015, p 416). A stereotype is how a person belonging to a specific group typically is or behaves (Burgess & Borgida, 1999). For example, women are expected to be soft, communal, caring, indecisive, emotional, weak, gentle, and nurturing whereas men are expected to be strong, bold, agented, aggressive, and rational. If women behave in any masculine way, gender prescriptive stereotypes overlap with the descriptive ones. Thus, women are expected to portray the behaviors that stereotypically match their gender but if they do not or probably show the stereotypical man characteristics, they will get negative feedback (Heilman, 2001). Gender stereotype results in the association of women and men to certain behavior and characteristics (Ashmore & Del Boca, 1979). For example, characteristics such as independent, logical, and effective were more attributed to males than female but women were perceived to be irrational and dependent (Bem, 1981). Gender stereotypes can have four dimensions: role behaviors, traits, physical characteristics, and occupations (Deaux & Lewis, 1984). People categorize what they observe to make predictions about others (Fiske & Taylor, 2013; Devine & Sharp, 2009). The predictions could induce mistaken assessments about people that are made based on a simple generalization. Such generalization could be against or in favor of others. Stereotypes in a workplace can negatively or positively affect one's expectations about performance and lead to bias decisions that impact opportunities and work outcomes for both men and women (Heilman, 2012; Heilman et al., 2015; Hentschel et al., 2018).

Discrimination and prejudice at work are too often the results of such gender stereotypes in the public and the grouping of personality as masculinity (instrumentality or competence) and Femininity (communality, expressiveness, or warmth). However, stereotypes do not necessarily lead to discrimination (Deaux & Lewis, 1984). Different researchers (Fiske et al., 2007; Cuddy et al., 2008; Abele & Wojciszke, 2014; Abele et al., 2016; Eagly et al., 2020; Donnelly & Twenge, 2017) has studied masculinity and femininity and it has been indicated that these two perceptions contribute to gender stereotypes (Hentschel et al., 2019).

2.6 Occupational segregation and servers' gender stereotype

Much research has been conducted on the content of gender stereotypes several decades ago, but the question of gender equality has not yet been achieved yet worldwide. The issue of the gender pay gap (AAUW, 2016) and less position of women in leadership and management is still a prevalent situation (Catalyst, 2016).

Researches of several years ago Basow (1992), indicated that although with the increasing gender parity in the labor market and the growing participation of women in various industries, gender-based occupational segregations are still prevalent and more recent findings also suggest there has not been much change since then (Haines et al., 2016). Consequently, it was explained that the gender-based occupational segregation could be the reason for the existence of the stereotype that one gender or the other is better at providing a given service.

The gendered division of labor has been existing since the primitive societies and still exists even in the contemporary and complex societies (Wood & Eagly, 2012). Women's role in society and family has been much of the routine domestic work. In the workplace, women are more engaged in people-oriented like social works and service occupations rather than things-oriented occupations, and science and technology that has been traditionally occupied by men (Lippa et al., 2014). Such distribution of women and men in the labor market contributes to the demarcation of what women and men are like and should be which in turn gives rise to gender-stereotypical conceptions (Koenig & Eagly, 2014).

There is a long history of gender inequality in Ethiopia, where women often face gender-based violence, carry a huge burden of the household chores, are seen as unproductive parts of the society while men hold prestigious positions. Women are disadvantaged in getting education due to socio-cultural factors, harmful social norms, and traditional practices such as early child

marriage, teenage pregnancy, and families favoring boys when investing in education. While boys get the privilege of going to school, girls are forced to stay at home to help the family. The status of women and girls is also marginalized in opportunities for employment (UNICEF, n.d). Due to such reasons, a huge gender division of labor could exist in Ethiopia, which ultimately leads to stereotypes.

To test how customers react to service failures to supposedly “gender of incongruent” job, Mohr & Henson (1996) conducted an experiment that showed customer’s negative reaction to service failures by providers whose gender was incongruent with the norms than they would react to those service providers whose gender was congruent with the norms. This finding was also supported by a study in consumer behavior, which claimed that gender-bias are attached to consumptions (Bristol & Fischer, 1993).

As explained by cognitive schema theory, the development and maintenance of stereotypes are based on personal traits. Individuals form schema based on persons of one gender performance in each occupation identifying a certain trait related to the gender of the employee, which associates the traits to the performance of the employee (Fiske & Linville, 1980).

Several researchers have indicated that stereotypes stem from the distribution of men and women in social roles (Hoffman & Hurst 1990; Eagly & Steffen, 1984; Oswald, 2003; Koenig & Eagly, 2014). As discussed by Eagly & Steffen (1984), the stereotype may result from a sexual grouping of labor, which also attribute to the gender intrinsic personality differences. The personality difference between males and females as observed by them was that women are more caring, nurturing, emotional, affectionate, submissive, sympathetic, and gentle. In sharp contrast, male stereotypes were presented as aggressive, dominant, ambitious, decisive, competitive, and self-confident.

Customers expect a women service provider to be more sympathetic than a men service provider. As a result, the dissatisfaction of customers occurs when such expectation fails to happen in the actual service scenario. The association that customers form between the gender of the service provider and service provider's personality affects their expectation level and perceived service quality. It is believed that most customers tend to expect female or male service providers according to their experiences and stereotypes (Fischer et al., 1997). For example, clients expect the male servers in hardware stores and female servers in nursery centers. In a study conducted to confirm the existence of gender-based stereotyping of occupations, it was found that occupations associated with women were rated lower in prestige than those occupations associated with men. Occupational stereotyping existed regardless of job status (Oswald, 2003). In a similar study, Glick (1991) reported that high salary paid occupations and prestigious jobs were associated with masculine traits.

Research shows that men in women-dominated environments and women in a men-dominated environment would feel intimidated (Fischer et al., 1997). Customers evaluated service providers more positively when the gender of the service provider is congruent with the job than when it is incongruent (Mohr & Henson, 1996). Moreover, it was examined that the impact of employee's gender is interrelated and masked by the customer's gender, relationship duration, and quality of the service. This leads to the conclusion that not only the gender of the service provider but customers' gender and trait characteristics affected their satisfaction level (Iacobucci & Ostrom, 1993).

Fischer et al. (1997) explored fast-food restaurants, hair cutting salons, and dental office settings to investigate whether the gender of the service providers should be regarded as an element of the servicescape that influences perceptions of service quality. As a result, the server-gender stereotype and in-group bias-based perceptions were shown across the service settings. Server-gender stereotype is as to what the gender of the service provider "should" be in certain service environments' and in-group bias-based perceptions are that customers expect to receive a better service from the same-gender service provider. For example, women would expect to receive better service from women and men would expect a better service from men. Furthermore, based on cross-cultural research, it was known that the core elements of gender stereotypes are similar in various countries (Williams & Best, 1990). However, the research of

Niemann et al. (1994) revealed that the interaction between gender and nationality is a factor in the development of stereotypes. That is, there are also broad differences concerning the gender stereotypes of different nationalities and racial backgrounds. Likewise, perceptions of service quality may vary across cultural groups (Furrer et al., 2000). Therefore, although several studies pointed out that gender stereotypes do influence customers' expectations and perceptions of service providers, it is still a little controversial (Mohr & Henson, 1996; Fischer et al., 1997).

3. Objectives of the study

Gender equality in all sectors would play an important role socially and economically. As a result, efforts have been made extensively to promote gender equality and empower women in Ethiopia. The government believes in the benefit gained from the equal participation of women with men in the socio-economic life of the society. However, that is not enough. While that is a good move, little is known about the perception of society towards the gender of professionals. The transition towards gender equality could not be achieved in the absence of adequate data on how the general population perceives female and male professionals. Since service sectors are the point where the society (customers) meet the service providers, researching service quality perceptions could help in a better understanding of the society's view towards gender roles. Without understanding society's perception, it is barely possible to educate and raise awareness on gender equality. Like in the other service sectors, women have been underrepresented in higher education and health sectors and there is a lack of scientific research about how the gender of the service provider matters in customers' perceived service quality. Although, progress has been made in the representation of women in senior positions but the question of how far the attitudes of the society have changed towards the performance of women is left unanswered. Stereotypes have never been investigated in the perception of service quality in higher education and health sectors in Addis Ababa and this is important to close this research gap because the current political environment in Ethiopia encourages the empowerment of women and welcoming them to leadership and power. However, while that is a good measure for the government to provide an opportunity for women, stereotypes from society could hinder the transition to gender equality. Thus, the general objective of the study is to investigate the influence of the service provider's gender on customer's perception of service quality and find out if stereotypes exist in the service sector, which can help in tackling the problem. The study also aims to address the following specific objectives.

1. To investigate if patients' and students' perceived service quality could be influenced by the physicians' and instructors' gender, respectively.
2. To examine which service dimensions are more attributable to the gender of the physician and the instructor?
3. To compare the ratings of the physicians in the health sector and the instructors in higher education.

4. Materials and methods

This section shows the decision of strategy for gathering and breaking down information, from both a theoretical and practical perspective, presented with the rationale behind the choice of the materials and methodologies.

4.1 Research Approach

This research is a deductive report that speaks to the commonest perspective of the connection between hypothesis and research. In this study, a hypothesis (problem) is deduced based on what is known about gender inequality in Ethiopia and was subject to empirical scrutiny using the SERVQUAL model. The deductive approach was used on the ground that the research problem originates from existing theories.

4.2 Research Strategy

This research is mainly quantitative but also qualitative. A quantitative strategy was used because questionnaires are appropriate to answer the research questions that are forwarded to customers. It also allows measuring the variables derived from the SERVQUAL model adequately and comes out with fine differences between customers' evaluation of male and female service providers in terms of service quality. Moreover, a quantitative strategy was used because the findings could be generalized and replicable to the particular context in which the study is conducted (Polit & Beck, 2010). Qualitative was used because further information was needed to support the data gathered from the quantitative survey and explain why certain things happen. As a result, an interview was carried out with physicians, medical directors, instructors, and heads of departments in the service settings. The interview was conducted to collect richer sources of information that could help to answer the research questions and reach into a conclusion. Since the research mainly investigates stereotypes that are a very subjective matter, it was important to verify the survey through interviews before concluding.

4.3 Research Design

This study is a cross-sectional design that entails the collection of data on more than one case and at a single point in time to collect quantifiable data concerning multiple variables, which are later examined to detect patterns of association. This research design considers more than one case since it is keen to study two service settings, at a solitary point in time meaning data are gathered on factors all the while.

4.4 Source of data

This study used both primary and secondary data to answer the research questions. Primary data, for the most part, is acquired through the managing of surveys and interviews. While secondary sources like examination of past studies are accessed from different databases to get some solid and reliable literature and empirical discoveries.

4.5 Study area

The study is conducted in Addis Ababa city. The city has 3.385 million population with 10 districts (Figure 2.5). This capital city holds 527 square kilometers of area in Ethiopia. The population density is estimated to be near 5,165 individuals per square kilometer available. Per the population recorded at the last census, the city of Addis Ababa has a higher population of female residents than male residents. Almost one-quarter of all people in Ethiopia that live in urban areas live in the capital city (World population review, 2019).

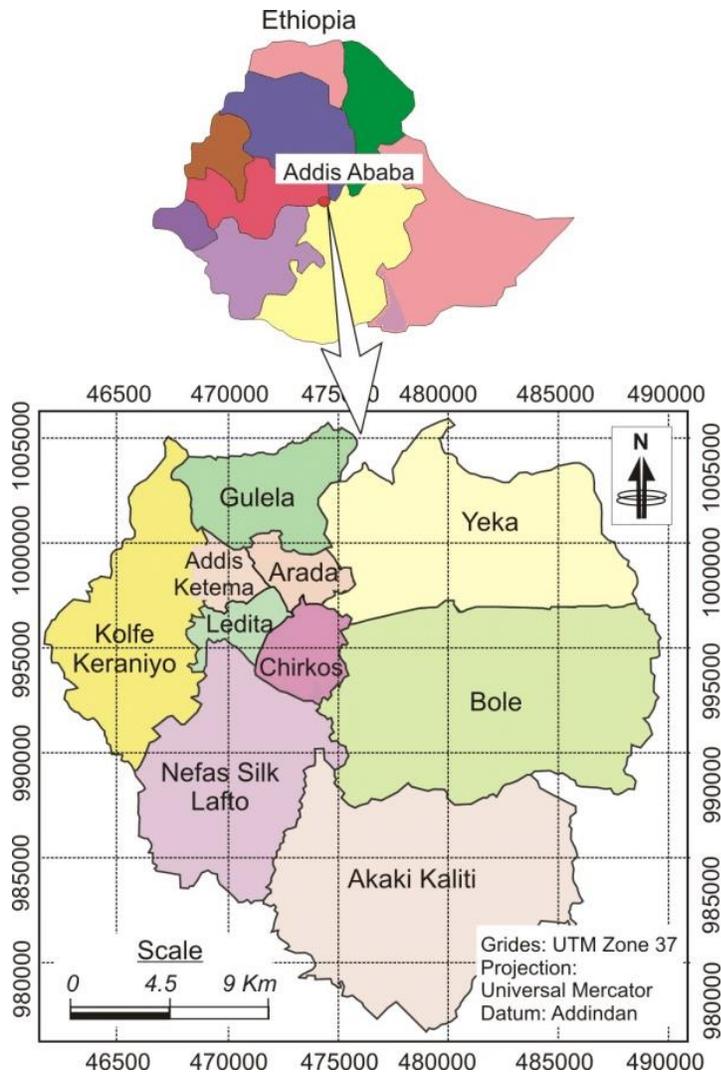


Figure 2.5 Addis Ababa map. Source: Travel encyclopedia

4.6 Population, sample size, and sampling techniques

Students who are enrolled in three Addis Ababa University campuses and patients who visited the three Addis Ababa hospitals within the study period are the target population. The study population is restricted to students taught by female and male instructors in the past semester and inpatients admitted to the hospitals during the data collection month. As the study subjects come from the general open public (from different genders, age groups, marital status, education backgrounds, designations, and professionalisms), it makes the sample unit heterogeneous because different levels of the society have different expectations and needs. Therefore, the idea of choosing respondents from different backgrounds will most certainly generate a more reliable outcome towards service quality in the retail organizations.

Two types of sampling techniques are employed throughout the data collection procedure. The selection of the universities and hospitals was done based on convenient sampling. The selection of the class years was also done using convenience sampling. Once the organizations were selected, multi-stage cluster sampling was employed. In the university, the cluster was made based on the departments. Then the sample was reduced to a smaller cluster based on classes taught by female instructors. While in the hospital, the cluster was made based on the ward which later was reduced to two wards based on the distribution of female and male physicians, the availability of patients from both gender, and the relevance of the ward to the study.

Addis Ababa University has 15 campuses of which 3 are located out of the city. The survey was conducted on three campuses. Out of each campus, three departments were chosen. In Addis Ababa University there are departments with only male staffs, therefore, it was necessary to select departments where female instructors also teach. Departments were selected based on the class where female instructors taught in the last semester.

College of business and economics, school of commerce has 6 departments in it out of which 4 departments had a female instructor taught in the past semester and three departments were selected for the study. Accordingly, Accounting, Marketing, and Management Departments were chosen. The departments have a total of 301 students. Out of that 209 students were taught by both female and male instructors in the past semester and 150 students were reached.

College of natural and computational sciences has 7 departments out of which 4 departments had a female instructor taught in the past semester and 3 departments were selected. These are Biology, Mathematics, and Computer science and altogether have 397 students of which 243 were taught by female instructors and 150 were reached. Whereas Social Work, Print and Web, and Public Relations departments were selected from the College of Social Sciences and College of Humanities, Language Studies, Journalism, and Communication. The departments have a total of 400 students of which 200 were taught by female instructors and 150 were reached. As summarized in Table 4.1, 450 samples were taken in the three campuses from 9 departments. Second and third-year students of both genders participated in the survey.

Table 4.1. Student's personal information

		Frequency	Percent
Gender	Male	209	45.0
	Female	241	55.0
Department	Accounting	54	12.0
	Biology	56	12.0
	Computer science	61	14.0
	Management	42	9.0
	Marketing	54	12.0
	Mathematics	31	7.0
	Print and web	40	9.0
	Public relation	45	10.0
	Social work	67	15.0
	Total	450	100.0
Year	Second-year	211	47.0
	Third-year	239	53.0

Source: own completion

The three campuses were selected on the ground that first, they have the best composition of study of fields where both female and male students are enrolled in and the institutes in the campus are conducive for the study because they have a more likely proportionate number of women and men instructors which makes the study unbiased. Second, they have the biggest number of colleges compared to the other campuses. Third, the campus accommodates a larger number of students than the rest of the other campuses. Not to mention that the campuses consist of the largest share of students coming from different parts of Ethiopia with diversified cultures and backgrounds. This contributes to the generalization of the study result.

To distribute the questionnaire, first, class schedules of the last semester were collected from the departments, then classes taught by female instructors were screened, finally, those classes were reached out for the survey. The questionnaires were distributed to all students while they were in the class. First-year students were excluded from the survey because sophomores and meddlers know better about the education service than the juniors. 500 questionnaires were distributed to students but only 450 were valid for analysis. Consent for collecting the data was first asked from the designated instructors and there was no time limit to fill the questionnaires. Every student had an equal chance of filling the survey and it took approximately 15-20 minutes.

There are 11 state-run hospitals in Addis Ababa but only 6 are currently managed by Addis Ababa Health Bureau. These are Zewditu Referral Hospital, Gandhi Memorial Hospital, Yekatit 12 Hospital & Medical College, Menelik II Referral Hospital, Ras Desta General Hospital, and Tirunesh Beijing General Hospital (Addis fortune,n.d). Out of the 6 hospitals, 3 were conducive for the study in terms of relevancy and the openness of the hospitals for public research. Hence, data was collected from Minilik II referral Hospital, Yekatit 12 hospital, and Zewditu referral hospital. The hospitals comprise different wards but for the study, medical and surgical wards were selected because those were the wards that have both female and male physicians and patients of both gender which makes it relevant to the study. For instance, the Maternity ward only accommodates women patients and ICU ward accommodate patients in a coma and sleeping in critical health conditions. Such kinds of wards were excluded from the study. Out of the general population of patients in the hospital, the study population was in-patients admitted in the data collection month. In-patients were chosen for the study because for patients to judge and evaluate the service quality, they must have multiple service encounter with the physician. Thus, patients who had met their physician at least three days in a row were selected. The criteria applied for both the medical and surgical wards. Newly admitted inpatients were excluded from the study as they have limited knowledge about the physician. Patients who were very weak to respond to the questionnaire due to their serious illness and children under 18 were excluded because they might not answer the questions properly. Questionnaires were distributed to in-patients in the hospital beds after asking their consent to participate in the survey. The data collector helped the inpatients in reading and explaining the questions to avoid missing parts due to weak energy and sickness. As indicated in Table 4.2 both female and male inpatients of all socioeconomic demographics participated in the survey.

