ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF PSYCHOLOGY

GENDER ROLE PERCEPTION AND VOCATIONAL CHOICE OF TRAINEES IN TVET COLLEGES/INSTITUTIONS



BY

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GENDER ROLE PERCEPTION AND VOCATIONAL CHOICE OF TRAINEES IN TVET COLLEGES/INSTITUTIONS

BY

FENTAHUN TSEHAY

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(Measurement and Evaluation)



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BY

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LIST OF ABBREVIATIONS

MEB - Mothers' Educational Background

FEB – Fathers' Educational Background

GRP – Gender Role Perception

VCPM – Vocational Choice Practical Manual

VCSC – Vocational Choice Service Clerical

TVET – Technical and Vocational Education Training

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ABSTRACT

The primary purpose of this study was to investigate the influence of sex, parents' educational background and gender role perception on vocational choice of trainees in TVET colleges /institutions. Gender role perception and vocational choice were measured in 309 participants (159 males and 150 females). Gender role perception measure assessed participants' attitude on gender roles along a five-point Likert scale. Vocational choice measures assessed participants' level of interest to different vocations along a five point scale of interest. The collected data were treated with an independent t-test, one way ANOVA, three-way ANOVA and four-way ANOVA and with post-hoc scheffee test. The result of the study revealed that there was no significant difference between males and females in gender role perception. Both displayed traditional gender role attitude. A significant difference was found between males and females in vocational choice. Females showed high interest in service/clerical vocations than males. Males showed high interest in practical/manual vocations than females. Parents' educational background was found to be influential in trainees gender role attitude but not on their vocational choice. The post hoc comparison (Scheffee Test) demonstrated that trainees with parents of higher educational level demonstrated fewer traditional gender role attitudes than trainees with parents of lower educational level. It was also found that gender role perception laid an influence on vocational choice. Finally, possible recommendations are forwarded taking into consideration the target group and other stakeholders.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Technical and vocational training is expected to provide knowledge and skills in technical and vocational fields in order to get human power needs in agriculture, business and other technical services. The efficiency and productivity of a country's labor force is determined by the level of competence of its skilled workers and technicians. Skilled workers and technicians are very important to increase the quality and efficiency of products of development. They are also key in production, maintenance and training workers. Qualified workers are able to change materials into goods and services by using science and technology. For example, well-acquainted technicians and tradesperson are familiar to handle new equipments and are able to know the properties of new materials. Generally, the overall goal of technical and vocational education is to make individuals for the world of work (Kerre, 1996).

The expansion of vocational education has helped both men and women to learn different skills for work. However, women's position in learning better occupational skills has not been adequate. This is partially accounted for instructional methods that produce female stereotypes and absence of counseling for women in curriculum and career choices (Roby, 2005).

TVET is expected to provide the most accommodating education for a variety of learners. It is useful for both the talented and the disadvantaged. General national legal and policy strategies give equal access of technical and vocational training to all people irrespective of gender, race or social status. However, a large number of women continue to be marginalized from the

benefit of technical and vocational education, due to the traditional stereotyping along gender lines. Women constitute half of the nation's population and are able to contribute for an overall development. Yet the participation of women in technical and vocational education is still hopeless. The low participation of women in this area led to the wastage of half of the country's labor force in relation to production (Kerre, 1996). Gender imbalance in education and training made half of the nation's population ill equipped, unmotivated, and underutilized in the development process. Furthermore, low school enrollment rate and completion rate with gender inequality result in the wastage of huge potential resource base (Kalu, 2002).

Today there is equal access for women to male dominated vocations but women continue to choose traditionally female oriented vocations. Societal norms and prejudices feeling of incapability, lack of encouragement and role models are some of the major factors that prevent women from carry on technical and vocational careers. A majority of women are also misdirected due to the lack of information about jobs and opportunities that are available. So providing useful information enable women to choose appropriate programs and aspire careers in scientific and technological fields (Kerre, 1996).

Some scholars strongly suggested that the lower and inferior labor market position of women is related to their position in the work place and in the educational institutions the led to it (Crany and O'Donnell, 1983). In addition, Blossfeld (1987) stressed that the participation of women in a few occupational fields is usually attributed to sex specific differences in educational attainment.

Traditional attitudes about gender and mathematics influence males and females in different ways in their aspiration for education and career. This perception difference should be at least partially responsible for the gender

differences in the movement of males and females into trainings relevant to profession that need technical skills (Correll, 2001). Adolescents' work values are also important for the subsequent occupational and educational plans. The main source of work value includes perceived parental interest in the adolescent's school life and pressure for achievement in school (Wijting, Arnold and Conrad, 1977). According to Super and Holland as cited in Wijting, Arnold and Conrad (1977) the formulation of work values is related to the experience individuals have with significant others at home, school and other social settings.

The study conducted for two decades revealed the negative stereotyped image of women in the workplace, perceived by both men and women has an effect on the low participation of women in training programs (Fawcett and Howden, 1998). The division of labor in relation to sex looks to be prevailed in all societies. A sex role standard generally refers to the culturally approved characteristics for males and females (Korman, 1982).

According to Ignico (1990), gender may be a contributing factor in gender role stereotyping and that gender role perception does have an impact on vocational choice. In the study of Colley, James, Tedder and Diment (2003), pupil's vocational choice was influenced by family background, gender and student gender role perception. Students prefer to join traditionally stereotyped fields of engineering and electronics while women outnumbered in the areas of nursery, nursing and healthcare.

The existence of traditional attitude about gender and task competence has an influence on adolescents' perception of competence in activities that are relevant for their future career. This differential perception of men and women may be the result of the internalization of cultural belief about gender or it may be resulted from the expectation of others that influence males and females to judge their own ability in a different way. Traditional

beliefs attached to particular training field bias trainees perception of their competence in that field (Correll, 2001).

Large number of women in limited fields of study exists whether or not the countries have a large number of women enroll in higher education. There is also evidence that counselors in high school of developing countries do not provide female students with career information to promote the choice of nontraditional fields of study (Stromquist, 1989).

1.2. Statement of the Problem

Most countries have identified that the availability of skilled labor force in an important sectors like agriculture, construction, manufacturing, transportation, communication and commerce for example is necessary to national development. Such labor force can be obtained through technical and vocational education and training. World Bank and educational researchers in their studies have identified that investment in TVET is important whatever the economic status of the country may be. The rapid technological changes that flourish in the contemporary world further push towards the expansion of TVET (Kerre, 1996).

The Ethiopian government has mobilized a new effort to create systems favorable to economic and social development to end poverty. TVET in Ethiopia is expected to produce competent and self-reliant citizens that will help the development process of the country and thereby sustainable reducing poverty and improving the livelihoods of all Ethiopians (engineering capacity building program [ecbp], 2006).

The introduction of modern education in Ethiopia was expected to change the country's social, economic and political systems by developing its human resources. With regard to education and training success have been made but much remains to be done in relation to human resource development (Wanna, 1998).

Previous studies conducted in Ethiopian TVET gave much emphasis on the assessment of TVET with regard to efficiency and administrative matters, the attitude of students and the society towards TVET, the participation and performance of women in TVET, guidance and counseling service in TVET and on the placement and streaming practice in TVET. Nevertheless, the efforts made to look at the factors behind the vocational choice of trainees and the differential path of boys and girls in training programs seem negligible.

Believing in the importance of TVET for the development of a country, special attention has been given for it by the new educational and training policy. For effective training to occur, building a well-organized college with qualified personnel and necessary materials and establishing efficient administrative system is not enough. Trainees' interest in different TVET programs is also crucial for the realization of TVET goals. The country needs a skilled human power on different disciplines. Therefore, the youth should be ready and interested for different skill trainings to help the overall development of the country. Trainees' interest towards different TVET programs can be influenced by different factors. Thus, the purpose of this study is to identify some of the characteristics that influence the vocational choice of trainees in TVET colleges.

In Africa the traditional roles of men and women still manifested in all aspects of the life of the society. This condition is mainly exist in the countryside and expressed in the work place and education (Kerre, 1996). Women constitute 50 percent of the Ethiopian population, but their participation in education and training is not sufficient. Thus, a complete and fair training system should give equal opportunity to both men and women (Wanna, 1998).

The national and organizational policies created favorable condition for skill training that fit to cultural beliefs and prejudices seem to have created some

sort of misunderstanding and perceptions that created an obstacle in the operation of training programs (Teklehaimanot, 2002). The study that was conducted by Assefa and Cakiroglu (2002) has identified that, the participation of Ethiopian women in science and technology related professions and fields of the study are minimal. Seyoum (1986) also noted that, educated women in Ethiopia were concentrated in primary school teaching, nursing and typing.

Jung and Gidey (1998) pointed out that the perception and attitudes of the society with regard to gender roles, responsibilities and their worth are often relies on value judgments and stereotyping. They further express the meaning to be masculine and feminine in Ethiopian context as follows:-

> *In Ethiopian society to be feminine means to be weak and coward, submissive, shy, dependent, more flexible and prefer housework. While in contrast to be masculine means to be brave, physically and psychologically strong, independent, aggressive, and competitive and the breadwinner. The realities are sometimes different, but the fact that society maintains these beliefs becomes oppressive for all (p.165).*

Traditional attitudes and expectations made difficult the equal participation of men and women in vocational education and training programs. Women are disadvantage with narrow and segregated vocational education and economic independence reduced. In my teaching experience in one of the TVET colleges under the study, I observe the difference of choice in training programs between boys and girls. Especially, boys dominated construction and industrial fields of study, whereas girls were dominant in the fields of home economics and business. So, I wonder to identify the reasons behind the differential path of boys and girls in trainings. A number of factors could be accounted for the variation of interest of the trainees on different training programs. It seems worthwhile to investigate the effect of sex, parents'

educational background and gender role perception on vocational choice. For this purpose, the following leading research questions were formulated.

- Is there a significant gender role perception difference between males and females?
- Do trainees from different parents' educational background show significant difference in gender role perception?
- Is there a significant variation between males and females vocational choice?
- Do trainees from parents that have different educational background show significant difference in their vocational choice?
- Is there any influence of gender role perception on vocational choice?

1.3. Objectives of the Study

The objectives of this study are:

- To identify the difference in gender role perception between males and females.
- To explore the variation of vocational choice between males and females.
- To examine the influence of parents' educational background on trainees gender role perception and vocational choice.
- To investigate the influence of trainees gender role perception on their vocational choice.
- To suggest possible solutions and directions for future research.

1.4. Significance of the Study

All TVET in Ethiopia are expected to produce qualified and skilled labor force that fulfills the demand of the labor market. TVET is designed towards increasing the efficiency of all economic sectors with a well acquainted and

able workforce and towards improving the problem of unemployment through self employment (ecbp, 2006).

Investment in TVET is believed to be very important for the development of a country by providing the skills and knowledge necessary for social and economic development. However, the development of TVET program faces many challenges. Some of the challenges that face TVET goals come from the trainees within. These include their attitude and interest for different training programs and gender segregation in trainings. It is obvious that trainees' interest for different vocations and the full participation of men and women in all training programs is important for the realization of TVET goals and the subsequent development works. Therefore, the findings of the study are expected to:

- Provide information about factors that affect trainees' interest for different fields of study.
- Provide information about some of the reasons for differential paths of training between males and females.
- Provides information in minimizing factors that negatively affect trainees' interest for different vocations.
- Contribute some idea that may help curriculum developers to base on, while designing courses of trainings and to relate it to trainees' interest.
- Provide information to the improvement of trainees' interest for all fields of study.
- Provide information for vocational guidance and counselors.
- Create awareness for teachers, college officials, policy makers and other educational experts about the causes for vocational choice of trainees.
- Be a reference for parents and care givers, so that they will assist young children develop according to their abilities and potentialities

rather than being confined to traditional masculine and feminine roles.

- Provide knowledge about theories, principles and research findings in the areas of gender role perception and vocational choice.

1.5. Delimitation of the Study

This study was delimited to two government TVET colleges of North Shoa Zone of the Amhara Region. First year trainees were selected as a target population of the study because they are accessible due to low apprenticeship program at this level. The total number of participants for this study was 321 (164 male and 157 female). Moreover, only three factors (sex, parents' educational background and gender role perception) were considered among the many that could influence vocational choice of trainees.

1.6. Definition of Important Terms

- Gender role perception- refers to trainees' attitude towards gender-based division of labor and behaviors that are traditionally labeled as feminine or masculine.
- Parents' educational background – refers to educational attainment of parents (father or mother) in four categories i.e. no formal education, primary education, secondary education and college/university education.
- Practical and manual – refers to vocations that need practical trainings and labor mainly in the fields of construction and industrial. These include building construction, concrete, plumbing, woodwork, electricity, auto-mechanics, road construction and metalwork.
- Service and clerical- refers to vocations or study courses mainly in the areas of home economics and business. These include secretarial

science, accounting, hotel service, purchasing, hairdressing and beautification, food preparation, textile, nurse and hotel management.

- Sex- refers to an individual's biological type (maleness or femaleness).
- Trainees- refer to students in TVET colleges.
- TVET- refers to technical and vocational education training colleges/institutions that give skill trainings at different levels in the fields of home economics, business, industrial and construction.
- Vocational choice- refers to trainees' choice of career or career relevant activities such as a particular training program or study courses.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

2.1. Foundation and Development of Vocational Education

Vocational education is a practically illustrated career skill instruction. Vocational and technical education is expected to enable the individual to develop desirable and effective work habits and acquire the necessary knowledge and skills of an occupation to either enter or make progress in it (Kazanas and Wolf, 1973). All forms of vocational education are also widely accepted as a main solution to unemployment problems of the youth (Kantor, 1986).

