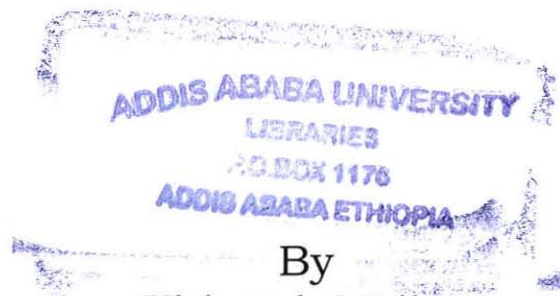
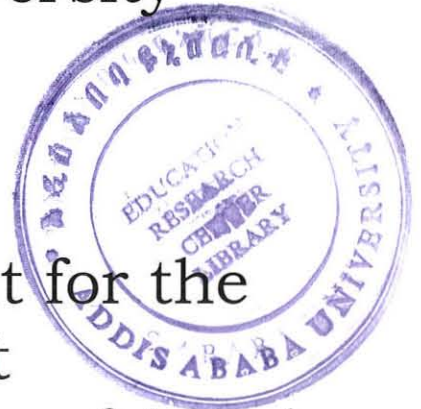


Factors Affecting Job Stress and Satisfaction of TVET Teachers in Tigray Region, Ethiopia

A Thesis Submitted to the
School of Graduate studies
Addis Ababa University

In Partial Fulfillment for the
Requirement
of the Degree of Masters of Arts in
Measurement and Evaluation



By
Yitbarek Melles
March 2007

Addis Ababa University
School of Graduate Study

Factors Affecting Job Stress and Satisfaction
of TVET Teachers in Tigray Region,
Ethiopia

By
Yitbarek Melles



Approval of Board of Examination

Fesseha Zewdie
Chairman, Department
Graduate committee

05/04/07

Date

[Signature]

signature

Desalegn Chalkisa
Advisor

05/04/07

Date

[Signature]

signature

Belong Teflew
Examiner

05.04.07

Date

[Signature]

signature

Chirpa Lemma
Examiner

05-04-07

Date

[Signature]

signature

ACKNOWLEDGMENT

I am greatly indebted to my advisor, Dr. Desalegn Chalchisa, insightful and analytical advisement in the actualization of the study. I am privileged to have him as a source of knowledge and authentic educator offering me wise feedback. My advisor's co-working approach, friendly, informal, and welcoming attitude were no less significant in completing the study.

I wish also to acknowledge Dr. Mohan Raju and Ato Abraha Asfaw who had given me time and advice throughout the thesis Work. I would also like to express my heartfelt thanks to all those who were involved in the validation procedures and teachers who filled the questionnaires of the study.

I am also grateful to my family members for enduring the many days and nights that I was not with them throughout the course work and the time of involvement in the research writing. I especially express my gratitude to my wife, Marta Fiseha, who had the patience, taking care of my children and good will to support me throughout my MA study. I am forever grateful for her. To all those significant ones including my parents who supported my educational journeys in early years, I express my gratitude and sincere appreciation.

Finally, I would miss the opportunity if I did not thank my brothers Yemane Meles, Haile Kahsay, Asrat Kahsay and colleagues Araya Fisseha and Mekonnen Fisseha , for all sources of support and insight throughout the long life span of my study and paperwork.

AKIJU

2.2.3 Job Stress and Satisfaction.....	26
CHAPTER THREE: METHODOLOGY.....	28
3.1 Subject of the Study.....	28
3.2 Measurement Scale.....	29
3.3 Procedures.....	30
3.4 Variable Designation.....	32
3.4.1 Demographic/ Background Variables.....	32
3.4.2 Teacher's Stress Variables.....	33
3.4.3 Teacher's Satisfaction Variables.....	34
3.4.4 Dependent Variables.....	34
3.5 Methods of Data Analysis	35
CHAPTER FOUR: RESULTS AND DISCUSSIONS.....	38
4.1 Results.....	38
4.1.1 Background of the Respondents.....	38
4.1.2 Relationships of Background Variables with Overall Stress and Job Satisfaction.....	39
4.1.3 Effects of Background Variables on Sub-Scales of Job Stress and Job Satisfaction.....	42
4.1.4 Comparison of Contribution of Intrinsic and extrinsic Variables on job satisfaction.....	54
4.1.5 Most Important Predictors of job Satisfaction.....	57
4.1.6 Factors Related to Job Stress; Most Important Predictors of Job Stress.....	57
4.1.7 Relationship between Job stress and job satisfaction....	59
4.2 Discussion of Results.....	60
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMANDATIONS.....	69
5.1 Summary and Conclusion.....	69
5.2 Recommendations	72
REFERENCES	77
APPENDICES.....	87

LIST OF TABLES

		Page
Table1	Samples drawn by area	29
Table2	Reliability of subscales of pilot study.....	36
Table3	Distribution of subject by their background variables.....	39
Table 4	Descriptive statistics and F-test summary table for job stress and job satisfaction by gender and qualification.....	40
Table 5	Descriptive statistics and F-test summary table for job stress and job satisfaction by age, experience, and professional area.	41
Table 6	Summary ANOVA for subscales of job stress by gender. ...	42
Table 7	Summary ANOVA for subscales of job stress by Age	43
Table 8	Summary ANOVA for subscales of job stress by qualification.	44
Table 9	Summary ANOVA for subscales of job stress by experience ...	46
Table 10	Summary ANOVA for subscales of job stress by area	47
Table 11	Summary ANOVA for subscales of job satisfaction by gender.	48
Table 12	Summary ANOVA for subscales of job satisfaction by age.....	50
Table 13	Summary ANOVA for subscales of job satisfaction by qualification.....	51
Table 14	Summary ANOVA for subscales of job satisfaction by experience	52
Table 15	Summary ANOVA for subscales of job satisfaction by area of teaching.....	53
Table 16	Stepwise Regression Results in predicting job satisfaction from Intrinsic and extrinsic variables separately (Model summery).	55
Tables17	Regression coefficient of both intrinsic and extrinsic sub scales on over job satisfaction coefficients.	56
Table 18	Regression coefficients of job stress subscales on overall job stress.....	58

List of Appendices

	Page
Appendix A	Items for expertise validation87
Appendix B	Items for pilot study99
Appendix C	Item score and nine subscale correlations of teachers stress (pilot study).....107
Appendix D	Item score and nine subscale correlations of teachers job satisfaction (pilot study).....108
Appendix E	Summary of the judges rating and % of their argument110
Appendix F	Additional comments on stressors and unsatisfying situations.....113

ABSTRACT

The purpose of the present study was to investigate the factors of job stress and job satisfaction among TVET teachers in Tigray and discuss its relevance to TVET. The research was conducted with the assumption that if such factors are identified, efforts can be made to eliminate or reduce the effects of those variables which lead to stress or and enhance those which lead to satisfaction. A sample of 180 teachers was randomly drawn from 308 teachers. Participants completed a questionnaire on demographic variables and 20 subscales of teachers' stress and job satisfaction measures. Quantitative statistics such as mean, standard deviation, Product Moment Correlation, ANOVA and linear regression techniques were employed between measures. The result of the study has shown that female respondent teachers had a lower level of satisfaction and highly stressed as compared to the males. Diploma graduate teachers showed relatively lower job satisfaction and higher stress compared to BA/BSC graduates. Teachers of Industrial area were with high stress (as compared to the business teachers) in leadership style and less satisfied in achievement need. However, age and experience on job stress and satisfaction did not show a significant contribution in the study. The results of regression showed that working environment, salary and benefits and responsibility were very important factors to job satisfaction. The regression analysis also indicated extrinsic variables to be the most explaining variables as compared to intrinsic variables on the overall effect of job satisfaction. Moreover, most teachers felt stressed on factors such as role overload, working condition, peer support, and leadership styles. The relationship between overall job Stress and job satisfaction was found to be negative and significant. Finally the results appear to have managerial and research implications. It is envisaged that the identification of the specific sources of stress will shade light in to the problems of TVET teachers that make their job particularly difficult.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

It was more than a century since the modern education was introduced in Ethiopia. The development of Technical and Vocational Education and Training (TVET) in the past was almost nonexistence comparing to the expansion of primary and secondary schools. In 1995/96 the Ministry of education (MOE), (1997) has reported that there were 9704 primary schools, 1304 junior secondary schools, 346 senior secondary schools and 17 TVET in the country. The Engineering Capacity Building program (ECBP), (2006) wrote that expansion or access of TVET has shown progress. Many training institutions and colleges are flourishing. However, despite the enormous expansion of TVET, still it caters for less than 3% of the relevant age group (ibid).

Similarly, for those young people who choose initial TVET after secondary school in Tigray, there is a wealth of different training options that ranges up to 20 trades or subjects to choose from. Initial TVET is arranged in different training institutions. In the year 2005, Tigray had 16 governmental and 13 non-governmental TVET and colleges enrolling a total of 7315 regular program students out of which 4637 were enrolled in governmental TVETs (MOE, 2005).

The purpose of TVET is to give students the vocational skills they will need in working life and the skills required to earn a living on a self-employed bases. But, how the training institution functioning to generate a work force capable of supporting and effectively contributing to the needs and demands at the market is a big issue and need to be studied. To bring changes in the performance of

quality training, skilled and motivated teachers are among the important inputs of the training process.

According to Schonfied (1990) compared to the general population, teachers of secondary school education were at risk for higher level of psychological distress and lower level of job satisfaction. Borg (1990) also reported that up to one third of teachers perceive their occupation as highly stressful.

There have been only very few studies by the Ministry of Education and AAU teachers, or thesis papers done on TVET but none specifically related to TVET teachers' stress and job satisfaction.

For number of years, one of the concerns confronting TVET at national or regional level has been a shortage of qualified teachers. Teachers were to be certified before assigned to teach at any level of education (TGE, 1994). The minimum qualification of TVET teachers for the 10+1 and 10+2 certificate levels was supposed to be first-degree holders (ECBP, 2006). But, teachers were under qualified for the TVET program since above 80 % of the teachers were a diploma graduate and these teachers were upgrading to degree program (TVET commission, 2006).

Effective program of TVET are dependant up on adequate supply of qualified teachers. Schonfied (1990) has reported that a large percentage of trained teachers join other profession or leave teaching after a short period of time. In support of this idea TVET commission of Tigray (2006) has reported that only in the year 2006 before the end of academic calendar 21 TVET teachers left the job. TVET teachers of Tigray are currently attending their summer degree program with the sponsorship of the government with the assumption that the teachers have the promise to serve for some years after

graduation. According to ECBP (2006) the existing TVET teachers are mostly inappropriately practically skilled, i.e. not competent to provide training in accordance with the occupational standards.

When TVET teachers leave the profession some degree of job dissatisfaction may be implied. Since TVET training is a costly investment, if graduates or teachers do not remain in the profession, it would seem beneficial to take steps to increase the tenure of teachers who are both successful and satisfied with their teaching.

There is a lack of precise information as to the existing degree of job satisfaction and stress among TVET teachers. Additionally, there is lack of information and research concerning the various factors or variables that affect the job satisfaction of the teachers of Tigray and corresponding relationship that exist between relevant variables and TVET teacher's job satisfactions. ECBP (2006) reported that TVET related research capacities within Ethiopia are underdeveloped. It was also recommended that in order to become self-in the long run, high quality domestic research capacities need to build up in Ethiopia. Therefore, this study could be a resource or an initial domestic input to the TVET research endeavor in Ethiopia.

In view of the importance of qualified teachers it is a prerequisite for the success of TVET programs and the apparent relationship between job satisfaction and teacher turnover, there appear to be a need for investigating the factors which contribute to TVET teacher's job satisfaction in Tigray. It is anticipated that the findings of the study would provide information concerning job satisfaction for TVET teachers in Tigray and would prove helpful to the state leadership of TVET commission in planning occupational enrichment activities for TVET teachers.

Therefore, in this research the assumptions are that, achievement in training programs of technical and vocational education and training are dependent upon skilled and motivated teachers. Additionally, achievement in the training program is positively correlated with the performance at world of work after graduation. Better performance at the world of work leads to poverty reductions. Under such assumptions, the problem to be addressed was to determine the level of job satisfaction of TVET teachers in Tigray and determine whether a relationship existed between job stress and satisfaction and their perceptions towards job stress. Specifically, the study will answer the following basic research questions.

1. Is there a difference with respect to demographic characteristics such as gender, age, qualification, experience and area of teaching among TVET teachers on overall job satisfaction and job stress?
2. Which factor (the intrinsic or extrinsic) plays more role in job satisfaction of TVET teachers?
3. What are the most important factors of teachers' job stress?
4. Is there a significant relationship between job stress and job satisfaction?

1.2. Objectives

The main objective of this study was identifying the major determinants of job stress and satisfaction. Specifically, it addressed the following objectives:

- To investigate the extent of relationships of variables such as sex, age, qualification, area of teaching and experience on job satisfaction and stress of teachers.

- To compare the influence of intrinsic and extrinsic factors on job satisfaction of the teachers.
- To identify the major predictors of job stress among the respondents of the study.
- To examine the relationship between job satisfaction and job stress of TVET teachers.
- To suggest feasible solutions depending on the findings obtained to improve the situation in the area.

1.3 Significance of the Study

The study was to identify variables that explain the stress and job satisfaction of TVET teachers. Thus, the findings of the study may help the training institutions and the TVET commission of Tigray to understand the impact of each variable on TVET teacher physiological stress and job satisfaction. It would also provide information concerning the relationship between stress and job satisfaction.

Furthermore, the study can be used as a springboard to conduct further research in the area. It would also prove helpful to the commission of TVET in planning enrichment activities and other necessary interventions.

It is important for the TVET teacher himself to consider some strategies that can help reduce the extreme level of stress they might experience.

1.4 Limitation of the Study

The teacher's stress measures and Teacher's satisfaction measures questionnaire was a self-reporting, paper-pencil survey instrument.

The use of teacher observations and teacher absence reports might have disclosed additional information concerning the factors contributing towards teachers' stress and job satisfaction. But had it not been limited to the use of these means of data collection, it would have been impossible to collect data from such a group that is in short of time to do additional work from such varied sample areas within a limited period of time, and under the restricting condition of shortage of adequate financial support.

1.5 Delimitation of the Study

This study was limited to TVET teachers mainly because TVET in Tigray is a newly introduced and expanded which needs intervention. Second, it was also limited to TVET teachers of Tigray because the researcher works there and wants to follow the subjects even after the purpose of this study is attained. Furthermore, since the situations related to stress and job satisfaction were numerous, and about 24 factors were considered in the self report instrument, issues related to stress coping mechanisms and detailed explanation of each factor were not considered in the study.

1.6 Definition of Terms

Intrinsic job satisfaction: The attitude the participant has towards the intrinsic aspect of the job such as achievement need, promotion, recognition and responsibility.

Extrinsic job satisfaction: The attitude the participant has towards the extrinsic aspect of the job such as relationships, salary and benefits, supervision, working environment and supervision.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 Definition and Symptoms of Occupational Stress

As Selye (1956), perceived stress to be a neutral psychological phenomenon. More specifically he defined it as a general adaptive syndrome or non-specific response to demands placed upon the human body. These demands could either stimulate or threaten the individual. In latter work, selye (1974) distinguished between 'eustress' and distress'

Some defined stress as the stimulus; others defined it as a response, and still others as the whole spectrum of interacting factors. Probably the best definition for stress was a combination of a stressor and stress reactivity (George, Elvis, Elizabeth and Kathryn, 1995).

Kyriacou(2001), has described teacher stress as : the experience by teachers of unpleasant, negative emotions , such as anger, anxiety, tension, frustration, depression, resulting from some aspects of their work as a teacher .

According to BUPA's Health Information Team (2004) physical and emotional health problem symptoms manifested by work related stress include physical symptoms and emotional and behavioral change symptoms.

Physical symptoms-increased susceptibility to cold and other infections, headaches, muscular tension, backache and neck ache, excessive tiredness, difficulty sleeping, digestive problems, raised heart rate, increased sweating, lower sex drive, skin rashes, blurred vision.