Table 4.2. In-patients personal information

		Frequency	Percent
Gender	Male	135	45.0
	Female	165	55.0
	Total	300	100.0
Education	Below 10th grade	119	40.0
	10 th grade complete	38	13.0
	12 th grade complete	29	10.0
	College	8	3.0
	Diploma	21	7.0
	Degree and above	21	7.0
	Total	236	79.0
	Missing	64	21.0
	Total	300	100.0

Source: own completion

During the period of data collection, Minilik hospital accommodated 79 inpatients in the medical ward and 111 inpatients in the surgical ward that added up to 190 out of that 100 were reached. Whereas Yekatit hospital accommodated 75 inpatients in the medical ward and 80 inpatients in the surgical ward which added up to 155 of which 100 were reached. Adding, Zewditu hospital accommodated 151 in-patients in the medical ward and 65 inpatients in the surgical ward that added up to 216 out of which 100 were reached. Hence 300 samples were taken in the three hospitals from the two wards.

The three hospitals were selected on the ground of the easy bureaucracy, willingness, and cooperation of the hospital administration for the data collection. One hospital refused data collection and another hospital had a long procedure to allow data collection which would have affected the limited data collection time.

4.7 Interview

Since the research hypothesizes that the server's gender will influence customers' perceived service quality such that female employees will be rated less than their counterparts, there was a need to interview employees to conclude whether the gender bias against female professionals is indeed a stereotype or a performance issue. For this reason, the study adopted individual semi-structured interviews and a phenomenological data analysis approach. Phenomenology interview analysis was applied because it enables the exploration of the experience of the participants and generates an understanding of the opinions of different individuals (Smith, 2007; Kvale & Brinkmann, 1996).

The individual interviews were used because it is suitable to investigate sensitive topics like gender stereotypes (Liamputtong & Ezzy, 2005). According to Guest et al. (2006); Crouch & McKenzie (2006), 12-20 samples are enough for a homogenous interview. Thus this study is carried out with 15 purposefully selected heads of departments and directors (12 from university and 3 from the hospital) and 40 randomly selected female and male staffs (20 instructors, 10 females and 10 males) and (20 physicians, 10 females and 10 males) participated at the respective service settings. The interview questions are presented in Appendix 3.

The interview was carried out between March and April 2019. The questions were generated on 5 main themes. These are: stereotypes against female instructors/physicians, female instructors'/physicians' performance in higher education and the health sector respectively, students' /patients' preference for the instructors'/ physicians' gender, victims of gender stereotypes in higher education and the health sectors, and students' evaluation (patients' evaluation was not included since patients do not evaluate physicians on a regular base.) The interviews for the head of departments and directors in both service settings were held in the respondents' office whereas the physicians and instructors were interviewed in the restroom and canteen. The physicians and instructors were approached randomly and those who were willing and had the time to be interviewed were included. The interview took approximately 20 minutes and all respondents' opinions were included in the data analysis.

4.8 Testing of the questionnaire

The questionnaire was tested to evaluate whether the questions can capture the required data as expected. The test was conducted mainly to find out whether the questionnaire is easily understandable as well as whether there are any vague and confusing questions in the questionnaire. Different authors suggest different pilot sample size. For instance, Connelly (2008) suggests that a pilot study sample should be 10% of the larger sample, Hertzog (2008) argues that determining pilot sample size is ambiguous because many factors can influence the study, Isaac, and Michael (1995) suggested 10-30 participants, Julious (2005) in the medical field, and Van Belle (2002) suggested 12. In this study, 75 respondents including expertise and researchers were approached from the two service settings to answer the questionnaire in the presence of the data collector. Accordingly, the necessary changes were made. For example, one question related to the customer's perception towards the gender of the service provider was straightforward where it asks respondents which gender, they think is more qualified. However, presumably due to fear of judgment, respondents in the hospital hesitated when they answer the question. This was observed from their facial expression when they answer the question and when they change their answer. Thus, to avoid dishonesty of respondents, the question was modified into a non-judgmental and simple question by dividing it into three questions to get honest answers. Hence the previous question was replaced by "What kind of service do you expect from male instructors/physicians?"; "What kind of service do you expect from a female instructor/physician?" and "Which gender would you prefer as your instructor/physician?"

Another modification was made in the structure of the questions. For example, the questions about the demographical characteristics of the respondents were at the end of the questionnaire but it was later brought to the first part of the questionnaire for the sake of making a good and easy conversation with the respondents. For the most part, the researcher had to read the questions to inpatients who could not fill the questionnaire by themselves. In such cases, starting the conversation by asking easy questions such as respondents' demographic characteristics created a more comfortable atmosphere to talk for both the researcher and the respondents.

4.9 Design of the questionnaire

The questionnaire for the survey comprises three parts; the first part of the questionnaire is demographical characteristics and the second part of the questions are questions related to the

customer's expectation and preference for the gender of the service provider. The third part of the questionnaire is the main part that is comprised of 22 questions each aimed at finding the respondents' opinions on perceptions of the five dimensions of service quality in the service settings.

The questionnaire is adapted from the SERVQUAL instrument as developed by Parasuraman et al., (1985) and was modified according to the research objectives. A Likert scale of 5 (Strongly agree) to 1 (Strongly disagree) was used to indicate the respondents' degree of expectations and perceptions concerning the 22 items. The survey used in the hospital was translated in Amharic language but there was no need to translate the university survey as the medium of instruction in Ethiopian universities in the English language.

Questionnaires were coded as "female" and "male". In the case of higher education, students were informed to randomly think of and rate a female or male instructor based on the code they received. In other words, students who received a "female" code rated about a female instructor from the previous semester and those who received "male" code rated about their previous male instructor. The period of data collection on the campuses was the beginning of a new semester thus, it was believed that the students would recall very well about the performance of their instructors in the previous semester. The coding was then used in the data analysis as "The gender of the instructor". The same method was applied for the health sector except that patients were informed to think of and rate their present female or male physicians. The questionnaires for both service settings are presented in Appendix 1 and 2.

4.10 Data Analysis Method

Data analysis was carried out using SPSS 23 version. The data collected from the survey answered all the research questions and hypotheses were also able to be tested properly. Analysis of data for this study was done in two steps, the preliminary analysis, and the main analysis. The preliminary analysis involved mainly descriptive statistics, checking the internal reliability and credibility of the modified SERVQUAL model and factor analysis carried out to test the validity of the data.

The main analysis involved Crosstab (Chi-Square tests) and a non-parametric independent sample test of the hypothesis. Chi-Square tests served the purpose to assess hypotheses H2, H3,

H5, and H6. Whereas, a non-parametric independent sample test was used to evaluate the hypotheses H1 and H4.

4.11 Ethical consideration

This study was reviewed and approved by all the administration of the service organizations for ethical considerations and followed by a written support letter from the ministry of education and ministry of health for the service facilities to conduct the study. Verbal informed consent was obtained from all the respondents before the start of each interview by explaining the purpose of the study. The information obtained from the study will not be disclosed to the third body. Only code numbers were used to identify the study participants. All information from any individual was confidentially treated without disclosing the respondent's identity and opinions were expressed as they are given.

5. Results and discussion

This chapter presents the analysis of the primary data collected from higher education and the health sector. The results and discussion are carried out separately for each service settings to avoid mix up and make it easy for readers. The data collected from the survey answered all the research questions and hypotheses were also able to be tested properly. The results of higher education are discussed first followed by the health sector. Finally, analysis for the comparison of the two sectors and interview results are discussed.

Reliability

The reliability of the scale and inner consistency of extracted factors used in this study are verified by computing Cronbach's alpha. As suggested by Hair et al. (2006) a minimum alpha of 0.7 was checked to meet the reliability. The Cronbach alpha estimated for each dimension in higher education and health sector can be seen in Table 5.1.3 and Table 5.2. The data used in computing the coefficient alpha and in subsequent analyses were in the form of gap scores Q (representing perceived quality) which is computed as $P - E$ where P and E represent the ratings on perception and expectation of each 22 items respectively (Parasuraman et al., 1988). The decision of using gap scores in purifying a multiple-item scale is based on the approach used by Parasuraman et al. (1988) and Ford et al. (1975). The results of the reliability analysis showed that coefficients of alpha for all dimensions are above 0.7, which is considered acceptable as an indication of scale reliability (Hair et al., 2006).

Table 0.1 Reliability Analysis for perceived quality in higher education

Reliability Analysis			
No	Service quality dimensions	Cronbach's Alpha	No of Items
1	Tangible	.71	4
2	Reliability	.86	5
3	Responsiveness	.80	4
4	Assurance	.83	5
5	Empathy	.80	4
Total service quality		.93	22

Source: own completion

Table 0.2 Reliability Analysis for perceived quality in the health sector

Reliability Analysis			
No	Service quality dimensions	Cronbach's Alpha	No of Items
1	Tangible	.85	4
2	Reliability	.73	5
3	Responsiveness	.84	4
4	Assurance	.80	5
5	Empathy	.93	4
Total service quality		.88	22

Source: own completion

Cronbach's alpha value for the overall perceived service quality in higher education and health sector are 0.93 and 0.88 respectively and indicate high reliability. Thus, these values suggest good internal consistency of the factors that mean the survey instrument generates the same results within the same population or with a similar service setting. In other words, the study is generalizable and therefore is expected to reproduce similar results across the same service settings.

Validity

Reliability alone is not sufficient unless the validity is checked. In this study, extensive literature was reviewed to ensure validity. Content validity was assessed whether adequate and representative ideas are included in the concept. While convergent validity is checked to assess the extent to which service quality dimensions and customer's perceived service quality that theoretically should be related, are related. Regarding the construct validity, it has been assured that the instrument measures what it is intended to measure but no other variables. The most popular measure of service quality is SERVQUAL (Parasuraman et al., 1988). The instrument appears to be generally accepted and well supported by researchers leveraging the proper measure of service quality. Given that the instrument has been tested multiple times and is widely used in various studies, there is no doubt in the validity of the instrument. As many researchers do, minor modifications were made on the instrument to fit the context of this study.

KMO and Bartlett's test

KMO is computed to quantify the adequacy of the responses given with the sample. Kaiser (1974) recommends accepting values of greater than 0.5. As per KMO measure, a measure of > 0.9 is marvelous, > 0.8 is meritorious, > 0.7 is middling, > 0.6 is mediocre, > 0.5 is miserable and < 0.5 is unacceptable.

The results of the sample data indicate a value of 0.93 and 0.88 for higher education and the health sector respectively, which falls into the acceptable range. Since a high-KMO value (close to 1.0) is achieved, the dataset is appropriate for factor analysis (Hair et al., 1995). The data within this study returned a significance value of $P < .001$, for both service settings indicating that the data was acceptable for factor analysis.

5.1 Results and discussion in the case of higher education

Using the SERVQUAL scale, the perceived service quality known as gap score was calculated. Accordingly, the result of this study shows that the gap score for all variables is mostly negative because the expectations are higher than the perceptions indicating a dissatisfaction of students on the overall service dimensions. Table 5.3 showed the summary of students' ratings for expectation and perception on a set of 22 items regarding the attributes of service quality dimensions.

Students' dissatisfaction was worse on female instructors likely due to gender bias which is discussed in the later sections. However, regardless of gender bias dissatisfaction of the students showed that there is a gap in the service quality. Students' dissatisfaction with the overall quality of the education could be because Ethiopia's education system is underdeveloped and faced with a low-quality problem. According to the World Bank (2012), Ethiopia is categorized under the world's most educationally disadvantaged countries. Western modern education was introduced in Ethiopia only in the 20th century (World education news and reviews, 2018), and the country's very first university, Addis Ababa University was established in 1950. Although public universities have grown to 30 in the present time (Encyclopedia Britannica, n.d), achieving quality education has been a challenge due to socio-economic reasons. A recent SERVQUAL study conducted in Addis Ababa University Faculty of Business and Economics revealed that students' satisfaction with service quality was low (Lodesso et al., 2019).

Table 0.3 Students' expectation and perception of service quality

Statements	Female instructor			Male instructor		
	Mean (E)	Mean (P)	(Q)	Mean (E)	Mean (P)	(Q)
Tangibles						
The instructor's preparation of up to date handouts	4.26	3.75	-0.51	4.22	3.78	-0.44
The instructor's use visually appealing physical facilities	3.87	3.47	-0.40	4.12	3.79	-0.33
The instructor's use visually appealing teaching materials	4.08	3.55	-0.53	4.17	3.78	-0.39
The instructor's appearance looks professional	4.16	3.69	-0.47	4.17	4.22	0.05
Total	16.37	14.46	-1.91	16.68	15.57	-1.11
Reliability						
The instructor's interest in solving your problem related to the class	4.11	3.39	-0.72	3.94	3.71	-0.23
The instructor's interest in solving your general problems outside the class	3.49	2.75	-0.74	3.60	3.29	-0.31
The instructor's willingness to provide services as promised to do so	4.03	3.57	-0.46	3.97	3.70	-0.27
The instructor's ability to get things right the first time	3.95	3.51	-0.44	3.91	3.92	-0.01
The instructor's maintain error free records and grades	4.11	3.50	-0.61	3.91	3.76	-0.15
Total	19.69	16.72	-2.97	19.33	18.38	-0.95
Responsiveness						
The instructor's accuracy of informing you when class and exams will be carried	4.18	3.79	-0.39	4.30	4.00	-0.3
The instructor's dedication to finish the course on time	4.33	3.80	-0.53	4.19	4.14	-0.05
The instructor's attention to respond to your requests	4.04	3.57	-0.47	3.91	3.73	-0.18
The instructor's honesty in giving fair grade and not discriminating	4.18	3.84	-0.34	4.32	4.00	-0.32
Total	16.73	15	-1.73	16.72	15.87	-0.85
Assurance						
The comfort you feel in approaching the instructor	3.96	3.51	-0.45	3.96	3.71	-0.25
The instructor's ability to build confidence in your performance	3.80	3.44	-0.36	3.86	3.65	-0.21
The instructor's politeness to you	3.93	3.56	-0.42	3.96	3.85	-0.11
The instructor's encouragement of student expression	4.13	3.59	-0.54	4.04	3.81	-0.23
The instructor's knowledge to teach the subject	4.40	3.82	-0.58	4.20	4.04	-0.16
Total	20.22	17.92	-2.3	20.02	19.06	-0.96
Empathy						
The convenience of the instructor's office hours	4.08	3.61	-0.47	4.08	3.72	-0.36
The individual attention you receive from your instructor	3.77	3.32	-0.45	3.77	3.66	-0.11
The instructor's having your best interests at heart	3.64	3.13	-0.51	3.82	3.57	-0.25
The ability of the instructor to understand your specific need	4.26	3.04	-1.22	3.78	3.51	-0.27
Total	15.75	13.1	-2.65	15.45	14.46	-0.99

Note: Q = P-E where Q, P, E represents gap score, perception, and expectation respectively.

Source: own completion

5.1.1 Perceived service quality ratings for higher education

As indicated in Table 5.3, the gap score /perceived service quality ratings varied across female and male instructors. Kolmogorov-Smirnov test of normality showed that the data was not normally distributed, hence the non-parametric test of the independent sample was used to show if the difference between the ratings of the two genders is significant in all dimensions. The results are discussed for each dimension as follows.

5.1.1.1 *Students' perceived service quality of tangibles*

On the tangibles of the service, students rated their female instructors significantly lower than they rated their male instructors on “professional appearance and dressing” (Table 5.4, $P < 0.001$). This could be because of the dressing culture in Ethiopia. Ethiopia is a traditional and conservative country that has a strong religious and cultural foundation. Most people in Ethiopia, both Christian and Muslim, dress very conservatively and modestly. However, the modern western styles of dress are very dominant in some parts of the country, especially Addis Ababa (Culture in Ethiopia, n.d). In the office, bureaucrats are expected to wear formal outfits such as formal dress for women and a suite with a tie for men (Cultural information, 2018). Men generally wear long pants and a T-shirt or a shirt covering the shoulders. Sagging pants are widely considered to be undignified attire for adult men.

Women wear a dress, short skirt or a pair of pants. However, wearing outfits that show too much cleavage or super short skirts are frowned upon in the society of Ethiopia. Ethiopians are very proud of preserving history, culture, and religion thus wearing inappropriate outfits can be regarded as “shame culture” especially in rural settings. Ethiopian society believes that the way people dress reflects their attitude and behavior. Modest outfits can make one labeled as decent, disciplined, and well-mannered while unacceptable outfits can make one as undignified. Given that the university students come from different parts of Ethiopia with different religious and cultural perspectives, instructors dressing code could be an issue of judgment.

Table 0.4 Perceived service quality of tangibles in higher education

Tangibles	The gender of the instructors								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The instructor's preparation of up to date handouts	222	-0.51	0.00	1.17	224	-0.44	-1.0	1.17	.792
The instructor's uses of visually attractive teaching materials	224	-0.41	0.00	1.30	224	-0.33	0.00	1.14	.597
The instructor's provision of well-organized and informative handouts	225	-0.53	0.00	1.10	225	-0.39	0.00	1.11	.160
The instructor's professional appearance and dressing	218	-0.47	0.00	1.26	221	-0.05	0.00	1.02	<.001

Note: mean = Gap score (Q). Prob. is based on Independent –samples Mann-Whitney U Test. The significance level is .05.

Source: own completion

Student's judgments on female instructors' appearance were also found to be higher in the study of Mitchell & Martin (2018). In their study, students were asked to evaluate their male and female professors' appearance, competence/ incompetence, and personality. As a result, 11% of students noted their female professor's appearance and 7% commented on their female professors' incompetence. However, no one commented on his or her male professors' appearance or incompetence. Students tend to comment on a woman's appearance and personality far more often than on man's (Carson, 2001) Likewise, women are more prone to clothing critics than men in Ethiopia because of cultural influences.

In Ethiopia, female instructors are expected to adhere to the cultural dressing code by not wearing anything beyond the acceptable norm. Casual wear in the office is not regarded positively. Given that Ethiopians are a conservative society in general, modest dressing is considered professional (Cultural information, 2018).