It is possible to think that vocational training has began in earlier times informally with the emergence of society and the subsequent production of basic needs. The process of learning was unconscious imitation of the skills of providing food, shelter, clothing and protection from wild animals (Struck, 1945). The social and economic development undertaken facilitated the need to transmit the required skills purposefully. Then the method of training through planned experience started to flourish in many parts of the world. For instance at the beginning of the twentieth century, the idea of using school to train youth for work led to a major movement in the reform of the American education (Kantor, 1986).

After independence, African nations required skilled scientific and technological human power to hold and develop the nation's productive abilities. The lack of interest with the traditionally academic systems of education which do not help to solve the challenges has pushed most countries to revise the education sector. A recent trend in educational reforms in Africa is the introduction and expansion of technical and vocational education in the general school curriculum. This is resulted from

understanding of the importance of technical and vocational education in national development (Kerre, 1996).

Vocational education is important that, it is made to train individuals for useful employment by developing skills for work and the human development theory defines schoolings as an investment that develops human capital (Wanna, 1992). As Schultz (1989) noted human capital is a new concept in economics. It is to be acquired by investing in people. Investment in people in low income countries is desirable to enhance productivity, per capital income and welfare.

2.2. Gender and Vocational Education

Vocational training system serves as a transition from the general educational system and the labor market, in which sex specific differences in vocational training system were a major cause of occupational sex-segregation in the life time (Blossfeld, 1987; Collins, Kenway and McLead, 2000). Fields that was dominated by males like Engineering and Technology has experienced little involvement of female students. Similarly, traditional female areas of study continue to be dominated by females. This led to the argument that women's high unemployment rate generally can be attributed to their engagement in the wrong areas of study, rather than by absence of educational qualifications (Crany and O'Donnell, 1983).

The gender differences at TVET level are a serious issue because the implications are that a large proportion of women who complete high school do not able to get relevant trainings needed in the world of work. This contributed to the low income status of women (Chombe, 2005).

Occupational segregation by sex is wide and is one of the most important and enduring aspects of labor markets around the world. It has an adverse effect on labor market efficiency and labor market progress. The exclusion of women from most occupations resulted in a wastage of human resource. In

addition it has a negative impact on the income level of women. Under pay and incomes for women workers with occupational segregation are becoming an increasingly important source of poverty and inequality in society as a whole. Generally women are not found in large numbers in production occupations. On average, over 90 percent of architects, engineers and related technicians in the world are men. Clerical jobs are a major source of employment for women. Approximately 85 percent of stenographers and typists in the world are women. Furthermore, women are concentrated in tailoring, dressmaking and sewing whereas men are dominant as brick layers, carpenters and construction workers (Anker, 1998). According to Jacobs(1989)occupational segregation by sex has in fact been declining slowly excluding the agricultural sector and child labor.

African women economic participation is comparatively less. This is because most African women do not get proper education and training. In addition the existing social, cultural and economic conditions have an adverse effect on their participation in overall development process (Abdulkadir, 1996).

Generally educational and occupational segregation by sex led to the wastage of huge human resource and affects national development

2.3. The Development of Gender Role Attitude

High familiarity in the expectation of desirable gender –role behaviors exists both within and between cultures. Men are expected to be independent, assertive and competitive while women are expected to be more passive, sensitive and nurturing (Hetherington and Parke, 1993).

In a society which is surrounded with gender stereotypes and biases, children regularly learn to adopt gender roles which are not always fair to both sexes. As children move through childhood and into adolescence, they are exposed to many factors which influence their attitudes and behaviors regarding gender roles. These attitudes and behaviors are generally learned

first in the home and are then reinforced by the child's peers, school experience and television viewing. However the strongest influence on gender role development seems to occur within the family setting (McCarthy and Houston, 1980; Paul, 1999).

Gender role development begins before birth (Prenatal) and Continues throughout the lifespan. Biological, cognitive and social factors interact to shape the development of gender roles and gender differences in behavior. Biological factors that are thought to shape gender differences include hormones and lateralization of the brain function. Hormones may organize a biological predisposition to be male or female during prenatal period (Hetherington and Parke, 1993; Pikunas, 1976).

Prenatal sex difference replaced by the beginning of a complex socialization process after birth. During infancy naming, clothing and room furnishings shape boys and girls. Overall, the sex difference between boy and girls is low in the first years of their life (Bandura cited in Hetherington and Parke, 1993).

The Years from about age two to age six are important in the development of gender roles. It is during these years that children become aware of their gender, where play activities and behaviors begin to strengthen based on maleness and femaleness. The social agents' family, school, the peer group and the media disseminate messages in stereotyped ways. Most theories of social and personality development focused on the early childhood years, because gender role development in these years is very important (Hetherington and Parke, 1993). The major theories in gender role development are presented below. These are social learning theory, cognitive developmental theory and gender schema theory.

Social learning theory, developed by Albert Bandura (1969), emphasized the importance of children's imitation of the behavior of others. The theory suggests that boys learn how to act like boys from observing and imitation

masculine behaviors, especially from their fathers, and girls learn from imitating females, especially their mothers. When children imitate same sex behaviors, they are rewarded, and imitating the other sex may result in punishment. Cognitive developmental theory underlines the centrality of understanding what it means to be a boy or girl in the development of gender roles. In 1966, Lawrence Kohlberg conceived of gender development as a three stage process in which children first learn their identity (" I am a boy"), then gender stability ("I will always be a boy and grow up to be a man") and finally gender constancy ("Even if I wore a dress, I would still be a boy"). All the three stages are completed in six years of age (Hetherington and Parke, 1993).

Finally, Bem (1981, 1985) developed a gender schema theory to explain how individuals come to use gender as an organizing category in all aspects of their life. It is based on the combination of aspects of the social learning theory and the cognitive development theory of sex role acquisition. She believed that through gender-schematic processing, a person spontaneously classify attributes and behaviors into masculine and feminine categories. Therefore, an individual process information and regulate their behavior based on whatever definitions of femininity and masculinity their culture provides (Bem, 1981; Franzoi, 2000).

Regardless of which theoretical explanations of gender roles is used, the early acquisitions of such ideas and behaviors produce traditional society that insist in the belief of educational and occupational segregation by sex.

The Variation between men and women serves as a basic organizing principle for every human culture. Although societies differ in the specific tasks they give to men and women, all societies assign adult roles on the basis of sex and consider this allocation in the socialization of their children. Not only are boys and girls expected to adopt sex specific skills, they are also expected to develop sex-specific self concepts and personality

characteristics to be masculine or feminine as defined by that particular culture (Barry, Bacon and Child as cited by Bem, 1981).

Many psychologists believe that traditional ideas of masculinity and femininity have been socially and psychologically destructive. We have been speaking as people are either masculine or feminine category, but in reality many people possess a combination of behaviors viewed as masculine or feminine. Any person, male or female, can be tender and nurturing with children, effective in sports and a successful cook (Bem and Spence cited in Hetherington and Parke, 1993).

Gender typed interests seems to remain stable from childhood to maturity. However, recent studies have identified that gender roles change across the life time as adults change to face the demands of new situations and circumstances; therefore, gender role development is a dynamic process that extends through the years of adulthood (Hetherington and Parke, 1993).

2.3.1. Sex and Gender Role Perception

The study was conducted in preschool- aged children with the Sex-Role Learning Index (SERLI), a picture choice instrument designed to compare children's preferences to both sex role stereotypes and each child's conception of what is sex appropriate. It was found that both boys and girls avoid choosing sex-inappropriate items and interested more to the sex-appropriate ones (Edelbrock and Sugawara, 1978).

The substantial knowledge of gender role stereotypes was found in children as young as two years old. This was identified by the study on two and three years old children. The result demonstrated that both boys and girls believed supporting mothers in house work as duty of girls. They also believed that boys will become bosses and girls will become workers in the house (Khun, Nash and Brucken, 1978).

The traditional expectations in our society are very strong. Females will be wives and mothers. Males will be husbands, fathers and income generator. Children are expected to grow up to be just like their mother and father. The belief in the inferiority of women is held by both men and women (McCarthy and Houston, 1980). There are stereotypic sex differences in many aspects of self concept favoring boys in the areas of science, mathematics, physical ability, appearance and favoring girls in the areas of language, nurturing and honesty self concepts (Marsh, 1989). Sometimes youngsters are not strict to identify themselves with a sex linked role (Pikunas, 1976).

Women are reluctant to demonstrate traditional gender roles than boys. There are many reasons for this sex difference in the belief to gender-role stereotypes. Our culture is basically a male-oriented culture, with greater esteem, privileges and status gave to the masculine role. Men role is more clearly set and there is greater pressure for boys than for girls to act according to the traditional gender role expectations by parents and peers (Fagot and Leinbach, Langlois and Downs cited in Hetherington and Parke, 1993).

Perceptions of appropriate gender role behavior is still largely influenced by more traditional gender role stereotypes, however, much has been done in creating fair gender relations. The contemporary research on gender role stereotyping indicates that women respondents show recognition that masculinity is desirable for women as well as for men, whereas men hold on more traditional gender role perceptions (Macnich, Milich, Crumbo and Funtowicz, 1996).

Comparing men and women, Knorad and Harris cited in Woeldesenbet(2006) have identified that women demonstrate liberal view regarding sex-roles than men do. Different from this, Galambos, Almedia and Peterson (1990) noted that with the increase of age, girls become more influenced by culturally set roles. This in turn made girls to exhibit more

traditional sex roles than adolescent boys do. Whether sex segregation in all aspects of human relations is conscious or unconscious, it limits choice. Children are made to fit one role to the exclusion of the other. They are blamed if they aspire to be anything "inappropriate" to their sex role. Thus sexist practices and attitudes are unnecessary and should be changed (McCarthy and Houston, 1980).

2.3.2. Parents and Gender Role Perception

Children are frequently influenced by models and some of the most important ones are father, mother and teacher. Many models have traditional attitudes regarding gender roles. Children are quick to internalize the sexist phrases like "Boys are doctors", "girls are nurses" and the like especially when it comes from their important models. Many of these internalized beliefs will eventually control the child's attitude. Many of them will limit the child's potential growth (McCarthy and Houston, 1980). Parents are pioneer on children acquisition of values (Grusec and Kuczynski, 1997).

The effect of parents on children is many. Much of what children learn comes from their parents. The family is an enduring social group based on marriage and blood relationship, making hereditary and environmental influences on the child. The activities a mother performs include nurturing and care, attention and protection, stimulation and tutoring. The physical separation at birth does not include emotional and social separation. The child remains dependent to his/her parent emotionally and socially during pre school years and early school years and to some extent throughout adolescence (Pikunas, 1976).

Families play an important role in gender-role socialization by the way in which they create the environment for their child. Boys and girls wear differently, get different playing materials and provided differently furnished

bedrooms. Parents treated their children in a different way; particularly fathers are strict to the traditional roles. Boys are expected to be stronger and are treated more roughly and played with more actively than girls since the early years of life, with the increase of age; girls are protected more and allowed less autonomy than boys. In addition achievement in the areas of mathematics and careers is not expected from girls as boys. Children of egalitarian parents are less gender-typed in their beliefs about possible occupations for men and women (Hetherington and Parke, 1993).

Fagot (1978) found that parents showed a different treatment for sons and daughters. Boys were given support to involve in though activities like climbing while these activities were prohibited for girls. Rather girls were encouraged for feminine activities such as playing with dolls and prettifying themselves. Regarding the role of children in home Stromquist (1990) stated that females at very early age are told to help their mothers in household activities; especially cleaning, washing, cooking, fetching water or in general expected to assume the role of their mothers when males are pushed to carry on the role of their fathers.

Ethiopian fathers focus on the discipline of their children regarding the parental and cultural expectations. In addition, fathers play the role in the development of traditional gender role attitude for their sons. They work to teach skills and develop interests in masculine gender appropriate roles like bravery, strength and power, success, wining, etc. (Belay cited by Mulat, 2005).

The pattern of differences in mothers and fathers relations with sons and daughters suggests that the social pressure involved in gender-role development begin as early as infancy. Fathers play a more important role in gender-typing process than mothers through their more unequal treatment of boys and girls (Hetherington and Parke, 1993). Fathers' pivotal role in gender role typing was also proved (Block cited by Pikunas, 1976).

Contrary to this some studies demonstrated that the role of the father and the mother is the same in gender role typing of their children (Fagot and Hagan; Lytton and Romney, as cited by Hetherington and Parke, 1993).

Parents' background variable were found to have some effect on their children's attitude to gender roles, but no impact on sex typing of occupations was found. The educational and occupational status of both parents significantly affected the concept of parents as well as children regarding gender roles. Parents with more education were found to be more liberal (Kulik, 2002). Different from this, even highly educated mother tend to enforce traditional roles on their daughters. They want their daughters to join languages and social studies and are less likely to support daughters cross gender occupational choice (Tangri cited in Tesfaye, 1996).

It is define and clear that the more exposure to formal education of a mother, the more she understands the importance of praise and self confidence in women's preparation for new roles in the "modern world". This is particularly important for her daughters' success (Bach, Gadalla and Gulick, 1985).

It is helpful for girls to have understanding mothers and for boys to have fathers who show interest and encouragement in both masculine and feminine activities. This develops proper sex role identification that is important for the healthy development of the child's personality (Pikunas, 1976).

2.4. The Development of Vocational Choice

Vocational development is the process by which individuals choose a career path or occupation. Individuals continue to develop vocationally throughout their lives and many have several major careers with the change of personal needs and interests (Harren, 1966; Vondralek, 1998).

The major theories of vocational development includes Ann Roe theory of vocational development, Donald super theory of vocational development, Eli Ginzberg theory of vocational development, John Holland theory of vocational development and Tiedeman vocational development theory.