The emotional and behavioral changes symptoms are like;

- wanting to cry much of the time
- feeling that a person can not cope
- short temperedness at work and at home
- feeling that you have achieved nothing at the end of the day
- eating when you are not hungry
- losing appetite
- smoking and drinking to get you through the day
- inability to plan, concentrate and control work
- getting less work done
- poor relations with the colleagues or clients
- loss of motivation and commitment

Therefore, it can be said that stress symptoms are harmful to affect people physically and mentally and there by affect the job. This was one of the reasons why the researcher was tackled the problem.

2.1.2 The Concept of Occupational Stress

It has resulted in different research studies in which attempts have been made to find the extent to which stress interferes with effectiveness and satisfaction in work (for example Selye, 1974; Lazarus, 1966). Work-related stress has been viewed in both positive (eustress) and negative (distress) ways. Stress becomes a problem when it is chronic or severe (ibid). Similarly Cyralene (2001) identified that optimum level of stress can act as a creative, motivational force that can drive people to achieve in credible feats (eustress). Chronic or traumatic stress (distress) on the other hand, was explained as potentially very distractive and can deprive people of physical and mental health, and at times even of life itself.

As Hans Selye (1982) pointed out, an important aspect of stress was that a wide variety of dissimilar situations are capable of producing the stress response such as fatigue, effort, pain, fear, and even success. In these views, stress was perceived as a reaction of individuals to the external stimuli with which they think they cannot cope. In this process there is an evaluation of the stressing situation and the ability to cope. Individuals who do not perceive an imbalance between the two will probably not experience any stress. Hence, stressful situations have to be considered only with regard to an individual's perceptions. The same situation may be stressful for one individual but not for another. Nevertheless, beyond individual difference, there is some general agreement regarding situations, which arouse stress in most individuals: a very restrictive school climate, a heavy load of paper work, heavy role demands and crowded classrooms are only few examples. In addition to working conditions, the role that the individual plays in the organization is another factor related to stress (Selye, 1974). However stress is not aroused by difficult frustrating conditions only, it also occurs as a result of facilitating condition, and lack of encouraging feedback. Difficult work conditions have been found to be independent of one another, each having a different impact on stress (Kanner, Kafry, and Pines, 1978))

2.1.3 Definition and Concept of Job Satisfaction

According to Vroom (1984) the terms job satisfaction and job attitudes were used interchangeably. Positive attitude towards the job were conceptually equivalent to job satisfaction and negative attitude towards the job were equivalent to job dissatisfaction. On the other hand Davis (1989) defined job satisfaction as a set of favorable or unfavorable feelings with which employees view their work.

Ivancevich & Metteson, (1990) defined job satisfaction as an attitude that workers have about their jobs.

The concept dissatisfaction with work often results in the tendency to be absent from work, in aggressive behavior, in an inclination to leave the job or psychological withdrawal from the work. Indeed, a relatively large number of successful teachers leave teaching at an early stage in their career . In case where dissatisfied teachers remain on the job, their dissatisfaction impairs their performance (Lawler, 1973; Morris, 1982)

The concept of satisfaction is encored in Maslow's theory of a hierarchy of needs (Locke, Cartledge, & Kerr, 1970). According to this, the fulfillment of needs such as achievement, feedback and reinforcement, and the attainment of one's intellectual potential are essential for satisfaction, especially if an individual has high expectations of self-fulfillment. He suggested that once individuals have satisfied one need in the hierarchy, it ceases to motivate their behavior and they are motivated by the need at the next level up the hierarchy. The theory suggests that will always tend to want more from their employers when they have satisfied their subsistence needs, they strive to satisfy security needs. When jobs are secured they will seek ways of satisfying social needs and if successful will seek the means to ultimate end of self-actualization.

Additional elaborations have been proposed of the determinants of job satisfaction. According to Vroom (1964) the extent of a person's satisfaction depends up on the rewards and positive feedback received. According to Vroom motivational forces of a job can be calculated if the expectancy, instrumentally and valence value are known. Similarly Locke et al., (1970) also suggest that satisfaction is

a function of the gap between the rewards actually granted and the rewards an individual he/she deserves. Here goals direct efforts and provide guidelines for deciding how much efforts put in to each activity when there are multiple goals. Participation in goal setting increases the individual's sense of control and fairness in the process. Thus the degree of congruency between rewards expected and rewards received affects the degree of satisfaction (Lawler, 1973). Comparison between the rewards an individual receives and those received by his/her colleagues is an additional factor in satisfaction (Korman, 1970).

An interested question raised in the literature was whether satisfaction and dissatisfaction is dependant up on each other. Research indicates that dissatisfaction is not the same as the absence of satisfaction, and that these are rather two independent entities. According to Herzberg (1959) the absence of factors that lead to satisfaction does not necessarily create dissatisfaction. Herzberg (1959) presented a two-factor theory, which looks at motivators (responsibility, recognition, promotion, achievement, intrinsic aspect of the job) and hygiene (supervision, salary, work environment, company policies, relationship with colleagues) and proposed that job satisfaction and dissatisfaction appeared to be caused by two sets of different factors. The presence of motivators in the work place caused enduring states of motivation in employees but their absence did not lead to dissatisfaction. Hygiene on the other hand produces an acceptable working environment but did not increase satisfaction-their absence did not however cause job dissatisfaction. This finding has important implication for teachers. It may be important for school principals to know that lack of teacher satisfaction from physical conditions, for instance, or from salary does not necessary mean that teachers are dissatisfied. Studies in which teacher satisfactions are

more intrinsic in nature, those of teacher dissatisfactions are more extrinsic. Raising the level of students' achievement, autonomy in pedagogical decision in classroom and receiving encouraging feedback from classroom teaching are examples of intrinsic determinants. The teaching profession status and prestige, and salaries, are examples of intrinsic determinants (Sergiovanni & Elliott, 1977).

Ninomiya and Okato (1990) found, Japanese teachers regard management, material rewards and a reasonable workload as important for job satisfaction.

Satisfaction is not uni-variant concept and has been conceptualized in many ways. Job satisfaction has been operationalized as satisfaction with various facets of the job, but the number of facets has ranged from five (Hackman and Oldham, 1980) to thirteen (Rice, Mcfarlin and Bennett, 1989). Job satisfaction has also been conceptualized more generally as total satisfaction measured by either a few general questions (Hackman and Oldham, 1980) or by linear aggregation of individual facets (Levin and Stokes, 1989).

Another popular conceptualization, and the one used in this study, is the intrinsic-extrinsic distinction (Weiss, Dawis, England and Lofquist, 1967). Intrinsic satisfaction is derived from actually performing the work and experiencing feeling of accomplishment, self-actualization, and identify with the task. Extrinsic satisfaction is derived from the rewards bestowed upon individual by peers, supervisors, or the organization and can take the form of recognition, compensation, advancement, and so forth. While no best conceptualization of job satisfaction has emerged in the literature, the intrinsic extrinsic distinction seemed appropriate for the study under investigation.

2.2 Past Researches Related to the Study

2.2.1 Factors Affecting Teacher's Stress

The factors reported to affect stress and burnout levels can be categorized in to three areas: Personal, environmental and organizational.

Personal includes gender, age, years of experience, marital status (Byrne, 1991) and educational level (Fennick, 1992; Friedman, 1991). While environmental includes the type of student taught, the grade taught, working conditions (Byrne, 1991; Pierce & Malloy, 1990).

Organizational factors include climate, culture, social support and professional support (Friedman, 1991). By far the most commonly reported organizational factors affecting stress implicate role ambiguity, role overload (Fennick, 1992; Friedman, 1991) and lack of recognition for good performance (Dinham, 1992). Similarly according to Gupta (1981), there are three major types of stressors: environmental, organizational, and individual. Trendall (1989) proposed that stress is a multi-factorial concept composed of factors within the individual, the organization and nature of workplace, and the nature of the wider society.

When Travers & Cooper (1997) Questioned British teachers across all educational sectors high workload, poor status and poor pay emerged as three of the seven major stressors. The same authors had also found that teachers named lack of governmental support, lack of information about changes, constant change and the demands of National curriculum as among their greatest sources of stress.

Specific factors responsible for high levels of psychological pressure for teachers were, high ratio between teacher pupils, limited progress of pupils, heavy workload, role overload & role conflict, relationship with colleagues/poor working environment, insufficient salary, status, time/resource difficulties, professional recognition needs (Borg et al.,1991;Kyriacou & sufclife, 1979; Kyriacou, 1987; Manthei & Solman, 1988; Laughlin, 1984 ;Travers & cooper, 1996; Guglielmi & Tafrow, 1998 as cited in Antoniou , Polychroni and Walters ,2000)

Of significance here is Brimer and Reynolds' (1993) claim that there was no distinctive, unique concept called 'stress'; in their view stress was a broad heading covering a variety of different and ever-changing factors.

As can be observed from the above views of different scholars the causes of stress were numerous. Overall, for the purpose of organizing the literature, the sources identified appear to fall in to three categories: demographic factors, environmental factors, and organizational and social factors. In Ethiopia some studies have dealt with the relationship between occupational stress and primary school teachers (Hagos, 1998) and secondary school teachers (Girma, 1995). But, no research has been conducted in relation to job stress of TVET teachers in Ethiopia.

2.2.1.1 Demographic Factors Affecting Teacher's Stress

Different scholars have identified factors related to job stress associated with personal variables, such as the relationship between sex, age, educational level, years of teaching experience, grade level taught, ability group taught and stress levels.

Of the number of studies, woman's work stress has been compared to that of men. Laughlin (1984) revealed significant effect where female teachers reported greater level of stress than males. The explanation given was that difference in terms of home responsibilities that female

teachers would carry in addition to their career. Similarly, Pines & Kafri (1978) draw attention to the fact that the caring professions – social work, nursing, teaching, which have been shown to be stressing profession-employ mainly woman. The findings of a research study comparing the stress experienced by male and female school principals indicated that there was no difference. However, the woman in that study seemed to cope with stress better than men (Ivanevich & Matteson, 1980).

On the contrary, Friedman (1991) argued that, males experienced higher levels of burnout than females. However Maslach and Jackson (1981) suggested that males were higher on depersonalization (development of negative uncaring attitudes) than females and females were higher than males on emotional exhaustion (feeling of fatigue which develop as emotional energies are drained). However, gender was not significant when examining teacher stress (Milstein & Golaszewski, 1983).

The effects of age on stress and burnout have also yielded equivalent findings. Some reported that the youngest and most idealistic teachers were at the greatest risk of burnout (Fennick, 1992; Sarros & Sarros, 1990; Eskridge & Coker, 1985), while others reported that older teachers were more susceptible to burnout and reported the peak burnout period occurs at 41-45 years (after approximately 20-24 years experience) (Friedman, 1991). Byrne (1991) reported that young teachers showed significantly higher level of emotional exhaustion than older teachers. It may be that older teachers were more prone to depersonalization or reduced personal accomplishment than younger teachers and that these aspects of stress were more likely to emerge with age. When examining teacher stress, it was also reported that age was not significant (Milstein & Golaszewski, 1983).

With regard to qualification variables, Friedman (1991) argued that the more educated the teacher is the more likely he/she is to burnout (Friedman, 1991). Other researchers hypothesize that those with higher education require more stimulation than that which is provided by standard teaching environment (Fennick, 1992; Dinham, 1992).

But, in some specific factors such as curriculum demands, working conditions, qualification variables vary. Laughlin (1984), reported that younger teachers under 26 and holding a university degree reported least stress from the factor curriculum demands. The researcher argued that university education might have provided a more flexible training experience for those teachers to adapt more readily to change.

Comparing teachers possessing a university qualification with the rest of teachers labeled as others; it was found out that university graduates reported less stress than their colleagues who were not university graduates (less qualified) on a range of items that have to do with poor working conditions and poor school ethos (Kyriocou and Sutcliffe, 1978) time management, teachers confidence/ competency (Furnham, 1987) on the contrary high level of stress on time demands (Solman and Feld, 1989)

In the new reform of TVET strategy, ECBP (2006) wrote that TVET programs still did not address actual skills needs in the economy, and most programs were of low quality and theory-driven due to resource constraints and lack of skilled TVET teachers. In the same report was also indicated that most TVET teachers/ instructors have a relatively low formal qualification affecting TVET delivery at higher

qualification levels. Most of the teachers have not been choosing to be educated as technical teachers because there were no other options available.

It was the assumption of researcher that the identified problems related to skill of teachers might be the source of teachers' stress and need to be studied.

2.2.1.2 Environmental Factors Affecting Teacher's Stress

Working conditions include problems as inadequate equipment, poorly maintained buildings, lack of space, poor quality furniture, poor staffroom facilities (Duham 1984; and Kyriacou and Sutcliffe, 1979). A general lack of resources was reported as one of the most important factors in many research studies (Manthei, Gilmor and Adair,1996) which contributed to teacher's stress and burnout.

Working conditions were neither convenient nor conducive to high level of performance, to say at least. Students in schools with inconvenient working conditions had lower desire to learn (ICDR, 1985). Large portions of these schools have neither adequate libraries nor laboratories (ICDR,1985). On top of all these, a significant portion of these teachers had reported that they face problems of shortage of textbooks and teachers guide (ICDR, 1985).

It is clear that the quality training of TVET requires a huge amount of money comparing with other academic programs. If the environmental resources are not conducive to teachers one can assume that this could be a stress on teachers. Therefore, it is also important to investigate the resources of the environment in relation to teachers' stress.

2.2.1.3 Organizational and Social Factors Affecting Teacher's Stress

With in the organization certain behaviors and demand have been found as stressors in particular the role conflict, role overload and role ambiguity phenomena in teachers (Friedman, 1991; Kahn et al., 1964). Role preparedness, which represents stress due to feeling of lack of competency or preparation to perform a given role, (MacKinnon, 1978), and non-participation, concerns not being directly involved in decision making process on issues that specifically affect one's work (Vroom, 1963).

Role preparedness. Iwanicki (1983) found that role related stress was a function of teacher's personality and teacher's preparation. Perceived professional competency has been found to be the source of stress for many teachers (Fimian & Santoro, 1983). Teachers have been known to experience stress because of their lack of occupational confidence in a particular work or instructional environment. Rapid work or technologies have caused teachers to feel incompetent and experience stress due to their inability to always remain current and up-to-date in their areas of expertise (Terry, 1997).

Role conflict is defined as conflicting job demands and is related to physiological stress. It involves the presence of two or more work demands that are incompatible.(Kahn et al., 1964)

Role overload is as a situation in which the individual is assigned more work than he/she can effectively deal with (Friedman, 1991). Role overload denotes the absence of sufficient resources to perform one's role adequately. A study by pithers & Soden(1998) has highlighted role overload as a significant stressor in teachers. They

assessed levels of strain, organizational roles and stress in 322 Australian and Scottish vocational lecturers. Stress was found to be high with role overload emerging as the major cause. The standard for TVET teaching load was 35 hours per week (MOE, 2004).

Role ambiguity occurs when an employee does not have adequate information to perform the task, or understand the expectations of that particular task. These factors have a significant negative impact on self-esteem, professional self-image and consequently resilience in the face of adversity (Friedman, 1991).

Dussault , Deaudelin , Royer & Loïselle (1999), have found that, among factors at the level of institution , *leadership style* to be important in affecting levels of stress. Organizational factors that, were directly or indirectly related to leadership style, have an immediate impact on teaching itself include lack of staff and equipment, excessive paperwork, insufficient salary, lack of advancement and opportunity, involuntary transfers, lack of administrative support, and conflicts in the perception of the job (French & Caplan, 1970; Kahn et al., 1964; Margolis et al., 1974 cited in Friedman, 1991). As mentioned before by Lauglin (1984), curriculum demands were considered as a teacher stress factor. The ministry of capacity building MCB (2002) stated that one of the major problems of the TVET program was determining the curriculum and preparation of textbooks. It was added that more than anything else priority were to be given to the preparation and continuous revision of the curriculum. The textbooks were not yet prepared and reference materials were insufficient (TVET, 2005). The problems related to the curriculum materials mentioned above could be the causes for teachers' stress.