5.1.1.2 Students’ perceived service quality of reliability

Students’ reliability ratings have shown a significant difference between male and female instructors in four factors (Table 5.5). Students rated female instructors lower than males in their “willingness to solve students’ problems related to the class and outside the class” ($P < .001$ and $P = .018$) respectively. These could be explained by the high expectation of students on women to be nurturing and more willing than men. El-Alayli et al. (2018) found that students request more special favors and expect that women grant their favor requests than male professors. Yet, when women professors deny those requests or do not respond in the favor of the students, they get negative reactions and lower evaluation of course (El-Alayli et al., 2018). Female instructors also received lower ratings for “the ability to get things right the first time” and “maintaining error-free records and grades.” ($P = .002$ and $P = .003$) respectively. This could be explained because people are more critical of females’ mistakes than males’ (Egan et al., 2017; Gupta et al., 2018; Žemojtel et al., 2016).

Table 0.5 Perceived service quality of reliability in higher education

Reliability	The gender of the instructors								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The instructor’s interest in solving their problem related to the class	219	-0.72	-1.00	1.30	224	-0.23	0.00	1.59	<.001
The instructor’s interest in solving their general problems outside the class	219	-0.74	0.00	1.51	221	-0.31	0.00	1.68	.018
The instructor’s willingness to provide services at the time promised to do so	220	-0.46	0.00	1.28	223	-0.27	0.00	1.37	.175
The instructor’s ability to get things right the first time not causing rework	222	-0.44	0.00	1.15	221	-0.01	0.00	1.41	.002
The accuracy of the instructor in maintaining error-free records and grades	214	-0.61	0.00	1.25	219	-0.15	0.00	1.49	.003

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test. The significance level is .05.

Source: own completion

5.1.1.3 Students' perceived service quality of responsiveness

Concerning the responsiveness of the service, “dedication to finish the course on time” was one of the statements that showed significantly lower ratings for women (Table 5.6, $P < .001$). This finding is supported by the study of Sari & Basarir (2016) who revealed that society holds a metaphor that male instructors are regarded as “efficient and stable” in contrast to female instructors. Additionally, “the instructor’s attention to respond to students' requests all the time they needed” also showed a significantly lower rating for women ($P = .028$). MacNell et al. (2015) evidenced a similar finding where an experiment on students’ online evaluation showed that male identity received a higher evaluation in “promptness” than female identity.

Table 0.6 Perceived service quality of responsiveness in higher education

Responsiveness	The gender of the instructors								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
Instructor's accuracy in telling you exactly when class and exams will be carried	221	-0.39	0.00	1.12	221	-0.30	0.00	1.03	0.499
The instructor's dedication to finish the course on time	222	-0.53	0.00	1.23	221	-0.05	0.00	1.20	<.001
The instructor's attention to respond to your requests all the time you needed	220	-0.47	0.00	1.30	223	-0.18	0.00	1.28	0.028
The instructor's honesty in giving fair grade and not discriminating students	222	-0.34	0.00	1.30	223	-0.32	0.00	1.22	0.705

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test. The significance level is .05.

Source: own completion

5.1.1.4 Students' perceived service quality of assurance

In regards to “Assurance”, female instructors again received lower ratings for “knowledge to teach the subject” ($P = .001$), “politeness to the students ($P = .017$), and “instructor’s encouragement of students’ expression” ($P = .005$, Table 5.7). A study by Mitchell and Martin (2018) also shows that male professors were more rated for “competence” and “intelligence” than female professors indicating a gender bias in students’ evaluation.

Table 0.7 Perceived quality of assurance in higher education

Assurance	The gender of the instructors								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The comfort you feel in approaching the instructor with concerns	222	-0.45	0.00	1.30	218	-0.25	0.00	1.40	.081
The instructor's ability to build confidence in your class performance	224	-0.36	0.00	1.50	221	-0.21	0.00	1.40	.386
The instructor's politeness to you	224	-0.42	0.00	1.40	224	-0.11	0.00	1.41	.017
The instructor's encouragement of student expression	222	-0.54	0.00	1.20	220	-0.25	0.00	1.22	.005
The instructor's knowledge to teach the subject	219	-0.58	0.00	1.30	219	-0.16	0.00	1.06	.001

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test. The significance level is .05.

Source: own completion

Other evidence also shows that male instructors are highly evaluated in “Professionalism” (MacNell et al., 2015). This coincides with the finding of this study that male instructors had higher ratings on “knowledge to teach the subject. In the same study, it was revealed that male instructors received higher ratings than female in “respectfulness” and “feedback” (MacNell et al., 2015) which supports the finding of this study that female instructors received lower ratings in “politeness” and “encouragement” of students’ expression respectively.

5.1.1.5 Students’ perceived service quality of empathy

Surprisingly students rated their female instructors as less emphatic than men in terms of “giving individual attention to students” (P =.007), “the instructor's having students’ best interests” (P =.031) and “the ability of the instructor to understand students’ specific needs” (P =.001, Table 5.8). All three statements seem to contradict other findings. Different researchers have explored that women are more emphatic than men (Chen et al., 2014; Christov-Moore et al., 2014). The study of Carson (2001) also indicated that female instructors reported that students’ perceive female instructors as approachable, are much more likely to see them as a friend, they assume familiarity and informality, seek much pastoral care from them and feel less intimidated by them than male instructors. Therefore, women's lower rate of empathy might be due to gender bias.

Table 0.8 Perceived quality of empathy in higher education

Empathy	The gender of the instructors								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The convenience of the instructor's office hours	222	-0.47	0.00	1.10	225	-0.36	0.00	1.30	.251
The individual attention you receive from your instructor	225	-0.45	0.00	1.30	224	-0.11	0.00	1.30	.007
The instructor's having your best interests	225	-0.51	0.00	1.43	222	-0.25	0.00	1.40	.031
The ability of the instructor to understand your specific need	222	-0.51	0.00	1.43	222	-0.25	0.00	1.43	.001

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test. The significance level is .05.

Source: own completion

5.1.2 Factor analysis for SERVQUAL in higher education

As the samples are independently taken for male and female instructors, the exploratory factor analysis was carried out separately for females and males to see any difference in the loadings of the variables between the two genders. The factor loading for both genders' dataset showed that the variables loaded in 5 components and all variables above .40 were maintained. The decision to include a variable in a factor was based on factor loadings greater than ± 0.3 (Hair et al., 1995). The extracted components of the female instructors explained nearly 64% of the variability in the original 22 variables while the male instructor's extracted component explained 68% for the five components. The rotated component matrix for female instructors as shown in Table 5.9 indicated a very arbitrary grouping of the variables.

Table 0.9 Rotated component matrix for female instructors' data set

Statements	Component				
	1	2	3	4	5
RA1.The instructor's interest in solving your problem related to the class	.799				
RA2.The instructor's interest in solving your general problems outside the class	.708				
RE3.instructor's attention to respond to your requests all the time you needed	.581				
A3.The instructor's politeness to you	.523				
A1. The comfort you feel in approaching the instructor with concerns	.454				
A4.The instructor's encouragement of student expression	.432				
E4.The instructor's ability to understand your specific needs		.785			
E3.The instructor's having your best interests		.739			
A5. The instructor's knowledge to teach the subject		.681			
RE1.The instructor's accuracy in telling you exactly when class and exams will be carried			.693		
RE4.The instructor's honesty in giving fair grade and not discriminating students			.621		
RE2.The instructor's dedication to finish the course on time			.570		
RA4.The instructor's ability to get things right the first time not causing rework			.564		
RA5.The accuracy of the instructor in maintaining error-free records and grades			.540		
E1.The convenience of the instructors' office hours				.789	
E2.The individual attention you receive from your instructor				.732	
A2.The instructor's ability to build confidence in your class performance				.619	
RA3.The Instructor's willingness to provide services at the time promised to do so				.564	
T1.The instructor's preparation of up to date handouts					.766
T2.The instructor's uses of visually attractive teaching materials					.725
T3.The instructor's provision of well-organized and informative handouts					.659
T4. The instructor's professional appearance and dressing					.644

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Note: T= Tangibles, RA = Reliability, RE =Responsiveness, A = Assurance, E = Empathy.

Source: own completion

No clear factor pattern emerged and many of the items had high loadings on several factors. Except for tangibles, the variables appeared in all components and were not nicely categorized in a distinct dimension, which makes it hard to conclude which variables are well represented in which component. This result did not support the five-dimension model proposed by Parasuraman et al. (1988). In contrast, the rotated component matrix for male instructors was understandable and showed a clear representation of each variable. Reliability, assurance, empathy, responsiveness, and tangibles were represented from the first to the fifth components respectively with only one variable from responsiveness mixed into the first component (Table 5.10).

Table 0.10 Rotated component matrix for male instructors' data set

Statements	Component				
	1	2	3	4	5
RA1.The instructor's interest in solving your problem related to the class	.771				
RA5.The accuracy of the instructor in maintaining error-free records and grades	.736				
RA3.The instructor's willingness to provide services at the time promised to do so	.676				
RA2.The instructor's interest in solving your general problems outside the class	.605				
RA4.The instructor's ability to get things right the first time not causing rework	.601				
RE4.The instructor's honesty in giving fair grade and discriminating students	.521				
A1. The comfort you feel in approaching the instructor with concerns		.738			
A5. The instructor's knowledge to teach the subject		.688			
A4.The instructor's encouragement of student expression		.650			
A2.The instructor's ability to build confidence in your class performance		.607			
A3.The instructor's politeness to you		.549			
E4.The ability of the instructor to understand your specific need			.765		
E2.The individual attention you receive from your instructor			.707		
E3.The instructor's having your best interests			.669		
E1.The convenience of the instructor's office hours			.621		
RA5.Instructor's accuracy in telling you exactly when class and exams will be carried				.874	
RE2.Instructor's dedication to finish the course on time				.740	
RE3.Instructor's attention to respond to your requests all the time you needed				.706	
T1.The instructor's preparation of up to date handouts					.739
T4.The instructor's professional appearance and dressing					.724
T2.The instructor's uses of visually attractive teaching materials					.541
T3.The instructor's provision of well-organized and informative handouts					.501

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization
 Source: own completion

The reason why the model did not fit the data set of women could be because of cultural and gender role differences across regions. To compromise this situation, another factor analysis was run again by merging the two data sets (male and female instructors) which later was retained for the subsequent analysis of the study. Accordingly, the extracted components explained nearly 64% of the variability in the variables. The rotated component matrix in Table 5.11 depicts that “assurance” and “empathy” seem to load in the first component. Reliability, responsiveness, tangibles, and the remaining part of empathy fall under components 2, 3, 4, and 5, respectively. Consequently, it was needed to rename and rearrange the statements based on the components

where they are well represented. Therefore, the first, second, third, fourth and fifth component was named as “assurance” (seven variables), “reliability” (five variables), “responsiveness” (four variables), “tangibles” (four variables) and finally “empathy” (two variables), respectively.

Table 0.11 Rotated component matrix for female and male instructors

Statements	Component				
	1	2	3	4	5
The ability of the instructor to understand your specific need	.702				
The instructor's having your best interests	.693				
The comfort you feel in approaching the instructor with concerns	.667				
The instructor's knowledge to teach the subject	.649				
The instructor's politeness to you	.609				
The instructor's encouragement of student expression	.563				
The instructor's ability to build confidence in your class performance	.492				
The instructor's interest in solving your general problems outside the class		.732			
The instructor's interest in solving your problem related to the class		.710			
The accuracy of the instructor in maintaining error-free records and grades		.698			
The instructor's ability to get things right the first time not causing rework		.643			
The instructor's willingness to provide services at the time promised to do so		.536			
Instructor's accuracy in telling you exactly when class and exams will be carried			.837		
Instructor's dedication to finish the course on time			.703		
Instructor's attention to respond to your requests all the time you needed			.593		
The instructor's honesty in giving fair grade and discriminating students			.565		
The instructor's preparation of up to date handouts				.771	
The instructor's uses of visually attractive teaching materials				.695	
The instructor's professional appearance and dressing				.628	
The instructor's provision of well-organized and informative handouts				.601	
The convenience of the instructor's office hours					.728
The individual attention you receive from your instructor					.691

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

1= Assurance, 2 = Reliability, 3 = Responsiveness, 4 = Tangibles, 5= Empathy.

Source: own completion

5.1.3 Students' ratings of instructors' over the five dimensions of service quality

After the loading of the variables based on the designated components, the nonparametric test of the independent sample was run again to verify if the rearrangement of the variables has made a significant difference between female and male instructors rates. The results indicated that male instructors are rated significantly higher than their female counterparts in all five dimensions (Table 5.12).

Many researchers also evidenced that female faculty member receive lower SIE and face gender biases than male instructors (Mengel et al., 2017; Weinberg et al., 2007; Ólafsdóttir, 2018). Fan et al. (2019) and Joye & Wilson (2015) revealed students perceive that male professor as more effective than female professors. Boring (2015) found out in her study that male instructors receive much higher scores than female instructors on several dimensions of teaching such as the ability to lead the class, contribution to students' intellectual development, degree of being up-to-date with current situations, and availability when students needed them. These dimensions can be regarded as Assurance, Tangibility, and Responsiveness, respectively.

Table 0.12 Nonparametric hypothesis test for the dimensions of service in higher education.

Independent –samples Mann-Whitney U Test						
Service dimensions	Items	Female instructor		Male instructor		Prob.
		Mean	Median	Mean	Median	
Tangibility	4	-1.91	-0.50	-1.11	-0.25	.009
Reliability	5	-2.97	-0.60	-0.95	-0.20	.002
Responsiveness	4	-1.73	-0.25	-0.85	0.00	.011
Assurance	7	-4.03	-0.43	-1.48	-0.14	.001
Empathy	2	-0.92	-0.50	-0.47	-0.00	.015

Note: mean = Gap score (Q). Prob. The significance level is .05

Source: own completion

These results support the first hypothesis of this study: **H1 instructor's gender will influence students' perceived service quality such that female instructors will be rated less than their counterparts.**

However, the finding might raise the question of performance difference between the two genders. What if female instructors are rated less than male instructors not because of gender

stereotypes but because they perform less than males? To answer this question, the university staff were interviewed. The result is discussed at the end of this chapter.

5.1.4 Students' attribution of service quality dimensions to the instructors' gender

The second objective of this study was to see how students attribute the service dimensions to the gender of the instructor. Thus, the gap score of female and male instructor's ratings was compared for each dimension and ranked accordingly. The aim of the ranking is not to compare male and female instructors gap score because it was obvious that men's scores were higher than the women's in all dimensions, however, to see in which dimension are the two genders highly ranked. Consequently, it was found that there was no special attribution of the service dimensions to the genders of the instructors (Table 5.13).

Table 0.13 The ranking of female and male instructors' ratings

Service dimensions	Gender of the instructor					
	Female			Male		
	Mean	Median	Rank	Mean	Median	Rank
Tangibles	-1.91	-0.50	3	-1.11	-0.25	4
Reliability	-2.97	-0.60	4	-0.95	-0.20	3
Responsiveness	-1.73	-0.25	2	-0.85	0.00	2
Assurance	-4.03	-0.43	5	-1.48	-0.14	5
Empathy	-0.92	-0.50	1	-0.47	-0.00	1

Note: mean = Gap score (Q).

Source: own completion

5.1.5 The influence of the instructors' gender on the students' service expectation and preferences

To prove **H2 students expect a better service from a male instructor than a female instructor and H3 students prefer male instructors than female instructors**, students were asked to answer a set of supportive questions to the existing model about their expectation of service from female and male instructors and their preferences of the gender of the instructor. Chi-Square test was used to analyze if there exists a significant relationship between the instructor's

gender and student's expectations, and a significant relationship was indicated. The results supported the hypothesis ($p < .05$). The detail of the whole analysis is as follows.

5.1.5.1 Students' expectation of the instructors' gender

Students were asked which gender pops up in their mind when they first think of an instructor. As a result, "a male figure" pops up in the majority of the students' minds. Many of the students (62%) think that instructors are males. Students who think instructor as female and both genders are 11% and 24%, respectively, whereas the rest 3% are indifferent (Figure 5.1). The finding shows a significant relationship between the instructors' gender and student's expectation about instructors' gender ($P = .004$; Carmer V = 0.172; $X^2 = 13.14^a$; $df = 3$).

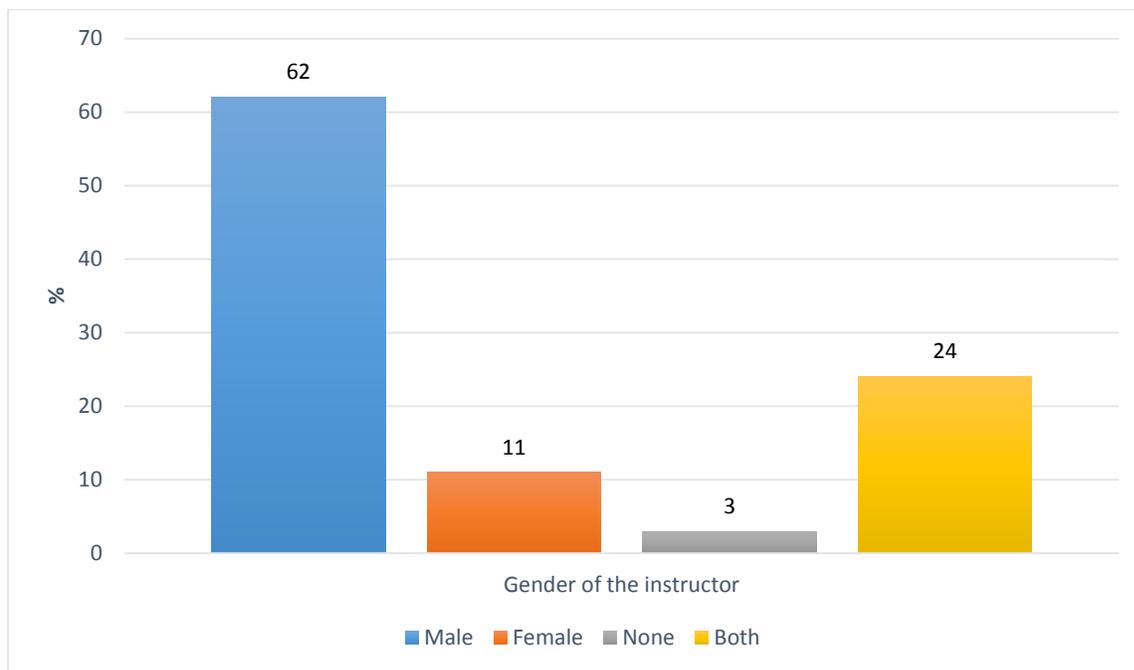


Figure 0.1 The gender that pops up first in students' mind when they think of an instructor in %

Source: own completion

The gender-based stereotype of students could be because of traditional attitudes, gender roles, the underrepresentation of women in higher education, and the fact that women are given lower positions in Ethiopia. According to the World Bank (2012), Ethiopian female literacy of

aged 15-24 was 47% compared to 63 % of males the same age. Educational attainment of the female population who are aged 25 and above who completed a bachelor's degree or equivalent was 0.4% while the male population of the same age accounted for 2.0%. Although Ethiopia has not yet abolished gender inequality, the country has made remarkable progress towards educating girls and empowering women. For instance, the net primary school enrolment climbed from 51% in 2004 to 95% in 2017. However, only 53% completed primary school. Moreover, the majority are unable to make the transition to secondary and tertiary schools due to gender-based violence on the way to school, distance, and economic challenges. Thus, only 25% of girls attend a secondary school where only 10% make it to university (UNICEF, n.d.) As girls grow older, their academic participation is challenged by the need to generate income shortly as education takes time. As a result, only 35% of undergraduate university students are female and 5% percent drop out in the very first year (USAID, n.d). Because of the educational gender gap, a male is more regarded as an instructor than a female. Globally, women are often assumed to have less academic rank than men (Carson, 2001). Miller and Chamberlin (2000) revealed gender disparities in the attribution students give to female and male faculty members. Despite the position held by male and female faculty members, students attributed the Ph.D. achievement to a man, even to the male graduate instructor. Whereas, students were less likely to attribute a Ph.D. to the woman even to a full professor. The authors believe that such misattribution of students is associated with the imputed statuses “instructor for women”, and “professor for men”. Female instructors have reported that students call them “Ms.” rather than “Dr” while their male colleagues become “Prof.” than “Mr” even when it is their proper title (Carson, 2001).