From the psychoanalytic perspective, Roe (1956, 1957) postulated that children with cold and rejecting early parent child relationships would be inclined to choose careers not significantly involving people interactions, and those with warm and accepting early parent-child relationships prefer occupations with substantial people interactions (Bordin, Barbara, Nachman and Segal, 1963; Switzer, Grigg, Miller and Young, 1962).

According to Super (1951, 1953, 1956, 1957, 1963) individuals act in relation to their understanding of themselves when making vocational choices. Psychologically, career choices are driven by self-concepts. Super noted that making satisfying vocational choices requires an accurate understanding of the self. In addition, knowledge about the requirements and work activities of different occupations are important for proper vocational choice. Five stages in vocational development were proposed by super, First, Growth (Birth to 14 years) marked by the foundation for a self concept. Second, Exploration (15 to 24) a period of an awareness of occupation. Third, Establishment (25 to 40) an occupation is selected that offers the best chance to obtain satisfaction, Fourth, maintenance (middle age to 65) here the individuals continues in and attempts to improve their situation in a chosen occupation. Fifth, Decline (65 and above) this age includes the preretirement phase where the individuals attention is on continuing to meet the minimum requirements of the job rather than on enhancing their position (Bordin et al, 1963; Kibrick and Tiedeman, 1961; Oppenheimer, 1966; Richards, 1973; Super, 1956; Tipton, 1966; Warren, 1961).

Ginzberg's, 1951 developmental theory of career choice postulates that individuals pass through three major stages before making their first significant vocational choice. In the first stage the child thinks of occupations in relation to their fantasies about being an adult. There is no significant consideration of personal abilities or occupational demands. This stage is called fantasy and covered the age from birth to 11 years. In the second stage the individual is focused largely on themselves. They evaluate their interests, capacities and values. This stage is called tentative and ranged from 11 to 17 years old. The third stage named realistic and cover the age from 17 to 18 and above. Here the focus is more on available careers and evaluation of demands and benefits of different careers (Richards, 1973; Super, 1956).

Holland (1959, 1963, 1981, and 1985) explained that different personality types are best suited to different careers. He proposed six basic personality types and then identified careers they were best suited to enter, According to Holland; individuals can be categorized as one of the following: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on suitable roles (Athanasou, 1986; Bordin et al, 1963).

Tiedeman (1961) identified four stages in vocational decision making. These are exploration, crystallization, choice and clarification. Exploration is marked by random, exploratory attempts; crystallization refers to the progress towards but not the attainment of choice. Choice stage marked by a substantive progress with some degree of certainty to a particular goal. In clarification stage the individual is involved in clarification and explanation of the outcome of his/her decision with regard to the goal aspires to achieve (Harren, 1966).

Vocational development can be considered as a decision making process which involve two aspects. The first is narrowing the rang of possibilities and the second, strengthening the possibilities which remain. Through the successive refinement of choices, finally a career choice is achieved (Hershenson and Roth, 1966). Capacities, aptitudes and interests are also important in the process of vocational choice (Super, 1956).

Research on the determinants of vocational choice has provided ample information about the motivational and biographical factors of the choice process. People in different careers were found to be different in their interests, goals, values, temperaments and socio economic characteristics (Astin, 1965).

2.4.1. Sex and Vocational Choice

Sex differences in occupational interest may, of course, begin even earlier in life. However, sex difference in occupationally relevant course enrolment decisions began in high school years (Correll, 2001). Males and females do develop different line of interest that is consistent with gender-role stereotypes. In a national survey of over 2000 children from 7 to 11 years old, it was found that boys like guns, boxing, wrestling and karate, team sports and fixing and making things more than do girls. In contrast, girls prefer dolls, sewing, cooking, dancing and taking care of little children more than do boys (Zill cited in Hetherington and Parke, 1993).

At the nine to ten year old level the segregation of boys and girls is almost complete. They differ in the interest of playing activities. Boys inclined to vigorous and competitive activities like sports, bicycling, hiking and mechanics. Girls' interests often focus on clothes, handicrafts, art appreciation, household work and other quiet or sedentary activities. They are mainly involved in jumping rope and skating (Pikunas, 1976).

Career aspirations of the boys and girls are certainly related to subject options. Students who wanted 'manual' occupations opted for proportionally many more 'Practical' courses than did the student seek to 'non manual' occupations. Such difference represents a first step in the emergence of the dominant social class and gender relations (Abraham, 1995).

A significant difference in work value was found between men and women. Female students were significantly more interested in working with people being supportive to them. Males were more attracted to security, good money and status. Occupational value was found to be highly influenced by sex (Smithers, 1975). Women's career choices are significantly affected by social and cultural norms (Garland and Price, 1977).

Male and female workers are often segregated into deferent occupations, with women's occupation typically having lower status and pay as compared to men's occupations. It was also indicated that certain types of occupations tend to be dominated by men. These include managerial and production occupations. The remaining occupations tend to be dominated by women. These include services and some types of clerical and care-giving professional occupations such as nursing and teaching. The survey conducted in western industrialized counties demonstrated that nurses, teachers, stenographers, cooks, waiters, bartenders, maids, hairdressers, barbers, beauticians, tailors, dressmakers, sewers and upholsterers, were mainly women. Furthermore, architects, engineers, technicians, government administrators, managers, supervisors, blacksmiths, tool makers, bricklayers, carpenters and other construction workers were mainly men (Anker, 1998).

The interest of boys and girls in careers was found to be different. Significant number of girls aspires to non-manual masculine careers, but even one boy was not found to choose a traditionally feminine career (Abraham, 1995). Certain occupations become labeled as 'women's work

and are accordingly valued less. In general, women constitute the majority of restaurant servers, telephone operators, secretaries, nurses, babysitters, dental hygienists, librarians and elementary, kindergarten teacher, while most lawyers, truck driver, top executives and engineers are men (Hogg and Vaughan, 2005).

According to Crany and O'Donnell (1983) more than a quarter of the Australian women are in sales, cooking, waitressing, housekeeping, caretaking and cleaning. A third of the female workforce is in the clerical area. Position of power and status tends to be occupied by men, even in occupations that are dominated by women.

The study held in Germany indicated that sexual segregation is especially present in the context of educational and occupational choices. According to Hegelheimer as cited in Blossfeld (1987) women as compared with men, participate in shorter training courses and are mainly concentrated in a relatively limited number of occupations, most of them in service industries. He further noted that, there are noticeable differences in the types of vocational trainings that men and women undertake. Except the office jobs, where there is a proportional number of men and women, men are mostly trained for industrial and technological occupations. The number of women in the areas of house keeping, health, social welfare and education was larger than men.

In the late 1970s, 68 percent of all registered female workers in Egypt were found in the service and finance sectors. Except in the so called "feminine" fields such as education or modern mass media, women are still marginalized in positions of authority. Especially women have a better position in medicine and some of sciences, but in some sciences like engineering their participation is insignificant. Even among engineers, women are mostly engaged in theoretical work and writing reports than working in the field (Papanek, 1985).

The study made in Europe demonstrated that, women were found in large number only in the areas of education, and approximately there was equal proportion in the fields of humanities and the arts, and health and social services. Generally, they are far from mathematically intensive disciplines and careers like natural and physical sciences and engineering (Huguet and Regner, 2007). The Australian training experience showed that women totally underrepresented almost to all important vocational areas with the exception of secretarial studies and hairdressing, which are totally female province (Crany and O'Donnell, 1983).

In Burkina Faso TVET, even single woman was not enrolled for machine shop and electronics. However, more girls enrolled in secretarial and commercial courses. In a similar study conducted in Nigeria and Swaziland demonstrated that women dominated the fields of fashion, secretarial studies, hairdressing and sewing while men are dominant in the fields of furniture making, auto-mechanic, electronics, art and design, carpentry and metal work (Kerre, 1996).

Beck- Gernsheim and Ostner as cited in Blossfeld (1987) suggested that the socialization process leads women to acquire skills and orientations that make them more qualified for household activity and less qualified for production works. Women show an interest in activities that are related to their previous activities, such as support, care, education and empathy for the needs of others. This resulted in the concentration women in the service field. Women are expected to choose activities that have a close connection with home activities and use familiar tools of work, some of the occupations of this kind are seamstress, cosmetician and saleswoman. In addition, women engaged in activities that seems the mother-child and wife-husband relations in the family.

In Israel girls' orientations towards science and technology outshine those of boys, efforts made to remove stereotypic attitudes from all activities seems

to have a positive effect or girls' orientation towards science. This can be taken as an evidence to support social explanation for sex difference as opposed to biological one (Steinkamp and Maehr cited in Assefa and Cakiroglu, 2002).Similarly, Mulat(2005) demonstrated the presence of fair gender role attitude in Awuramba community of Ethiopia. He further noted that both males and females participate in all activities equally.

Sex and social origin were found to be influential in the choice of training for a particular occupation (Heinz, Kelle, Witzel and Zinn, 1998). Blossfeld (1987) categorized occupations into three: production, service and administration to study the labor market entry and sexual segregation of careers. Production includes occupations like wood work, welding, construction, electricity, carpenters and machinery technician. Service includes occupations like waitress, hairdressers and nurses. Administrative occupations include managers and administrators. Blossfeld identified that men were dominant in production and administrative fields whereas women were dominant in the service sector. He further noted that sexual segregation in occupations was mainly resulted from sex difference in vocational training.

2.4.2. Parents and Vocational Choice

Several theories of vocational psychology have showed that parents have a crucial effect on the vocational choice of their child. This parental influence can be implemented either through their attitudes toward their child or the child's identification with them (Brunkan, 1966). Herma as cited in Brunkan and Crites (1964) has also emphasized the important role of parents in the process of vocational development during adolescent years.

Roe's (1957) theory of vocational choice suggests that if a child experiences warm, loving parents he/she will move to occupations mainly involving people. On the contrary, rejecting parents will predispose the child to occupations that do not involve people (Green and Parker, 1965). The main

factor in vocational choice is the family atmosphere which an individual experiences during childhood and early adolescence years. According to Roe, there are three basic parental attitudes which affect an individual's vocational choice: acceptance, concentration and avoidance. Acceptance refers to parents who encourage their children to fulfill their potentialities, concentration refers to parents who place heavy demands upon their children and avoidance refers to parents who have no interest in their children activities or interest (Roe cited in Brunkan and Crites, 1964).

Attempts to test Roe's theory, however, have produced conflicting results. Children vocational choice did not related to parents' attitudes of concentration, acceptance and avoidance (Brunkan, 1965; Switzer et al., 1962).

Parental intervention is crucial in shaping students beliefs regarding the choice of appropriate subjects in addition to their own belief (Abraham, 1995). The family has long been recognized as an important factor in vocational development of children (Paine, Deutsch and Smith, 1967). Children are expected to act inline with the same sex parent. Boys and girls inclined to adopt whatever sex roles their culture hold. Children learn gender stereotypes from home and the community. Even parents who understand the irrelevance of traditional gender roles are not ready to treat their sons and daughters equally. This is partially from the fear that their children might exhibit extreme inappropriate gender roles (Jung and Gidey, 1998).

A significant correlation between work values and family background factors on children vocational choice was found (Paine et al., 1967). Educational status and occupational position of parents have an influence on their children's vocational preference (Afework, 2006). A study in Nicaragua revealed that parents' education, particularly education of mothers highly influences their daughters' education (Behrman and Wolfe cited in Emebet,

2003). On the other hand Tipton (1966) found that parents influence on vocational choice of their children is insignificant.

It was found that amount of the difference between attitudes of parents was predictive of occupational choice (Switzer et al, 1962). Compared to uneducated mothers educated mothers have a positive influence on their daughters' educational aspiration and achievement. In addition they expect more from their daughters and are ready to help them for new experiences directly or indirectly (Bach, Gadalla, Khattab and Gulick, 1985).

2.4.3. Gender Role Perception and Vocational Choice

Gender role perceptions are the set of behaviors defined by particular society that shows what acceptable behavior is for men and women (Feldman, 1999). The society continues to undermine women's role for they are given the inferior position. The societal attitude on women forces them to limit their choice and activities in life (Fitzgrald and Betz as cited by Yalew, 1997).

Traditionally, men and women have each demonstrate a different sex role in society (men work outside and women at home). Gender role assignment may be given and disseminated by the social group that has more power, mainly men (Hogg and Vaughan, 2005). Gender-role typing may hinder the expression of the child's own personal interests and skills. Thus, gender-typed beliefs are now generally believed to be restrictive stereotypes that interfere with cognitive processing and that should be reduced by introducing egalitarian way of life in home for children (Bem, 1981).

The overall differences in work values demonstrates that even in conditions of equal opportunity men and women will inclined towards different occupations (Smithers, 1975). Gender differences in the selection of courses leading to production works are not the result of real differences in ability, but they are instead resulted from differential perception of ability between

men and women, widely held cultural beliefs related to different activities forced individuals into particular activities. It also affects how individuals "self-select" into occupationally meaningful trainings. This in turn led to the gender segregated labor force that will be created partially through the different and seemingly voluntary choices of men and women make (Correll, 2001).

There is a direct relationship between job perceptions and job preferences. People tend to prefer occupations which they can perceive as capable of achieving their needs. Most vocational theorists regard the process of occupational choice as a transition between the individual and his environment in which job perceptions are clearly operate. It is also clear that people with similar job perceptions do not necessarily select the same vocation (Gonyea, 1963).

The study conducted by Huguet and Regner (2007) on the middle school girls demonstrated that, girls are going to be under represented in scientific disciplines and careers due to the existing stereotype threat. According to Correll (2001) many factors certainly influence individual career relevant decisions and preferences. At least, one must feel competent at the skills or tasks necessary for a given career. Cultural beliefs about gender affect early career-relevant choices of men and women.