There was a significant association between internal attributions and symptoms of burnout, suggesting that teachers who blame themselves for difficulties were more vulnerable to stress (Bibou-Nakou, Stogiannidou & Kiosseoglou , 1999). Lindsey (1979), identified that one of the top ten reasons related to the vocational education teachers of Texas turnover was the relationship with the school administration.

At the level of institution factors such as *social support* amongst *colleagues* have found to be important in affecting levels of stress (Dussault et al., 1999). Similarly *social support* had both positive effect on health and a buffering effect in respect of work stress (Dick, Wagner, Petzel , Lenke & Sommer , 1999). As a result of social and other changes, teachers face increased parental and community expectations for the outcomes and standards of education and the relevance of curriculum. Hence many teachers asserted that they were inadequately prepared to implement new curriculum (Bailey, Berrell & Gibson, 1991). Also, impacting on teachers work and its current organization were economic imperatives stemming from governments and employing authorities demanding more accounting in the work of teachers. Such pressures from the social and educational system were externally diving much of the day-day demands in teachers' work, increasing considerably the psychological and workload effect. It is five years since TVET program was launched according to the Ethiopian Education and Training Policy. From the above findings seems not easy for teachers introducing new policy with new curriculum and teachers.

According to ECBP (2006) most curricula that were used in formal TVET were developed in the ministry of education with no real influence of employers. A systematic integration of work has not yet

been achieved. One of the guiding principle of TVET is the program should be demand driven. And yet if parents and the employers as a social support do not have participation in the curriculum there could be a gap between the world of work and the training program. The lack of social support from the employers and parents side may be one source of teachers' stress.

It was reported that efforts to improve education always seem to focus on disciplining or changing teachers, which increases their overall accountability (Fennick, 1992). By the same author it was also reported that on schools and teachers have increased with society having higher expectations for teachers while at the same time the status of teachers has declined.

In Ethiopia, TVET is suffering from a relatively low public image. TVET is usually associated with blue-collar jobs, low salaries and lack of personal development opportunities partly owed to low quality of previous programs that in fact did not allow TVET graduates to successfully compute in the labor market. TVET is generally perceived as a last resort for those students who failed to get in to higher education. This misconception needs to be rectified (ECBP, 2006).

2.2.2 Factors Affecting Job Satisfaction

2.2.2.1 Background Variables Affecting Job Satisfaction

Several studies have dealt with the relationship between job satisfaction and such personal variables as; age, sex, years of service, educational qualification etc.

One variable which was hypothesized to have a strong relationship to job satisfaction was age. Herzberg, Mausner, Peterson, & Capwell (1957) theorized that age has a curvilinear relationship to job satisfaction. As a person begins a job, satisfaction is high.

Satisfaction declines for several years, and then begins to rise. This relationship was explained as follows: People receive frequent feedback and rewards during years spent in formal schooling. After formal schooling is finished, a person enters work with high expectation of frequent rewards. When these rewards occur less frequently than expected, the workers become disenchanted and less satisfied with the job. Over time the workers accepts the lack of rewards as normal, lowers expectations, and become more satisfied.

Hulin(1963) found that job satisfaction and age were positively correlated. He disagreed with Herzberg in that he found the relationship between age and job satisfaction to be linear rather than curve linear.

Another demographic variable that has influenced job satisfaction has been gender. Women have reported lower levels of job satisfaction than men have (Fiorentino, 1999; Hagedorn, 1996).

2.2.2.2 Intrinsic and Extrinsic Factors Affecting Job Satisfaction

As discussed under the conceptualization of job satisfaction factors affecting job satisfaction can be viewed as intrinsic or extrinsic types. Based on the category given by Herzberg (1959) the intrinsic aspect of job satisfaction were; responsibility, recognition, promotion, achievement and extrinsic aspect were; supervision, salary and benefits, work environment, company policies, relationship with colleagues.

According to Lortie (1975), structure of teaching occupation favors the distribution of psychic (intrinsic) rather than material reward (extrinsic) rewards. Some other researchers suggest that most characteristically, sources of satisfactions are seen as deriving from

inadequacies in working conditions (Kyriacou and Sutcliffe, 1979; Kalsler, 1981; Galloway et al., 1985, as cited in Payne, 1989).

Therefore these intrinsic and extrinsic aspects seem inconsistently playing more role as a source of in job satisfaction, which was explained in the above research practices.

2.2.2.2.1 Intrinsic Factors

Research established that the relationship existed between teacher satisfaction and student achievement (Doyle & Foryth, 1973). In general, the findings tended to indicate that teachers in secondary schools whose students achieve relatively high scholastically had higher moral or satisfaction than did teachers in school with relatively low pupil achievement. Similarly student achievement tends to increase under teachers with high morale and decrease with low morale. According to Lussier [1996], there was evidence that high *achievement need* was closely associated with high performance. Lussier (1990) also found that achievement in teaching contributed most to satisfaction. As related to achievement and recognition Sergiovanni (1996) asserted that teachers' job satisfaction response, achievement and recognition were ranked first and second as factors contributing to good feeling about the job.

Vroom (1982) interpreted *promotional* opportunity as a desired, positive, personal goal. He stated that promotional opportunity is a goal most workers desire and that an individual's performance is related to the degree to which the individual believes that being promoted is related to performance on the job and how strongly the individual desires the promotion. Sutter (1994) also found promotional opportunities to be a predictor of job satisfaction. Showing hope as a long term satisfaction effect, Grton and Kalaman

(1985) found in their national survey of 400 elementary school assistance principals that over 50% of the respondents didn't view their current job as career positions and hoped within five years to become principals.

Employee participation in decision making increases productivity, and this view was supported by a considerable body of research evidence, though the findings were inconsistent (Vroom, 1982). As stated by Davis (1972) Participation in this context is defined as the mental and emotional involvement of a person in a group situation that encourages the individual to contribute to group goals and share *responsibility* for them. Such participation includes both mental and emotional involvement and this motivates workers to release their energy, initiative and creativity, encourage them to accept greater responsibility for the effectiveness of the organization, and stimulates the development of team work among them. It also has the potential of helping make better decisions and enhancing the participants' growth and development (Davis, 1972).

2.2.2.2.2 Extrinsic Factors

There was disagreement on the importance of the relationship of supervisor-worker relationship and job satisfaction. Wisniewski (1990) found that in teachers' work the help offered by one's immediate supervisor favors high job satisfaction. Similarly Herzberg, Mausner, and Snyderman (1959) stated that the relationship between workers and supervisors is overrated as a variable affecting job satisfaction. Bruce and Blackburn (1992) asserted that both job satisfaction and job performance were dependent on supervisors in the organization. Other researchers also concluded that supervisor relations are important to job satisfaction. For example Solly and

Hohenshil (1986) found that supervisor relations were related to overall satisfaction among school psychologists. Vroom (1982), however, stated that satisfaction is related to the consideration an employee feels is received from *supervision*.

The more often the teachers participate in forming the didactic and educational *policy* of the school, the more often –proportionally they declare their high job satisfaction (Wisniewski, 1990). In addition to the participation Wisniewski has found that the more often the teachers maintain that professional duties are precisely defined, the more often, according to their measurement, they declare high job satisfaction.

Satisfaction with the amount of their *pay* was strongly connected in the investigations with the teachers' feeling of high job satisfaction (Wisniewski, 1990). Vocational industrial education teachers in Texas who had quite teaching cited *salary* as a primary reason (Lindsey, 1979). Bruce and Blackburn (1992) argued that pay equity was more important than the actual dollar amount. They explained that relative pay is better predictor of job satisfaction than absolute pay: people at work have a clear idea of what ought to be paid in comparison with others and in relation with their skills, experience and so forth. Along with monetary value, pay is important to a worker for other reasons. Gruneberg (1979) wrote, "Pay means more to individual than just the potential of acquiring material goods. Salary was also an indication of achievement, recognition and position in the organization." However Piamonte (1980) argued that *salary* doesn't motivate workers for higher level of performance. Money means different things to different individuals. Money symbolizes satisfaction of basic needs for food, clothing, shelter and the like to low income people, status, prestige, power and security to high income people. It also symbolizes success

for top executives (Williams, 1978). In general money is important for both the poor and the rich. As Davis (1972) put it money tends to satisfy lower order needs better than higher order needs. The value of money to individuals tends to decline as they get rich but this decline is not large and most people continue to have substantial desire for financial rewards (Davis, 1972). Such continued desire of people for money makes it an important satisfying factor.

Good(appropriate)*working conditions* such as educational equipments (books, instruments, etc) distinctly promoted high job satisfaction (Wisniewski,1990). Wisniewski explained that the principal creates a good atmosphere for cooperation distinctly favored their job satisfaction.

Teachers' feeling of finding *good relationships or support from their students ' parents* and favorable cooperation with them is conducive to high job satisfaction (Wisniewski, 1990)

2.2.3 Job Stress and Satisfaction

In general, Job stress has been viewed as antecedent of job satisfaction and inversely related, and the two constructs have been treated as a result of yet distinct (Stanton and et al., 2002). An inverse relationship between job stress and job satisfaction among various populations has been reported (Beehr, Walsh, & Taber, 1976). Satisfaction is increased directly by the amount of individual's tensions are reduced, and decreased directly by the amount of remaining tensions.

Investigations generally show that the more teachers of comprehensive secondary schools of UK are stresses in their job, the

less they are satisfied and committed (Kyriacou and Sutcliffe; 1979). Litt and Turk (1985) carried out a study at high school teachers and investigated that negative well-being as a measure of stress correlated negatively and significantly with job satisfaction $r=-0.33$, $p<0.01$).

What has been less clear than the direction of the relationship has been the nature of stress-related factors or the levels of stress impacted on specific facets of job satisfaction among TVET teachers in general and TVET teachers of Tigray in particular.

CHAPTER THREE: METHODOLOGY

3.1 Subject of the Study

The population of the study consisted of the TVET teachers of the Tigray public technical and vocational institutions. The survey groups were from the two fields of business and industrial. Proportional sampling method was used to select the areas of teaching with the assumption that the samples could range from a relatively white collar (business) to a relatively blue collar which needs more hands on training (industrial) area. Random sampling method was used to select 10 training institutions out of 16 training institutions. After selecting the areas of training and training institutions by random sampling method, a sample of 180 teachers were drawn from 308 teachers of business and industrial areas of which 108 were from business area and 72 were from industrial area. Among the total 180 respondents, 43 were females.

Table 1**Samples drawn by area**

Business Area			Industrial Area		
Field of study	Population	Samples	Field of study	Population	Sample
Accounting	68	38	General mechanics	30	18
SSOM	31	17	Wood work	19	12
Banking & Insurance	4	3	Electricity/Electronics	33	20
Purchasing/Marketing	15	8	Auto mechanics	23	15
Sales	8	5	Machine technology	11	7
Information Technology	47	26	Subtotal	116	72
General Business	19	11			
Subtotal	192	108			

3.2 Measurement Scale

Instruments used to measure teachers' stress & job satisfaction were self-report questionnaire. The favorable and unfavorable items are scored in the opposite directions (1, 2,3,4,5 versus 5, 4, 3, 2, 1). Finally the total scores were calculated by summing up the respondents answers to all items. High total scores reflect favorable over all attitudes, while low total scores reflect unfavorable ness towards the object of attitude.

In the present study, the dependant variables were TVET teachers' stress and job satisfaction. The independent variables considered were situations related to TVET teachers stress (role ambiguity, role

overload, role preparedness, non participation, role conflict, leadership style, working conditions, peer support and social support), TVET teachers' job satisfaction (achievement, responsibility, recognition, promotion, supervision, salary and benefits, working environment, system policies and practices and relationships with colleagues) and personal factors (gender, experience, qualification, type of trade teaching) .

3.3 Procedures

The items included in the questionnaire of the present study were largely adapted from Lussier (1996) for the stress factors with reliability $\alpha = 0.82$ of and from weiss et al, (1967) for the job satisfaction with the reliability of $\alpha = 0.85$. A 5-point scale (1= strongly disagree; 5= strongly agree) was used for all of the subscale items (see Appendix B). Based on these and the survey reports, a total of 98 items were collected. The items were categorized in to 20 clusters and the demographic characteristics. Overall, about half of items were stated positively while the other half negatively. After the pool of items has been assembled, the screening and validation of the items took place through various methods including expert judgment and pilot test tryout.

In the present study 4 judges were involved. The group of judges consisted of lecturers, in the area of Testing and measurement and organizational behavior, with the rank of assistant professors. The tasks of the groups were to comment and improve upon the clarity, wording, phrasing and appropriateness of the items and to rate each of the items on the extent to which each item measures the construct in which it is grouped. The judges rated the appropriateness of each item to measure the behavior under the given category by saying

highly (3), moderately (2) or poorly (1). On the basis of the rating score of 75% of the agreement and above were retained as good, while the rest were discarded.

In order to check the degree of agreement among the raters in judging the items an estimate of raters' reliability was also calculated. On the basis of the rater's items reliability, a reliability index of Alpha 0.65 was obtained.

Therefore, based on an overall assessment made by this group, among the ninety eight pools of items ninety two items were made ready for the pilot test try out of the instrument for further screening and validation. At this stage, while 98 items belonged to both the general stress and job satisfaction category, the number of items belonging to each of the twenty specific clusters ranged from four to five.

The purpose of the pilot test was to check the overall organizational structure of the test and to generate data for the statistical item analysis procedure. The items used in the test tryout were 92 items retained from the judgments of the expertise. In the test, the items were unanimously distributed irrespective of their specific clusters. Moreover, the item assumed the form of Likert scale. Then the instrument was tried at a randomly selected group of fifty-two subjects in Mekelle town.

Following the pilot test, the Pearson-Product Moment Correlation coefficient of the items was calculated. As it has shown in Appendix C and D , items with better r value were retained for the main study. Therefore 85 items were made ready for the main study.

The calculated correlation coefficient of the twenty-test subscales ranged from 0.64 to 0.89.

The scoring of the data gathered was made following the procedures employed in Likert scale. The five point scales were given the scale values in such a way that Strongly agree, Agree, Undecided, Disagree and Strongly disagree were given a scale values of 5,4,3,2,1 respectively for the positive items while it was the reverse for the negative items. The total score of a subject on a given variable was then calculated by summing the scores on the item belonging to the variable. Thus, all the subjects of the study will have two total scores for the dependent variables on the overall job stress and satisfaction and eighteen total scores on the independent variables. Demographic variables were also coded using dummy variables.

3.4 Variable Designation

3.4.1 Demographic/ Background Variables

Variable designation	Variable name	Variable description
Gen	Gender	Refers to the maleness or femaleness of the respondents
Age	Age	Age of teachers in years
Qual	Qualification	A course of study that a teacher has successfully completed and earned BA BSC, MA MSC, Diploma or Certificate.
Exp	Experience	Total service of teachers in years.
Area	Trade type	Refers to the type of area the respondents are teaching (Industrial or business)

3.4.2 Teacher's Stress Variables

Variable designation	Variable name	Variable description
Ra	Role Ambiguity	The state of job having more than one meaning
Ro	Role overload	Feeling the teacher that he/she is doing or expected to do too much of the standard
Rp	Role preparedness	Competency or preparation to perform a given role
Np	Nonparticipation	Not become involved in different school activities, committee, etc
Rc	Role conflict	A situation in which teachers or the staff are involved in serious disagreement
Ls	Leadership style	The abilities and skills of the leaders or the organization in creating good atmosphere of working conditions
Wc	Working conditions	Availability of appropriate educational equipments, attitude of students and employment opportunities
Ps	Peer support	A team working spirit among staff members, cooperation and computation
Ss	Social support	Public attitude towards TVET and TVET teacher.