Students’ gender did not matter in attributing instructors as male. Regardless of their gender, most of the students had the thought of men when they think of instructors. Surprisingly female students accounted for the larger number (54%) compared to male students (46%) (Figure 5.2). This shows that the conceptualization of male as an instructor than a female is widely spread and accepted by the general population.

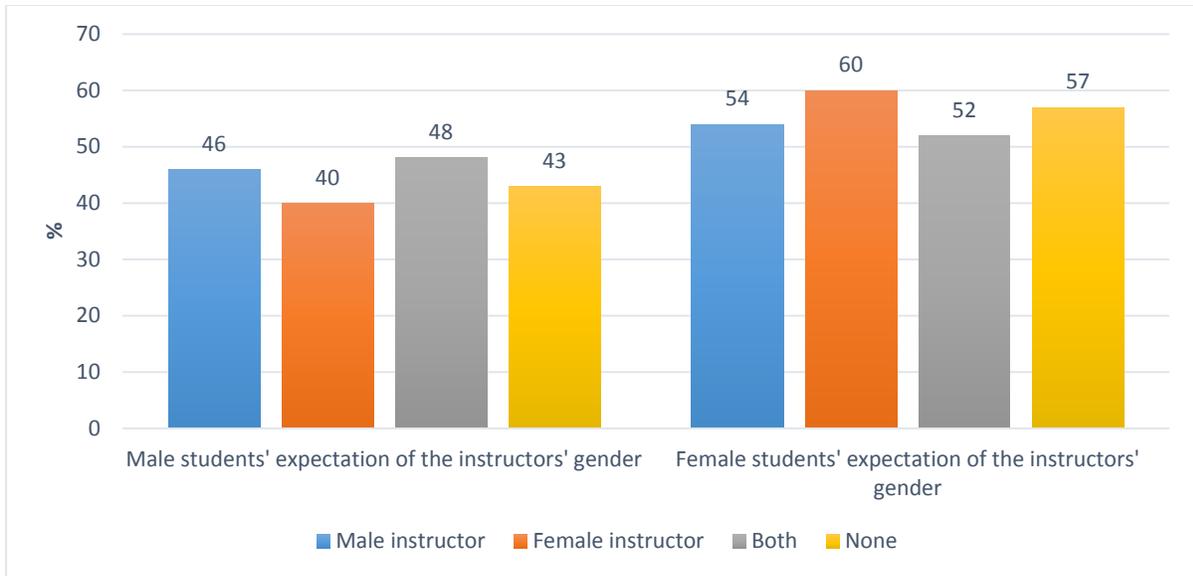


Figure 0.2 The gender that pops up first in male and female students' mind when they think of an instructor in %

Source: own completion

5.1.5.2 Students' expectation of service quality from female and male instructors

The service quality that students expect from a female instructor is significantly lower than what they would expect from a male instructor. Only 27% of students expected very good service from female instructors compared to 59% of the male instructors (Figure 5.3 and 5.4).

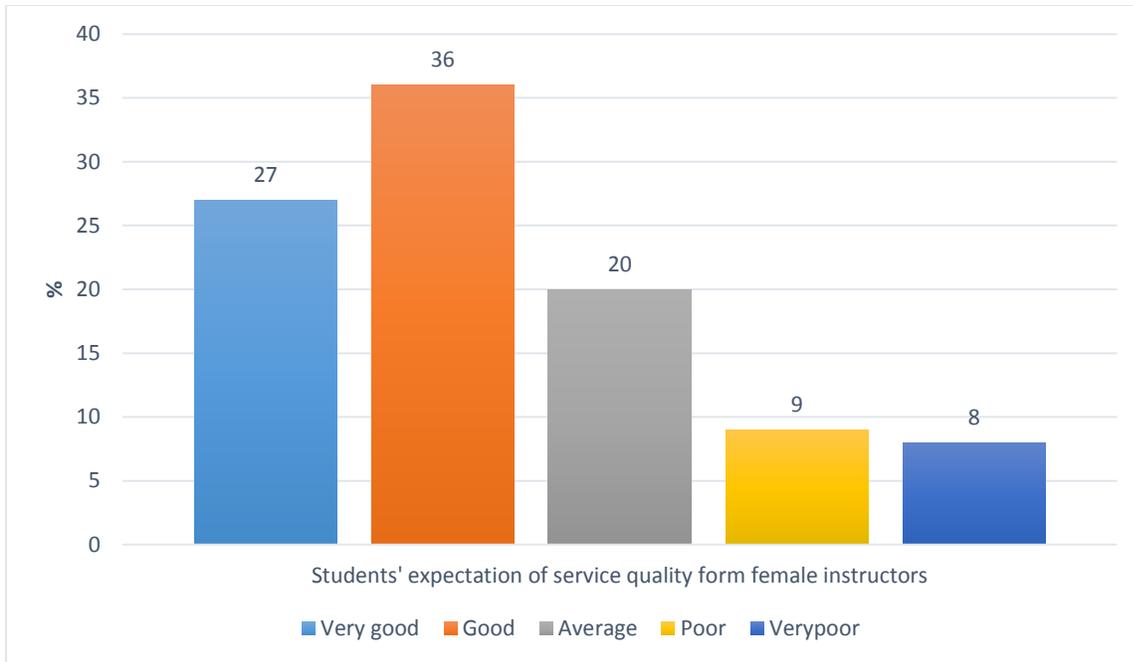


Figure 0.3 Students' expectation of service quality from a female instructor in %

Source: own completion

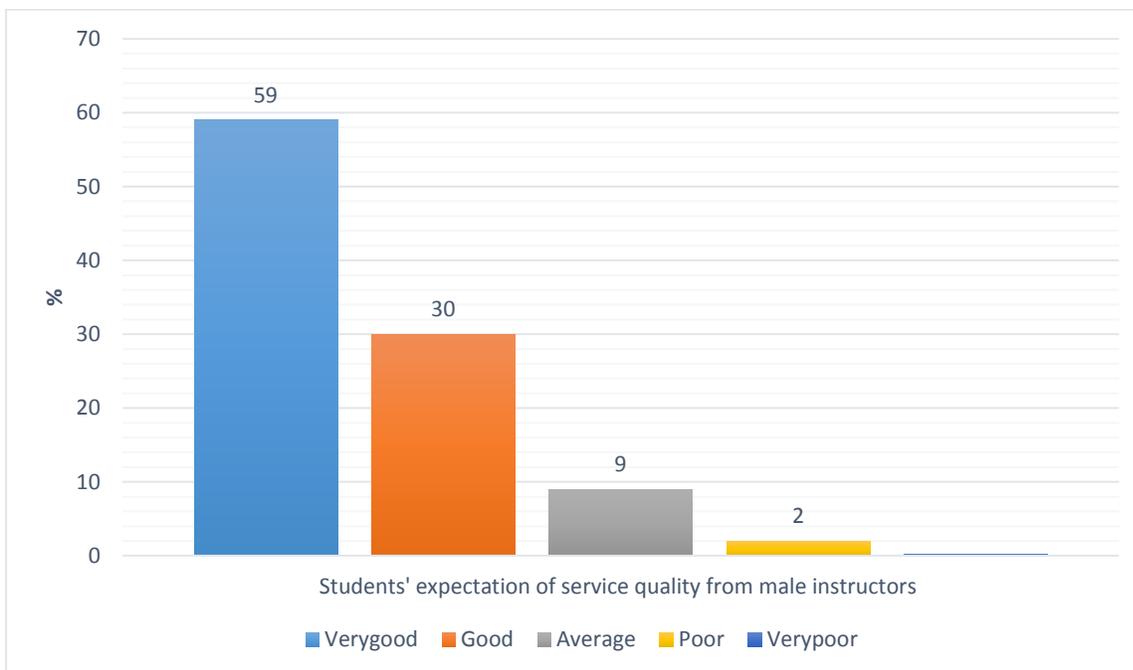


Figure 0.4 Students' expectation of service quality from a male instructor in %

Source: own completion

The relationship between the instructors' gender and students' expectation of service quality is significant such that women instructors are rated lower than men instructors. ($P < .001$; Cramer $V = .276$; $X^2 = 33.87^a$; $df = 4$ for female instructors and $P < .001$; Cramer $V = 0.237$; $X^2 = 24.79^a$; $df = 4$ for male instructor.) Students are less likely to expect good quality from female instructors because, for long years, women in Ethiopia have been seen as incapable and unproductive parts of the society. The gender role has brainwashed the people that women's activity is limited to the household task. Thus, they do not gain much trust from society on their performance. Different researches have also come up with similar findings. Boring (2017) and MacNell et al. (2015) argued that students give lower scores to women than men for the same level of teaching effectiveness. Arbuckle & Williams (2003) also found that students hold a strong gender stereotype against women favoring male faculty members.

Further, the experimental study of Goldberg (1968) showed that college students showed gender bias, attributing more positive evaluations to a male-authored article even when the journal article varied only in terms of its author's gender. In a similar experiment, Noel & Allen (1976) asked students to rate the quality of writing in essays. The study found that both male and female students rated the essays as being lower quality if they believed the author was female

5.1.5.3 Female and male students' expectation of service quality

There was no significant difference between male and female students in rating female instructors. Although female students' rate was higher than male students for the "very good" and "very poor" service expectation (Figure 5.5), the overall rating did not show a significant difference ($P = .416$; Cramer $V = .094$; $X^2 = 3.92^a$; $df = 4$). However, female students rated male instructors higher than male students (Figure 5.6), showing a significant difference between the genders ($P = .007$; Cramer $V = .179$; $X^2 = 14.1^a$; $df = 4$)

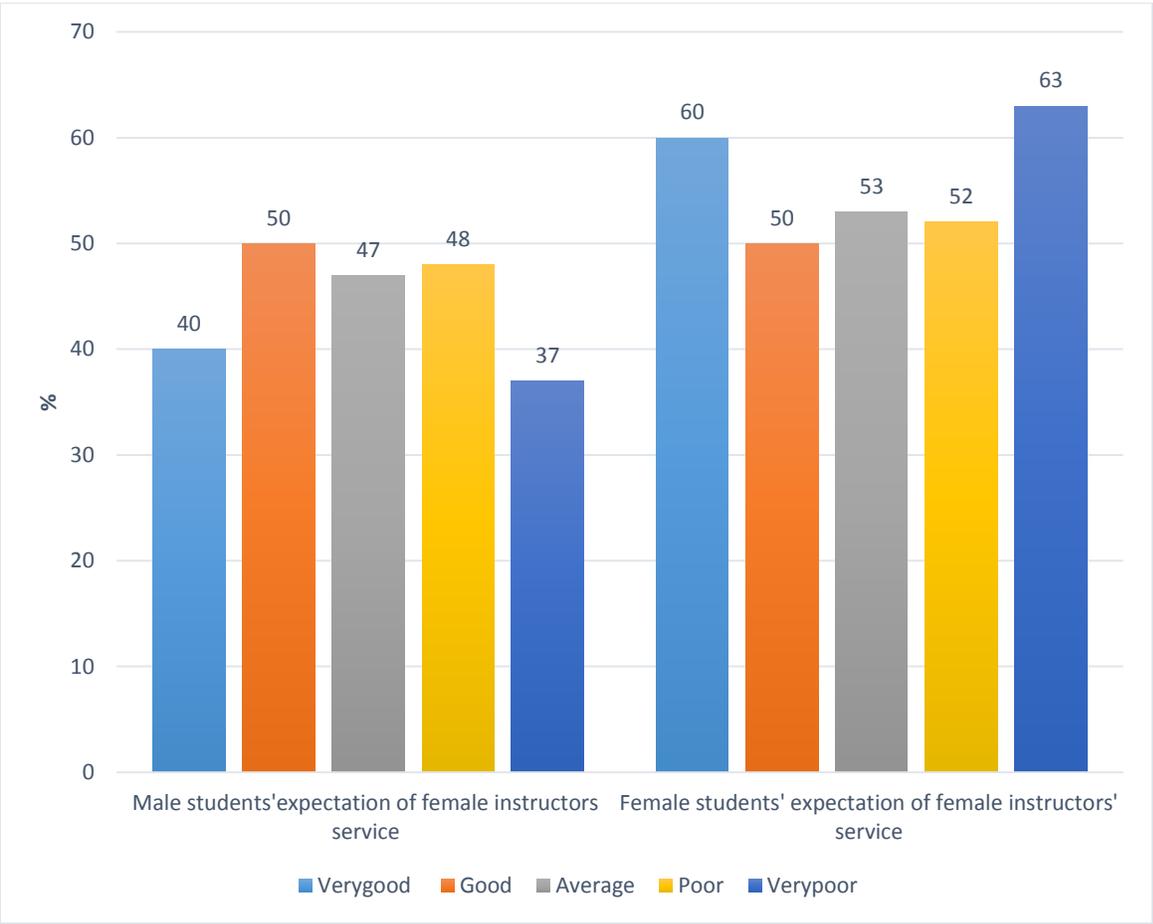


Figure 0.5 Female and male students' expectations of female instructors' service in %

Source: own completion

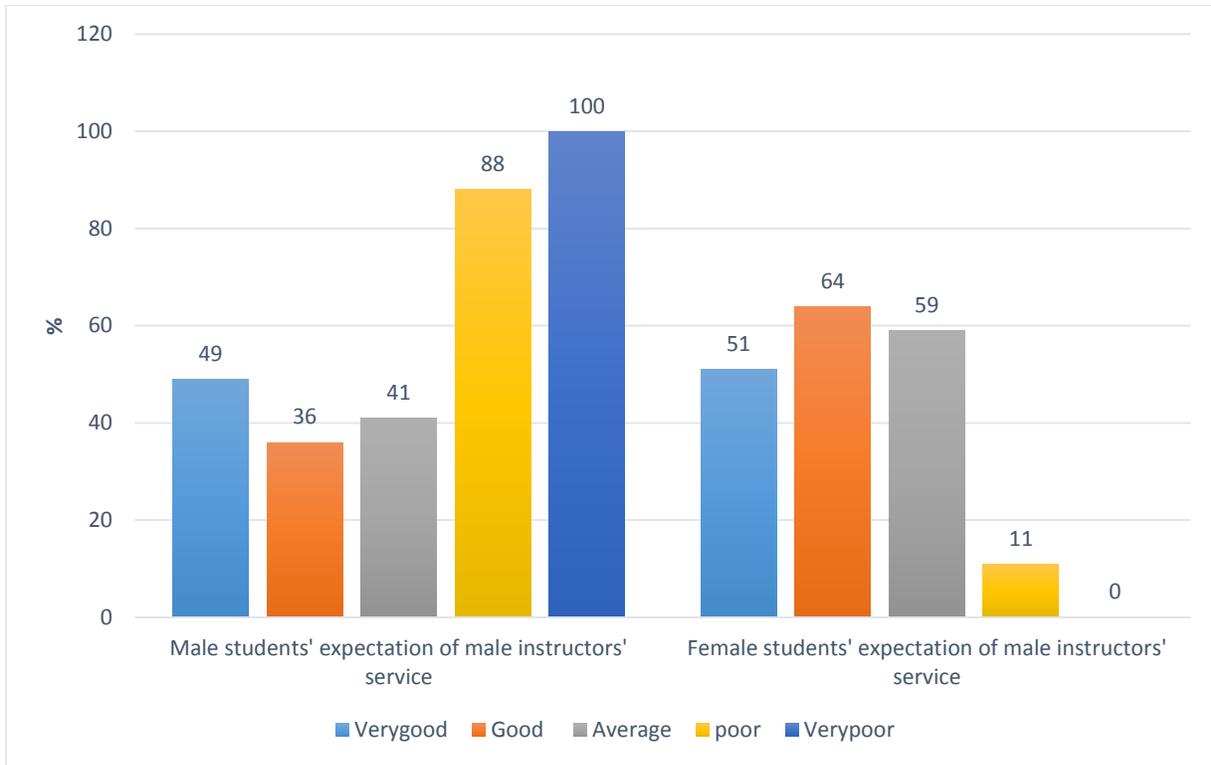


Figure 0.6 Female and male students' expectations of male instructors' service in %

Source: own completion

5.1.5.2 Students' preference for the instructors' gender

Male instructors were preferred compared to females by most of the students (Figure 5.7) (56% preference for male vs. 17% preference for female). A significant relationship was found between the students' preference and the gender of the instructor ($P = .001$). Similar studies show that gender affects students' preferences where students prefer male traits over female traits for instructors (Bennett 1982; Burns-Glober & Veith, 1995).