A basic premise of gender theories is that women's disadvantaged position in the labor market is caused by women's inferior position in society and the family. In all societies, house hold work and child care are seen as the main responsibility of women, while men are seen as mainly responsible for being the breadwinner. These societal norms and perceptions differ from reality for many women, men and families are not ready to give up their influence on the behavior of women and their effect in causing discrimination against women. Women are seen as having less need for labor market skills. Hence girls are less likely to continue trainings that are relevant for labor market.

Educational and occupational segregation by sex is caused by female stereotypes and their supposed abilities. For instance a female stereotypes of caring nature, skill and experience at household related work, greater manual dexterity, greater honesty and physical appearance led to the belief that women are appropriate to be nurse, doctor, social worker, teacher, maid, housekeeper, cleaner, cook, waiter, launderer, hairdresser, spinner, weaver, knitter, tailor/dressmaker, midwife, sewer, typist, cashier/book-keeper, salesperson, accountant, receptionist and shop assistant. Other female stereotypes like disinclination to supervise others, less physical strength, less ability to do science and math, less willingness to travel and less willingness to face physical danger and use physical force is associated with women's exclusion from the position of administration, supervision, management, construction, mining, well drilling, physical scientist, aircraft officer and worker, ship officer and worker, police officer and security guard (Anker, 1998).

In Latin America, women trains in traditionally female areas like food processing, cosmetology, secretarial skills and sewing, which are characterized by minimum wages and little potential for growth. In contrast, women represent 5 percent of the trainees in the industrial courses of electronics, metallurgy and mechanics (Fawcett and Howden, 1998). There is evidence that changes among women to wards a more egalitarian direction may help them to involve in the so called masculine areas (Gump, Alper, Leader cited in Tesfaye, 1996).

2.5. Vocational Education in Ethiopia

2.5.1. Development of Ethiopian TVET

The main goal of the education and training policy is the production of citizens with an all-round education capable of making conscious and active role in the overall development of the country. A country needs skilled human power to achieve a rapid economic growth and development.

Whatever resource the country may have, a country can not be successful in economic growth without skilled and trained human power (Ministry of Education [MOE], 2002).

Craftsmen and artesian were exist in Ethiopia for centuries. However, these people of great ability were segregated to a lower status by the traditional Ethiopia for a long time (Pankhurst and Tshehai cited by Wanna, 1998). The introduction of modern education in Ethiopia focuses mainly to produce administrators and translators. Around the middle of the 20th century, technical and vocational education began to get attention in the Ethiopian education sector. Between 1940 and 1964, six vocational/technical schools were established in Ethiopia with an annual intake not more than 1,000 students (MOE, 2002; Wanna, 1998). By 1962 the government changed the existing high schools into what is called 'comprehensive high schools' in order to solve the problem of youth unemployment. After 1980, the government realized the failure of comprehensive high schools to solve the problem of unemployment effectively. Then the government launched a program to strengthen a number of selected comprehensive high schools and other vocational /technical schools so as to create effective skill training program. It was during this time that vocational/ technical schools reached 17. In 1995/96 academic year the seventeen training schools enrolled a total of 2,738 students (Wanna, 1998).

Ethiopia is determined to involve in the competitive global market economy. This needs technical and professional human power. Therefore, technical and vocational education and training (TVET) become a great concern for the Ethiopian education system (MOE, 2006/07).

The new education and training policy of 1994 gives due attention to technical and vocational training. Thus, the new organization of technical and vocational training has a wide and multi dimensional nature. The training is given at various levels. Agricultural and other related trainings

are designed to train students who completed grade 8 for three to six months. Vocational trainings that take one, two or three years are also given for students who completed grade 10. On the other hand for students who completed their preparatory education, professional training is given at college and university levels. Generally, there is an interrelated educational system that link academic, vocational and professional education. In addition the new organization of technical and vocational training relies on the analyses of the skill needed for the country's development. As a result, technical and vocational education is adequately flexible to begin new areas of training or to close the existing ones if necessary (MOE, 2002).

Today, there are hundreds of TVET colleges and institutions all over the country and in the year 2006/07; the total enrolment has reached 191,151 in the fields of home economics, business, industrial and construction. In the year 2006/07, in the Amhara region alone there were 61 TVET Colleges/institutions with a total enrolment of 10,630 trainees (MOE, 2006/07).

Ethiopian TVET achieved a lot in recent years in terms of expansion and training, but a lot has to be done to achieve its goals successfully. The question of relevance and quality of the trainings has to be addressed. Inequality in access (particularly for women and the disabled) has to be solved.

2.5.2. Trainees Interest and Gender Segregation in Ethiopian TVET

Local studies have indicated that the prevalence of traditional sex-roles are very high and resulted in serious psychological, social and economic problems which place women in unfortunate position in relation to education, employment, income and status (Chombe, 2005; Woldesenbet, 2006). As other traditional societies, traditional gender role assignment seems to be deeply planted in the Ethiopian culture (Tesfaye, 1997).

The cultural influence on female students affects the achievement of female students at higher education level in many ways. For instance societal expectation and family influence has some impact in the level of confidence they develop and their choices of future interests (Hedija, 2002). The overwhelming majority of women are pushed to traditional roles and that led to their poor participation in the social and economic development in general and in science and technology in particular (Atsede, 1991).

Traditional gender role attitude developed in the education system, the family, the peer group, the media and the religion. All this certainly strongly influences career choices. Girls either were placed in or encouraged to hold on trainings that would prepare them to be typists, receptionists, file clerks, cashiers or sales workers (Mihirete, 2007). Families' role in providing information and guidance for girls is very high. The amount and kind of support that parents give to daughters depends on the family values and it varies accordingly. Educated parents give more support and attention to the education of their children (Liyu, 2007).

Women participation in education and development is less than men, women's roles are limited in the home and involve cooking, rearing children and other responsibilities in the house. Their involvement in managerial, administrative, technical and scientific positions are very low (Allasebu and Hirut cited in Gennet,1991). According to Assefa and Cakiroglu (2002) the number of Ethiopian women in science and technology related occupations and education is very low. A large number of women were concentrated in home economics, business and commerce. They further noted that, based on the data of the Federal Civil Service Commission (2002) women constituted 8.5 percent in natural science, 7.34 percent in engineering, 80.13 percent in home economics and 53.1 percent in commercial and business fields.

Economic growth without improvement in human resource is unthinkable. In Ethiopia women represent half of the total population. However, they are exposed to gender segregation in all aspects of their activity. Gender discrimination effect is not limited to women alone; it also hinders the overall growth of the country. It marginalized a large segment of the population from participating in social, economic and political life (Trufat, 1998).

The involvement of Ethiopian women in industrial and handicraft fields is less than that of men. In 1998, only 18 percent of women employed in small scale industries, on the contrary, women were dominant in the service sector. Most of the hotel and restaurant service, business, wholesale and retail trade, and small business like beauty salons, laundry service, etc. were owned by women (Abdulkadir, 1996).

Traditional attitudes of gender stereotyping and lack of sufficient educational information led women to be under represented in the fields of science and technology of higher education (Chombe, 2005; Dessalegn, 1996). Tesfaye (1996) identified that about 68 percent of female students in higher education were enrolled in traditionally feminine areas of study.

Afework (2006) stated that women in TVET schools were enrolled themselves in customarily female dominated fields like bakery and secretarial science while men are large in number in technical areas of training. Abdulkadir (1996) further confirmed that women participation in technical areas is extremely low, but they are many in the vocational fields of accounting, secretarial science and home economics.

Mihirete (2007) demonstrated that boys were pushed to join industrial and construction fields in TVET, and they are trained as carpenters, plumbers, mechanics, and auto-body repair man and for other skills. On the other hand, girls were encouraged to register and train for courses in home economics and typing even by the guidance and counselors.

Gender segregation in Ethiopian TVET is further demonstrated in the following tables.

Table 1 below demonstrates that Women are dominant in the fields of secretarial science, food preparation and hotel service whereas men outnumber women in the areas of wood work, building construction and auto mechanics.

TABLE 1

Comparison of the number of male and female trainees in some selected departments in 2003/04 academic year at the national level.

Department	Male	Female	Total
Wood Work	1388	241	1629
Building Construction	3555	679	4234
Auto Mechanics	5562	472	6034
Secretarial Science	492	9648	10140
Food Preparation	160	847	1007
Hotel Service	148	429	577

Source: MOE (2003/04). Education statistical Annual Abstract

Table 2 below demonstrated that the fields of hairdressing, hotel service, and textile and food preparations were less liked by the trainees. It is clearly demonstrated by the total number of trainees enrolled in these fields. In addition, these fields were dominated by women.

Generally, compared to men, the number of female trainees was large in the department of accounting, marketing, purchasing, secretarial science, hairdressing and beautification, hotel service, textile, food preparation in the two academic years. On the other side men outnumber women in the fields of electricity, electronics, machine technology, auto machines, general mechanics, building construction, wood work and road construction.

TABLE 2

Comparison of the number of male and female trainees in some selected department in 2005/06 and 2006/07 academic years in Amhara region.

Department	2005/06 (1998 E.C)			2006/07 (1999 E.C)		
	Male	Female	Total	Male	Female	Total
Accounting	581	623	1204	589	805	1394
Marketing	73	152	225	-	-	-
Purchasing	89	167	256	78	112	190
Secretarial science	19	1077	1096	22	1040	1062
Hairdressing and Beautification	1	12	13	3	14	17
Concrete	-	-	-	31	24	55
Hotel service	-	-	-	15	23	38
Textile crafts	45	95	140	30	97	127
Food preparation/cook	3	52	55	1	85	86
Electricity	434	149	583	884	174	1058
Electronics	181	85	266	287	104	391
Machine Technology	182	71	253	72	28	100
Auto Mechanics	362	10	372	542	96	638
General Mechanics	254	27	276	356	59	415
Building Construction	261	71	332	-	-	-
Wood work	100	4	104	230	51	281
Road construction	151	37	188	-	-	-

Source: MOE (2005/06). Education Statistics Annual Abstract.

MOE (2006/07). Education Statistics Annual Abstract

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1. Research Design

This research was a quantitative survey study. It was designed to find out the influence of sex, parents' educational background and gender role perception on vocational choice of trainees in TVET colleges.

3.2. Variables

Independent Variables - trainees' sex in nominal scale coded 1 for male and 2 for female; parents educational background in nominal scale represented by 1 (no formal education), 2 (primary education), 3 (secondary education) and 4 (college/university education); and gender role perception that is a metric scale obtained from score of the participants on gender role perception measure. Using the middle score in the scale of gender role perception measure a dichotomy of responses as either a traditional or modern (egalitarian) was created. Accordingly, traditional group composed of participants who have scored greater than the middle score and coded as 1(traditional); and the modern (egalitarian) group were those below the middle and coded as 2.

Dependent Variables-includes vocational choice score of the two sub scales. These were Vocational Choice Practical Manual and Vocational Choice Service Clerical. Both are metric scales obtained from Vocational Choice Practical Manual (VCPM) and Vocational Choice Service Clerical (VCSC) measures respectively. Gender Role Perception (GRP) score also used as a dependent variable in the case of trainees sex and their parents' educational background.

3.3. Participants and Sampling Procedure

The study was carried out in North Shoa Zone of the Amhara Region. Two government TVET colleges (D/Berhan TVET College and Ataye TVET institution) were chosen using purposive sampling technique to secure adequate information. The target population of the study was all 2008/09 academic year first year trainees from all departments. There are 1888 first year trainees (947 male 941 female) in the two colleges. Excluding trainees from the department of IT assistance in D/Berhan TVET, who were used for the pilot test, a total of 321 (164 male and 157 female) participants were selected for the study based on the table of determining sample size (Krejcie and Morgan, 1970).

Using the combination of stratified random sampling technique and systematic random sampling technique is helpful in selecting proportional number of participants from the population that have different categories (Best and Kahan, 2003). After determining the proportion of the number of participants based on college, department and sex; a systematic random sampling technique was employed to select the required number of participants.

The sample consisted of trainees with an average age 18.7 years (SD=2.09, range 15-38 years old). Eight trainees (5 male and 3 female) did not participate in the study because they were absent in the day of questionnaire administration. Out of the total 313 questionnaires administered only 159 male and 150 female participants returned properly filled in and usable questionnaires. So the final sample was 309.

3.4. Instruments

The instrument of data gathering for the study was a questionnaire. The questionnaire had three main parts:

Part One: The Background Part

The background part dealt with trainees and parents' background information, and the researcher developed it. Totally, there are six items in this part, which included trainees' sex, age, college/institution, department and parents' educational background (both father and mother).

Part Two: Gender Role Perception Measure

This part was designed to measure trainees' gender role perception (GRP). The items were adapted from the previous instrument (Prasad and Baron, 1996). Prasad and Baron developed an instrument to measure gender role attitudes. The items were divided in to three: policy items, belief items and moral items; and participants were supposed to rate their agreement on a 5 point-scale of agreement. Reliability (alpha) of the scales was in the range of .685 to .964. Prasad and Baron suggested that strong correlation of the sub scales enable the items to serve as a general source of individual difference in gender role attitudes. They also noted the soundness of the instrument in terms of reliability and validity to use for many cultures.

Forty items that are familiar to the Ethiopian context and easily understandable were selected. Trainees endorsed the statements on a five-point, Likert type scale (1= strongly disagree to 5= strongly agree). Fifteen items were reverse coded. Each item was scored 1-5, which result in possible total scores from 40 to 200. The high score on the questionnaire demonstrates traditional attitude whereas the low score indicates modern (egalitarian) attitude on gender role. To test the reliability of the instrument for the area under the study, the questionnaire was pre-tested on 40 (22 male and 18 female) trainees. The scale was found to be reliable; Cronbach's [alpha] was .95.