3.4.3 Teacher's Satisfaction Variables

Variable designation	Variable name	Variable description
Ac	Achievement	The feeling of accomplishment that the teacher gets from the job
Res	Responsibility	Freedom to use one's own judgment
Rec	Recognition	A sense of pride, respect, rewards and appreciations
Pr	Promotion	Opportunities and fairness of promotion
Su	Supervision	Fairness and competence of managerial tasks by one's supervisor (regional or school supervisor)
SB	Salary and Benefits	Amount and fairness or equity of salary and other fringe benefits or extra things that a teacher receives.
We	Work environment	Enjoyment of the actual tasks of teaching learning process itself
Sp	System and policy practices	Policies, procedures, rules, perceived red tape
Rel	Relationship with colleagues	Perceived competence, working spirit and pleasantness of one's colleagues

3.4.4 Dependent Variables

Variable designation	Variable name	Variable description
str	Job stress	A global measure of pressure or worry caused at work
sat	Job satisfaction	A global measure of one's own well being at work

3.5 Methods of Data Analysis

Quantitative data analysis was employed to analyze the data. Quantitative statistics such as mean, standard deviation, Pearson Product Moment Correlation and ANOVA linear regression techniques were employed to investigate the basic research questions. SPSS version 10 was used to run the aforementioned statistical techniques

The reliability of the subscales for this study was measured by Cronbach's alpha, the calculated correlation coefficient ranged from 0.67 to 0.89 and 0.64-0.83 for job stress and job satisfaction subscales respectively (see also Table 2 below).

Table2**Reliability of subscales of pilot study**

subscale	Reliability(α)
Role Ambiguity	0.78
Role overload	0.89
Role preparedness	0.89
Nonparticipation	0.78
Role conflict	0.82
Leadership style	0.68
Working conditions	0.67
Peer support	0.79
Social support	0.75
Achievement	0.73
Responsibility	0.72
Recognition	0.73
Promotion	0.81
Supervision	0.64
Salary and Benefits	0.79
Work environment	0.80
System and policy practices	0.83
Relationship with colleagues	0.74
Overall job stress	0.82
Overall job satisfaction	0.71

F-test, at $\alpha = 0.01$ and 0.05 levels, was used to see differences among the categories of gender, age, experience, area of teaching and qualification of respondents of TVET teachers. To make an overview with respect to relationship among variables of job stress and satisfaction Pearson Product Moment Correlation was employed. Linear regression was used to explain the source of variability in dependant variables. Therefore, the independent variables (role ambiguity, role overload, role preparedness, none participation, role conflict, leadership style, working conditions, peer support and social support) were regressed on the dependant variable (stress). Similarly, the independent variables (achievement, responsibility, recognition, promotion, supervision, salary and benefits, working environment, system policies and practices and relationships with colleagues) were regressed on the dependent variable (job satisfaction) using the linear regression model.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

This part describes background factors (facets) of the sampled population and the means, standard deviations and relationships of the variables are considered in the study using descriptive statistics. Besides, F- tests, Pearson Product Moment Correlation, and linear regression results were presented. The chapter contains interpretations and discussions of the results

4.1 Results

4.1.1 Background of the Respondents

The percentages and means of the respondents' gender, age, experience, qualification and areas of teaching are presented below.

Table 3**Distribution of subject by their background variables**

Subject	Category	N	%
Gender	M	137	76.10
	F	43	23.90
Age	21-30	146	81.10
	31-40	20	11.10
	41-50	8	4.40
	51-60	6	3.30
Experience	1-5	117	65.00
	6-10	35	19.40
	11-15	8	4.40
	>15	20	11.10
Qualification	BA/ BSC	23	12.80
	Diploma	157	87.20
Area	Business	108	60.00
	Industrial	72	40.00

It could be observed from Table 3 that the majority of the respondents (81.10%) were young ranging from 20-30 years old. Most of the respondents (65.00%), had an average year of service is 6.83, were with less experience ranging from 1-5 years. Large numbers of the TVET teachers were diploma holders (87.2%). Though females were proportionally represented in the sample the total numbers of females (23.9%) was less than that of males.

4.1.2 Relationships of Background Variables with Overall Stress and Job Satisfaction

Descriptive statistics and F- test for each variable were presented in Table 4 and Table 5.

Table 4**Descriptive statistics and F-test summary table for job stress and job satisfaction by gender and qualification**

Source of Variation	variables	Category	N	Mean	SD	F
Gender	str	Male	137	12.23	3.23	11.62**
		Female	43	9.30	3.27	
	sat	Male	137	12.48	2.61	6.75*
		Female	43	11.37	1.79	
Qualification	str	BA/BSC	23	12.43	3.46	6.76*
		Diploma	157	10.53	3.26	
	sat	BA/BSC	23	12.26	2.24	0.01
		Diploma	157	12.21	2.52	

* P < 0.05 level

** P < 0.01 level

The dependant variables were perception of job stress scores and job satisfaction. The lowest the score reported, the highest the stress because stress was conceptualized as negative. Therefore, in Table 4, the significance difference on gender showed female teachers perceived relatively high level of stress than did their counter-part male teachers. Table 4 also depicted that female teachers were less satisfied on their job as compared to male teachers.

Qualification had also a significant effect on teachers stress and not on job satisfaction. The mean difference between the qualifications showed that diploma holder teachers were with high stress as compared with the BA/BSC teachers.

Table 5**Descriptive statistics and F-test summary table for job stress and job satisfaction by age, experience, and professional area**

Source of Variation	variable	Category	N	Mean	SD	F
Age	str	21-30	146	10.85	3.34	1.00
		31-40	20	10.60	3.22	
		41-50	8	9.00	3.12	
		51-60	6	11.83	3.82	
	sat	21-30	146	12.22	2.61	0.38
		31-40	20	11.85	1.79	
		41-50	8	12.50	2.27	
		51-60	6	13.00	1.67	
Experience	str	1-5	117	11.14	3.25	2.40
		6-10	35	9.74	3.56	
		11-15	8	12.00	3.63	
		>15	20	9.95	3.95	
	sat	1-5	117	12.04	2.43	0.69
		6-10	35	12.69	3.08	
		11-15	8	12.63	2.07	
		>15	20	12.25	1.65	
Area	str	Business	108	10.92	3.59	0.51
		Industrial	72	10.56	2.93	
	sat	Business	108	12.31	2.48	0.42
		Industrial	72	12.07	2.50	

Computations of F values of age, experience, and area of teaching in Table 5 did not reveal significant difference on both over all job stress and overall job satisfaction.

4.1.3 Effects of Background Variables on Subscales of Job Stress and Job Satisfaction

The following presents analysis of data for subscale of stress and job satisfaction. The analysis was presented in Tables 6

Table 6

Summary ANOVA for subscales of job stress by gender

Variable	source	Sum of Squares	df	Mean Square	F
RA	Between Groups	8.84	1	8.84	0.82
	Within Groups	1919.22	178	10.78	
	Total	1928.06	179		
RO	Between Groups	168.98	1	168.98	12.18**
	Within Groups	2469.22	178	13.87	
	Total	2638.20	179		
RP	Between Groups	87.97	1	87.97	10.69**
	Within Groups	1464.95	178	8.23	
	Total	1552.91	179		
NP	Between Groups	0.15	1	0.15	0.82
	Within Groups	1883.05	178	10.58	
	Total	1883.20	179		
RC	Between Groups	3.29	1	3.29	12.18
	Within Groups	1673.29	178	9.40	
	Total	1676.58	179		
LS	Between Groups	5.41	1	5.41	10.69
	Within Groups	2696.23	178	15.15	
	Total	2701.64	179		
WC	Between Groups	2.70	1	2.70	0.01
	Within Groups	840.96	178	4.72	
	Total	843.66	179		
PS	Between Groups	2.63	1	2.63	0.35
	Within Groups	1724.15	178	9.69	
	Total	1726.78	179		
SS	Between Groups	0.03	1	0.03	0.36
	Within Groups	1270.95	178	7.14	
	Total	1270.98	179		

**p < 0.01

Table 6 shows that gender had a statistically significant effect on role overload ($F= 12.18$; $p < 0.01$). Similarly gender has also significant effect on role preparedness ($F = 10.48$, $p < 0.01$). Role over load and role preparedness contributed more stress for female teachers than for male. There was no significant difference among males and females with regard to the other seven factors listed in table 6.

Table 7

Summary ANOVA for subscales of job stress by Age

Variables	Variations	Sum of Squares	df	Mean Square	F
RA	Between Groups	9.36	3	3.12	0.29
	Within Groups	1918.70	176	10.90	
	Total	1928.06	179		
RO	Between Groups	10.80	3	3.60	0.24
	Within Groups	2627.40	176	14.93	
	Total	2638.20	179		
RP	Between Groups	17.44	3	5.81	0.67
	Within Groups	1535.48	176	8.72	
	Total	1552.91	179		
NP	Between Groups	31.54	3	10.51	1.00
	Within Groups	1851.66	176	10.52	
	Total	1883.20	179		
RC	Between Groups	24.91	3	8.30	0.88
	Within Groups	1651.66	176	9.38	
	Total	1676.58	179		
LS	Between Groups	39.73	3	13.24	0.88
	Within Groups	2661.92	176	15.12	
	Total	2701.64	179		
WC	Between Groups	12.41	3	4.14	0.88
	Within Groups	831.25	176	4.72	
	Total	843.66	179		
PS	Between Groups	24.35	3	8.12	0.84
	Within Groups	1702.43	176	9.67	
	Total	1726.78	179		
SS	Between Groups	31.81	3	10.60	1.51
	Within Groups	1239.17	176	7.04	
	Total	1270.98	179		

Table 7 has shown no significant difference among the age categories of all nine factors listed. That is four categories of age did not show significant difference among them with respect to all subscales of stress.

Table 8

Summary ANOVA for subscales of job stress by qualification

Variables	Variations	Sum of Squares	df	Mean Square	F
RA	Between Groups	5.56	1	5.56	0.51
	Within Groups	1922.50	178	10.80	
	Total	1928.06	179		
RO	Between Groups	87.79	1	87.79	6.13**
	Within Groups	2550.41	178	14.33	
	Total	2638.20	179		
RP	Between Groups	0.72	1	0.72	0.08
	Within Groups	1552.20	178	8.72	
	Total	1552.91	179		
NP	Between Groups	1.35	1	1.35	0.13
	Within Groups	1881.85	178	10.57	
	Total	1883.20	179		
RC	Between Groups	10.98	1	10.98	1.17
	Within Groups	1665.59	178	9.36	
	Total	1676.58	179		
LS	Between Groups	17.20	1	17.20	1.14
	Within Groups	2684.44	178	15.08	
	Total	2701.64	179		
WC	Between Groups	4.07	1	4.07	0.86
	Within Groups	839.59	178	4.72	
	Total	843.66	179		
PS	Between Groups	0.82	1	0.82	0.08
	Within Groups	1725.96	178	9.70	
	Total	1726.78	179		
SS	Between Groups	15.71	1	15.71	2.23
	Within Groups	1255.26	178	7.05	
	Total	1270.98	179		

** P < 0.01 level

Qualification had statistically significant effect on role overload ($F = 6.13, p < 0.01$). Those teachers who have diploma qualification were with high stress than those with BA/ BSC qualification with respect to role overload (Table 8) facing different pressure in their job and extra works beyond their expectation, which lead them to more stress. There was no significant difference between the diploma and BA/BSC holders with regard to the other eight factors listed in Table 8.

Table 9**Summary ANOVA for subscales of job stress by experience**

Variables	Variations	Sum of Squares	df	Mean Square	F
RA	Between Groups	26.47	3	8.82	0.82
	Within Groups	1901.59	176	10.80	
	Total	1928.06	179		
RO	Between Groups	12.67	3	4.22	0.28
	Within Groups	2625.53	176	14.92	
	Total	2638.20	179		
RP	Between Groups	6.72	3	2.24	0.25
	Within Groups	1546.19	176	8.79	
	Total	1552.91	179		
NP	Between Groups	62.77	3	20.92	2.02
	Within Groups	1820.43	176	10.34	
	Total	1883.20	179		
RC	Between Groups	18.81	3	6.27	0.67
	Within Groups	1657.76	176	9.42	
	Total	1676.58	179		
LS	Between Groups	1.35	3	0.45	0.03
	Within Groups	2700.29	176	15.34	
	Total	2701.64	179		
WC	Between Groups	17.76	3	5.92	1.26
	Within Groups	825.90	176	4.69	
	Total	843.66	179		
PS	Between Groups	22.32	3	7.44	0.77
	Within Groups	1704.46	176	9.68	
	Total	1726.78	179		
SS	Between Groups	27.21	3	9.07	1.28
	Within Groups	1243.77	176	7.07	
	Total	1270.98	179		

Table 9 showed no significant difference among the experience categories of all nine factors listed. That is four categories of experience did not show significant difference among them with respect to all subscales of stress.

Table 10**Summary ANOVA for subscales of job stress by area**

Variables	Variations	Sum of Squares	df	Mean Square	F
RA	Between Groups	8.53	1	8.53	0.79
	Within Groups	1919.53	178	10.78	
	Total	1928.06	179		
RO	Between Groups	3.79	1	3.79	0.26
	Within Groups	2634.41	178	14.80	
	Total	2638.20	179		
RP	Between Groups	5.49	1	5.49	0.63
	Within Groups	1547.42	178	8.69	
	Total	1552.91	179		
NP	Between Groups	17.13	1	17.13	1.63
	Within Groups	1866.07	178	10.48	
	Total	1883.20	179		
RC	Between Groups	3.11	1	3.11	0.33
	Within Groups	1673.46	178	9.40	
	Total	1676.58	179		
LS	Between Groups	129.51	1	129.51	8.96
	Within Groups	2572.13	178	14.45	
	Total	2701.64	179		
WC	Between Groups	5.63	1	5.63	1.20
	Within Groups	838.03	178	4.71	
	Total	843.66	179		
PS	Between Groups	2.31	1	2.31	0.24
	Within Groups	1724.46	178	9.69	
	Total	1726.78	179		
SS	Between Groups	25.51	1	25.51	3.65
	Within Groups	1245.46	178	7.00	
	Total	1270.98	179		

** P < 0.01 level

The F test in Table 10 revealed that there was significant difference among the teachers of industrial and business areas on leadership styles (F=8.96, p<0.01). Industrial area teachers were with more

stress as compared to business area teachers. There was no significant difference among Industrial and business areas with respect to the other eight factors listed in Table 10.

Table 11

Summary ANOVA for subscales of job satisfaction by gender

Variables	Variations	Sum of Squares	df	Mean Square	F
AC	Between Groups	0.35	1	0.35	0.03
	Within Groups	2222.60	178	12.49	
	Total	2222.95	179		
RES	Between Groups	4.69	1	4.69	0.44
	Within Groups	1899.37	178	10.67	
	Total	1904.06	179		
REC	Between Groups	128.10	1	128.10	7.55**
	Within Groups	3021.65	178	16.98	
	Total	3149.75	179		
PR	Between Groups	102.55	1	102.55	4.93*
	Within Groups	3706.25	178	20.82	
	Total	3808.80	179		
SU	Between Groups	8.73	1	8.73	0.82
	Within Groups	1892.93	178	10.63	
	Total	1901.66	179		
SB	Between Groups	0.43	1	0.43	0.02
	Within Groups	3705.88	178	20.82	
	Total	3706.31	179		
WE	Between Groups	9.52	1	9.52	0.51
	Within Groups	3327.03	178	18.69	
	Total	3336.55	179		
SP	Between Groups	3.39	1	3.39	0.15
	Within Groups	4077.81	178	22.91	
	Total	4081.20	179		
REL	Between Groups	0.97	1	0.97	0.05
	Within Groups	3169.23	178	17.80	
	Total	3170.20	179		

** P < 0.01

* p<0.05

F test (Table 11) revealed that gender had significant effect on promotion ($F= 4.93$, $P<0.05$) and recognition ($F=7.55$, $p<0.01$). In Comparisons with female teachers males had better mean scores on promotion and recognition. This is to mean that promotion and recognition had contributed more for males on job satisfaction than for females. There was no significant difference among males and females with respect to the other seven factors listed in Table 11.