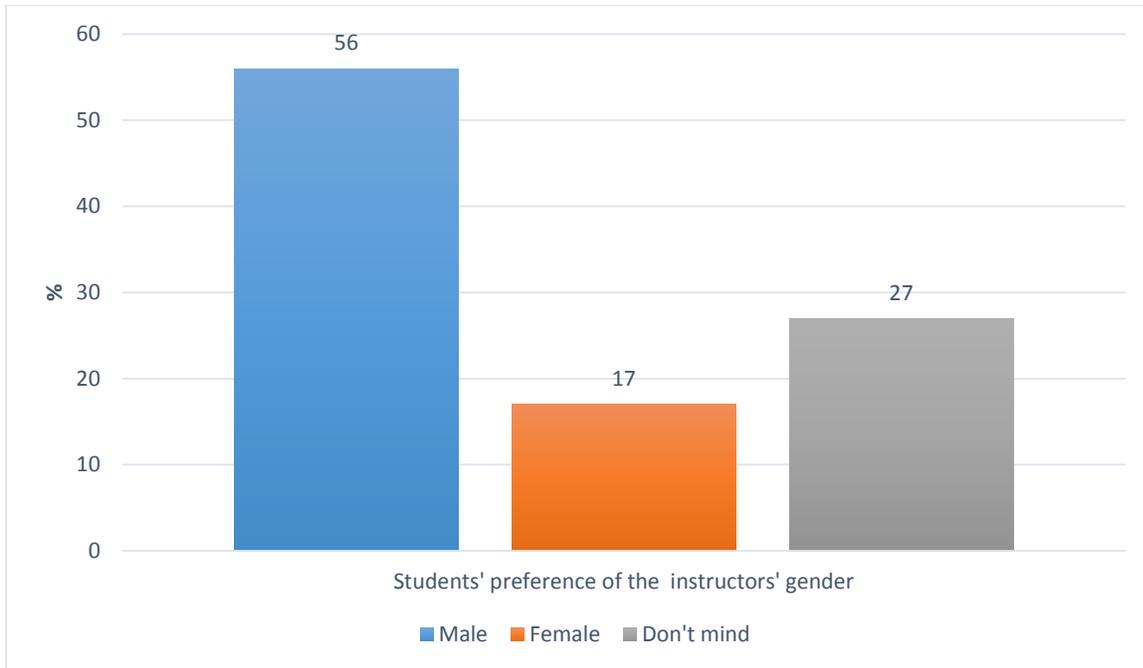


Figure 0.7 Students' preference of the instructors' gender in %

Source: own completion

In an experiment conducted on college students to evaluate their preference for the gender of the instructors, it was found that students showed a preference for the male candidate. In the experiment, students were given a hypothetical applicant's name - Sam, Sarah, and Dr. Lawson for a faculty teaching position and stronger gender bias were shown against the female applicant (Burns-Glover & Veith, 1995). Such apparent gender bias could be the result of men's dominance in a lecturing job which makes women seem out of place (Siskind & Kearns, 1997).

The students' gender did not contribute to a significant difference in the preference of the instructors' gender. Both male and female students preferred male instructors than female instructors.

5.2 Result and discussion in the case of the health sector

The SERVQUAL model was again used in the case of the health sector to evaluate the influence of the physicians' gender on the patients' perceived service quality. The gap score was compared between female and male physicians. As a result, it was found that women physicians were rated lower than men physicians in all dimensions except for "empathy"

As indicated in Table 5.14 the gap score for the majority of the variables is negative for both female and male physicians showing dissatisfaction of patients on the overall service.

Table 0.14 Patients' expectation and perception of service quality

Statements	Female physician			Male physician		
	Mean (E)	Mean (P)	(Q)	Mean (E)	Mean (P)	(Q)
Tangibles						
The physician's use of modern equipment and technology	4.73	3.62	-1.11	4.26	3.81	-0.45
The physician's use of visually appealing physical facilities	3.19	3.50	0.31	3.13	3.63	0.50
The physician's provision of well-organized information	3.14	3.45	0.31	3.11	3.74	0.63
The physician's professional appearance and dressing	4.99	3.63	-1.36	4.98	3.93	-1.05
Total	16.05	14.2	-1.85	15.48	15.11	-0.37
Reliability						
The physician's ability to solving your problem related to your medical examination	4.03	3.33	-0.70	3.95	4.41	0.46
The physician's interest in solving your general problems	3.39	2.62	-0.77	3.59	3.05	-0.54
The physician's willingness to provide services as promised so	4.10	3.46	-0.64	3.84	3.77	-0.07
The physician's ability to get things right the first	3.99	3.54	-0.45	3.92	4.22	0.3
The physician's maintaining error free medical records	4.18	3.56	-0.62	4.03	3.56	-0.47
Total	19.69	16.51	-3.18	19.33	19.01	-0.32
Responsiveness						
The physician's accuracy in telling exactly when the examination will be performed	4.32	3.78	-0.54	4.04	3.99	-0.05
The physician's dedication to finish your treatment on time	4.35	3.14	-1.21	4.20	4.49	0.29
The physician's willingness to give prompt service	4.18	3.39	-0.79	3.67	3.65	-0.02
The physician's honesty and not discriminating patients	4.30	3.79	-0.51	3.98	3.89	-0.09
Total	17.15	14.10	-3.05	15.89	15.76	0.13
Assurance						
The safety and comfort you felt in receiving the care	4.74	4.36	-0.38	4.78	4.65	-0.13
The physician's behavior to install confidence in you	4.76	4.42	-0.34	4.88	4.73	-0.15
The physician politeness and courteousness to you	4.85	4.81	-0.04	4.85	4.83	-0.02
The physician encouragement to express yourself	4.80	4.68	-0.12	4.91	4.88	-0.03
The knowledge to demonstrate and answer your questions	4.83	4.51	-0.32	4.93	4.84	-0.09
Total	23.98	22.78	-1.2	24.35	23.98	-0.42
Empathy						
Operating hours were convenient for you	4.83	4.55	-0.28	4.81	4.65	-0.16
The physician gave you individual attention	4.81	4.58	-0.23	4.80	4.64	-0.16
The physician has your best interests at heart	4.81	4.57	-0.24	4.80	4.65	-0.15
The physician's ability to understand your specific needs	4.81	4.57	-0.24	4.80	4.71	-0.09
Total	19.26	18.27	-0.99	19.21	18.65	-0.56

Note: Q = P-E where Q, P, E represents gap score, perception, and expectation respectively.

Source: own completion

A higher difference was observed in “responsiveness” and a minimum gap in “empathy” across the two genders. The patient’s dissatisfaction was worse on female physicians especially for “reliability”. The results depicted the existence of gender bias in patients’ perceived quality towards female physicians and are discussed in detail in the subsequent subtopics.

5.2.1 Perceived service quality in the health sector

As indicated in Table 5.14, patients’ perceived service quality ratings showed differences across female and male physicians. Therefore, it was needed to see if the difference is statistically significant. As a result, the non-parametric test of the independent sample was carried out and the results are discussed for every dimension as follows.

5.2.1.1 *Patients perceived service quality of tangibles*

Patients’ rate for “the use of modern equipment and technology” and the provision of well-organized information” was significantly higher for male physicians ($P < 0.001$, Table 5.15). The gap in the ratings could be first due to patients’ stereotypes. Female and male physicians operate with the same equipment in both the medical and surgical wards. As observed during the data collection, the physicians do not have a separate office and work in a team with the same facilities and equipment regardless of their gender. Likewise, in many cases, patients are treated by both female and male physicians at the same time. In other words, two or more physicians of both genders can be assigned to a single inpatient and operate with similar equipment. The equipment in the patients’ room is also equally likely to be used by female and male physicians as needed. Thus, the difference between male and female physicians rating for the usage of equipment could be mainly a stereotype. Second, it could be due to the difference in medical specialization between female and male physicians. Studies show that females and males are more likely to specialize in different fields. Data for Ethiopian physicians’ specialization preference based on gender was not found but in the US women are predominate in obstetrics and gynecology (83.4%), Allergy and immunology (73.5%), Medical genetics and genomics (66.7%), Hospice and palliative medicine (66.3%), and Dermatology (60.8%). Whereas men are more represented in more technical specializations such as orthopedic surgery (84.6%), Neurological surgery (82.5%), Interventional radiology (integrated) (80.8%), and Thoracic surgery (78.2%) (American Medical Association, 2019). Evidence also shows that women physicians are more likely to spend time on providing

psychotherapy and counseling service and are less likely to engage in emergency room duty and technical or surgical procedures (Keane et al., 1991) while male physicians are more engaged in the technical practice of the medical and physical examination (Bertakis, 2009). For such reasons, patients might be less likely to see women using highly technical medical equipment. However, the evaluated female and male physicians are from the same ward, thus, a big specialization gap is not expected between the two genders.

Table 0.15 Perceived service quality of tangibles in the health sector

Tangibles	The gender of the physician								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The physician uses modern equipment and technology	150	-1.11	-1.00	1.40	148	-0.45	-1.00	1.38	<0.001
The physician uses visually appealing physical facilities	147	0.31	1.00	1.24	146	0.50	1.00	1.27	0.195
The physician's provision of well-organized information	146	0.31	1.00	1.21	147	0.63	0.50	1.09	0.025
The physician's professional appearance and dressing	145	-1.36	-1.00	1.19	147	-1.05	-1.00	0.09	0.057

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test.

Source: own completion

Concerning the provision of well-organized information ($P = .025$), the gap between the two genders could stem from the difference in communication style between female and male physicians. Evidence shows that female and male physicians exhibit different communication styles. Female physicians are more likely to share emotions and information that lead patients to a discussion and encourage them to express themselves (Roter & Larson, 2001) while male physicians focus only on information concerning the illness and symptoms of the patients (Franks & Bertakis, 2003).

5.2.1.2 Patients perceived service quality of reliability

For reliability, all dimensions indicated a significant difference between female and male physicians except for “the accuracy of the physician in maintaining error-free medical records” (Table 5.16). “The physician’s ability to get things right the first time not causing rework” was significantly lower for female physicians than men physicians ($P < .001$).

Table 0.16 Perceived service quality of reliability in the health sector

Reliability	The gender of the physician								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The physician’s dependability in solving your problem related to your medical examination.	146	-0.70	0.00	1.39	150	-0.46	0.00	1.26	0.001
The physician’s interest in solving your general problems.	145	-0.77	0.00	1.44	148	-0.54	0.00	1.61	0.038
The physician’s willingness to provide services at the time promised to do so.	144	-0.64	0.00	1.30	146	-0.07	0.00	1.47	0.010
The physician’s ability to get things right the first time not causing rework.	146	-0.45	0.00	1.07	150	0.30	0.00	1.38	<0.001
The accuracy of the physician to maintain error-free medical records.	146	-0.62	0.00	1.36	148	-0.47	0.00	1.23	0.192

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test.

Source: own completion

Studies indicated that female mistakes are more pronounced than males’. For instance, according to Huston (2016), females in male-dominated occupations face more criticism after making mistakes than men. The researchers argued that society is harsh on mistakes done by women leaders. However, they find it easier to forgive a poor decision when the leader is in a gender-congruent role. Such criticism on the female physician is also observed not only from patients but also from their fellow male physicians and medical directors. According to the study of Sarsons (2017), one's gender influences the way people interpret information about his or her

ability. Physicians lowered referrals after a bad experience with a female surgeon. The study revealed that primary care physicians (PCP) react negatively about a woman surgeon's ability than a man's after a bad experience such as a patient's death. PCP lowered referrals to women surgeons with bad experience but a bad experience with a male surgeon did not affect the referral number. The gap between the genders on "The physicians' dependability in solving patients' general problems and problems related to medical examination" was also significantly lower for female physicians. ($P < .001$ and $P < .038$, respectively, Table 5.16). However, other studies indicated that women physicians are more likely to spend more time on counseling patients and discussing their problems while male doctors spend more time in the medical examination and physical examination (Bertakis, 2009; Roter & Hall, 2004; Roter et al., 2002).

5.2.1.3 Patients' perceived service quality of responsiveness

Male physicians were significantly rated higher than a female physician for all the items in responsiveness ($P < .005$, Table 5.17). However, literature indicated that women physicians are more likely to be responsive and willing than men and exhibit patient-centered behavior (Bertakis et al., 2003). Evidence also shows that when women exhibit patient-centered behavior, they do not get the credit for that because that is what they are expected to be (Hall et al., 2015).

Table 0.17 Perceived service quality of responsiveness in the health sector

Responsiveness	The gender of the physician								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The physician's accuracy in telling you exactly when examinations will be performed.	145	-0.54	0.00	1.90	148	-0.05	0.00	1.37	0.001
The physician's dedication to finishing your treatment on time.	149	-1.21	0.00	1.46	146	0.29	0.00	1.53	0.001
The physician's willingness to give prompt service to your requests all the time you needed.	148	-0.79	0.00	1.41	147	-0.02	0.00	1.54	<0.001
The physician's honesty in giving you fair service without discriminating patients.	150	-0.51	0.00	1.28	147	-0.09	0.00	1.49	0.031

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test.
Source: own completion

Yet, when they do not practice such behavior, they obtain an unfavorable evaluation. Whereas men do get credit when exhibiting patient-centered behavior because it makes them seen as extraordinary or going extra miles to accommodate their patients and this gets noticed by patients favorably. This can be explained by the lack of fit model (Heilman, 1983, 1995) where the level of expected patient-centered behavior and the level of shown patient-centered behavior seem to be the driving factor for how patients evaluate their physicians.

5.2.1.4 Patients' perceived service quality of assurance

Among the variables that describe assurance, “the physician’s knowledge and ability to answer patients’ questions indicated a significant difference between the two genders where female physicians are rated lower than their counterparts ($P < .005$, Table 5.18). The study of Kulshreshtha et al. (2019) also showed that 37% of male patients believed that male physicians are more knowledgeable than female physicians. In the same study, 40% of male patients said male physicians are more skillful than female physicians.

Table 0.18 Perceived service quality of assurance in the health sector

Assurance	The gender of the physician								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
The safety and security you felt in receiving health care and communicating with the physician.	150	-0.38	0.00	1.12	150	-0.13	0.00	0.79	0.069
The physician's behavior to install confidence in you.	150	-0.34	0.00	0.96	150	-0.15	0.00	0.69	0.108
The physician's politeness and courteousness to you.	150	-0.04	0.00	0.56	150	-0.02	0.00	0.54	0.979
The physician's encouragement to express yourself.	150	-0.12	0.00	0.61	150	-0.03	0.00	0.46	0.128
The physician's knowledge and ability to answer your questions.	150	-0.32	0.00	0.83	150	-0.09	0.00	0.59	0.005

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test.

Source: own completion

5.2.1.5 Patients' perceived service quality of empathy

Patients' ratings on empathy did not show a significant difference between female and male physicians (Table 5.19). However, several studies indicated that women physicians are more emphatic than males (Hojat et al., 2004; Roter & Hall, 2004). Howick et al. (2017) revealed that women physicians were better emphatic in showing more compassion to patients, listening, and understanding their needs.

Table 0.19 Perceived service quality of empathy in the health sector

Empathy	The gender of the physician								Prob.
	Female				Male				
	N	Mean	Median	SD	N	Mean	Median	SD	
Operating hours were convenient for you.	150	-0.28	0.00	0.93	150	-0.16	0.00	1.14	0.106
The physician gave you individual attention	150	-0.23	0.00	0.82	150	-0.16	0.00	1.31	0.663
The physician having your best interests at heart	150	-0.24	0.00	0.78	150	-0.15	0.00	1.42	0.483
The physician's ability to understand your specific needs	150	-0.24	0.00	0.81	150	-0.09	0.00	1.44	0.167

Note: mean = Gap score (Q). Prob. Is based on Independent –samples Mann-Whitney U Test.

Source: own completion

5.2.2 Factor analysis for SERVQUAL in the health sector

Like in the higher education, samples for health sectors were independently taken for male and female physicians. First, two exploratory factor analysis was carried out separately for females and males to see any difference in the loadings of the variables between the two genders. Then a third-factor analysis was also carried out by merging the female and male physician's data set. The extracted components of the female physicians explain nearly 67% of the variability in the original 22 variables while the male instructor's extracted component explained 63% for the five components. The rotated component matrix of both female and male physicians showed that many of the items had high loadings on several components making the variable loading difficult to interpret (Table 5.20 and Table 5.21). Thus, the result did not support the five-dimension model proposed by Parasuraman et al. (1988).

Table 0.20 Rotated component matrix for female physicians' data set

Statements	Component				
	1	2	3	4	5
E3. The physician having your best interests at heart.	.956				
E4. The physician's ability to understand your specific needs.	.938				
E2. The physician gave you individual attention.	.912				
E1. Operating hours were convenient for you.	.781				
A2. The physician's behavior to install confidence in you.	.771				
A1. The safety and security you felt in receiving health care and communicating the physician.	.766				
A5.The physician's knowledge and ability to answer your questions.	.683				
A3.The physician's politeness and courteousness to you.	.521				
RA5.The accuracy of the physician in maintaining error-free medical records		.782			
RE4.The physician's honesty in giving you fair service without discriminating patients		.727			
RA4.The physician's ability to get things right the first time not causing rework		.691			
RA2.The physician's interest in solving your general problems.		.666			
RA1.The physician's dependability in solving your problem related to your medical examination		.611			
RE3.The physician's willingness to give prompt service to your requests all the time you needed		.575			
RE1.The physician's accuracy in telling you exactly when the examination will be performed.		.437			
T3.The physician provision of well-organized information.			.791		
T2.The physician's use of visually appealing Physical facilities.			.740		
T1. The physician's use of modern equipment and Technology.			.731		
T4.The physician's professional appearance and dressing.			.649		
RE2.The physician's dedication to finish your treatment on time.				.812	
RA3.The physician's willingness to provide services at the time promised to do so.				.736	
A4. The physician's encouragement to express yourself.					.679

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Note: T= Tangibles ,RA = Reliability, RE =Responsiveness, A = Assurance , E = Empathy

Source: own completion

Table 0.21 Rotated component matrix for male physicians' data set

Statements	Component				
	1	2	3	4	5
E3.The physician has your best interests at heart	.866				
E4.The physician's ability to understand your specific needs.	.856				
E1.Operating hours were convenient for you.	.843				
E2.The physician gave you individual attention.	.822				
A2. The physician's behavior to install confidence in you.	.810				
A1.The safety and security you felt in receiving health care and communicating the physician.	.720				
A3.The physician's politeness and courteousness to you.	.619				
RE2.The physician's dedication to finish your treatment on time.		.842			
RE3.The physician's willingness to give prompt service to your requests all the time you needed		.777			
RA3.The physician's willingness to provide services at the time promised to do so.		.770			
RE1.The physician's accuracy in telling you exactly when the examination will be performed.		.631			
RE4.The physician's honesty in giving you fair service without discriminating patients		.579			
RA5.The accuracy of the physician in maintaining error-free medical records			.846		
RA4. The physician's ability to get things right the first time not causing rework			.775		
RA2.The physician's interest in solving your general problems.			.639		
RA1.The physician's dependability in solving your problem related to your medical examination			.545		
T4.The physician professional appearance and dressing			.429		
T3.The physician provision of well-organized information				.731	
T1. The physician's use of modern equipment and Technology.				.726	
T2.The physician's use of visually appealing Physical facilities				.689	
A4.The physician's encouragement to express yourself					.719
A5.The physician's knowledge and ability to answer your questions.					.678

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Note: T= Tangibles ,RA = Reliability, RE =Responsiveness, A = Assurance , E = Empathy

Source: own completion

The extracted components for the merged data set nearly explained 63% of the variability in the variables. The rotated component matrix in Table 5.22 depicted that “Empathy” and “Assurance” seem to load in the first component. Responsiveness, reliability, tangibles, and the remaining part of assurance fall under components 2, 3, 4, and 5, respectively. Because there was the needed to rearrange the statements based on the components where they are well represented,

the components are renamed as follows. The first, second, third, fourth and fifth component was named as “Empathy” (seven variables), “responsiveness” (four variables), “reliability” (five variables), “tangibles” (four variables) and finally “assurance” (two variables), respectively.