Part Three: Vocational Choice Measure

This part dealt with trainees' vocational choice. This section consisted of two sub scales. These were Vocational Choice Practical Manual (VCPM) and Vocational Choice Service Clerical (VCSC). The item in this part was adapted from previous work (Simons, Goddard and Patton, 2000) and some of the items developed by the author.

Simons et al. (2000) determined to measure individual vocational interest by using Vocational Interest Survey for Australia (VISA). The VISA comprises 64 work statements, each requiring respondent to rate how much they think they would like or dislike the work activity described by each work statement. Interest ratings are made along a seven point scale ranging from (1) "I extremely dislike (or hate) this activity" to (7) "I extremely like (or love) this activity". The 64 items provide an assessment of vocational interest across eight interest dimensions: caring, culture, service, managing, clerical, science, practical and environment. Sub scale alpha coefficients reported were in the range of .80 to .90. After factor analyses the eight sub scales were grouped into three. It was suggested that these three factors represent management, manual and service related vocational interests.

For the purpose of this study practical/manual and service/clerical classifications were taken, because courses given in TVET colleges under the study falls in either of the two categories. So vocations that are familiar to trainees and related to the courses given in TVET colleges were selected. In addition vocations that need practical and manual activity (from industrial and construction fields) were included in the practical/manual scale. In the similar manner vocational in the fields of home economics and business were included in the service/clerical scale.

Thirty items were prepared at preliminary draft of which 15 items for VCPM scale and 15 items for VCSC scale. To test the reliability of the instrument for the area under the study, the questionnaire was pre-tested on 40(22

male and 18 female) trainees. After the measure of internal consistency, Cronbach's[alpha] 10 items,5 from each sub scale which were least correlated with the total item were rejected.

The final vocational choice measure for this study included 20 items for the two subscales. One that assesses interests on practical/manual vocations (10 items) and another that assess interests on service/clerical vocations (10 items). The items or vocations on the two subscales were arranged in odd-even order. Respondents indicate their degree of interest using a five-point scale from strongly uninterested to strongly interested. The range of possible scores for each measure is 10 to 50. High scores on VCPM indicate high masculinity and low score indicted less masculinity. High score on VCSC indicates high femininity and low score indicated less femininity. Internal consistencies [alpha] of the present sample were .92 for VCPM and .89 for VCSC sub scales.

3.5. Procedures of Data Collection

The initial English version of the questionnaire was translated to Amharic with the help of two postgraduate TEFL students to avoid language barriers. After the translation of the questionnaire, pre-test was made using 40(22 male and 18 female) IT assistance trainees from D/Berhan TVET college. Based on the feedback clarifications were included.

The author with the help of the assistants administered the questionnaire in a regular classroom period with the consent of instructors. Totally, the administration of the questionnaire was completed in five occasions. In the process of administration, assurance was given that individual responses would be kept confidential and that participation was voluntary.

3.6. Method of Data Analysis

After the necessary data were collected and coded quantitative analyses was performed using SPSS 12.0 for windows. Descriptive and inferential statistics were used to analyze the data. These included mean, standard deviation, t-test and analysis of variance (ANOVA).

Means and standard deviations were used to describe the distribution of scores on the dependent variables across different classifications of the independent variables.

Independent sample t-test was used to identify whether there is a significant sex difference in gender role perception and vocational choice.

A number of one-way analysis of variance procedure were used to find out whether there is a statistically significant variation among trainees who come from different parents' educational background in their gender role perception and vocational choice.

Two-way analysis of variance was performed to identify the main and interaction effect of sex and gender role perception on vocational choice (practical/manual and service/clerical).

Moreover, the Scheffe test was used to make pair wise comparisons.

All differences were tested for statistical significance at .05 levels.

CHAPTER FOUR

RESULTS AND DISUSSION

4.1. Results

4.1.1. The Influence of Sex and Parents' Educational Background on gender role perception

Response given by the participants to the instrument used to gather data on gender role perception were analyzed for possible relationships with the independent variables. Gender role perception measure used to find out the extent of participants attitude to what is traditionally referred as "male" or "female" activities or behavior. The means and standard deviations of this measure based on sex and parents' educational background are presented in Table 3.

The values indicated in the table below describe the distribution of the participants into the different classification levels of each independent variable based on their response on gender role perception measure.

TABLE 3

Number of cases, means and standard deviations in gender role perception of participants in different categories of the independent variables

Variables	Classification	N	Gender Role Perception	
			Mean	SD
Sex	Male	159	134.77	33.37
	Female	150	135.92	30.19
	Total	309	135.33	31.78
Fathers' Educational Background	No formal Education	126	151.92	28.36
	Primary Education	95	127.65	29.17
	Secondary Education	53	125.38	29.33
	College/University Education	35	111.49	24.43
	Total	309	135.33	31.78
Mothers' Educational Background	No formal education	165	147.66	30.35
	Primary Education	76	125.95	27.70
	Secondary Education	52	115.02	26.13
	College/ University Education	16	118.69	25.79
	Total	309	135.33	31.78

To examine whether trainees attitude on gender roles show any developmental variation across sex, independent sample t-test was computed.

TABLE 4

A t- test in Gender Role Perception score between males and females.

Sex	N	Mean	SD	t_{cal}	t_{cr}	P-value
Male	159	3.3692	.83429	-.318	1.960	P>.05
Female	150	3.3980	.75238			

An independent t-test showed that the difference between males and females in gender role perception was non significant (t (307) =-.318, P>.05). There was a slight mean difference between males and females that is females score little bit higher than males, but there was no statistically significant difference between males and females on gender role perception.

In order to examine the influence of parents' educational status on trainees' gender role perception, trainees were grouped into four categories based on their parents' levels of schooling. The groups were no formal education, primary education, secondary education, college/university education. The results of the analysis are presented in table 5 below.

TABLE 5. ANOVA summaries

Source of Variation	SS	df	MS	F
a) FEB on GRP				
Between Groups	40.894	3	13.631	27.087*
Within Groups	153.490	305	.503	
Total	194.384	308		
b) MEB on GRP				
Between Groups	36.038	3	12.013	23.138*
within Groups	158.346	305	.519	
Total	194.384	308		

*P<.05

A one-way analysis of variance was computed to see whether the groups significantly differ in their gender role perception scores. The results of the analysis in relation to fathers' education are given in table 3(a).As can be seen from this table the difference between group was statistically significant, F(3,305)=27.087,p<.001,indicating that fathers' level of schooling lays influence on gender role perception of trainees. Furthermore, the examination of group means using Scheffee's: post-hoc test uncovered the significance mean difference between some groups (p<.05),see appendix

C. Accordingly trainees whose fathers with no formal education tend to be more traditional in their gender role outlook than those trainees with fathers of primary, secondary or college/university education. This means that trainees with fathers of no formal education (M=151.92) showed higher gender role perception (traditional attitude) than trainees with fathers of primary education (M=127.65), secondary education (M=125.38), and collage/university education (M=111.49). Similarly, trainees with fathers of primary education (M=127.65) showed higher gender role perception score (traditional attitude) than trainees with farther of college/ university education (M=111.49). On the other hand the mean difference in gender role perception score of trainees with fathers with primary and secondary education; secondary education and collage/university education was not significant(P>.05).

A similar analysis for mothers' educational background as presented in Table 3(b) revealed a significant group effect, F(3,305)=23.138,p<.001, indicating that trainees' gender role perception differs according to mother's educational level. Moreover, the Scheffee's pair wise comparison test revealed that the differences in groups of no formal education and primary education, no formal education and secondary education, no formal education and college / university education were statistically signification(P<.05). The other comparisons were not found to be significant (P>.05).This means that trainees with mother of no formal education (M=147.66) showed high gender role perception score (traditional attitude) than trainees with mothers of primary education (M=125.95), secondary education (M= 115.02) and college/ university education (M=118.69).

4.1.2. The Influence of Sex, Parents' Educational Background and Gender Role Perception on Vocational Choice

Response given by the participants to the instrument used to gather data on their vocational choice were analyzed for possible relationships with the

independent variables. Vocational choice has two subscales: Vocational Choice Practical Manual and Vocational Choice Service Clerical. The means and standard deviations are presented in table 6.

TABLE 6

Number of cases, means and standard deviations in vocational choice practical manual (VCPM) and vocational choice service clerical (VCSC) of Participants in different categories of the independent variables.

Variables	Classification	N	VCPM		VCSC	
			Mean	SD	Mean	SD
Sex	Male	159	39.36	5.45	22.21	7.23
	Female	150	22.46	6.05	38.97	7.61
	Total	309	31.16	10.23	30.34	11.19
Fathers' Educational Background	Noformal education	126	30.02	11.03	31.45	13.03
	Primary Education	95	32.46	10.11	29.78	9.6
	Secondary Education	53	30.94	9.57	29.75	10.21
	College/university education	35	32.03	8.19	28.77	9.27
	Total	309	31.16	10.23	30.34	11.19
Mothers' Educational Background	Noformal education	165	31.25	11.04	30.56	12.65
	Primary Education	76	30.82	9.72	31.21	9.26
	Secondary Education	52	31.62	8.66	29.31	8.75
	College/University education	16	30.31	9.26	27.38	10.63
	Total	309	31.16	10.23	30.34	11.19
Gender Role perception	Traditional	192	31.01	11.14	30.80	12.87
	Modern/Egalitarian	117	31.41	8.56	29.59	7.67
	Total	309	31.16	10.23	30.34	11.19

To examine whether participants interest either in practical/manual or service/clerical vocations show any sex difference independent sample t-test was computed.

TABLE 7. A t-tests in VCPM and VCSC scores between males and females.

	Sex	N	Mean	SD	t_{cal}	t_{cr}	P-value
VCPM	Male	159	3.9365	.54546	25. 834	1.960	P<.05
	Female	150	2.2460	.60453			
VCSC	Male	159	2.2208	.72252	-19.864	1.960	P<.05
	Female	150	3.8967	.76056			

Since the computed t-value exceeds the table value, it implies that there is a statistically significant difference in both VCPM and VCSC between males and females.

The analysis on VCPM revealed that women were less masculine or have less interest in practical and manual vocations (M = 22.46, SD= 6.05) than men (M =39.36,SD= 5.45), t (307)=25.834,p<.05.

Sex difference in the VCSC was also examined using t-test. The analysis revealed that women were highly feminine or have high interest in service and clerical vocations (M = 38.97, SD=7.61) than men (M =22.21, SD= 7.23), t (307) =-19.864, p<.05.

To examine the influence of parents' educational background on trainees choice of either practical/manual or service/clerical vocations; trainees were grouped based on their parents' educational level. The groups were no formal education, primary education, secondary education and college/ university education. After the groups were formed a one-way analysis of

variance was computed for each parent. The results of the analysis are presented in table 8.

TABLE 8. ANOVA Summaries

Source of variation	SS	df	MS	F
a) FEB on VCPM				
Between Groups	3.529	3	1.176	1.126
Within Groups	318.504	305	1.044	
Total	322.032	308		
b) MEB on VCPM				
Between Groups	.328	3	.109	.104
Within Groups	321.705	305	1.055	
Total	322.032	308		
c) FEB on VCSC				
Between Groups	2.901	3	.967	.771
Within Groups	382.556	305	1.254	
Total	385.456	308		
d) MEB on VCSC				
Between Groups	2.615	3	.872	.694
Within Groups	382.842	305	1.255	
Total	385.456	308		

As table 8 above shows, there is no statistically significant group difference in either of the parents educational level ($p>.05$). This implies trainees from parents having different educational background did not differ in their choice of either practical/manual or service/clerical vocations.

In the previous analysis, it was demonstrated that vocational choice varies across sex. Since gender role conceptions are rooted on sex, they have an implication on the difference of vocational choice across sex. This is further confirmed by the following two-way analysis of variance. To see the main and interaction effect of sex and gender role perception on vocational choice, a 2x2 design analysis of variance was conducted. In this analysis sex and gender role perception (GRP) were arranged as independent variables while vocational choice (practical/manual or service/ clerical) as dependent variable. Table 9 and 10 presents a two -way analysis of variance on vocational choice practical manual (VCPM) and vocational choice service clerical (VCSC) respectively.

TABLE 9. ANOVA summary

Source of variation	SS	df	MS	F
Sex	179.668	1	179.668	645.226*
GRPc	.025	1	.025	.088
Sex * GRPc	16.531	1	16.531	59.368*
Within group(Error)	84.930	305	.278	
Total	3321.980	308		

*P<.05

A two-way analysis of variance as demonstrated in table 9 above showed a significant main effect for only sex [$F(1,305)=645.226$, $p<.05$, partial $\eta^2=.679$]and interaction effect for only between sex and gender role perception [$F(1,305)=59.368$, $p<.05$, partial $\eta^2=.163$].The other main and interaction effects were not significant. The result demonstrates sex and the combination of sex with gender role perception influence trainees' choice of practical/ manual vocations. The two factors accounted for 73.6% of the variance in vocational choice (VCPM).