Table 12**Summary ANOVA for subscales of job satisfaction by age**

Variables	Variations	Sum of Squares	df	Mean Square	F
AC	Between Groups	7.92	3	2.64	0.21
	Within Groups	2215.03	176	12.59	
	Total	2222.95	179		
RES	Between Groups	0.75	3	0.25	0.02
	Within Groups	1903.31	176	10.81	
	Total	1904.06	179		
REC	Between Groups	70.96	3	23.65	1.35
	Within Groups	3078.79	176	17.49	
	Total	3149.75	179		
PR	Between Groups	33.43	3	11.14	0.52
	Within Groups	3775.37	176	21.45	
	Total	3808.80	179		
SU	Between Groups	8.36	3	2.79	0.26
	Within Groups	1893.30	176	10.76	
	Total	1901.66	179		
SB	Between Groups	101.09	3	33.70	1.65
	Within Groups	3605.22	176	20.48	
	Total	3706.31	179		
WE	Between Groups	24.61	3	8.20	0.44
	Within Groups	3311.94	176	18.82	
	Total	3336.55	179		
SP	Between Groups	44.36	3	14.79	0.64
	Within Groups	4036.84	176	22.94	
	Total	4081.20	179		
REL	Between Groups	11.69	3	3.90	0.22
	Within Groups	3158.51	176	17.95	
	Total	3170.20	179		

Age (in Table 12) did not have any statistically significant effect on any of the job satisfaction factors except minor variations in mean scores.

Table 13**Summary ANOVA for subscales of job satisfaction by qualification**

Variables	Variations	Sum of Squares	df	Mean Square	F
AC	Between Groups	6.35	1	6.35	0.51
	Within Groups	2216.60	178	12.45	
	Total	2222.95	179		
RES	Between Groups	0.40	1	0.40	0.04
	Within Groups	1903.66	178	10.69	
	Total	1904.06	179		
REC	Between Groups	16.60	1	16.60	0.94
	Within Groups	3133.15	178	17.60	
	Total	3149.75	179		
PR	Between Groups	13.19	1	13.19	0.62
	Within Groups	3795.61	178	21.32	
	Total	3808.80	179		
SU	Between Groups	2.13	1	2.13	0.20
	Within Groups	1899.53	178	10.67	
	Total	1901.66	179		
SB	Between Groups	78.52	1	78.52	3.85*
	Within Groups	3627.79	178	20.38	
	Total	3706.31	179		
WE	Between Groups	9.29	1	9.29	0.50
	Within Groups	3327.26	178	18.69	
	Total	3336.55	179		
SP	Between Groups	45.26	1	45.26	2.00
	Within Groups	4035.94	178	22.67	
	Total	4081.20	179		
REL	Between Groups	4.01	1	4.01	0.23
	Within Groups	3166.19	178	17.79	
	Total	3170.20	179		

* P < 0.05 level

Qualification (in Table 13) had also statistically significant effect on salary and benefits (F= 3.85, P< 0.05). Teachers with BA/BSC

qualification had highly satisfied with salaries and benefits as compared to teachers with diploma qualification. There was no significant difference among BA/BSC and diploma qualifications of teachers with respect to the rest seven factors listed in table 13.

Table 14

Summary ANOVA for subscales of job satisfaction by experience

Variables	Variations	Sum of Squares	df	Mean Square	F
AC	Between Groups	20.41	3	6.80	0.54
	Within Groups	2202.54	176	12.51	
	Total	2222.95	179		
RES	Between Groups	17.83	3	5.94	0.55
	Within Groups	1886.23	176	10.72	
	Total	1904.06	179		
REC	Between Groups	46.20	3	15.40	0.87
	Within Groups	3103.55	176	17.63	
	Total	3149.75	179		
PR	Between Groups	92.06	3	30.69	1.45
	Within Groups	3716.74	176	21.12	
	Total	3808.80	179		
SU	Between Groups	6.47	3	2.16	0.20
	Within Groups	1895.19	176	10.77	
	Total	1901.66	179		
SB	Between Groups	148.32	3	49.44	2.45
	Within Groups	3557.99	176	20.22	
	Total	3706.31	179		
WE	Between Groups	12.85	3	4.28	0.23
	Within Groups	3323.70	176	18.88	
	Total	3336.55	179		
SP	Between Groups	115.66	3	38.55	1.71
	Within Groups	3965.54	176	22.53	
	Total	4081.20	179		
REL	Between Groups	6.70	3	2.23	0.12
	Within Groups	3163.50	176	17.97	
	Total	3170.20	179		

Experience (in Table 14) did not have any statistically significant effect on any of the job satisfaction factors except minor variations in mean scores.

Table 15

Summary ANOVA for subscales of job satisfaction by area of teaching

Variables	Variations	Sum of Squares	df	Mean Square	F
AC	Between Groups	88.41	1	88.41	7.37**
	Within Groups	2134.54	178	11.99	
	Total	2222.95	179		
RES	Between Groups	13.11	1	13.11	1.23
	Within Groups	1890.95	178	10.62	
	Total	1904.06	179		
REC	Between Groups	1.87	1	1.87	0.11
	Within Groups	3147.88	178	17.68	
	Total	3149.75	179		
PR	Between Groups	46.05	1	46.05	2.18
	Within Groups	3762.75	178	21.14	
	Total	3808.80	179		
SU	Between Groups	8.01	1	8.01	0.75
	Within Groups	1893.65	178	10.64	
	Total	1901.66	179		
SB	Between Groups	1.79	1	1.79	0.09
	Within Groups	3704.52	178	20.81	
	Total	3706.31	179		
WE	Between Groups	0.49	1	0.49	0.03
	Within Groups	3336.06	178	18.74	
	Total	3336.55	179		
SP	Between Groups	2.70	1	2.70	0.12
	Within Groups	4078.50	178	22.91	
	Total	4081.20	179		
REL	Between Groups	2.41	1	2.41	0.14
	Within Groups	3167.79	178	17.80	
	Total	3170.20	179		

** P < 0.01 level

F Test (in Table 15) for the area of teaching (Industrial and business) revealed significant difference in Achievement need. While achievement need was higher mean for business area, at the same time it was lower mean for Industrial area. There was no significant difference among Industrial and business area teachers with respect to the rest eight factors listed in table 15.

4. 1.4 Comparison of Contribution of Intrinsic and extrinsic Variables on job satisfaction

For the purpose of the analysis the subscales of job satisfaction were grouped in to two intrinsic (responsibility, recognition, promotion achievement) extrinsic (supervision, salary and benefits, working environment systems and policies & relationships). To compare the effects of Intrinsic and extrinsic subscales on over all job satisfaction, the categorized subscales were measured separately using regression analysis in terms of their prediction on overall job satisfaction. The table was presented below.

Table 16

**Stepwise Regression Results in predicting job satisfaction from
Intrinsic and extrinsic variables separately
Model summary**

Predictor variables	R	R. Square	Adjusted R. Square	SE	F	Sig
AC,PR, REC, RES	0.457	0.209	0.209	2.23	12.56	0.00
C REL, SB SU, WE, SP	0.540	0.291.	0.271	2.12	14.32	0.00

Table 16 indicated that comparing the roles of intrinsic and extrinsic variables in predicting over all job satisfaction, based the selected variables other factors being equal, the extrinsic subscales contribute more (27.1 % of the variance explained) as compared to the intrinsic subscales (20.9% of the variance explained). To provide a greater insight in to the contribution of each variable the coefficient of the predictors we re presented in the table below

Tables17

Regression coefficient of both intrinsic and extrinsic sub scales on over job satisfaction coefficients.

Sub scales	B	SE	β	t-test
Constant	6.05	.913	—	6.63
Achievement	0.02	0.06	0.03	0.38
Responsibility	0.18	0.07	0.24	2.41**
Recognition	0.07	0.05	0.12	1.53
Promotion	-0.02	0.05	-0.05	-0.51
Supervision	-0.04	0.07	-0.05	-0.56
Salary and benefit	0.18	0.05	0.33	3.71**
Working environment	0.21	0.06	0.36	3.54**
Systems & Policies	-0.08	0.06	-0.15	-1.32
Relationships	-0.04	0.06	-0.07	-0.60

R= 0.582 R² (Adjusted) = 0.339 F (9, 179) (p<.01)

** P<0.01

* P<0.05

Judging from the beta weights the effect of two sub scales working environment, salaries and benefits were highly significant (F= 3.71; P < 0.01 and F = 3.54, P<0.01) respectively. Responsibility was in the third rank, which was significant. The other variables were not significant. Therefore the order of subscale coefficients seem to show the role of extrinsic factors predicted better on over all job satisfaction.

4.1.6 Most Important Predictors of job Satisfaction

Further examination of the standardized estimates in Table 17 revealed the relative importance of these subscales of job satisfaction in explaining TVET teacher's job satisfaction. According to the data collected for this study, the variables which were significant in this model followed this order of importance; working environment ($\beta=0.36$), salary and benefits ($\beta = 0.33$) and Responsibility ($\beta=0.24$).

4.1.7 Factors Related to Job Stress; Most Important Predictors of Job Stress

The nine independent variables shown category of the subscales of Table 18 were regressed on the dependant variable stress-

Table 18

Regression coefficients of job stress subscales on overall job stress.

Subscales	B	SE	β	t-test	Probably
Constant	8.75	2.38		3.68	0.00
Role ambiguity	0.03	0.09	0.03	0.36	0.72
Role over load	0.23	0.06	0.26	3.58***	0.00
Role preparedness	0.05	0.08	0.05	0.70	0.49
Non-Participation	-0.17	0.08	-0.16	-2.09	0.04
Role conflict	0.03	0.08	0.03	0.36	0.79
Leadership style	0.14	0.16	0.16	2.24*	0.03
Working condition	0.35	0.14	0.23	2.59**	0.01
Peer support	-0.31	0.11	-0.29	-3.00**	0.00
Social support	0.10	0.09	-0.08	-1.08	0.28

R= 0.452 R² =0. 205 F (9,179) = 4.861 P<0.000

R² (Adjusted) = 0.163

*** P<0.001

* P<0.05

** P<0.01

Beta weights; effect of peer support, role overload, working condition, leadership styles, non participation, social support, role

preparedness, Role ambiguity, role conflict on stress in order of their importance, except role overload and role conflict, non- participation and leadership styles have the same order in the arrangement. Accordingly subscales with the rank of 1-4 had high significant effect on stress.

Regression analysis also showed that issues such as role over load (8.9%), peer support (2.4%) and Non- Participation (1.4%) in total 17.2%. of the variance are explained. Other variables entered to the step-wise regression were dropped.

4.1.8 Relationship between Job stress and job satisfaction

The relationship between overall job Stress and satisfaction was $r = -0.25$ and it was significant at 0.01 level.

4.2 Discussion of Results

The major sub-topics discussed in this section were related to the following basic research questions.

- 4.2.1. Is there a difference with respect to demographic characteristics such as gender, age, qualification, experience and area of teaching among TVET teachers on overall job satisfaction and job stress?
- 4.2.2. Which factor (intrinsic or extrinsic) plays more role in job satisfaction of TVET teachers?
- 4.2.3. What are the most important factors of job stress of teachers?
- 4.2.4. Is there a significant relationship between job stress and job satisfaction?

Discussions of the study were presented following the major findings of the study. Therefore, the main findings were as follows;

Demographic variables;

Female respondent teachers had a lower level of satisfaction and highly stressed as compared to the males. Females showed high stress on role overload and role preparedness, and low job satisfaction with respect to recognition and promotion. Diploma graduates showed relatively lower job satisfaction and higher stress compared to BA/BSC graduates. Diploma graduates were with high stress (compared to BA/BSC graduates) in the factor work overload. Teachers of Industrial area were with high stress (as compared to the business teachers) in leadership style and less satisfied in achievement need. However, age and experience on job stress and satisfaction did not show a significant contribution in the study.

Intrinsic VS extrinsic variables

The results of regression showed that working environment, salary and benefits and responsibility were very important factors to job satisfaction. The regression analysis also indicated extrinsic variables to be the most explaining variables as compared to intrinsic variables on the overall effect of job satisfaction.

The most stressful factors

Most teachers felt stressed on factors such as role overload, working condition, peer support, and leadership styles.

Relationship between job stress and job satisfaction

The relationship between overall job Stress and job satisfaction was found to be negative and significant.

4.2.1. Is there a difference with respect to demographic characteristics such as gender, age, qualification, experience and area of teaching among TVET teachers in overall job satisfaction and job stress?

Previous researchers found that job related stresses for teachers were evident. In the study, which focused on social service organization, Jeffery (1990) reported that women showed more indicators of job related stress than men. Similar results were also found by Laughlin (1984) and Pines & Kafri (1978). The findings of the present study too indicated that females experienced more job stress than men as the mean difference on job stress was significant at $p < 0.001$, $F = 11.62$.

Furthermore, the explanation for high level of stress by overload on the part of females seems due to the additional responsibility they have at home (house wives and mothers). With regard to role preparedness, female TVET teachers who felt incompetent were more stressful than males. Those female teachers who had difficulty to adapt quickly to changes in the work environment exhibit higher stress. This study also indicated that the female teachers who were well prepared and competent in their teaching roles found to have less job stress.

On the other hand, the analysis of job satisfaction as a function of sex indicated that males were more satisfied as compared to their female counterparts. Thus, this finding was in congruent with the findings of Fiorentino(1999) and Hagedron(1996): women have reported lower level of job satisfaction than men. Besides, it was found out that stress was inversely related to job satisfaction implying that females with high job stress have shown low job satisfaction.

The second demographic variable under investigation was age of the respondents. The findings of Herzberg(1957) on the same issue showed curvilinear relationship, where as that of Hulin (1963) revealed a linear positive relationship across the specified age category. In the present study, however, no significant relationship was found on job satisfaction as a function of age. Scholars like Fennick, 1992; Sarros & Sarros, 1990; Eskridge &Coker, 1985 fund that job stress varies as a result of age; whereas the findings of this study supported the works of Milstien & Golaszewski (1983) which reported that age was not a significant variable.

The other variable considered was experience. Experience didn't have any statistically significant effect on job stress and satisfaction. The reason could include for the non-significant result may be most of the respondents average experience was 6.83 with most of them ranged from 1-5 years service. With regard to the experience factor Friedman (1991) reported that the peak period for burnout or high stress to be 20-24 years experience. Similar reason can be inferred also to the category of service years to the job satisfaction.

The fourth variable was qualification. Diploma graduates showed higher job stress as compared to the BA/BSC graduates, and the difference was statistically significant. In this case, the explaining factors seem teaching load, and salary and budget related issues. The diploma teachers might need more time to prepare themselves and feel less comfortable to manage classrooms with ease and flexibilities. On the other hand, diploma teachers were more dissatisfied because they do the same job with the BA/BSC holders but they differ in their salary. Many of the teachers who gave additional comments to the open-ended questionnaire (Appendix F) also supplemented this idea.

However, qualification didn't show any significant difference in the overall job satisfaction.

The last demographic factor considered was whether area of teaching makes a mean difference on job stress and satisfaction. These did not show a significant mean difference in job stress and satisfaction. But, there was a significant difference between industrial and business teachers as a result of leadership styles. This might be for the reason that teachers in the industrial subjects require more resources, but not satisfied with the leadership activities. This was supported by the ideas of Wright (1991) who said that lab teaching for technology teachers can be a source of frustration especially in requesting, using and maintaining hand tools and/ or supplies for classroom. The same author, citing different sources, added that the primary reason that technology teachers leave the profession was lack of support from the institutional administration.

Area of teaching was significantly related to job satisfaction scale achievement. Here, the teachers of business area were found to be more satisfied as compared to the industrial area teachers, which could be related to the relationship with the leadership.

4.2.2 which factors (the intrinsic or extrinsic) play more roles in job satisfaction of TVET teachers?

The results of stepwise regression analysis for the intrinsic and extrinsic factors on job satisfaction were presented in the finding. Higher predictive ability on job satisfaction was observed in the factors related to extrinsic variables compared to intrinsic ones. Among factors of job satisfaction, the first and second higher predictors were found from the extrinsic variables/category – 1st

salary and benefits, and 2nd working environment (consistent with that of Wisniewski (1990)). However, Piamonte (1980) and Davis (1972) argued that money means different for different people and categorized as less related to job satisfaction. Anyway, according to this study, reasonable amount of salary pay and additional monetary or material rewards or benefits seem one of the important factors with regard to overall job satisfaction.