Table 0.22 Rotated component matrix for female and male physicians

Statements	Component				
	1	2	3	4	5
The physician has your best interests at heart	.943				
The physician's ability to understand your specific needs	.927				
The physician gave you individual attention	.885				
Operating hours were convenient for you.	.818				
The physician's behavior to install confidence in you.	.755				
The safety and comfort you felt in receiving health care and communicating the physician.	.701				
The physician's politeness and courteousness to you	.561				
The physician's dedication to finish your treatment on time		.817			
The physician's willingness to give prompt service to your requests all the time you needed		.777			
The physician's accuracy in telling you exactly when the examination will be performed.		.695			
The physician's honesty in giving you fair service without discriminating patients		.554			
The accuracy of the physician in maintaining error-free medical records			.770		
The physician's ability to get things right the first time not causing rework			.727		
The physician's willingness to provide services at the time promised to do so			.729		
The physician's interest in solving your general problems			.716		
The physician's dependability in solving your problem related to your medical examination			.624		
The physician use of visually appealing Physical facilities				.748	
The physician use of modern equipment and Technology				.748	
The physician provision of well-organized information				.745	
The physician professional appearance and dressing				.590	
The physician's encouragement to express yourself					.787
The physician's knowledge and ability to answer your questions.					.581

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

Note: 1= Empathy, 2=Responsiveness, 3 = Reliability, 4 = Tangibles, 5=Assurance

Source: own completion

5.2.3 Patients’ ratings of physicians over the five dimensions of service quality

The nonparametric test of the independent sample was run again to verify if the rearrangement of the variables has made a significant difference in patients' ratings of a female and male physician. As a result, the analysis indicated that female physicians are rated significantly lower than male physicians in all dimensions except for empathy (Table 5.23). Multiple pieces of research also indicated that female physicians get less credit than a male physician for the same medical performance and patient-centered behaviors (Blanch et al., 2010; Hall et al., 2014; Hall et al., 2011).

Table 0.23 Nonparametric hypothesis test for the five dimensions in the health sector

		Independent –samples Mann-Whitney U Test				
Service dimensions	Items	Female instructor		Male instructor		Prob.
		Mean	Median	Mean	Median	
Tangibility	4	-0.17	0.00	0.06	0.00	<.001
Reliability	5	-0.67	-0.80	-0.23	-0.20	<.001
Responsiveness	4	-0.75	-0.50	0.03	0.00	<.001
Assurance	2	-0.22	0.00	-0.06	0.00	.046
Empathy	7	-0.25	0.00	-0.12	0.00	.083

Note: mean = Gap score (Q). Prob. The significance level is .05

Source: own completion

Since no significant difference was detected in “empathy” between male and female physicians. Therefore, the fourth hypothesis of this study: **H4 physicians’ gender will influence patients’ perceived service quality such that female physicians will be rated less than their male counterparts** was rejected.

5.2.4 Patients attribution of service quality dimensions to the physician’ gender

The second objective of this study was to investigate if patients attribute the service dimensions to the gender of the physician. Thus, the gap score of female and male physicians’ ratings was compared and ranked accordingly. Consequently, it was found that “Assurance” was commonly attributed to female and male physicians in the first rank. The second rank for female and male physicians was “Empathy” and “Responsiveness” respectively (Table 5.24).

Table 0.24 The ranking of female and male physician ratings

Service dimension	Gender of the physician					
	Female			Male		
	Mean	Median	Rank	Mean	Median	Rank
Tangibles	-1.85	0.00	3	-1.37	0.00	5
Reliability	-3.18	-0.80	5	-0.32	-0.20	3
Responsiveness	-3.05	-0.50	4	-0.13	0.00	2
Assurance	-0.44	0.00	1	-0.12	0.00	1
Empathy	-1.75	0.00	2	-0.86	0.00	4

Note: Mean = Gap score
Source: own completion

5.2.5 The influence of the physicians’ gender on the patients’ service expectation and preferences

The 5th and 6th hypotheses (**H5. Patients will expect a better service from male physicians than female physicians and H6. Patients will prefer male physicians than female physicians**) were tested by asking respondents a set of supportive questions to the existing model about their expectation of service from female and male physicians and their preferences for the gender of the physician. Chi-Square test was used to analyze if there exists a significant relationship between the physicians’ gender and patients’ expectations. As a result, a significant relationship was indicated that supported the hypothesis ($p < 0.05$). The detail of the analysis is as follows.

5.2.5.1 Patients' expectation about the physicians' gender

The majority of the patients think of “a male character” when they imagine a physician. Many of the patients (82%) think that physicians are males. Those who think physicians as female and both genders are 14% and 1.0%, respectively, whereas the rest 1.0% are indifferent (Figure 5.8). A significant relationship was detected between the physicians' gender and patients' expectations about the gender of the physicians ($P = .001$; Carmer $V = .218$; $X^2 = 14.11^a$; $df = 2$).

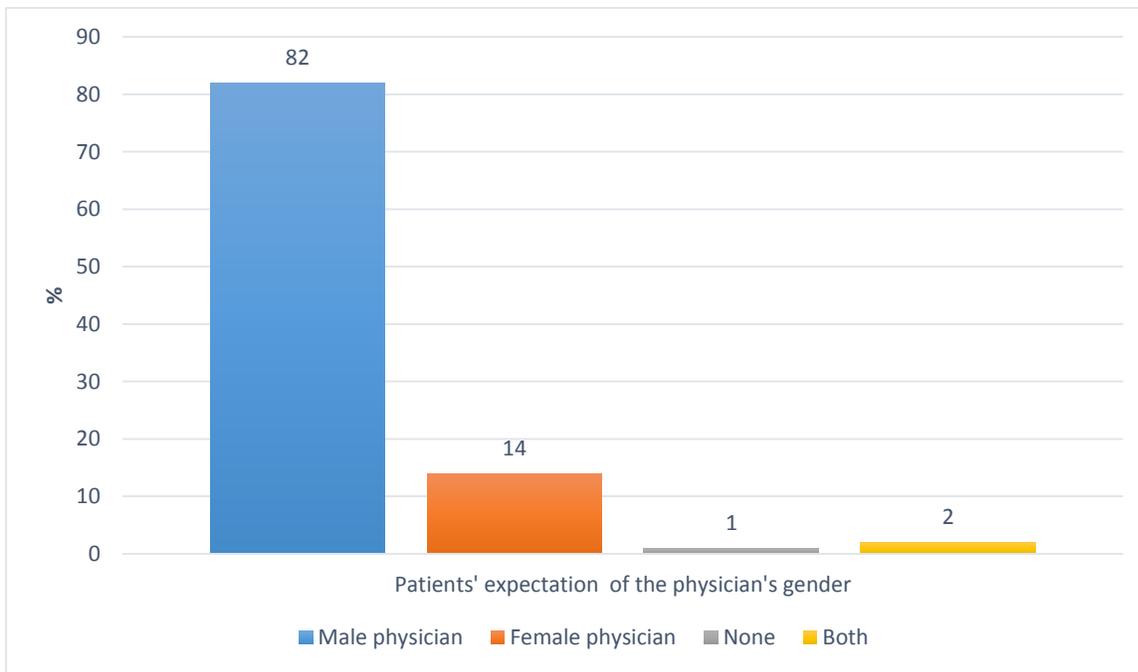


Figure 0.8 The gender that pops up first in patients' mind when they think of a physician in %

Source: own completion

The reason for such gender bias could be that males dominate the medicine field. Patients' gender did not matter in attributing physicians as male. Regardless of their gender, the majority of the patients' had the thought of men when they think of physicians. Female patients made up a larger percentage (54%) compared to male patients (46%) (Figure 5.9). This shows that the gender of the patients did not affect the conceptualization of males as a physician rather than female.

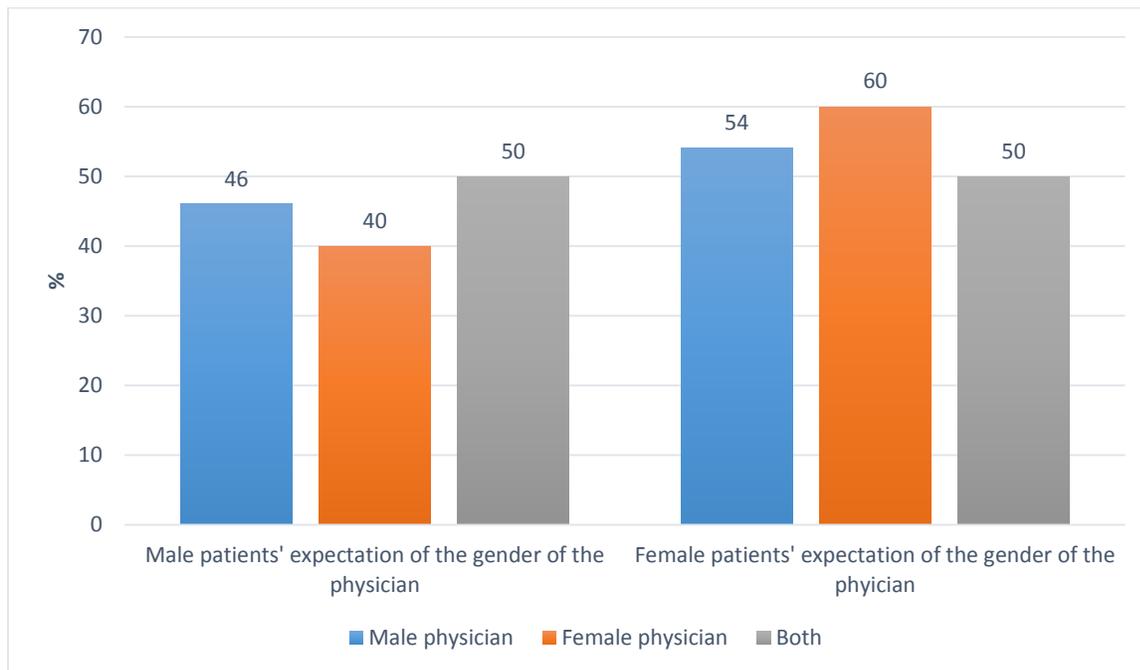


Figure 0.9 Male and female patients' expectation of the physicians' gender in %

Source: own completion

5.2.5.2 Patients' expectation of service quality from female and male physicians

Patients' expectation of female physicians' service was significantly lower than their expectation for male physicians. Only 42% of patients expected a "very good" service from female physicians compared to 92% of the male physicians' (Figure 5.10 and 5.11). The relationship between the physicians' gender and patients' expectation of service quality was significant such that women physicians are rated lower than men physicians. ($P < .006$; Cramer $V = .204$; $X^2 = 12.39^a$; $df = 3$ for female physicians and $P < .010$; Cramer $V = .237$; $X^2 = 9.169^a$; $df = 2$ for male physicians.)

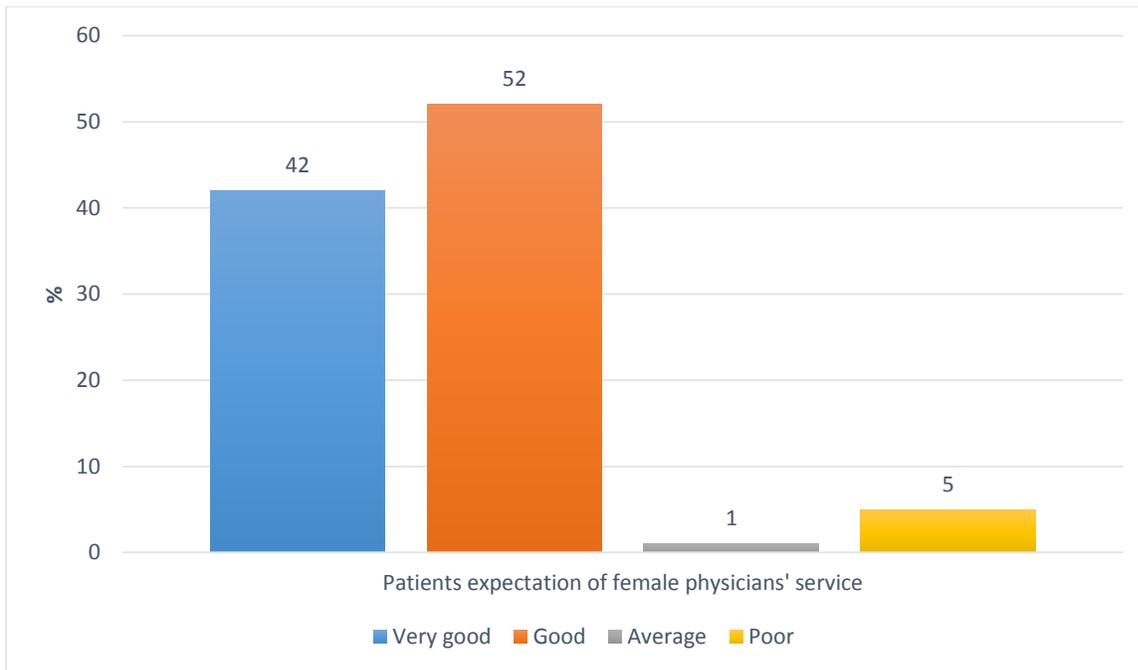


Figure 0.10 Patients' expectation of service quality from a female physician in %

Source: own completion

The result is not a surprise in the context of Ethiopia where many people still believe that males are dominant and should occupy higher roles and authority. Because male physicians have significantly outnumbered female physicians for a long time in Ethiopia (Wabekon Development consultant, 2006), male physicians are still expected to perform better than female physicians.



Figure 0.11 Patients' expectation of service quality from a male physician in %

Source: own completion

5.2.5.3 Female and male patients' expectation of service quality

The gender of the patients showed no significant difference in their expectations of service quality. ($P = .162$; Cramer $V = .132$; $X^2 = 5.13^a$; $df = 3$ for female physicians and $P = .189$; Cramer $V = .106$; $X^2 = 3.33^a$; $df = 2$ for male physicians). Both female and male patients had higher expectations for male physicians. (Figure 5.12 and 5.13). This shows that the general populations believe that men physicians outperform women physicians. Such gender bias is again explained by the impact of cultural complexities and gender roles in Ethiopian society.

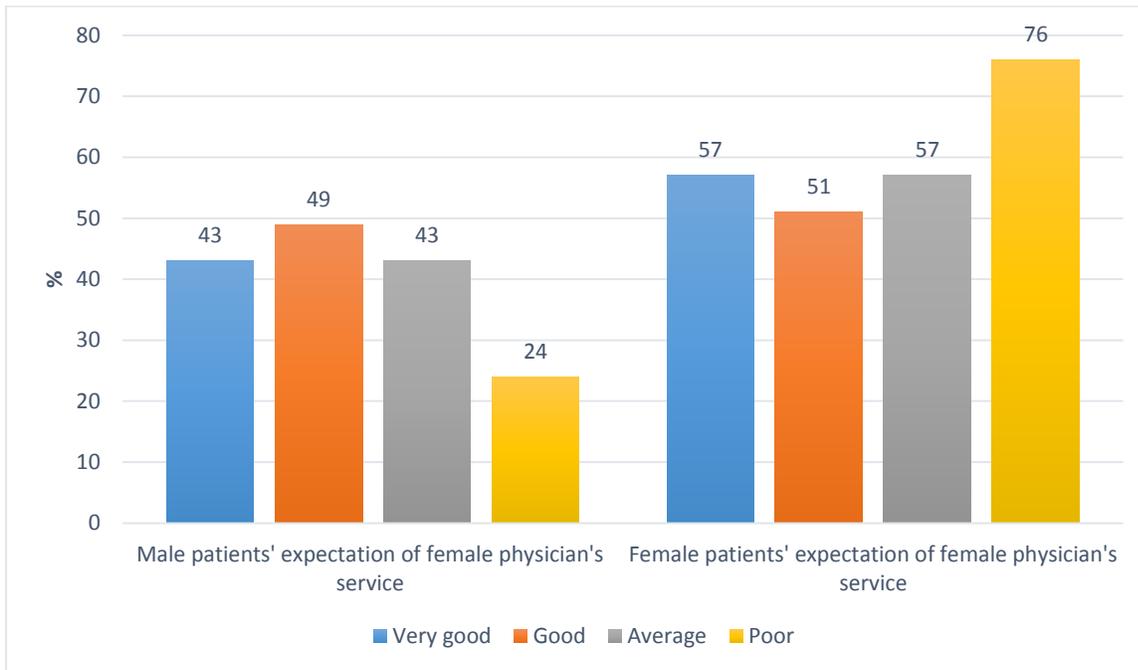


Figure 0.12 Female and male patients' expectations of female physicians' service in %

Source: own completion

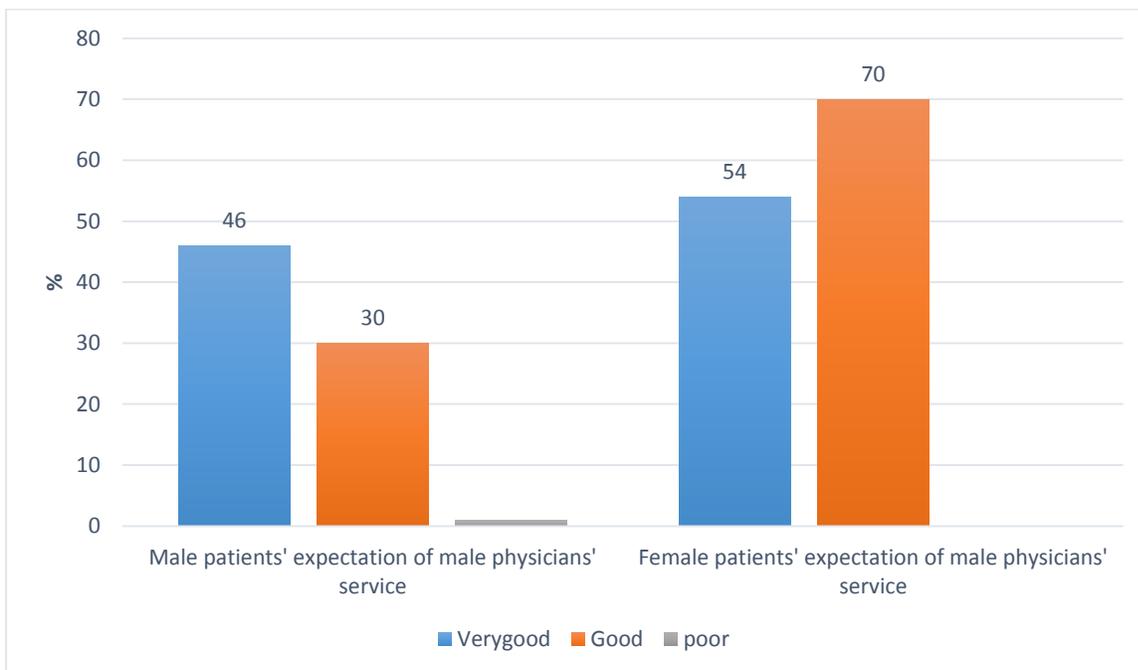


Figure 0.13 Female and male patients' expectations of male physicians' service in %

Source: own completion

5.2.5.4 Patients' preference for the physicians' gender

The majority of the patients preferred male physicians than female physicians (Figure 5.14). Male physicians were 63% preferred vs. 22% preference for females. A significant relationship was also detected between the patients' preference and the gender of the instructor ($P = .013$; Cramer $V = .170$; $X^2 = 8.63^a$; $df = 2$). Similar studies show that patients preferred male physicians than females.