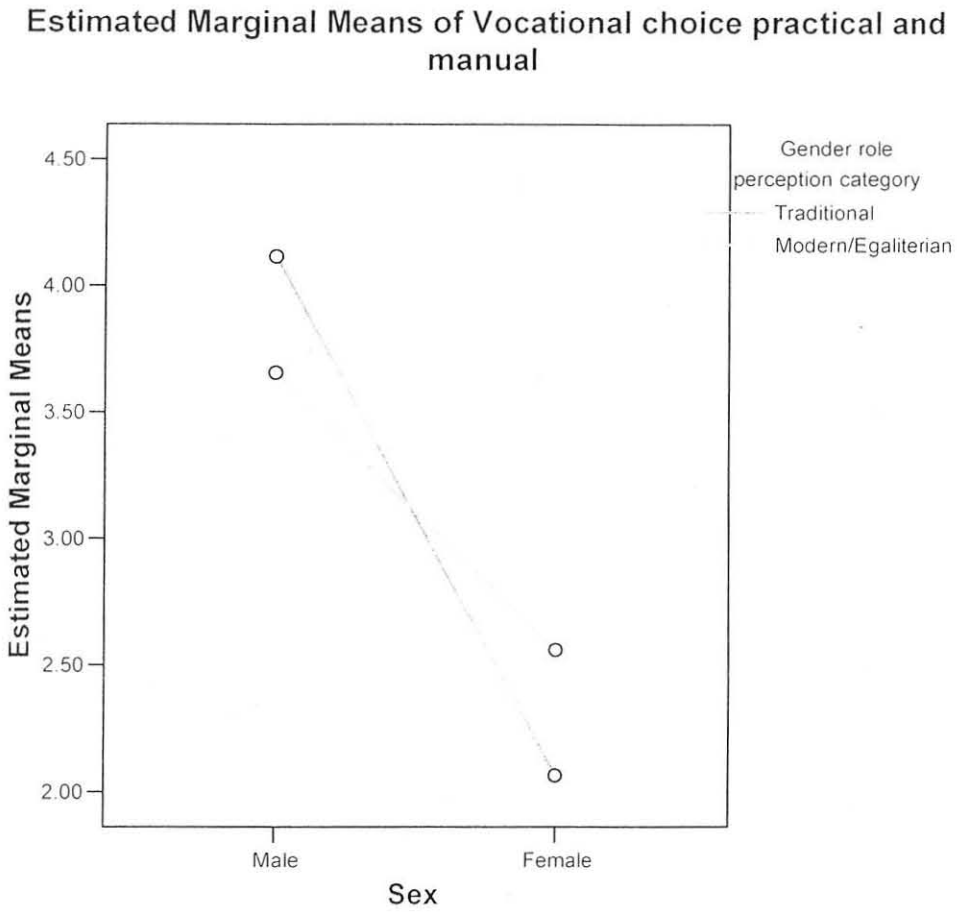

Figure1. Interaction plot on VCPM

TABLE 10. ANOVA Summary

Source of variation	SS	df	MS	F
Sex	162.175	1	162.175	382.314*
GRPc	.877	1	.877	2.069
Sex * GRPc	38.827	1	38.827	91.532*
Within group(Error)	129.379	305	.424	
Total	3230.420	308		

* p<.05

A two-way analysis of variance as demonstrated above in table 10 revealed a significant main effect for sex [F (1,305) =382.314, p<.05, partial η^2 = .556]. The significant interaction effect were between sex and gender role perception [F (1,305) = 91.532, p<.05, partial η^2 = .231]. The other main and interaction effects were not significant. Totally 66.4% of the variance in vocational choice (VCSC) was accounted for by trainees' sex and gender role perception.

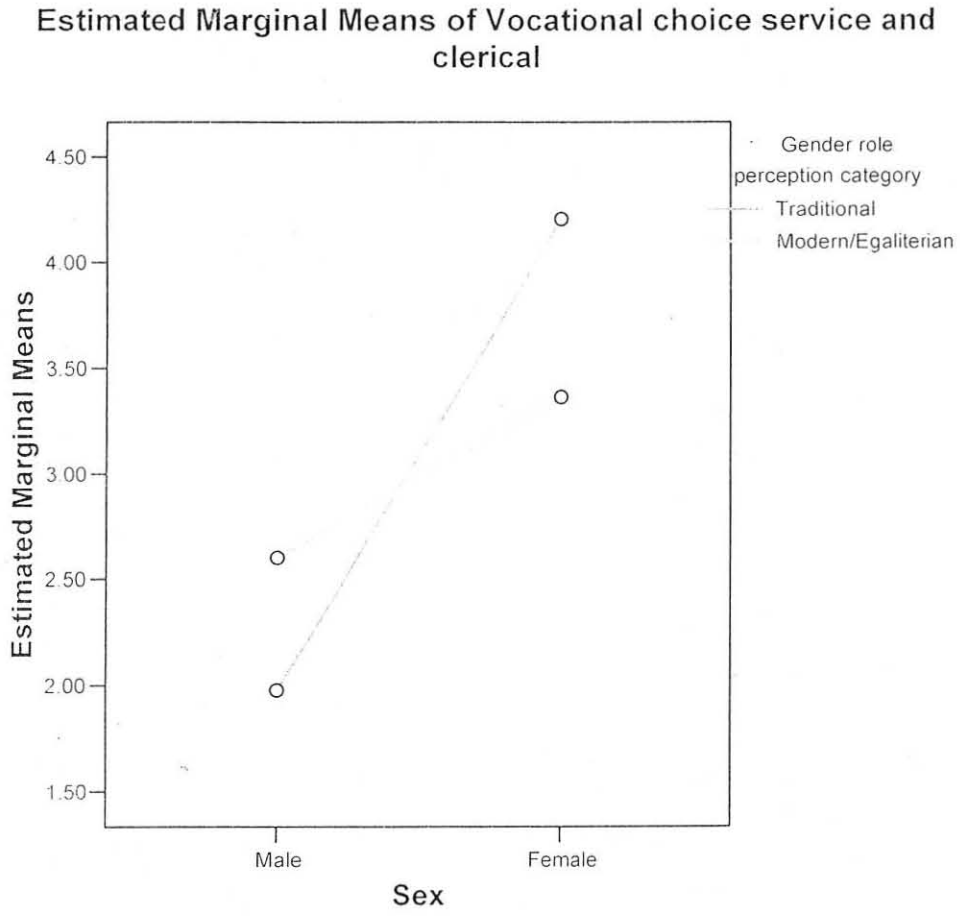

Figure2. Interaction plot on VCSC

4.2. Discussion

4.2.1. The influence of Sex and Parents' Educational Background on Gender Role Perception.

An independent t-test and one-way ANOVA revealed a significant influence of parents' education background on the development of gender role perception. Significant sex difference on gender role perception was not found. These effects are discussed in the following sections.

4.2.1.1. Sex and Gender Role Perception

An independent t-test on gender role perception between males and females revealed no significant difference. Both sexes displayed a traditional gender role attitude. Traditional gender role outlook is still highly manifested in Ethiopian society. So it is not unexpected to see a similar gender role attitude between males and females. In Ethiopia gender appropriate role is still highly expected from both males and females. This might led children of both sexes to acquire traditional gender role perception.

This result is consistent with the previous findings (Edelbrock and Sugawara, 1978), which identified that with the increase of age boys become more masculine and girls become more feminine. It is because children continue acquired traditional gender role attitudes from family, peers and the society.

The present finding is not inline with the findings of other researchers. For instance Baber and Tucker (2006), Lewis (n.d), Tesfaye (1997), TU and Chang (2000) and Zhang (2006) identified sex difference in gender role perception. They further noted that men demonstrated strict traditional gender role attitude compared to women. Men tend to support the traditional division of labor while women show flexible attitude towards gender roles. Likewise, Hetherington and Parke (1993) stated that girls tend

to conform less strictly to traditional gender role attitude than do boys. One possible reason for girls' reluctant attitude may be the pressure of parents, teachers and peers towards prestigious and more valued "masculine" occupations. On the other hand males are expected to go inline with their masculine role.

4.2.1.2. Parents' Educational Background and Gender Role Perception

Results of the present study indicate the trainees' perception of gender roles varies with the variation of their parents' education levels. That is, trainees with parents of higher education levels tend to display fewer level of traditional gender role attitude. Exposure and education might change the traditional attitude of parents and this in turn enables them to display non sexist activities. Educated parents become role models for their children by performing cross gender activities. For instance performance of house hold tasks (cleaning, cooking, etc.) by the father led to the development of egalitarian attitude of children. Educated parents are also tolerant to cross sex behaviors that encourage children to acquire fair gender role attitude.

The present result further supports the findings reported by kulick (2002), who reported that parents' education significantly affected children gender role attitude. However, this finding is not in line with Baber and Tucker (2006), who identified that parents' education was not related to gender role understanding.

When the education of the fathers and mothers seen separately, trainees with fathers of no formal education demonstrated higher traditional gender role attitude than trainees with fathers of primary, secondary and college/ university educational backgrounds. Generally with the increase of formal schooling of fathers, there is a decrease in traditional gender role perception on the part of children. It demonstrates that fathers may exhibit flexible

gender roles at home with the increase of their education that in turn influences their children attitude.

Likewise, trainees with mothers of College /University educational background exhibited lower traditional attitude regarding gender role. So with the increase of mother education, trainees tend to show more liberal gender role attitude.

This result confirms the findings of previous researchers Bach et al. (1985) and Tesfaye (1996, 1997), who demonstrated that maternal education is important in the development of egalitarian gender role perception for children. Supporting the position of these authors Antill, Cunningham and Cotton (2003) noted that children's gender role attitude were associated with both parents' education. However, contrary to this Zhang (2006) revealed the absence of relationship between parents' education and the development of egalitarian gender role attitude.

4.2.2. The Influence of Sex, Parents' Educational Background and Gender Role Perception on Vocational Choice.

A consecutive analysis of t-test, one-way ANOVA and two-way ANOVA revealed a significant sex main effect and sex and gender role perception interaction effect on vocational choice. However, parents' educational background did not bring any significant difference on vocational choice. These effects are discussed in the following sections.

4.2.2.1. Sex and Vocational Choice

Results of an independent t-test clearly indicate the presence of a consistent difference between males and females in their vocational choice. Male displayed high interest in practical and manual vocations than females; and females displayed high interest in service and clerical vocations than males.

This demonstrates males' inclination towards "masculine" vocations and females preference of "feminine" vocations. A two-way ANOVA was also revealed a significant effect of sex on vocational choice practical/manual or service/ clerical vocations.

The mean score further demonstrated that, males showed high interest in practical/manual vocations than did girls for service/clerical vocations. This implies males' rigid attitude in selecting vocations compared to females. This may be resulted from the differential treatment provided by parents, teachers, peer and other socializing agents. Males are always expected to demonstrate masculine behavior. Deviation from the traditional norm might bring insult for males, but females sometimes encouraged for doing masculine activities.

The present finding is consistent with the findings of Grip and Willems (2003), who reported that girls are not interested to choose technical studies even if they have high grades in math and science. Several researchers were also identified a clear sex difference in vocational choice with an extreme position of males in favor of "masculine" vocations (Correll, 2001; Colley et al., 2003; Heinz, Kelle, Witzel and Zinn, 1998; Shapard and Hess, 1974 and Stipek and Gralinski, 1991). The present result further supports the findings reported by Gillborn(1990),who identified a clear sex difference in vocational choice. Woodwork and metal work and other technical courses were dominated by boys, while typing, housecraft, child care and textiles/dressmaking were dominated by girls.

4.2.2.2. Parents' Educational Background and Vocational Choice

As the results show, parents (either mother or father) education level did not affect trainees' vocational choice. In other words, trainees from parents of different educational background did not show any variation in their vocational choice. The result implies that even educated parents wanted

their children to continue on vocations that are traditionally labeled as masculine and feminine for their sons and daughters respectively. Strong traditional attitude of the society regarding gender roles might hinder the effort of educated parents.

The present result further supports the findings reported by Correll (2001) and Kulick(2002), who noted the absence of any effect of parents' education on sex typing of occupations. The present finding is also in agreement with the findings of the previous researchers who identified that even educated parents wanted their daughters to continue on "feminine" Vocations (Tangi cited in Tesfaye, 1996; Ruble cited in Hetherington and Parke, 1993).

However, this finding is in contrary to Hall and Barger (1967), who stated the importance of educated parents. Educated parents provide opportunity for discussion with their children regarding education and occupational matters. Parental education had a significant effect on educational plans and career aspirations (DeRidder, and Mortimer et al. cited in Lankard, 1995). Supporting the position of these authors Chombe (2005), Ehrhardt, Ince and Bahlburg (1981) and Worku (1997) identified the influence of parents' education on vocational choice. That is, better educated parents encouraged children to follow vocations other than the traditional one.

4.2.2.3. Gender Role Perception and Vocational Choice

The result of the present study showed that trainees' gender role perception lay an influence on their vocational choice. In the choice of practical and manual vocations the influence of gender role perception is significant when it is combined with sex. The interaction between sex and gender role perception accounted for 16.3% of the total variability in vocational choice practical manual. There is also a significant interaction effect between sex and gender role perception on the choice of service and clerical vocations. The interaction between sex and gender role perception accounted for 23.1%

of the total variability in vocational choice of service clerical. Both sexes had traditional gender role attitude that led them to choose traditional roles. That is males with traditional attitude inclined towards practical/manual vocations whereas females with traditional attitude inclined towards service clerical vocations.

The present finding is in agreement with Hensley (n.d), who identified that traditional gender role attitude is related to traditional job choice in males. Tesfaye (1996) also demonstrated the influence of traditional gender roles to women's vocational interests. Other studies were also revealed the influence of gender role perception on vocational choice. Boys and girls were found to choose vocations based on their sex roles (Gttfredson cited in Dodson and Borders, 2006; Opara, 2006). Men in traditional male occupations have more traditional gender role attitude and men in non traditional occupations have reported lower masculinity (Lemaku cited in Dodson and Borders, 2006). In addition the present finding supports the previous finding that women with more egalitarian gender role attitude were found to choose less traditional occupation and more likely to prefer male dominated occupations (Feather and Said, O'Brien and Fassinger, Rea, cited in Hensley, n.d). Supporting the position of these authors, Gillborn(1990) stated that gender stereotyping of roles influence educational and occupational aspirations of the youth.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Summary

The main objectives of the study are:

- To identify the difference of gender role perception between males and females.
- To explore the variation of vocational choice between males and females
- To examine the influence of parents' educational background on trainees gender role perception and vocational choice.
- To investigate the influence of trainees gender role perception on their vocational choice.