A comparison of the intrinsic and extrinsic factors were made to determine job satisfaction, the results of this study showed inconsistency with the findings of Sergiovanni (1996) who found out intrinsic factors (specifically achievement and recognition) as the best predictors. Wisniewski (1990) also asserted that supervision favors high job satisfaction, which seemed less related to the job satisfaction in this study.

In general, although the study of Lortie (1975) and Payne (1985) favored the intrinsic rather than extrinsic factors that influence teachers' job satisfaction, this study tended to support the views explained by Wisniewski (1990), Piamonte (1980) and Davis (1972), who considered the factors separately.

From the items of the questionnaire physical conditions, availability of materials/equipments, teachers' academic freedom and respecting teachers at the community seems important for the working environment there by for the TVET teachers' overall job satisfaction.

Among 12 factors studied by Wright (1991) on retention of technology teacher's salary/benefits was the second most important factor next to working environment. Others like Lindsey (1979), Bruce and Blackburn (1992), Ninomiya's et al. (1990), put it in terms of material

reward. The present study has also in line with the past studies considering salary and budgets to be the most important factor in job satisfaction. Whisniewski (1990) also argued that the amount of pay is considered to be the most important for job satisfaction. ECBP (2006) has also reported low salary of teachers to be a problem for the quality of training conducted.

Next to working environment and salary and benefits, responsibility was found to be the third important factor for the overall job satisfaction. This is in line with the findings of Vroom (1982) and Davis (1972) that view employees participation in decision-making encourages the individuals and thereby increases productivity. Therefore, there is a strong relationship between employee's participation in decision making, giving opportunities for responsibility and to give them freedom to use their own judgment in the work can bring job satisfaction. Hence, responsibility can be considered as the third important factor for TVET job satisfaction.

4.2.3 What are the most important factors of teachers' job stress?

Peer support, Role overload, working condition and leadership styles were the four most significant predictors of job stress. Peer support was the first important factor contributing significantly, in a negative direction, towards stress. That is, colleagues seemed playing important contribution towards eutress than distress. This might also imply that there was cooperation and team sprit among TVET teachers. Dussault et al. (1999) found support amongst colleagues to be important in affecting levels of stress. Similarly Dick et al. (1999) also found that the support of colleagues had both positive effects on health and buffering effect in respect of work stress. This was in line with the present finding.

Role overload was the most frequently reported factor affecting teachers' stress (Fennick, 1992; Friedman, 1991, Travers and cooper, 1997; Antoniou, 2000). Therefore, the present study confirmed the previous research findings. According to this paper, the second most source of stress found among the studied nine variables was workload, which provided convincing support for the assertions by Gupta,1981; Travers and cooper, 1977; Antoniou et al.,2000; Duham,1984; Kyriacou and sufcliffe, 1979; ICDR, 1985). In this study, working environment as a factor of stress stood third. Issues such as availability of equipments and training materials, unavailability of job opportunities for their students, competencies of technology transfer to their students seemed some of the possible reasons for the working conditions according to the questionnaire items. Besides, leadership style was the fourth important variable with significant effect on stress comparing with the nine subscales of the regression. Travers and Cooper (1997), Friedman (1991) and Dussault et al. (1999) had also considered leadership style as an important factor in affecting job stress. Here, the teachers' stress was affected positively by the leadership styles of the institutions.

4.2.4 Is there a significant relationship between job stress and job satisfaction?

One of the objectives of the present study was to examine the relationship between job stress and job satisfaction. The relationship between overall job stress and job satisfaction was $r = -0.25$ and it was significant at 0.01 level. The high negative correlations between job stress and job satisfaction provided convincing support for the assertions by Kyriacou and sutcliffa (1979), which was significant at $p < 0.01$

($r = -0.27$). The present study was in line with the findings of Beehr et al. (1976). Litt and Turk (1985) had also found an inverse relationship between constructs of job satisfaction and job stress.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMANDATIONS

5.1 Summary and Conclusion

The purpose of the present study was to investigate the factors influencing job stress and satisfaction among TVET teachers in Tigray.

Random sampling method was used to select a sample of 180 teachers.

Instruments used to measure teachers' stress & job satisfaction were self-report questionnaire. Screening and validation of the items took place through various methods including expert judgment and pilot test tryout.

Quantitative statistics such as mean, standard deviation, and linear regression techniques were employed to investigate the basic research questions

Stress is a phenomenon that can produce negative results in teachers' professional life. The effects of extreme or unproductive level of stress can cause teachers to have negative attitudes toward students and to lose their energy and purpose. Stress also contributed to ineffectiveness and inefficiency in the teaching roles of teachers (Eskridge & Coker, 1985).

On the other hand, job satisfaction also influenced the general life satisfaction, which was an important influential factor for teachers' psychological health. The findings of the study indicated that job stress and job satisfaction had strong inverse relationship and affected positively or negatively the teachers themselves, their

students and the training process. Stress factors and satisfaction factors affecting teachers were identified in terms of their degrees.

The result of the study has shown that female respondent teachers had a lower level of overall job satisfaction as compared to the males. One reason for the dissatisfaction of the majority of females might be the difference observed as a result of recognition and promotion, which was said to be favored more to males than the female teachers. Similarly, females (compared to males) were more stressed with work overload and role preparedness.

With regard to qualifications, diploma holders showed relatively lower job satisfaction as compared to BA/BSC graduates. Besides, the higher the qualification the lower the stress was observed among the diploma and degree holder teachers. The diploma teachers were engaged in the same job with that of degree holders but with relatively less payment implying more dissatisfied in the area of work.

Teachers of Industrial area were with high stress as compared to the business teachers in leadership style subscale. Area of teaching was also significantly related to job satisfaction scale achievement. Here, the teachers of business area were more satisfied in achievement needs as compared to the industrial area teachers.

However, age and experience on job stress and satisfaction did not show a significant contribution in the study. The results of regression showed that working environment, salary and benefits and responsibility were very important factors to job satisfaction. The satisfaction rank scores on regression analysis also indicated extrinsic variables to be the most explaining variables as compared to intrinsic variables on the overall effect of job satisfaction. Moreover,

most teachers felt stressed on factors such as role overload, working condition, peer support, and leadership styles.

The relationship between overall job Stress and job satisfaction was found to be negative and significant.

Therefore, based on the present study it is possible to draw the following concluding remarks:

- Gender showed significant difference in the aspects of job stress and job satisfaction; female teachers experienced high stress in the overall job stress, role overload and role preparedness compared to male teachers. On the other hand, female teachers reported lower satisfaction with aspects of overall job satisfaction, recognition and promotion.
- Qualification had significant effect in the overall job stress and not in the aspects of job satisfaction except salary and budget. Diploma graduate teachers were with high overall job stress and low satisfied in salary and budget as compared to BA/BSC graduates.
- Area of teaching revealed significant difference in achievement need and leadership style. While business area teachers showed high job satisfaction in achievement need, at the same time it was lower for industrial area. On the other hand, leadership style was found to be highly stressful for the industrial area as compared to the business area teachers.
- No significant differences among the categories of age and experience were observed in job stress and satisfaction.
- The most important predictors of job satisfaction were found to be the extrinsic aspect of the job compared to the intrinsic aspect of the job. The significant predictors of job satisfaction were working environment, salary and benefits, and responsibility. The highest predictors working environment and

salary and benefits were the extrinsic aspect of the job. But, only responsibility from the intrinsic aspect of the job contributed small percentage of variance to the job satisfaction.

- Peer support, Role overload, working condition and leadership styles were the four most significant predictors of job stress. Peer support was the first important factor contributing significantly, in a negative direction, towards stress and the others contribute in a positive direction.
- The relationship between overall job stress and job satisfaction was negatively significant. This might show that by minimizing aspects of job stress, the satisfaction of teachers could be improved.

5.2 Recommendations

Recommendations for Practice

Given the current fast growth in technology with its effect on the economy and society at large, the need for training is more profound than ever. The TVET system has to produce high working force towards employment and self-employment. In view of these realities, nowadays employers and trainees expect more from staff, to provide efficient and effective training. Accordingly, highly satisfied and less stressed teachers are needed. Therefore the findings obtained the following future agendas were forwarded to improve the situation under discussion.

- The result of the present study has shown that role preparedness was found out to be the source of stress and promotion and recognition in job were typical source of stress to females compared to male teachers. *Role preparedness* was variable that can be somewhat controlled by the TVET system

at different levels starting from the grassroots level training centers. For example, since this study indicated that a problem in role preparedness induced stress in female teachers, the TVET system could require and encourage with special attention to females in upgrading their skills by providing opportunities for female teachers to gain additional short term trainings related to their areas of expertise. The school systems could also encourage and make it possible for the female teachers to be given time to get the opportunity for an internship programs to gain additional skills and knowledge. The training institution should also *recognize* for the good jobs performed, give rewards and encouragements for females with special attention. Since *promotion* was a source of dissatisfaction for females it was also advised for the training institutions to give chances for them to promote to different positions.

- The industrial area teachers had complained over the *leadership style* as compared with the business teachers. Special attention is needed by the leadership, in technical as well as material support, for the industrial area teachers so that to decrease the level of stress. The relationship between the leadership and the industrial teachers with respect to teachers' stress need also to be discussed. Though industrial teachers had more complain with the leadership style as compared to business teachers, leadership style was a significant predictor of job stress among all TVET teachers. Therefore, to improve the leadership of institutions different training imputes related to teachers ways of handling and other alternative solutions should be devised so that to reduce teachers stress.

- The result of the finding revealed that there was a strong negative relationship among teachers with respect to *peer support*. The implication on cooperation and team spirit among TVET teachers should be taken as an asset and should be used as an opportunity for other activities such as team teaching.
- In this study the factor *working condition* was considered to be the most important factor contributing to job stress. The school and the TVET commission have to monitor and improve the availability of equipments and training materials, employability skills for students, competencies of technology transfer to students thereby to improve the working conditions of training institutions.
- From the finding reasonable amount of *salary pay and additional monetary or material rewards or benefits* was one of the important factors with regard to overall job satisfaction. TVET centers can be productive through their hands on training throughout the year. It is important to use these opportunities for income generating activity for the schools and thereby to give monetary/material rewards for teachers. MOE also need to improve the salary of teachers taking in to account the nature of the job, the type of skill demanded and the economy of the county so that to reduce dropout of teachers.
- *Responsibility* was found an important factor for the overall job satisfaction. *Participation* of teachers in decision-making, giving to get the chance for responsibility and to give them freedom to use their own judgment in the work can bring job satisfaction.

- The remedies for the satisfying factors should also be given attention according to priority of extrinsic-extrinsic order. Improving *extrinsic factors* such as working environment and salary and benefits need to be given priorities of attention since they showed better prediction of job satisfaction.

Suggestions for further research

- The present study has, considered factors related to demographical variables among which age and experience indicated no difference in both dependent variables considered. But, the findings were inconsistent with other researchers. Therefore age and experience categories, as sources of job stress and satisfaction could be a source of future research.
- Additional studies involving more items related to specific sources of stress and job satisfaction and other methods of data collection such as personal interviews with teachers and observations of working are desirable to further investigate the concepts of stress and job satisfaction. Attribution-inquiry techniques seem promising for this purpose to probe for the potential alternative reasons for high stress and job satisfaction. Comparisons with the results of similar studies in the neighboring regional state governments in Ethiopia, as well as in other countries, may through additional light on some of the detailed topics.
- With regard to role overload the ministry of education and the schools has to study the workload for TVET teachers with regard to the working behavior. Because the diploma holders and females were suffering from the job overload, the school

has to seek means in minimizing work overload with special attention female and diploma teachers. Further study is also needed to study on workload of females at home.

- Further research may create a more effective measure on the factor related to -working environment if it is studied in terms of different dimensions such as culture, type of profession, level of institution, and skills of coping mechanisms

REFERENCES

- Alley, R. (1980). Stress and the professional educator. *Action in teacher Education*, 2, 1-8.
- Antonion, A., Polychroni, F., and Walters, B. (2000). Sources of stress and professional burnout of teachers of special education in Greece. A paper presented at international special education congruence. *University of Manchester 24th-28th July 2000*. 1 -15.
- Bailey, J.G., Berell, M.M., & Gibson, I.W. (1991). *Springboards to change: From policy to practice*. Brisbane: Ministerial consultative council on curriculum.
- Beer, T.A., Walsh, J., & Taber, T. (1976). Relationship of stress to individually or organizationally valued states: higher order needs and moderators. *Journal of Applied Psychology*, 61, 41-47.
- Bibou-Nakou I, Stogiannidou A & Kiosseoglou G (1999). The relationship between teacher burnout and teachers' attributions and practices regarding school behavior problems. *School Psychology International* 20, 209-217.
- Borg, M. (1990). Occupational stress in British educational settings: A Review. *Educational psychology*, 10, 103-126.
- Brimer, R.B. & Reynolds, S. (1993). *Bad theory and Bad practice in occupational stress*. Paper presented at British psychological society occupational conference, February.
- Brouwers A & Tomic W (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education* 16, 239-253.

- Bruce, W.M., & black burn, J.W. (1991). *Balancing job satisfaction and performance*. Westport, CT: Quorum Books.
- BUPA 's Health Information Team (2004). *Stress in the work place* . . Washington, DC: Harvard University.
- Byrne, B.M. (1991). Burnout: Investigating the impact of background variables for elementary, intermediate, secondary, and university educators. *Teaching and Teacher Education*, 7(2), 197-209.
- Cyralene P. (2001). *Insights into the concept of stress: Emergency Preparedness and Disaster Relief coordination program*, by the pan American Health organization printed in Washington, DC., U.S.A.
- Davis, K.(1972) *Human Behavior at work: Human Relations and organizational Behavior*, 6th ed. ,New York: Mcgraw-Hill Book company.
- Davis, Keith and Newstorm, John W.(1989).*Human behavior at work : organizational Behavior*. New York: Mcgraw-Hill Book company.
- Dinham, S. (1992). *Human perspectives on teacher registration: Preliminary results of one investigation* Paper presented at the Annual Meeting of Australian Council for Education Administration.
- Doyle, G.T., Forsyth, R.A. (1973). The relationship between teacher and student anxiety levels. *Psychology in the Schools*.10,231-233.
- Dussault M, Deaudelin C, Royer N & Loïselle J (1999). Professional isolation occupational stress in teachers. *Psychological Reports* 84, 943-946.

- ECBP (2006). *National Technical and Vocational Education and Training (TVET) Strategy*. Addis Ababa.
- Eskridge, D.H., & Coker D.R, (1985). *Teacher stress: Symptoms, causes, and management techniques* (ERIC Document Reproduction Service No. EJ 320930)
- Fennick, R. (1992). *Combating new teacher burnout: providing support networks for personal and professional growth*. Paper presented at the Annual Meeting of the Conference on college compositions and communication.
- Fimian, M.J., & Santoro, T.M.(1983). Sources and manifestations of occupational stress reported by full-time special education teachers. *Exceptional children*,2,19-23.
- Fiorntino, L.M.(1999). Job satisfaction among faculty in higher education. *Dissertation Abstracts International*60,138.
- Friedman, I.A.(1991). High and low burnout school: school culture aspects of teacher burnout. *Journal of Educational research*, 84(6),325-33
- George, F. et al. (1995).Occupational Stress among Canadian College of Educator: A Review of Literature. *College quarterly* 3, 1-9.
- Girdano, D.A., Everly , G.S., & Dusek, D.E.(1990). *Occupational stress and stressors*. In A. maaisel (Ed.), *controlling stress and tension: A holistic approach*(3rd ed., pp 131-152). Englewood cliffs, NJ: Prentice Hall.
- Girma Lema (1995). Perceived sources of Occupational Stress Among Secondary School Teachers: The Case of East Showa. Un published MA thesis, Addis Ababa.
- Gorton, D. and Kalamani, B. (1985). The assistance principal: An underused asset. *Principal*,65(2),36-40.