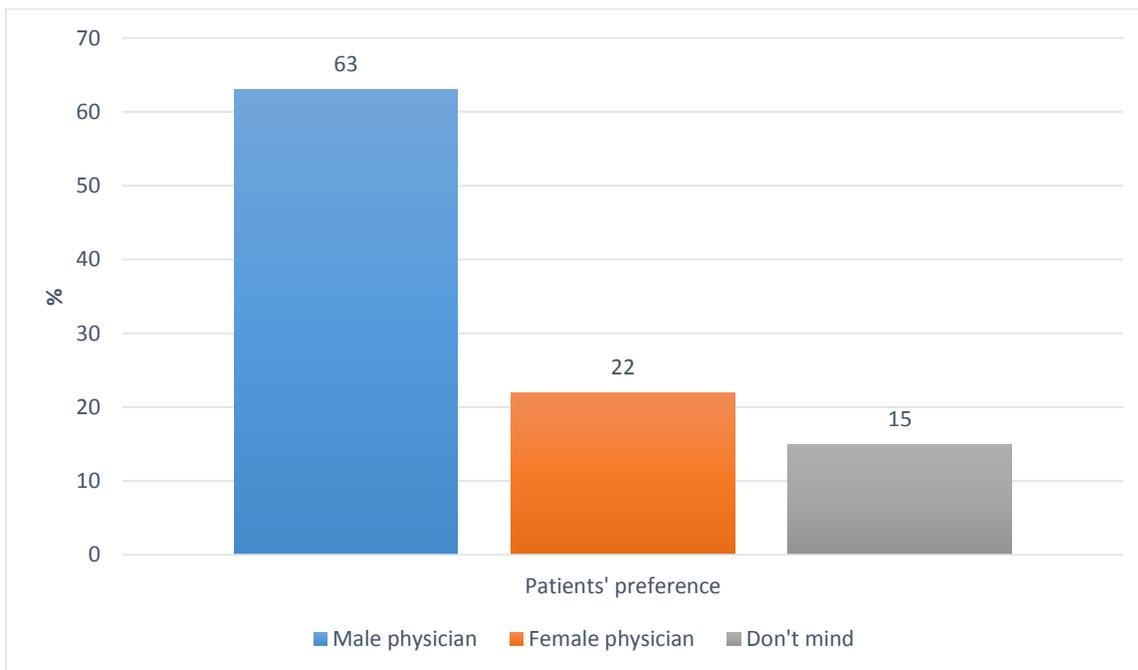


Figure 0.14 Patients' preference of the physicians' gender in %

Source: own completion

Adudu O.P. & Adudu O.G. (2008) indicated that patients hold a gender bias such that 42% of them preferred male physicians and 11% preferred female physicians. Another study also indicated that more than half of the patients (60%) prefer a male physician in general (Leung & Cheng, 2016). Also, the studies of Xiong et al. (2018) and Zaghloul et al. (2005) showed that male and female patients prefer male physicians for clinical management cases and consultations because they believed that male physicians have more "authority" than female physicians.

The patients' gender did not contribute to a significant difference in the preference of the physicians' gender. Both male and female patients preferred male physicians than female physicians.

5.3 Perceived service quality in the hospital and the university

The third objective of this study was to find out in which service sector do male and female service providers receive a higher perceived service quality. As a result, a comparison was carried out between the university and the hospital. However, no significant difference was found (Table 5.23). This shows that female and male professionals are similarly perceived in the hospital and university.

Table 0.23. The comparison of perceived service quality in the hospital and university

Gender of the professional	Perceived service qualities in the two service settings	N	Mean	SD	Prob.
Female	Hospital	150	-0.35	0.39	0.693
	University	225	-0.40	0.72	
Male	Hospital	150	-0.65	0.39	0.458
	University	225	-0.14	0.63	

Note: Significance difference is based on Independent –samples Mann-Whitney U Test, Mean = Gap score
Source: own completion

Given the history of gender inequality in Ethiopia, the results might be somehow expected but not with such a shocking difference. Although women and girls in Ethiopia have been disadvantaged in several ways such as low status in their society, livelihoods, basic human rights, literacy, health, and employment (UN women, n.d), huge improvements were made in the past three decades especially since the new Prime Minister Abiy Ahmed came to power in 2018. The Government of Ethiopia is committed to achieving gender equality. Ethiopia is now the only African state after Rwanda to have equal gender representation in the cabinet (BBC, n.d). Women are now appointed to top-level positions including the Defense Minister, Ministry of Peace, Chief Justice, Ministry of Trade and Industry, Ministry of Women, Youth and Children, Ministry of

Transport, Ministry of Science and Higher Education, Ministry of Labor and Social Affairs, Ministry of Culture and Tourism and Ministry of Revenue (Euro news, n.d). In a country that has long been considered a patriarchal society there are now as many as ten women ministers (half of all Ethiopian ministers). Thus, one might expect that this should change the biased attitude towards women which has been a problem in Ethiopia for decades. Unfortunately, the results of this study reveal a disappointing fact about the perception of gender in Ethiopia. Despite the results so far, there is still much to be done in Ethiopia for the recognition of women's equality and women's work. Ethiopians' hope for achieving gender equality lies in the new women ministers who have been in power only for a little over one year.

5.4 Interview results and discussion

5.4.1 Interview result for the higher education

5.4.1.1 Stereotypes against female instructors

On the three university campuses, no respondents ever witnessed female instructors being discriminated against and bullied by students. In addition, heads of departments and directors said no students ever filed a formal complaint against female instructors. Neither do female instructors complained about gender bias or discrimination. However, 5 out of 9 department heads admitted that students' informally expressed their negative feelings towards female instructors concerning their behavior such as strictness and bossy. The following are comments of the department heads.

“Those female instructors whom their students see them as strict, I do not believe they are any stricter than other male instructors. However, students expect females to be humble and less assertive, therefore, when female instructors do not behave as the students' expected gender role, they react negatively” (Head of a department)

“I think being strict for female instructors is a way of gaining respect from students. One of my female colleagues once told me that she does not want to be strict but she has to be otherwise students' won't take her seriously and sometimes they cross the line” (Director).

The results show that first, female instructors do not face pronounced bias that could lead to complaining or they do not report it. Second, the students' complaints concerning the strictness and bossiness of the female instructors could stem from a lack of congruence. When the expectations about the characteristics of a job are incongruent with the attributes stereotypically associated with the female instructors' in the job, the evaluation will be negative Heilman (1983).

The respondents also believed that they believe students might question female instructors' competence because women in Ethiopia have always been subordinate for a long time and this has caused a deep-rooted gender bias against female instructors. The following are what the respondent commented.

“Students' perception of females' capacity can be affected by the way they are brought up as a child and the place they grow up. Most of the time students from rural areas are more likely to believe that women cannot perform well because growing up they see less educated women”.
(Head of a department)

“I believe questioning female instructors' competence depends on the subject they teach. Most of the time it happens in STEM. I am a Mathematics instructor and there was this time where my female colleague and I called our students for a make-up class on one Saturday. We both taught the same course to different sections. On that day, I noticed the students' number was higher than the usual in the class and I asked why. They told me the students came from her section. I know her personally she is a good instructor but I guess her students wanted to see if there is a better lecture than her. I believe this is doubting her knowledge or skill.” (Head of a department)

Female and male instructors also shared similar opinions. 13 out of 20 (of which 10 were women) agreed that they believe students doubt female instructors' knowledge and hold a stereotype that men instructors are better qualified than women instructors. They further agreed that the gender of the instructors could bias the students' perception. The respondents explained the reasons for such stereotypes as follows.

“Students see fewer women in the higher education sector, thus they are more likely to perceive that lecturing is more of the job of men.” (Female instructor)

“The provision of affirmative actions for women in Ethiopia could bias students' perception of women because affirmative actions may imply that women are less competent than men, indicating that they need special support to capacitate them and make them equal to men.” (Female instructor)

“Ethiopia is a patriarchal country that puts women at a household level. The social conditioning of women as homemakers and men as breadwinner is still prevalent in many societies. Very few women break this ideology and make it to a higher position, yet they do not get as equal acceptance as men.” (Male instructor)

“Language and proverbs in Ethiopia aggravate gender bias. Some proverbs disgrace and belittle women. Students who grow up internalizing such proverbs are more likely to have a negative attitude towards the capacity of women.” (Male instructor)

According to the above respondents' opinion, socio-cultural complexities partnered with the less participation of females in the labor market contributes to the stereotypes against female instructors.

5.4.1.2 Female instructors' performance in higher education

The respondents altogether said that female instructors perform well and sometimes even better than their male counterparts. Therefore, the difference in students' ratings of their instructors seems more of a stereotype issue rather than a performance.

“As a director, I found female instructors more responsible, disciplined, courageous, strong, and dedicated than male instructors.”(Director)

“Unless students are gender-biased, there is no reason that female instructors could be rated less than male instructors. They both perform pretty well.”(Head of a department)

“We do internal evaluations on our instructors annually and we do not see a significant difference between male and female instructors. Gender had never been an issue. ” (Head of a department)

The respondents’ view shows that female instructors’ performance does not raise the question of quality. However, implicit biases contribute to the negative evaluation of female instructors. Such evaluations could result in discouragement of female instructors.

5.4.1.3 Students’ preference for the instructors’ gender

Respondents from the department heads and directors (5 out of 12) believed that students prefer male instructors to female instructors. Likewise, 10 out of 20 instructors (of which 6 were women) also expressed the same opinion. According to their opinion, students’ preference of male instructors could be either for conscious or implicit reasons. Some of their reasons were explained as follows.

“The entrance exam scores to universities are lower for female students because of affirmative action. This means female students are given a special privilege to make it to the universities. When they graduate and become instructors, their students are less likely to treat them as equally as male instructors and may believe that they are less qualified. For this reason, students may prefer male instructors.” (Male instructor)

“I believe some students do not even have a clear reason why they prefer male instructors. It is simply because of a preconception. They are biased with the culturally conventional gender roles” (Female instructor)

“Because male instructors have always outnumbered female instructors, students tend to prefer males” (Female instructor)

Based on the respondents' opinion it can be concluded that the conscious and unconscious biases have to do with the socio-economic and cultural construction of the society. It has a deep connection to how young female students are treated and their share in higher education.

5.4.1.4 Victims of gender stereotypes in higher education

No male respondents were a victim of gender stereotypes but 4 female instructors revealed that they have encountered aggressive students' behaviors and they feel like their students do not give them the respect they deserve. Two respondents shared their bitter experiences as follows.

“When I give assignments to my students they outrageously say they do not have time because other instructors have already given them assignments. I understand them because I was also a student once. I do not get hurt because of what they said but the way they say it is a total disrespect to me.” (Female instructor)

“On my first course ever, after teaching three weeks I asked my students to give me feedback or any comments on my teaching style. I received many good comments but there were also a few comments that reflected pure hatred and bias because I am a woman. It hurt my feelings so I never asked students for feedback. I am better off not knowing what they think about me.” (Female instructor)

As pointed out by the respondents, female instructors are less respected and are more likely to face stereotypes than male instructors.

5.4.1.5 Students' evaluation

Half of the female instructors felt that the evaluation they received from students is somehow less than their expectations. However, the male instructors believed their evaluation is not biased. According to the female instructors' reply, students' low evaluation of female instructors were not for a clear reason. This indicates that students' evaluations are more affected by emotional feelings rather than rational feelings when they evaluate their female instructors. The following are their words.

“In the class, my students seem to like me, or at least that was what I believed. However, I guess I was wrong because their evaluation was nothing that I expected. I still do not get it why”. (Female instructor)

“Previously, I had a good relationship with my students. I love teaching and I enjoyed every class. For a reason I do not understand, they gave me lower evaluation but I was sure that they liked the class. It was so discouraging”. (Female instructor)

“There was this course that was given to two sections and I delivered the course with my male colleague. He taught section A and I taught section B. We used the same syllabus and applied the same style of continuous assessment. As we were friends, we used to meet more often and discuss what kind of assignments we should give the students. We agreed to give them the same assignments and the final exam question papers were the same for both sections. At the end of the semester when the evaluation came, my students complained that the exam I gave them was difficult. Mind you, the exam was the same with the other section and the students in his class did not complain about the exam.” (Female instructor)

5.4.2 Interview result for the health sector

5.4.2.1 Stereotypes against female physicians

All three medical directors said they never received a formal complaint from patients against female physicians concerning their competence but 3 of them mentioned that they have witnessed female physicians being disrespected and disregarded. However, none of them has ever received a complaint from a female physician being disrespected or discriminated against. One of the medical male directors said as follows.

“We all are aware that female physicians face a hard time with patients. It feels bad when they do not get the respect they deserve. However, they do not come to us complaining about it because they know we cannot grant them the respect they want from their patients. It’s beyond our control”

All respondents also believed that patients question female physicians' knowledge. Astonishingly all the female and male physician respondents said that they have witnessed female physicians been regarded as less of a male physician. Patients more often refer to female physicians as a nurse but "Dr." title is given to male physicians. In addition, they said that the gender of the physician highly influences patients' perception of the quality of the service. They expect very less from women physicians and do not put trust in them. The following were their words.

"While I was visiting inpatients, an older man shared his fear with me that the medication that his female physician recently prescribed to him is not helping anything and he is even feeling worse. He asked me to check if what she prescribed is the right medication." His tone says it all. He did not believe she was enough qualified. Similar situations had happened many times. Some patients are not confident about female physicians. Such a pity." (Male physician)

"Most of the time patients wait for the decision of a male physician while I have already given them a decision." (Female physician)

"There are a lot of times where both female and male physician treats the same patients. During the treatment, patients are more likely to adhere to what the male physicians tell them to do. They seem to ignore the comments of the female physicians." (Male physician)

"When I visit inpatients with my male physician colleague, they maintain eye contact with him and not me when he talks but when it's my turn to talk, they do not seem to give any attention to anything I say and that pisses me off." (Female physician)

"I once had to visit inpatient with a senior female physician. The patient keeps calling her "nurse" but addressed me as "a Doctor". She is my senior and one of the best physicians whom I look up to. I felt for her but she did not seem to mind. She told me she is used to it." (Male physician)

The respondents gave different reasons why such stereotypes persist. Most of them commonly agree it is the consequence of gender inequality in Ethiopia. Men are glorified culturally and religiously than women in the society of Ethiopia. The gender gap in education has also aggravated the situation.

“Medicine is a male-dominated field of study and the stereotypes against female physicians are the result of this.” (Male physician)

“Males are usually thought to be more capable and more experienced than women. Thus, patients are afraid to entirely rely on women physicians’ decisions”. (Female physician)

“Medicine is a matter of life or death and we live in a country where women are not much trusted in their capacity. It is clear why patients are biased.” (Male physician)

“I believe it usually depends on personal experience but generally just like in the other spheres of life where men are thought to be competent, that bias is carried to the medical profession as well.” (Female physician)

All the respondents' opinions showed that there is a huge distrust of female physicians because they are seen as less qualified than male physicians and that is due to mere gender stereotypes and the smaller share they hold at the medicine field.

5.4.2.2 Female physicians' performance in the health sector

All respondents believed that the stereotype against female physicians has nothing to do with performance rather it is a misconception of patients. Female physicians performed well in their jobs. Even facing challenges as a woman, they do their duties without any question.

“We do not doubt that our female physicians are outstanding. That is what we see in their day-to-day activity, but I do not know why this does not convince the patients. What can convince one more than action? I guess our society is blinded with preconceptions and cannot acknowledge the works of a female. I am afraid this preconception will not change any time sooner. We need more time to aware of our society that females can do better.” (Medical Director)

“Both female and male physicians are equal in our eyes because their performance shows that. We get reports about their assessment every month. We do not see any difference in their performance.” (Medical Director)

“Nowadays female physicians compete for leadership and projects even more than males. You can understand from this that they do not have a limitation of competence.” (Medical Director)

The above results indicated that even though female physicians are active in their workplace and perform their job well, yet they are discriminated against beyond reasons.