In light of the above objectives, the following basic questions have been raised.

- Is there a significant gender role perception difference between males and females?
- Do trainees from different parent's educational background show significant difference in gender role perception?
- Is there a significant variation between males' and females' vocational choice?
- Do trainees from parents that have different educational background show significant difference in their vocational choice?
- In there any influence of gender role perception on vocational choice?

In order to seek answers for the above questions, a field research was organized. The site selected was North Shoa Zone of the Amhara Region.

Two TVET colleges were purposefully selected for the purpose. Finally, participants were selected at random.

The basic instrument used for the data collection was a questionnaire. The questionnaire consisted of three parts: the background part, gender role perception measure and vocational choice measure. Vocational choice measure consisted of two subscales: vocational choice practical manual and vocational choice service clerical. The background part consisted of items designed to gather information about trainees' sex, age, college, department and their parents' educational background. Gender role perception measure consisted of items that assess the attitude of participants towards gender roles. The vocational choice measure consisted of items assessing participants' degree of interest to different vocations.

After the data were collected the analysis was conducted using the following statistical procedures.

- An independent t-test was used to see sex difference in gender role perception and vocational choice.
- One-way ANOVA procedures to assess whether gender role perception or vocational choice varies due to variation of parents' educational background.
- Two-way ANOVA procedures to see whether vocational choice (either practical/manual or service/clerical) varies with sex, and gender role perception.

Besides this, the scheffe test was used to identify the group that has contributed for the total variation.

Ultimately, the following results have been obtained.

- An independent t-test revealed the absence of a significant difference between males and females in their gender role perception. Both males and females displayed traditional gender role attitude. In a

similar analysis it was found that there was a significant difference between males and females in their vocational choice. Males showed high interest in practical/manual vocations than females. In the other hand females showed high interest in service/clerical vocations than males.

- One-way ANOVA procedures indicated that trainees from different parent's educational level differed in their gender role perception but not in their vocational choice. That is, trainees with parents of higher level of schooling exhibited less traditional attitude regarding gender roles than trainees with parents of lower level of schooling. Here, scheffee's test specifically showed that trainees whose fathers with no formal education tend to be more traditional in their gender role outlook than those trainees with fathers of primary, secondary or college/university education. Similarly, trainees with mothers of no formal education showed high gender role perception score (traditional attitude) than trainees with mothers of primary, secondary and college/University education.
- Two-way ANOVA procedures demonstrated a significant main effect of sex on vocational choice both practical/manual and service/clerical. A significant interaction effect of sex and gender role perception on vocational choice (practical/manual and service/clerical) was also found. That is, males with traditional gender role perception showed high preference in practical and manual vocations whereas females with traditional attitude showed high preference in service and clerical vocations.

5.2. Conclusion

Based on the findings of this study, one may arrive at the following conclusions.

- Trainees seem to acquire similar gender role perception irrespective of sex. Males and females displayed traditional gender role attitude.
- Trainees' gender role perception seems to be affected by their parents' educational level. Trainees with parents of no formal education tend to demonstrate higher traditional gender role attitude than trainees with parents of primary, secondary and college/university educational level.
- Trainees' vocational choice varies across sex. Males showed high interest in practical and manual vocations than females. However, females showed high interest in service and clerical vocations than males.
- Trainees' vocational choice was not related to parents' educational background.
- Trainees' level of gender role perception seems to affect their vocational choice. Particularly the combination sex and gender role perception brought a significant effect on vocational choice. Males with a traditional attitude displayed high interest for practical and manual vocations and females with a traditional attitude displayed high interest for service and clerical vocations.

5.3. Recommendations

Based in the present study, the following recommendations are forwarded.

- Parents are crucial in children's life. Parental support for girls should be promoted to develop egalitarian attitude that is important for future occupational role.
- Special efforts have to be made to enhance women's participation in technical fields starting from primary school level. In this regard early childhood educators can do much to improve the situation by encouraging all children to engage in all activities.

- Teacher attitude, behavior and teaching practice are the most important implications of trainees' enrollment and performance in trainings. Teachers should encourage both male and female trainees to join in non traditional vocations. Children model much of their parents and teachers activities. Male and female teachers should be a model for trainees by sharing all aspects of the educational experience equally.
- The MOE in collaboration with the regional TVET agency and TVET colleges/institutions have to design a system which helps to make a balance of the number of male and female trainees to be trained in each field.
- The curriculum review process in TVET Colleges and institutions should be strengthened to support the process of eliminating gender stereotypes of vocations.
- The technical level of the training offered in traditionally female occupations must be improved to enhance female productivity and to increase males' involvement.
- Courses in traditionally male-dominated occupations (such as plumbing, welding, electrical installation, carpentry, etc.) should be revised, or pre-training courses should be designed to ensure that women also have access to the courses.
- Administrative and training staff and male and female trainees should receive gender awareness training. A promotional campaign is important to present the economic opportunities available to women and to resist traditional gender role attitudes.
- Many students make unwise vocational choices because of lack of information as well as due to faulty information. To improve this situation vocational information should be disseminated through seminars, conferences, workshops and other forums. The awareness program can also be conducted through radio, television, news papers, posters and pamphlets.

- Vocational guidance and counseling service should be strengthened to help trainees in choosing non traditional vocations. Counseling should also provide information for trainees regarding the nature of courses and employment opportunity. Furthermore, the vocational guidance service should be given at the high school level. This helps students to acquire relevant information regarding the training programs before they join the formal training colleges or institutions.
- Finally, to get broader understanding on gender role perception and vocational choice, further studies on this issue need to be done by including other factors like socio economic status, religion, age, work values, science achievement, parents' gender role attitude and the influence of peers and the media.

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APPENDICES

Appendix A

Addis Ababa University

School of Graduate Studies

Department of Psychology

Questionnaire

This Questionnaire is prepared to collect data that will use for writing my Master's Thesis as a partial fulfillment of the program of graduate studies in Addis Ababa University. This questionnaire has three parts. And you are requested to provide your responses according to the directions of each part. Part I contains items related to trainees and family background information. Part II and III contain items that are designed to measure trainee's gender role perception and vocational choice respectively. The study is aimed at investigating some of the factors behind the vocational choice of trainees. Thus, you are kindly requested to complete the questionnaire carefully and honestly for your responses are the only way to reach reliable research results. Please note that your response should be based on actual feelings and reaction rather than depending on those conceptions that you think that should or should not be.

Note. Your response will be kept confidential. You are not expected to write your name.

Thank you!

Part I- Background Data

Direction: Please answer the following questions by providing the appropriate response or by putting a tick "✓" where needed.

1. Sex male ☐ female ☐
2. Your age_____
3. college/Institution D/Berhan ☐ Ataye ☐
4. Department _____
5. Father's educational background

   ☐ No formal education

   ☐ Primary education

   ☐ Secondary education

   ☐ College/University education

6. Mother's Education background

   ☐ No formal education

   ☐ Primary education

   ☐ Secondary education

   ☐ College/University education

Part II- For each of the statements presented in the table five options are given in front of them. Put on "✓" under one of the options to indicate your level of agreement. The numbers indicate:

1= Strongly disagree

2= Disagree

3= Undecided

4= Agree

5= Strongly agree

No	Statements	1	2	3	4	5
1	Women and men should be respected in different ways.					
2	Men and women are equal in ability and intelligence.*					
3	Women can wear men's clothings. *					
4	Men can wear women's clothings. *					
5	Boys and girls should be encouraged to do the same things.*					
6	Boys should be encouraged to do things that boys usually do and girls should be encouraged to do things that girls usually do.					
7	Parents should spend more effort teaching girls to take care of their appearance than they spend teaching boys about this.					
8	There are occasions on which women and men should eat separately.					
9	Men should not think badly of women who ask them for a date.*					
10	Virginity is more desirable in women than in men.					
11	In relationship between men and women, disloyalty should be censured more for women than for men.					
12	Men are more capable than women of killing the enemy in war.					
13	Men are better at making decisions about money.					
14	Men are naturally better religious leaders than women.					
15	Men are more rational than women.					
16	Women are better suited than men to child care.					
17	The responsibility of taking care of infants should be equally divided between parents, irrespective of their gender.*					
18	Men are better suited than women to work outside of the house.					
19	The responsibilities of a mother are the same as the responsibilities of a father to their families.*					
20	Fathers are capable of carrying out the duties of the mother.*					

21	Mothers are capable of carrying out the duties of the father.*					
22	The wife should have primary responsibility for child care.					
23	Husbands and wives should share equally in house work such as cooking, washing dishes, and house cleaning.*					
24	The husband and wife should have equal responsibility to contribute to the family income by working.*					
25	The husband should have primary responsibility for contributing to the family income by working.					
26	Women should be allowed to have maternity leave without fear of losing their job while they are away.*					
27	Men should be allowed to have paternity leave without fear of losing their job while they are away.*					
28	Marriage partners should be about equally well educated.*					
29	Husbands should be better educated than their wives.					
30	Boys are naturally better at math and science than girls.					
31	Girls are naturally better to English, social studies and languages than boys.					
32	Boys are naturally better at most sports.					
33	Girls are naturally better at learning to use typewriters.					
34	Men are better suited for higher education than women.					
35	More women should go into nursing.					
36	More men should be truck drivers.					
37	Medicine is a more appropriate career for women than engineering.					
38	Human beings evolved so that men have authority in the family.					
39	There should be special quotas for women in government jobs.*					
40	Human beings evolved for women to do the work at home and men to do the work outside of the home.					

* Indicates reverse scoring item

Part III- Vocations in different fields are listed in the following table. Please put a tick "✓" in front of each vocation according to your interest level presented as:

1= very uninterested

2= uninterested

3= undecided

4= interested

5= very interested

No	Vocations	1	2	3	4	5
1	Building Construction					
2	Secretarial work					
3	Break production					
4	Accountant					
5	Plumbing					
6	Waitress					
7	Wood work					
8	Purchaser					
9	Auto-technician					
10	Hair dressing					
11	Electrician					
12	Beautification					
13	Restore an old car					
14	Food preparation					
15	Replace a broken light switch					
16	Dress making					
17	Road construction					
18	Nurse					
19	Metal work					
20	Hotel management					

- Items in odd numbers represent practical and manual works and traditionally referred as masculine whereas in even numbers represent service and clerical works and traditionally referred as feminine fields.

Appendix B

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የድህረ ምረቃ ትምህርት ቤት

የሳይኮሎጂ ት/ክፍል

መጠይቅ

ይህ መጠይቅ የተዘጋጀው በአዲስ አበባ ዩኒቨርስቲ የሁለተኛ ዲግሪ ማሟያ የጥናት ወረቀት ለመስራት የሚያግዘኝን መረጃ ለመሰብሰብ ነው። መጠይቁ ሦስት ክፍሎች ያሉት ሲሆን እያንዳንዱ ክፍል በተሰጠው ትዕዛዝ መሰረት መልስ ይስጡ። ክፍል አንድ ሰልጣኞችንና ቤተሰብን የተመለከቱ መረጃዎች የሚጠይቅ ክፍል ነው። ክፍል ሁለት ወንዶችና ሴቶች ሊያከናውኗቸው ስለሚገቡ ተግባራትና ስለሚጠበቅባቸው ባህሪያት ሰልጣኞች ያላቸውን አመለካከት ለመመዘን የሚያግዙ ጥያቄዎች ይዟል። ክፍል ሦስት የሰልጣኞችን የመሥ ምርጫ ወይም የሥልጠና ፍላጎት ለመመዘን የሚያግዙ ጥያቄችን የያዘ ክፍል ነው። የጥናቱ ዋና ዓላማ በቴ/መ/ት/ስ ተቋማት ውስጥ በሰልጣኞች የመሥ ወይም የሥልጠና ዘርፍ ምርጫ ላይ ተዕዕኖ ያላቸውን ነገሮች ለማወቅ ነው። ስለዚህ መጠይቁን በጥንቃቄና በቅንነት እንድትሞሉ እየጠየቅሁ፤ የእናንተ ምላሽ ተዓማኒነት ያለው የጥናት ውጤት ለማግኘት ብቸኛው መንገድ መሆኑን አስታውሳለሁ። መልሶቻችሁ ከእናንተ እውነተኛ ስሜት ላይ የተመሰረተ እንጂ መሆን አለበት መይም የለበትም በሚሉ አመለካከቶች ላይ የተመሰረተ መሆን የለበትም። በመጨረሻም በመጠይቁ ላይ ስማችሁን መፃፍ እንደማይጠበቅባችሁ እገልፃለሁ።

አመሰግናለሁ!!