- Grunburg, M.M.(1979). *Understanding job satisfaction*. Theford , Norflok, Great Britain: Lowe and Brydone printers, Ltd.
- Gupta, N. (1981). *Some sources and remedies of work stress among teachers*. (ERIC Document Reproduction Service No. ED 214961). National Institute of Education.
- Hackman J. Richard & Gerg.R. Oldham(1980). *Work redesign*. Reading, MA: Addison-Wesley.
- Hagedorn, L.S.(1996). Wage equity and female job satisfaction: The role of wage differentials in job satisfaction casual model. *Research in higher education*, 39, 143-162.
- Hagos Zeray (1998). The Relationship Between Sex and Other Characteristics to Teachers Stress and Coping Strategies: The Case of western Zone elementary School Teachers of Tigray. Unpublished MA thesis, Addis Ababa.
- Herzberg, F. (1959). *The motivation to work*(2nd ed.). New York: John Wily & sons.
- Herzberg, F., Mausner, B., Peterson, R.O. & Capwell, D.F. (1957). *Job attitudes: Review of Research and Opinion*. Pittsburgh, PA: Psychological Service of Pittsburgh.
- Hulin, C.L. (1963). *A linear Model of job satisfaction*. Authorized facsmile of an unpublished doctoral dissertation (Cornell University, Ithaca, NY, 1963) Ann Arbor, MI: University Microfilms Limited.
- ICDR. (1985). *Evaluation of educational research in Ethiopia; Report on curriculum preparation and the teaching learning process* Vol. 1 No 2. Unpublished. Addis Ababa.
- Ivancevich, J.M. & Metteson, M.T. (1990). *Organizational Behavior Management*. Boston: Home-Wood.

- Ivanevich, J.& Matteson, M.(1980). *Stress and work: a managerial perspective* (Glenview, IL, scott Foresman & Cop).
- Iwanicki, R.F.(1983). Towards understanding and alleviating teacher burnout. *Theory in to Practice*,22,27-31.
- Jeffery, V.L. (1990). Stress an burnout of men and women in the human service of professionals. *Dissertation Abstracts International*, 29(29),229.
- Kahn, R.L., Wolfe, D.M.,Quinn, R.P.,Snock,J.D. &Rosenthal, R.A. (1964). *Organizational stress : studies in role conflict and role ambiguity* .New York: John wiley.
- Kanner, A., Kafry, D., & Pines, A.(1978). Conspicuous in its absence: the lack of positive conditions as a source of stress. *Journal of Human stress*,4,33-39.
- Kochhar S.K.(1993). *Educational and vocational guidance in secondary schools* (Indian Ed.).New Delhi: Sterling publishers private limited.
- Korman, A.K.(1970). Towards an hypothesis of work motivation, *Journal of Applied Psychology*, 54,35-41.
- Kyriacou, C. (2001). Teacher stress. Directions for the future research. *Educational Review* 53(1) ,27-35.
- Kyriacou, C. and Sutcliffe, J. (1979). Teacher stress and job satisfaction. *Educational Research* 21(2), 89-97.
- Laughlin, A. (1984). Teacher stress in an Australian setting: the role of biographical mediators, *Educational Studies*,10,7-22.
- Lawler, E.E (1973).*Pay, participation and organizational change, In Man and Work in Society*. New York, van Nostrand.

- Levin, Ira & Joseph p. stokes (1989). Dispositional approach to job satisfaction: Role of negative affectively. *Journal of Applied Psychology* 74: 754-58.
- Lindsey, P.W (1979). Teacher turnover in Texas secondary vocational industrial education program. *Dissertation Abstracts International*,40,3684A.
- Litt, M.D., & Turk, D.C. (1985). *Sources of stress and dissatisfaction in experienced high school teachers*. (ERIC Document Reproduction Service No. EJ 320930).
- Locke, E.A, Cartledge, N. & Kerr, C.S (1970). Studies of the relationship between satisfaction, goal setting and performance. *organizational behavior* 5,135-158.
- Lussier, R.N. (1996). *Human relations in organizations. A skillbased approach* (3rd ed.). New York: Mc Graw-Hill.
- Lussier, Robert N. (1990). *Human relations : A skill-Building Approach*. Botson: Home-Wood.
- Mackinnon, N.J.(1978). Role strain: An assessment of a measure and its variance of factors structure across studies. *Journal of Applied Psychology*, 63, 321-328.
- Manthei,R. and Gilmor,T. and Adair, V.(1996). Teacher stress in intermediate schools. *Educational Research*38(1),3-17.
- Maslach, C. & Jackson, S. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 1-15.
- Maslow, A.H.(1970). *Motivation and Personality*(2nd ed.). New York: Harper & Row.
- Menlo,Allen & Popple, pam(1990). A five country study of the work perceptions of secondary school teachers in England, the

- United states, Japan, Singapore and West Germany (1986-88). *Comparative Education*,26(2/3),174.
- Marrow, J.(1999, October 6). The teacher shortage, phony cures. *Educational Week*, 48,64.
- Milstein, M. M., & Golaszewski T. J. , (1983). *Organizationally-based stress: What bothers teachers(an end of year perspective)?* Montreal, Quebec, Canada: America Education Research Association. (ERIC Document Reproduction Service No.ED 231048)
- MCB.(2002). *Capacity Building Performance strategy*. Addis Ababa.
- MOE. (2003). *Annual Abstract reports*. Addis Ababa
- MOE. (2004). *Guideline for quality assurance of institutions of technical and TVET*. Addis Ababa
- MOE. (2005). *Annual Abstract Reports*. Addis Ababa
- Morris, M.B.(1982).*The public school as a workplace: the principal as a key element in teacher satisfaction*, Tech. Rep. 32, Dayton, institute for the development of educational activity.
- Ninomiya, Akina and Okato, Toshitka (1990). A Critical Analysis of Job-Satisfied Teachers in Japan. *Comparative Education*, 26(2/3),249-257.
- Pettegrew, L.S., Thomas, R.C.,Ford, J. & Raney, D.C.(1981).The effect of job related stress on medical center employee communicator style. *Journal of occupational Behavior*,2, 235-253.
- Pettegrew, L.S., Wolf Glenda E. (1982). Validity measures of teachers' stress. *American Educational Research Journal*19(3). 373-396.
- Piamonte J.S.(1980). An employee motivation system that leads to excellent performance, *personnel*,57(6) 61.

- Pierce, M. & Malloy, G. (1990). Relationship between school type, occupational stress, role perceptions and social support. *Australian journal of Education*, 34 (3), 330-38.
- Pines, A. & Kafri, D. (1978). Work tedium in social service professionals. social work. *Journal of occupational Behavior*, 3,254-273.
- Pithers RT& Soden R (1998) Scottish and Australian teacher stress and strain: a comparative study. *British Journal of Educational Psychology* 68,269-279.
- Rice, Robert W., Dean B. McFarlin & Debbie E.Bennet (1989). Standards of comparison and job satisfaction. *Journal of Applied Psychology*,74(4) : 591-98.
- Sarros, A. M & Sarros, J.C (1990). How burned out are our teachers? A cross-cultural study. *Australian Journal of Education*, 8, 151-158.
- Schonfield, I. (1990). Psychological distress in a sample of teachers. *The journal of psychology*. 123,321-338.
- Selye, H. (1956). *The Stress of life*. New York: McGraw-Hall.
- Selye, H. (1974). *Stress without Distress* Lipincott.
- Selye, H. (1982). *History and present status of stress concept* Theoretical and Clinical Aspects . New York: The Free press.
- Sergiovanni, T.J. & Elliott, D.L.(1977). *Educational and organizational leadership in elementary schools* (Englewood cliffs, prentice Hall).
- Solly, D.C. & Hohenshil, T.H.(1986). Job satisfaction of school psychologists in a primary rural state. *School psychology Review*, 15(1):119-126.

- Solman, R. & Feld, M.(1989). Occupational stress: perceptions of teachers in catholic schools. *Journal of Educational Administration*, 27(3), 55-68.
- Stanton, J.M., Bachiochi, P.D. Robie, C., Perez, L.M., & Smith, P.C. (2002). Revising the JDI Work Satisfaction subscale: Insights in to stress and control. *Educational and Psychological Measurement*, 62, 877-895.
- Sutter, M.R.(1994). *Job and Career satisfaction of school assistance principals*. An Un published doctoral dissertation, Kent State university, Kent, ohio.
- Terry, P.M. (1997, April) Teacher burnout: Is it real? Can we prevent it ? Paper presented at the annual meeting of the north central association of college and schools, Chicago, IL. (ERIC Document Reproduction service No. Ed 408258)
- Tigray TVET Commission, (2003). *Labor market assessment in Tigray* Tigray National Regional State of TVET commission, Mekelle Unpublished.
- Tigray TVET commission, (2006). *Semi-Annual report paper , Tigray*
- TGE (1994). *Educational Strategy*. Addis Ababa.
- Travers C & Cooper C (1997). *Stress in teaching*. In Shorrock-Taylor D(ed) Directions in educational psychology. Whurr, London.
- Trendall, C. (1989). Stress in teaching and teacher effectiveness: A study of teachers across main stream special education. *Journal of Educational Research*, 31, 52-58.
- Van Dick R, Wagner U, Petzel T, Lenke S & Sommer G (1999). Occupational stress and social support : first results of a study among school teachers. *Psychology in Erziehung and unterrich* 46,55-64.

- Vroom, V.H (1964). *Work and motivation* (New York, John Wiley)
- Vroom, V.H (1982). *Work and motivation* (New York, John Wiley)
- Weiss, D.J., R.V. Dawis, G.W. England & L.H. Lofquist. (1967).
Manual for Minnesota satisfaction questionnaire Industrial
relation center, University of Minnesota.
- Wieslaw Wisniewski (1990). The job satisfaction of teachers in Poland.
Comparative Education, 26(2/3):299-306.
- Wiley, C. (2000). A synthesis of research, causes, effects, and
reduction strategies of teachers stress. *Journal of Educational
Research*, 29, 20-38 .
- Williams, J.C. (1978). *Human behavior in organization*, Cincinnati,
Ohio: South western publishing co., 123-124.

Appendix A

Items for expertise validation

Addis Ababa University

School of Graduate studies

Department of Psychology

Type: MA thesis expertise Item Validation Check list prepared for vocational school teachers related to stress and job satisfaction.

Aim: The aim of the item validation is to construct and select good items that help to identify factors in the school environment that cause stress and possibly decrease teachers' satisfaction on the job. The information obtained by you will also be helpful to validate the items and make some arrangement before piloting the Questionnaires.

Remark:

You are kindly requested to please complete to this three scale checklist by putting x mark to the right of each factor and for the poor items give suggestions on how it should be modified in the blank space given.

After the 5th item of each variable, there is also a space provided for suggestion if there are additional items suggested.

Thank you

Part I: Stress on the job-weighting items

		To what extent does the items measure Category in which it is grouped			
		Highly	Moderately	Poor	Remark
	Role Ambiguity				
1	I can predict what will be expected of me in my work tomorrow.				
2	I am unclear on what the scope and responsibilities of my job are.				
3	I am uncertain what the criteria for evaluating my performance actually are				
4	I receive enough information to carry out my job effectively.				
5	When asked, I am able to tell someone exactly what the demands of my job				

	Role Overload				
6	I feel that my job interferes with my family life				
7	I feel constant pressure from others to improve the quality of my work.				
8	I find that I have extra work beyond what should normally be expected of me.				
9	The criteria of performance for my job are too high.				
10	The teacher training I received was inadequate to enable me to perform my job effectively.				
	Role preparedness				
11	I am prepared to carry out all the school assignments I received.				
12	I often feel that others have to help me if I am to get the job done properly.				
13	I am able to quickly adapt to the changing pressures and situations at work.				
14	My fellow department members feel that I am capable of performing my job well.				
15	I am prepared to carry out testing and evaluation.				
	Non-participation				
16	My fellow department members and I regularly have time during the school hours to discuss job-related issues.				

17	I have influence over what goes on in my department school.				
18	I am informed of important things that are happening in my department school.				
19	My administrative head asks my opinion on decisions that directly affect me.				
20	I feel that it is useless to make suggestions about my work because decisions are made regardless of my attempts to influence them.				
	Role conflict				
21	I receive conflicting demands from two or more people or groups in the school setting				
22	I have to bulk a rule or policy in order to carry out an assignment.				
23	I have a hard time satisfying the conflicting demands of students, parents, administration and teachers.				
24	I am given school related duties without adequate resources and materials to carry them out.				
25	There is a difference between the way my administrative head thinks things should be done and the way I think they should be done.				
	Leadership style				
26	My administrative head allows me extensive freedom to plan and organize my work.				

27	My administrative head brings me together with other facilities departments in joint meetings to make decisions and solve common problems.				
28	My administrative head gives me full information about the things which directly involve my work.				
29	My administrative head always insists that I solve my own work problems but is available to advise me if needed.				
30	My administrative head insists that I stick to my job and leave decision-making and planning to him.				
	Working conditions				
31	I am troubled by the students' poor attitude towards learning training.				
32	I find working only with low ability students puts a lot of stress on me				
33	I am worried with unavailable job opportunities to my students.				
34	I feel incompetent with the introduction of new technologies.				
35	I am troubled by the shortage of curriculum materials such as textbooks, reference materials, and other instructional materials.				
	Peer support				
36	There is lack of friendly support from other staff members.				
37	When I really need to talk with someone, my fellow staff members are willing to listen.				

38	My fellow staff members pay attention to what I am saying.				
39	My fellow department members stand up for each other for outsiders.				
40	Meeting with colleagues are valuable.				
	social support				
41	The parental and societal expectations for the outcomes of our school are high which are stressful.				
42	TVET is generally perceived as the last option for those students who failed to get in to higher education and this emanates from low public image .				
43	Employers do not feel that the would be graduates get enough skills and knowledge to their companies.				
44	The society considers TVET as if we produce unemployed graduates.				
45	There is low status of the profession in the society.				

Items on over all job stress

1	I often think my work even when I am at home.			
2	I never have time to look after other matters because I am too busy with my work.			
3	I feel frustrated because it seems that my work my work will never end.			
4	I find my work easy and without pressure at all.			

Any additional comments related to stress :

Part II: Satisfaction on the job-weighting items

		Highly	Moderately agree	Poor
	Achievement			
1	I try very hard to improve on my past performance at work.			
2	I enjoy a difficult challenge.			
3	I want to know how I am progressing as I complete tasks.			
4	I enjoy setting and achieving realistic goals.			
5	People get a head as fast here as they do in other places.			
	Responsibility			
6	I have the chance to be responsible for planning my work.			
7	I have the chance to make decisions on my own.			
8	I have the chance to be responsible for the work of others.			
9	I have freedom to use my own judgment.			

10	I have the responsibility of my job.			
	Recognition			
11	When I do a good job, I receive the recognition for it.			
12	I feel a sense of pride in a job well done.			
13	I feel satisfied with the way they usually tell me when I do my job well.			
14	I am satisfied with the pride I get for doing a good job.			
15	There are few rewards for those who work here			
	Promotion			
16	There is really too little chance for promotion on my job.			
17	Those who do well on the job stand a fair chance of being promoted.			
18	I am satisfied with my chances of promotion.			
19	I have the chance of getting a head.			
20	The way promotion are given are transparent.			
	Supervision			

21	I feel satisfied with director's supervision and understanding each other.			
22	The way the director handles teachers is good.			
23	My supervisor is quite competent in doing his job.			
24	My supervisor is unfair to me.			
25	My supervisor shows too little interest in the feeling of subordinates.			
	Salary and Benefits			
26	My pay and the amount of work I do is good.			
27	Job benefits, in addition to my salary, are good.			
28	As compared to my colleagues my salary and job benefits are fair.			
29	I have the chance to make as much money as my friends.			
30	There are benefits we do not have which we should have.			
	Work environment			
31	I have enough materials equipments for my work.			
32	The physical surrounding of my work are pleasant.			
33	Teachers in the community are regarded with respect			
34	It is difficult to feel satisfied working here.			