5.4.2.3 Patients' preference for the physicians' gender

All three directors believed that patients prefer male physicians. Likewise, 16 out of 20 physicians (9 women and 7 men) also expressed the same opinion. Some of their reasons were explained as follows.

“For a long time, society has been perceiving females like a nurse who take orders but not able to give orders. I think patients like authoritarian behaviors, so they prefer male physician”

“People in Ethiopia still believe women should stay at home. They think women’s place is below men. They have a hard time accepting women can do better.” (Female physician)

“For centuries, the male has been dominant in the field of medicine. People have not yet accepted the equality of gender. They regard women as inferior and do not trust them to take care of their health.” (Female physician)

“Patients do not want to put their health at risk because they believe women physicians are not as skilled as male physicians” (Male physician)

As the responses of the respondents explain, patients’ preference of male physicians over female physicians is nothing but lack of confidence in female physicians and not accepting them in the medical field.

5.4.2.4 Victims of gender stereotypes in the health sector

No male respondents were ever a victim of gender stereotypes, but all 10 female physicians said that they have experienced a stereotype from their patients. Due to patients’ lack of trust and unconscious biases, female physicians are a victim of gender stereotypes most of the time. Some of the female physicians’ experience is quoted as follows.

“I had to remind my patients that I am a physician not a nurse like 10 times a day. I’m tired of being looked at as a nurse while I am a senior physician. The title Dr. is automatically given to a male health professional even if he is a nurse.”

“Before my patients get to know me better, they complain a lot about my instructions. Sometimes they just ignore what I tell them which is for their good. Later I learn from the nurses that my instructions overwhelmed my patients. However, I was doing my job. I know they would have accepted instructions given by male physicians in a blink of a second” What can you do? Our society worships men.”

“Sometimes I feel like my patients are interrogating me. They ask many questions because they do not trust what I say to them. As much as I like to explain every detail, I hate it when they question my knowledge.”

The fact that all the female respondents were a victim of gender stereotypes indicates the extent women are not accepted in the field of medicine and the magnitude of the society 's negative attitude towards female physician and their ability as women.

The findings in both sectors have similarities regarding the circumstance that female professionals being questioned for their gender and facing stereotypes. It also confirmed that students' and patients' perceived service quality could be affected by the gender of the service provider. Both female and male respondents expressed similar views concerning biases against female professionals, which leads to the conclusion that the general population agrees that negative evaluation against women professionals exists.

6. Conclusion and recommendations

Based on the findings, it can be concluded that the SERVQUAL model can be used not only to evaluate customers' level of satisfaction but also to measure the gender gap in perceived service quality. However, the outcome of the SERVQUAL model could vary across genders even when applied to the same sectors. Differences in gender roles across nations or regions can also result in different outputs in the application of SERVQUAL models. The results can vary based on national and cultural contexts and this study is good evidence for that.

The gender bias against women professionals in Ethiopia is pervasive regardless of the gender of the evaluator. Such bias is very likely to exist because of the customer's implicit and unconscious bias towards female professionals. Ethiopian society still believes that males are dominant and should occupy roles of authority and such belief might influence individuals' evaluation of the service quality. Regardless of the performance of female professionals, they still get negative evaluations because of preconceptions. This proves that the attitudes of Ethiopian society have not still changed with the modern world where women are treated as equally as men. Because Ethiopia is far from achieving gender equality, it is difficult to easily eliminate such preconceptions from the minds of the society. Much effort is needed to change peoples' attitudes towards women.

With the first historically appointed women president, 50% of the cabinet filled with women and 10 appointed women ministers, the result of this study is an important finding that could serve as a turning point for Ethiopian gender equality. The women ministers and senior politicians can take measures and be influential in building a country that benefits girls and women and gives equal opportunities of education and employment. Ethiopian women have never been given such a marvelous opportunity of power and this is the time to make the most of it by making changes in the lives of other women and girls. Not only women instructors and physicians, but all women professionals should be appreciated for their work by managers, politicians, government bodies, and the community as well. Ethiopia needs more educated women at higher positions. Appointing more women in positions of power will slowly change the negative attitudes against women as the country starts to witness the performance and changes made by women leaders. In that way, young girls will also have role models they can look up to. This means Ethiopia will have more inspired and educated young girls than ever before. Therefore, closing the gender gap could help with changing the attitudes and perceptions of the society towards women

professionals. This is possible through educating and empowering women, which will in return increase the number of female labor force participation and bring women to traditionally male-dominated professions such as medicine. One of the root causes of misconceptions against women is the higher illiteracy rate of women. Thus, education could be the key to tackle such conceptions and achieve gender parity. The more women have educated the fewer stereotypes they face. Ethiopian higher education should take the lead in addressing gender equality in all fields of study and in STEM, in particular where the higher gender gap is observed. Bringing more females to STEM means having more physicians and tackling the negative perceptions towards them. Thus, more female students should be encouraged and pushed to peruse medicine fields. Giving equal opportunities for education and employment to women in all fields could also contribute to acquiring a larger share of economically active and independent women. This proves to the society that women can perform well and could minimize or destroy the negative perceptions that society holds against women.

Raising awareness about gender equality is also another way of changing negative attitudes towards women's performance. Unless gender equality is achieved, gender gaps could not be closed in service quality.

This research has proved that the negative ratings towards female physicians and instructors are not an issue of performance rather a mere stereotype. As the results of the interview have revealed, the stereotypes came only from the students. Department heads, directors, instructors, and physicians altogether agreed on the fact that women perform as equally as men. Some of the department heads and directors even said that women perform better than men in some cases. This means higher management and employers do not have a biased perception of gender roles that could disadvantage the employment of women professionals. Therefore, the finding of this study will not lead to the aftermath of not recruiting women.

This study suggests that higher education management should not entirely rely on SEI as a tool to evaluate the quality of the instructor's teaching, decide on instructors' contract renewals and promotions because as discussed earlier the students' evaluation of the female instructors does not describe the quality of their performance. Due to the stereotypes women face, they receive negative evaluations and that should not be used against them to decide on their promotion or renewal of the contract. The evidence provided in this study that female instructors be rated less than male instructors could alert higher education management that gender bias exists against

women instructors. Hence, it helps decision-makers not to base their evaluations on SEI only when making managerial decisions.

The empirical findings of this study have a theoretical contribution to service quality and gender study literature. It provides evidence on the effect of the service providers' gender on customers' perceived service quality and helps to understand the current attitude towards women instructors and physicians. The result of this study also shows the reflection of peoples' attitude towards not only female physicians and instructors but also women in general. The managerial contribution of this study lies on the practical implications it provides to higher education administration, hospital managers, government bodies, NGOs, policymakers, and politicians to predict how far the progress on achieving gender equality has gone and what should be done in the future to change the mindset of the society and achieve gender equality.

7. New scientific results

The new scientific results of this study are as follows.

1. Female instructors are significantly rated lower than male instructors in the following dimensions. Tangibles ($P = .009$), Reliability ($P < .001$), Responsiveness ($P = .011$), Assurance ($P = .002$), and Empathy ($P = .002$)
Female physicians were also rated significantly lower than their male counterparts in the following dimensions. Tangibles ($P < .001$), Reliability ($P < .001$), Responsiveness, ($P < .001$), and Assurance ($P = .046$).
2. There was a significant relationship between the instructors' gender and students' expectations ($P < .001$). Similarly, the relationship between the physicians' gender and patients' expectations was also significant ($P < .001$).
3. There was a significant relationship between the instructor's gender and students' preference for the gender of the instructors ($P < .05$). Students preferred male instructors than female instructors. Likewise, the physicians' gender and patients' preference for the gender of the physicians was significant ($P < .05$). Patients preferred female physicians than male physicians.
4. The gender of the students did not matter in perceiving women instructors as less qualified than men ($P > .05$). Both female and male students had lower expectations from female instructors. 27% of students expect a "very good" service from female instructors compared to 59% of the male instructors. In addition, the gender of the patients did not show a difference in perceiving women physicians as less qualified than men ($P > .05$). Both female and male patients had lower expectations from a female physician. Only 42% of patients expected a "very good" service from female physicians compared to 92% of the male physicians'
5. SERVQUAL model can be used to measure gender bias in higher education and health sectors. The outcome of the SERVQUAL model application could vary across genders because of cultural and gender role differences across regions.

8. Limitations and future research implications

Although this study has theoretical and managerial contributions, it has some limitations that future researches need to address. First, this study is carried out in higher education and health sector context thus it might not be generalized to other service sectors. Further research is needed to investigate the phenomena in various service sectors. Second, the findings of this study are limited to the context of Ethiopian higher education and health sectors thus, might not be generalized to other countries. Third, this study employed a cross-sectional research design that is limited to current situations. Further longitudinal research is needed to see the effects over a period when economic growth and gender parity is somehow achieved in Ethiopia. Fourth, future research should include new dimensions of service quality by incorporating new variables and assume new situational factors other than gender that would moderately affect the relationships between individual variables. The fifth, bigger sample size is needed to make the conclusion robust and generalizable.

9. Summary

This study aimed to investigate a gender-based service quality gap in customers' evaluation of female and male service providers' using a SERVQUAL model. The finding provided conceptual outputs on how the gender of the service provider could influence customers' perceived service quality in higher education and the health sector. Based on the statistical analysis, it was found that the SERVQUAL model was not suitable when the analysis is carried out separately for a female and male data set. However, when merging female and male data sets, a relatively better result was found that supports the SERVQUAL model with little modification. Based on the result, it was concluded that the outcome in the application of the SERVQUAL model could vary across gender and region.

Further findings revealed that students' and patients' expectations exceeded their perceptions for both male and female instructors and physicians implying a low perceived service quality. When the two genders are compared, female instructors' and physicians' scores are significantly lower than male instructors and physicians for all service dimensions except for empathy in the case of the health sector. In higher education, the highest gap score was observed in "assurance" for both genders (female -4.03 and male -1.48) while in the health sector "reliability and "tangibles" accounted for the highest gap score for female (-3.18) and male (-1.37) respectively.

Based on the analysis carried out to see in which dimensions the two genders are highly ranked, results in higher education showed that the dimensions that female and male instructors highly rated and least rated are the same. "Empathy" was the first highly ranked dimension while "assurance" was the least ranked dimension for both female and male instructors. In the case of health care, "assurance" was the first highly ranked dimension for both female and male physicians while "reliability" and "tangibles" were the least ranked dimensions for female and male physicians respectively. Moreover, findings indicated that students and patients hold a stereotype against female instructors and physicians respectively. They expected a higher quality of service from male instructors and physicians than females. The customers' gender did not show a significant difference in perception. Both genders perceived that male is a better-qualified professional in both the service settings. Finally, customers showed more preference for male instructors and physicians than females.

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1. Haile, V. (2019). The stereotypical link between gender and innovation. The 7th Central European Conference in Regional Science. Sopron University, Hungary.
2. Haile, V. (2018). The influence of gender on the perception of innovation. Conference on the geopolitical challenges of Middle-Europe and Hungary's place and role in the transitioning Europe: migration, the future of the EU, Kaposvár University, Hungary.

Curriculum vitae

Versavel Tecleab was born on 1 September 1990 in Addis Ababa, Ethiopia. She graduated from Jigjiga University in 2010 majoring in Bachelor of arts in Marketing Management. After completing her BA, she started working at Mada Walabu University as instructor in the department of Marketing Management and took the role of delivering courses to BA students , design course syllabus at a faculty level, and develop course materials. She also worked as a part time instructor in higher-level vocational training at the college of Open 20. In 2011, the Ministry of Education certified her with a higher diploma certificate that qualifies her to teach at a national standard. In 2012, she received a scholarship award from the government of India where she continued her study at Andhra University until 2014, and obtained a Masters of Business Administration majoring in Marketing and Human Resource. From 2014 - 2016, she continued her work at Mada Walabu University as a lecturer where she took part in delivering courses, research and development, and advising graduating students on their senior thesis. In 2016, she qualified for IELTS certificate for both Academic and General Exams. Apart from her higher education career, she has worked as an intern business-to-business sales person in PEPSICo. Soft drinks industry. Currently, she is a Ph.D candidate in Kaposvar University. During her study, she has authored 10 articles including unpublished works, has been participating in different conferences in the areas of Gender studies, General Marketing, Consumer Behavior, and Innovation and participated in teaching international MSc students.

Abbreviations

STI: Students' Instructors Evaluation

STEM: Science Technology Engineering Mathematics

SERVQUAL: Service quality

PCP: Primary care physician

SERVPERF: Service Performance

EP: Evaluated performance

HEDPERF: Higher Education Performance

IPA: Importance performance analysis model

Appendix

Appendix 1

Questionnaires for the Higher education

Dear Respondent!

This questionnaire is prepared to assess the students' perceived service quality at Addis Ababa University. Your cooperation is highly valued in providing trustworthy and accurate response about the kind and quality of service you received in the university. You do not need to write your name. Take your time and seriously fill the following service quality questionnaire. The information is highly confidential and will only be used for research purpose
Thank you in advance for your time

Sex: Male Female

Age: 18-24 25-34 35-44 45-54 Above 55

Department

Part II

1. What is the gender of your instructor?
Female Male
2. Which gender pops up in your mind first when you think of an instructor
Male Female None Both
3. What kind of service do you expect from a female instructor?
Very good Good Average Poor Very poor
4. What kind of service do you expect from a male instructor?
Very good Good Average Poor Very poor
4. Which gender would you prefer as your instructor?
Male Female Don't mind

Please Tick as appropriate for both your expectations and perceptions

5= Strongly Agree

4= Agree

3= Neutral

2= Disagree

1=Strongly Disagree

Dimensions of Service	Statement	Expected Service					Perceived Service				
		5	4	3	2	1	5	4	3	2	1
Tangible 4	The instructor's preparation of up to date handouts										
	The instructor's use visually appealing physical facilities										
	The instructor's use visually appealing teaching materials										
	The instructor's appearance looks professional										
Reliability 5	The instructor's interest in solving your problem related to the class										
	The instructor's interest in solving your general problems outside the class										
	The instructor's willingness to provide services as promised to do so										
	The instructor's ability to get things right the first time										
	The instructor's maintain error free records and grades										
Responsiveness 5	The instructor's accuracy of informing you when class and exams will be carried										
	The instructor's dedication to finish the course on time										
	The instructor's attention to respond to your requests										
	The instructor's honesty in giving fair grade and not discriminating										
	The instructor's accuracy of informing you when class and exams will be carried										
Assurance 5	The comfort you feel in approaching the instructor										
	The instructor's ability to build confidence in your performance										
	The instructor's politeness to you										
	The instructor's encouragement of student expression										
	The instructor's knowledge to teach the subject										
Empathy 4	The convenience of the instructor's office hours										
	The individual attention you receive from your instructor										
	The instructor's having your best interests at heart										
	The ability of the instructor to understand your specific need										

Appendix 2

Questionnaires for the health sector

Dear Respondent!

This questionnaire is prepared to assess the patients perceived service quality in Addis Ababa public hospitals. Your cooperation is highly valued in providing trustworthy and accurate response about the kind and quality of service you received in the hospital. You do not need to write your name. Take your time and seriously fill the following service quality questionnaire. The information is highly confidential and will only be used for research purpose
Thank you in advance for your time

Sex: Male Female

Age: 18-24 25-34 35-44 45-54 Above 55

Education Below 10th grade 10th grade complete 12th grade complete
 College Diploma Degree and above

Part II

1. What is the gender of your physician?
Female Male
2. Which gender pops up in your mind first when you think of a physician
Male Female None Both
3. What kind of service do you expect from a female physician ?
Very good Good Average poor very poor
4. What kind of service do you expect from a male physician ?
Very good Good Average poor very poor
5. Which gender would you prefer as your physician?
Male Female Don't mind

Please Tick as appropriate for both your expectations and perceptions

5= Strongly Agree

4= Agree

3= Neutral

2= Disagree

1=Strongly Disagree

Dimensions of Service	Statement	Expected Service					Perceived Service				
		5	4	3	2	1	5	4	3	2	1
Tangible 4	The physician's use of modern equipment and technology										
	The physician's use of visually appealing physical facilities										
	The physician's provision of well-organized information										
	The physician's professional appearance and dressing										
Reliability 5	The physician's ability to solving your problem related to your medical examination										
	The physician's interest in solving your general problems										
	The physician's willingness to provide services as promised so										
	The physician's ability to get things right the first										
	The physician' maintaining error free medical records										
Responsiveness 5	The physician's accuracy in telling exactly when the examination will be performed										
	The physician's dedication to finish your treatment on time										
	The physician's willingness to give prompt service										
	The physician's honesty and not discriminating patients										
	The physician's accuracy in telling exactly when the examination will be performed										
Assurance 5	The safety and comfort you felt in receiving the care										
	The physician's behavior to install confidence in you										
	The physician politeness and courteousness to you										
	The physician encouragement to express yourself										
	The knowledge to demonstrate and answer your questions										
Empathy 4	Operating hours were convenient for you										
	The physician gave you individual attention										
	The physician has your best interests at heart										
	The physician's ability to understand your specific needs										

Appendix 3

Interview questions

The interview questions for heads of departments and directors were as follows.

1. Have you ever witnessed your female colleagues been discriminated or bullied by their students/patients because of their gender? If yes, explain about the situation please.
2. Do you believe the gender bias against female staffs is an issue of performance? If no what do you think is the reason for customers' stereotypes against female staffs.
3. Do you believe students'/patients' perception of service quality can be biased by the gender of the instructor/physician. If yes, explain why, please
4. How do you evaluate the performance of female staffs compared to their male counterparts?
5. From your experience or point of view which gender do students/patients prefer as their instructor/physician? Why?
6. Have you ever received complaints from female instructors/patients that they are facing gender bias from their students/ patients?

The interview questions for instructors and physicians were as follows.

1. Have you ever been a victim of gender stereotype and discrimination by your students/patients?
2. Have you ever witnessed your female colleagues been discriminated or bullied by their students/patients because of their gender? If yes, explain about the situation, please.
3. Do you think students/patients would question the potential of the service provider because of their gender?
4. Do you believe students'/patients' perception of service quality can be biased by the gender of the instructor/physician. If yes, explain why, please.
5. Do you believe the gender bias against female staffs is an issue of performance? If no what do you think is the reason for students/patients stereotypes against female staffs.
6. How do you evaluate the performance of female staffs compared to their male counterparts?
7. From your experience or point of view, which gender do students/patients prefer as their instructor/physician? Why?

8. Have you ever felt that the evaluation that your students/patients give you is less than what you deserve?