ፈንታሁን ፀሐይ

ክፍል አንድ፡ አጠቃላይ መረጃ

ትዕዛዝ፡ - የሚከተሉትን ጥያቄዎች በተሰጠው ቦታ ላይ ተገቢውን ምላሽ በመስጠት ወይም የጭረት (✓) ምልክት በማድረግ መልሽ/ስ።

1. ፆታ፡ ☐ ወንድ ☐ ሴት
2. ዕድሜ ----------
3. ኮሌጅ/ ተቋም ☐ ደ/ብርሃን ☐ አጣዬ
4. የትምህርት ክፍል(የስልጠና ዘርፍ) ----------
5. የአባት የትምህርት ደረጃ
   ☐ ምንምመደበኛ ትምህርትአልተማረም
   ☐ የመጀመሪያ ደረጃ ትምህርት
   ☐ የሁለተኛ ደረጃ ትምህርት
   ☐ የኮሌጅ /ዩኒቨርስቲ ትምህርት
6. የእናት የትምህርት ደረጃ
   ☐ ምንምመደበኛ ትምህርት አልተማረችም
   ☐ የሁለተኛ ደረጃ ትምህርት
   ☐ የመጀመሪያ ደረጃ ትምህርት
   ☐ የኮሌጅ /ዩኒቨርስቲ ትምህርት

ክፍል ሁለት፡- ከዚህ በታች በሰንጠረዡ ውስጥ ካሉት ዓረፍተ ነገሮች ፊት ለፊት አምስት አማራጮች ተቀምጠዋል፡፡ የስምምነት ደረጃህን/ሽን ለመግለፅ ከተቀመጡት ምርጫዎች በአንዱ ስር የ«✓» ምልክት አድርግ/ጊ፡፡ ቁጥሮች የሚያለክቱት፡

1= በጣም አልስማማም ፣

2= አልስማማም ፣

3= በመጠኑ እስማማለሁ፣

4= እስማማለሁ፣

5= በጣም እስማማለሁ ነው፡፡

ተ.ቁ	ዓ ረ ፍ ተ ነ ገ ር	1	2	3	4	5
1	ወንዶችና ሴቶች በተለየ መንገድ መታየት አለባቸው።					
2	ወንዶችና ሴቶች በችሎታና በጉብዝና እኩል ናቸው ።					
3	ሴቶች የወንዶችን ልብስ ሊለብሱ ይችላሉ ።					
4	ወንዶች የሴቶችን ልብስ ሊለብሱ ይችላሉ ።					
5	ወንዶችና ሴቶች እንድ ዓይነት ሥራ እንዲሰሩ መበረታታት አለባቸው።					
6	ወንዶች በአብዛኛው በተለምዶ ወንዶች የሚሰሩትን ሥራ እንዲሰሩ መበረታታት አለባቸው እንዲሁም ሴቶች በአብዛኛው በተለምዶ ሴቶች የሚሰሩትን ስራ እንዲሰሩ መበረታታት አለባቸው።					
7	ወላጆች ከወንድ ልጆቻቸው ይልቅ ለሴት ልጆቻቸው ውበታቸውን እንዴት መጠበቅ እንዳለባቸው ማስተማር ይገባቸዋል።					
8	ወንዶችና ሴቶች ለብቻቸው የሚመግቡበት ጊዜ ሊኖር ይገባል።					
9	ሴቶች የፍቅር ጥያቄ በሚያቀርቡበት ጊዜ ወንዶች እንደ ነውር ሊቆጥሩት አይገባም።					
10	ድንግልና ከወንዶች በበለጠ ከሴቶች ይጠበቃል።					
11	በወንዶችና በሴቶች መካከል ባለ ግንኙነት ውስጥ ታማኝ አለመሆንን በተመለከተ ከወንዶች ይልቅ ሴቶች ላይ ቁጥጥር ሊኖር ይገባል።					
12	ወንዶች ከሴቶች በተሻለ ጠላትን ጦር ሜዳ ላይ የመግደል ችሎታ አላቸው።					
13	ወንዶች ገንዘብን በተመለከተ ከሴቶች የተሻለ የመወሰን ችሎታ አላቸው።።					
14	ወንዶች ከሴቶች ይልቅ በተፈጥሯቸው የተሻሉ የሐይማኖት መሪዎች ናቸው።					
15	ወንዶች ከሴቶች በተሻለ ምክንያታዊ ናቸው					
16	የህፃናትን እንክብካቤ በተመለከተ ሴቶች ከወንዶች የተሻሉ ናቸው።					
17	የህፃናትን እንክብካቤ በተመለከተ ሁለቱም ወላጆች እኩል ሃላፊነት አለባቸው።					

18	ወንዶች ከቤት ውጪ ያሉ ሥራዎችን ለመስራት ከሴቶች የተሻሉ ናቸው።					
19	ቤተሰብን በተመለከተ የእናትና የአባት ሐላፊነት እኩል ነው።					
20	አባቶች የእናቶችን ተግባር ለማከናወን ይችላሉ።					
21	እናቶች የአባቶችን ተግባር ለማከናወን ይችላሉ።					
22	ሚስት የህፃናቱን እንክብካቤ በተመለከተ ዋና ሐላፊነት አለባት።					
23	ባልና ሚስት የቤት ውስጥ ሥራን ለምሳሌ ማብሰል፣ ሳህኖችን ማጠብና የቤት ዕዳትን እኩል መሥራት አለባቸው።					
24	ባልና ሚስት ለቤተሰቡ ገቢ የማስገኘት እኩል ሃላፊነት አለባቸው።					
25	ባል ሠርቶ ቤተሰቡን የመደገም የመጀመሪያ ሐላፊነት አለበት።።					
26	ሴቶች በስራ ቦታቸው በማይኖሩበት ጊዜ ሥራቸውን የማጣት ስጋት ሳይኖርባቸው የወሊድ ፈቃድ ሊያገኙ ይገባል።					
27	ወንዶች በስራ ቦታቸው ላይ በማይኖሩበት ጊዜ ስራቸውን የማጣት ስጋት ሳይኖርባቸው ሚስቶቻቸው በሚወልዱበት ጊዜ ፈቃድ ሊያገኙ ይገባል።					
28	በጋብቻ የተሳሰሩ ጥንዶች በእኩልነት ከፍተኛ ትምህረት ሊማሩ ይችላሉ።					
29	ባሎች ከሚስቶቻቸው በተሻለ የተማሩ ሊሆኑ ይገባል።					
30	ወንዶች ከሴቶች በተሻለ በሒሳብና በሳይንስ ትምህርት ላይ ጎበዞች ናቸው።					
31	ሴቶች ከወንዶች በተሻለ በሕብረተሰብ ሳይንስ ጥናት እና በቋንቋ የተሻሉ ናቸው።					
32	ወንዶች በብዙ የሥፖርት ዓይነት በተፈጥሮ የተሻሉ ናቸው።					
33	ሴቶች የፅሕፈት መሳሪያ ለመጠቀም በማጥናት በተፈጥሯቸው የተሻሉ ናቸው።					
34	ወንዶች ከሴቶች ይልቅ ለከፍተኛ ትምህርት የተመቹ ናቸው።					
35	ብዙ ሴቶች ነርስ መሆን አለባቸው።					
36	ብዙ ወንዶች የከባድ መኪና ሾፌር መሆን አለባቸው።					
37	ለሴቶች ከምህንድስና ይልቅ ሕክምና ተገቢ የሥራ ዘርፍ ነው።					

38	ሰው የተፈጠረው ወንዶች የቤታቸው አለቃ እንዲሆኑ ነው።					
39	በመንግስት ሥራዎች ውስጥ ለሴቶች የተለየ ትኩረት ተሰጥቶ በኮታ ሊመደቡ ወይም ሊቀጠሩ ይገባል።					
40	የሰው ልጅ የተፈጠረው ሴቶች የቤት ውስጥ ስራ እንዲሰሩ ሲሆን ወንዶች ደግሞ ከቤት ውጪ እንዲሰሩ ነው።					

ክፍል ሦስት ፡ የተለያዩ የሙያና የስልጠና ዘርፎች በሚከተለው ሰንጠረዥ ውስጥ ተዘርዝረዋል።። የፍላጎትህን/ሽን ደረጃ ለማመልከት ከተቀመጡት ቁጥሮች ሥር የ«✓» ምልክት አስቀምጥ/ጭ። ቁጥሮች የሚያመለክቱት:-

1= በጣም አልፈልግም ፣

2= አልፈልግም፣

3= አልወሰንኩም ፣

4= እፈልጋለሁ እና

5= በጣም እፈልጋለሁ ነው።

ተ.ቁ.	የ ሙ ያ ወ ይ ም የ ስ ል ጠ ና ዘ ር ፍ	1	2	3	4	5
1	የህንጻ ግንባታ					
2	የዕህፈት ስራ/ታይፒንግ					
3	ብሎኬት ማምረት					
4	የሒሳብ ሠራተኛ					
5	የባንክ ሥራ					
6	የሆቴል አስተናጋጅ					
7	የእንጨት ሥራ					
8	ዕቃ ግዥ					
9	መካኒክ					
10	የፀጉር ሥራ					

11	የኤሌክትሪክ ባለሙያ					
12	የውበት ስራ					
13	ያገለገለ መኪና መጠገን ወይም ማደስ					
14	የምግብ ዝግጅት					
15	የተበላሸ የኤሌክትሪክ ማብሪያና ማጥፊያ መቀየር					
16	የልብስ ስፌት					
17	የመንገድ ሥራ (ግንባታ)					
18	ካርስ					
19	የብረታ ብረት ሥራ					
20	የሆቴል አስተዳደር					

Appendix C

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Gender role perception

Scheffe

(I) Father's Educational Background	(J) Father's Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
No Formal Education	Primary Education	.60670(*)	.09639	.000	.3357	.8777
	Secondary Education	.66358(*)	.11614	.000	.3371	.9901
	College/University Education	1.01087(*)	.13555	.000	.6298	1.3919
Primary Education	No Formal Education	-.60670(*)	.09639	.000	-.8777	-.3357
	Secondary Education	.05688	.12162	.974	-.2850	.3988
	College/University Education	.40417(*)	.14027	.042	.0099	.7985
Secondary Education	No Formal Education	-.66358(*)	.11614	.000	-.9901	-.3371
	Primary Education	-.05688	.12162	.974	-.3988	.2850
	College/University Education	.34729	.15451	.170	-.0871	.7816
College/University Education	No Formal Education	-1.01087(*)	.13555	.000	-1.3919	-.6298
	Primary Education	-.40417(*)	.14027	.042	-.7985	-.0099
	Secondary Education	-.34729	.15451	.170	-.7816	.0871

* The mean difference is significant at the .05 level.

Multiple Comparisons

Dependent Variable: Gender role perception

Scheffe

(I) Mother's Educational Background	(J) Mother's Educational Background	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
No Formal Education	Primary Education	.54283(*)	.09989	.000	.2620	.8236
	Secondary Education	.81603(*)	.11459	.000	.4939	1.1382
	College/University Education	.72433(*)	.18866	.002	.1940	1.2547
Primary Education	No Formal Education	-.54283(*)	.09989	.000	-.8236	-.2620
	Secondary Education	.27320	.12967	.220	-.0913	.6377
	College/University Education	.18150	.19819	.840	-.3756	.7386
Secondary Education	No Formal Education	-.81603(*)	.11459	.000	-1.1382	-.4939
	Primary Education	-.27320	.12967	.220	-.6377	.0913
	College/University Education	-.09171	.20599	.978	-.6708	.4874
College/University Education	No Formal Education	-.72433(*)	.18866	.002	-1.2547	-.1940
	Primary Education	-.18150	.19819	.840	-.7386	.3756
	Secondary Education	.09171	.20599	.978	-.4874	.6708

* The mean difference is significant at the .05 level.

Appendix D

Univariate Analysis of Variance

Descriptive Statistics

Dependent Variable: Vocational choice practical and manual

Sex	Gender role perception category	Mean	Std. Deviation	N
Male	Traditional	4.1155	.42582	97
	Modern/Egaliterian	3.6565	.59551	62
	Total	3.9365	.54546	159
Female	Traditional	2.0642	.43268	95
	Modern/Egaliterian	2.5600	.72383	55
	Total	2.2460	.60453	150
Total	Traditional	3.1005	1.11381	192
	Modern/Egaliterian	3.1410	.85583	117
	Total	3.1159	1.02253	309

Tests of Between-Subjects Effects

Dependent Variable: Vocational choice practical and manual

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	237.103(a)	3	79.034	283.829	.000	.736
Intercept	2786.471	1	2786.471	10006.807	.000	.970
Sex	179.668	1	179.668	645.226	.000	.679
GRPc	.025	1	.025	.088	.767	.000
Sex * GRPc	16.531	1	16.531	59.368	.000	.163
Error	84.930	305	.278			
Total	3321.980	309				
Corrected Total	322.032	308				

a R Squared = .736 (Adjusted R Squared = .734)

Descriptive Statistics

Dependent Variable: Vocational choice service and clerical

Sex	Gender role perception category	Mean	Std. Deviation	N
Male	Traditional	1.9784	.68727	97
	Modern/Egaliterian	2.6000	.60760	62
	Total	2.2208	.72252	159
Female	Traditional	4.2053	.59077	95
	Modern/Egaliterian	3.3636	.72912	55
	Total	3.8967	.76056	150
Total	Traditional	3.0802	1.28659	192
	Modern/Egaliterian	2.9590	.76690	117
	Total	3.0343	1.11870	309

Tests of Between-Subjects Effects

Dependent Variable: Vocational choice service and clerical

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	256.077(a)	3	85.359	201.226	.000	.664
Intercept	2675.706	1	2675.706	6307.741	.000	.954
Sex	162.175	1	162.175	382.314	.000	.556
GRPc	.877	1	.877	2.069	.151	.007
Sex * GRPc	38.827	1	38.827	91.532	.000	.231
Error	129.379	305	.424			
Total	3230.420	309				
Corrected Total	385.456	308				

a R Squared = .664 (Adjusted R Squared = .661)

DECLARATION

I, the undersigned, declare, that this thesis is my original work, has not been presented for a degree in any other university, and that all sources of material used for the thesis have been duly acknowledged.

Name Fentahun Tsehay

Signature

Place Addis Ababa University

Date of submission June 2009