35	Teaching is free from outside interruptions .			
	System policies and practices			
36	The policies and practices towards employees of this school system are good.			
37	The way in school system policies are put in to practice are good.			
38	The way in which the school system polices are administered are good.			
39	The employees are well informed about the school system policies.			
40	The way the school system treats its employees are fair.			
	Relationship with colleagues			
41	I can easily get advice and consultation when I need help.			
42	I have the support and co-operation of colleagues.			
43	Meeting with colleagues are valuable.			
44	I have sufficient opportunity for professional interaction with other colleagues.			
45	There is a sprit of cooperation among my co-workers colleagues.			

Items on over all job satisfaction

1	I have a sense of satisfaction in my work.			
---	--	--	--	--

2	It is difficult to feel satisfied working here.			
3	The nature of my job brings me a lot of satisfaction.			
4	I absolutely don't have satisfaction in my work.			

Any additional comments on job satisfaction:

Appendix B**Items for pilot study**

Date _____

Questionnaire code number _____

Addis Ababa University

School of Graduate studies

Department of Psychology

Questionnaire prepared for vocational school teachers in the
Regional State of Tigray

General Remarks:

The aim of the questionnaire is to identify factors in the school environment that cause stress and possibly decrease teachers' satisfaction and commitment on the job. The information obtained will also help recommend possible intervention measured to resolve problems related with teachers stress and job satisfaction. It will be also used by the investigator for strictly academic purpose.

You are kindly requested to please complete this questionnaire carefully and honestly. Your response will be kept confidential. There are no right and wrong answers and what is required is to show the level of your personal opinions to each item.

Please do not write your name on the questionnaire.

Thank you

Part I : Respondents Demographic Characteristics or personal variables

Please consider the list and circle a number to the left of each factor otherwise fill in the blank.

- 1 .Sex: [1] Male [2] Female
- 2 .Age _____
3. Indicate your present qualification
[1] Bachelor's degree [2] Master's degree [3] Diploma [4] Certificate
4. Experience in years:
As vocational teacher ____ years
As a teacher different from vocational teacher ____ years
Total service ____ years
5. Teaching Grade level
[1] 10+1 and or | 10+2 [2] 10 + 3
6. Type of trade you are teaching: _____.

Part II: Stress on the job-weighting questionnaire

Direction : The following is a list of situations that teachers face in their job on the job. Please consider the list and circle a number to the right of each factor on the basis of your agreement and disagreement. (1=Strongly agree 2= Disagree 3= Undecided 4= Agree 5=Strongly agree)

#	Situations that affect teachers stress					
1	I can predict what will be expected of me in my/day to day work.	1	2	3	4	5
2	I feel that my job interferes with my family life	1	2	3	4	5
3*	I am prepared/trained to carry out all the work assignments I received.	1	2	3	4	5
4	My fellow department members and I regularly have time during the school hours to discuss job-related issues.	1	2	3	4	5
5	I receive conflicting demands from two or more people or groups in the school setting	1	2	3	4	5
6	My administrative head allows me extensive freedom to plan and organize my work.	1	2	3	4	5
7	I am troubled by the students' poor attitude towards learning/ training.	1	2	3	4	5
8	There is lack of friendly support from other staff members.	1	2	3	4	5
9	The parental and societal expectations for the outcomes of our school are high which are stressful.	1	2	3	4	5
10	I am unclear on what the scope and responsibilities of my job are.	1	2	3	4	5
11	I feel constant pressure from others to improve the quality of my work.	1	2	3	4	5
12	I often feel that colleagues have to help me if I am to get the job done properly.	1	2	3	4	5

13	I have influence over what goes on in my department/school.	1	2	3	4	5
14	I have to think twice a rule or policy while to carryout my job.	1	2	3	4	5
15	My administrative head involves me with other members/departments in joint meetings to make decisions and solve common problems.	1	2	3	4	5
16	I find working only with low ability students puts a lot of stress on me	1	2	3	4	5
17*	When I really need to talk with someone, my fellow staff members are willing to listen.	1	2	3	4	5
18	TVET is generally perceived as the last option for those students who failed to get in to higher education and this emanates from low public image .	1	2	3	4	5
19	I am uncertain what the criteria for evaluating my performance actually are	1	2	3	4	5
20	I find that I have extra work beyond what should normally be expected of me.	1	2	3	4	5
21	I am able to quickly adapt to the changing pressures and situations at work.	1	2	3	4	5
22*	I am informed of important things that are happening in my department school.	1	2	3	4	5
23	I have a hard time satisfying the conflicting demands of students, parents, administration and teachers.	1	2	3	4	5
24	My administrative head gives me full information about the things which directly involve my work.	1	2	3	4	5
25	I am worried with unavailable job opportunities to my students.	1	2	3	4	5
26	My fellow staff members pay attention to what I am saying.	1	2	3	4	5
27	Employers do not feel that the would be graduates get enough skills and knowledge to their companies.	1	2	3	4	5
28	I receive enough information to carry out my job effectively.	1	2	3	4	5
29	The criteria of performance for my job are too high.	1	2	3	4	5
30	My fellow department members feel that I am well trained to performing my job well.	1	2	3	4	5

31	My administrative head asks my opinion on decisions that directly affect me.	1	2	3	4	5
32*	I am given school related duties without adequate resources and materials to carry them out.	1	2	3	4	5
33	My administrative head always insists that I solve my own work problems but is available to advise me if needed.	1	2	3	4	5
34	I feel incompetent with the introduction of new technologies.	1	2	3	4	5
35	My fellow department members stand up for each other for outsiders.	1	2	3	4	5
36	The society considers TVET as if we produce unemployed graduates.	1	2	3	4	5
37	When asked, I am able to tell someone exactly what the demands of my job	1	2	3	4	5
38	It is too much to perform my job effectively than what I am trained.	1	2	3	4	5
39*	I am prepared/trained to carry out tests and evaluation of students.	1	2	3	4	5
40	I feel that it is useless to make suggestions about my work because decisions are made regardless of my attempts to influence them.	1	2	3	4	5
41	There are differences between me and my administrative head on how things should be done.	1	2	3	4	5
42*	My administrative head insists that I stick to my job and leave decision-making and planning to him.	1	2	3	4	5
43	I am troubled by the shortage of curriculum materials such as textbooks, reference materials, and other instructional materials.	1	2	3	4	5
44	Meetings with colleagues are valuable to me.	1	2	3	4	5
45	There is low status of the profession in the society.	1	2	3	4	5

Items on over all job stress

46	I often think my work even when I am at home.	1	2	3	4	5
47	I never have time to look after other matters because I am too busy with my work.	1	2	3	4	5
48	I feel frustrated because it seems that my work my work will never end.	1	2	3	4	5
49	I find my work easy and without pressure at all.	1	2	3	4	5

Part III: Satisfaction on the job-weighting questionnaire

Direction: The following is a list of situations for teacher's satisfaction on the job. Please consider the list and circle a number to the right of each factor.

#	Situations that affect teacher's job satisfaction					
1	I try very hard to improve on my past performance at work.	1	2	3	4	5
2	I have the chance to be responsible for planning my work.	1	2	3	4	5
3	When I do a good job, I receive the recognition for it.	1	2	3	4	5
4	There is really too little chance for promotion on my job.	1	2	3	4	5
5	I feel satisfied with director's supervision and understanding each other.	1	2	3	4	5
6	My pay and the amount of work I do is good.	1	2	3	4	5
7	I have enough materials/equipments for my work.	1	2	3	4	5
8	The policies and practices towards employees of this school system are good.	1	2	3	4	5
9	I can easily get advice and consultation when I need help.	1	2	3	4	5
10	I enjoy a difficult challenge.	1	2	3	4	5
11	I have the chance to work decisions on my own.	1	2	3	4	5
12	I feel a sense of pride in a job well done by me.	1	2	3	4	5
13	Those who do well on the job stand a fair chance of being promoted.	1	2	3	4	5
14	The way the director handles teachers is good.	1	2	3	4	5
15	Job benefits, in addition to my salary, are good.	1	2	3	4	5
16	The physical surrounding of my work is pleasant.	1	2	3	4	5

17	The way in school system policies are put in to practice are good.	1	2	3	4	5
18	I have the support and co-operation of colleagues.	1	2	3	4	5
19	I want to know how I am progressing as I complete tasks.	1	2	3	4	5
20	I feel happy with the way I am informed when I do my job well.	1	2	3	4	5
21	My supervisor is quite competent in doing his job.	1	2	3	4	5
22	As compared to my colleagues my salary and job benefits are fair.	1	2	3	4	5
23	TVET teachers in the community are regarded with respect	1	2	3	4	5
24	The way in which the school system policies are administered are good.	1	2	3	4	5
25	Meeting with colleagues is valuable.	1	2	3	4	5
26	I enjoy setting and achieving realistic goals.	1	2	3	4	5
27	I have the chance to be responsible for the work of others.	1	2	3	4	5
28	I am satisfied with the pride I get for doing a good job.	1	2	3	4	5
29	I am satisfied with my chances of promotion.	1	2	3	4	5
30	My supervisor is unfair to me.	1	2	3	4	5
31	I have the chance to make as much money as my friends.	1	2	3	4	5
32	It is difficult to feel satisfied working here/in this job.	1	2	3	4	5
33	The employees are well informed about the school system policies.	1	2	3	4	5
34	I have sufficient opportunity for professional interaction with other colleagues.	1	2	3	4	5
35	People get ahead as fast here as they do in other places.	1	2	3	4	5
36	I have freedom to use my judgment in my work.	1	2	3	4	5
37	There are few rewards for those who do this kind of job.	1	2	3	4	5
38	I have the chance of getting a head.	1	2	3	4	5
39	My supervisor shows too little interest in the feeling of teachers.	1	2	3	4	5
40	There are benefits we do not have which we should have.	1	2	3	4	5

41	My teaching is free from outside interruptions.	1	2	3	4	5
42	The way the school system treats its employees are fair.	1	2	3	4	5
43	There is a spirit of cooperation among my co-workers colleagues.	1	2	3	4	5
44	I have the responsibility of my job.	1	2	3	4	5
45	The way promotions are given is transparent.	1	2	3	4	5

Items on over all job satisfaction

46	I have a sense of satisfaction in my work.	1	2	3	4	5
47	It is difficult to feel satisfied working here.	1	2	3	4	5
48	The nature of my job brings me a lot of satisfaction.	1	2	3	4	5
49	I absolutely don't have satisfaction in my work.	1	2	3	4	5

Any additional comments on your job that make you unsatisfied:

Remark * Items not included in the pilot study which are dropped by the expertise

Quaternaries of the pilot study are the same as that of pilot study except the items which are dropped by the pilot study listed in Appendix C .

Appendix C

Item score and nine subscale correlations of teachers stress (pilot study).

Variable/ subscales	Item no	r of items	r of subscales
Role ambiguity	1	0.60	0.78
	10	0.75	
	19	0.51	
	28	0.50	
	37	0.56	
Role overload	2	0.62	0.88
	11	0.65	
	20	0.53	
	29	0.72	
	38	0.70	
Role prepared	12	0.56	0.89
	21	0.74	
	30	0.70	
	39	0.59	
Non participation	4	0.54	0.79
	22	0.66	
	31	0.42	
	40	0.65	
Role conflict	5	0.29	0.82
	23*	0.27	
	32	0.44	
	41	0.34	
Leadership style	6	0.49	0.68
	15	0.60	
	24	0.53	
	33*	0.25	
	42	0.30	
Working condition	7	0.48	0.67
	25*	0.16	
	34	0.48	
	43	0.40	
Peer support	8	0.69	0.79
	17	0.36	
	26	0.51	
	44	0.29	
Social support	9		0.75
	27	0.51	
	36	0.29	
Overall job stress	45	0.51	0.82
	46	0.65	
	47	0.65	
	48	0.84	
	49	0.75	

*Items that are not significant are discarded for the main study.

Appendix D Item score and nine subscale correlations of teachers job satisfaction (pilot study)

Variable/ subscales	Item no	r of items	r of subscales
Achievement Need	1	0.56	0.73
	10	0.55	
	19	0.52	
	26	0.44	
	35	0.54	
Responsibility	2*	0.14	0.72
	11	0.64	
	27	0.31	
	36	0.64	
	44*	0.20	
Recognition	3	0.56	0.73
	12	0.37	
	20	0.45	
	28	0.49	
	37	0.30	
promotion	4	0.51	0.81
	13	0.47	
	29	0.65	
	38	0.36	
	45	0.69	
supervision	5	0.64	0.64
	14	0.57	
	21	0.65	
	30*	0.16	
	39*	-0.01	
Salary and benefits	6	0.71	0.79
	15	0.51	
	22	0.48	
	31	0.33	
	40	0.63	
Working environment	7	0.67	0.80
	16	0.66	
	23	0.63	
	32	0.68	
	41	0.52	
System policies and practices	8	0.77	0.83
	17	0.69	
	24	0.71	
	33	0.56	
	42	0.68	
Relationship with colleagues	9	0.74	0.74
	18	0.44	
	25	0.49	
	34	0.57	

	43	0.67	
Overall job satisfaction	46	0.85	0.71
	47	0.68	
	48	0.66	
	49	0.87	

*Items which were not significant are discarded for the main study.

Appendix E Summary of the judges rating and % of their argument

Item sr	R ₁	R ₂	R ₃	R ₄	$\sum X_r$	%	
1	2	2	3	3	10	83.33	
2	3	3	3	3	12	100.00	
3*	1	1	1	1	4	33.33	**
4	3	3	3	3	12	100.00	
5	2	2	3	3	10	83.33	
6	2	2	2	3	9	75.00	
7	2	2	3	3	10	83.33	
8	3	3	3	2	11	91.67	
9	3	3	3	3	12	100.00	
10	1	3	3	3	10	83.33	
11	3	3	3	3	12	100.00	
12	3	3	1	3	10	83.33	
13	3	3	3	2	11	91.67	
14	3	3	1	3	10	83.33	
15	3	3	1	3	10	83.33	
16	3	3	3	3	12	100.00	
17*	2	2	3	1	8	66.67	**
18	3	3	3	3	12	100.00	
19	3	3	3	3	12	100.00	
20	1	2	3	3	9	75.00	
21	3	3	3	3	12	100.00	
22*	1	1	3	2	7	58.33	**
23	3	3	3	3	12	100.00	
24	1	2	3	3	9	75.00	
25	3	3	1	3	10	83.33	
26	3	3	3	3	12	100.00	
27	1	2	3	3	9	75.00	
28	1	2	3	3	9	75.00	
29	2	2	3	3	10	83.33	
30	3	3	3	3	12	100.00	
31	1	2	3	3	9	75.00	
32*	2	2	1	2	7	58.33	**
33	3	3	2	2	10	83.33	
34	3	3	3	2	11	91.67	
35	3	3	3	3	12	100.00	
36	3	3	3	3	12	100.00	
37	3	3	3	3	12	100.00	
38	3	3	1	3	10	83.33	
39*	2	2	1	1	6	50.00	**
40	2	2	2	3	9	75.00	
41	2	2	2	3	9	75.00	
42*	1	1	1	1	4	33.33	**
43	2	2	2	3	9	75.00	
44	2	2	2	3	9	75.00	
45	3	3	1	3	10	83.33	

Item sr	R ₁	R ₂	R ₃	R ₄	$\sum X_r$	%
46	3	3	3	3	12	100.00
47	3	3	1	3	10	83.33
48	3	3	3	2	11	91.67
49	2	2	3	3	10	83.33
1	3	3	3	3	12	100.00
2	3	3	3	3	12	100.00
3	2	2	2	3	9	75.00
4	3	3	3	3	12	100.00
5	2	2	3	3	10	83.33
6	3	3	3	3	12	100.00
7	3	3	3	3	12	100.00
8	3	3	3	3	12	100.00
9	2	2	3	3	10	83.33
10	2	2	3	3	10	83.33
11	3	3	3	3	12	100.00
12	3	3	3	3	12	100.00
13	3	3	3	3	12	100.00
14	2	2	3	2	9	75.00
15	2	2	3	2	9	75.00
16	3	3	3	3	12	100.00
17	3	3	3	3	12	100.00
18	3	3	3	3	12	100.00
19	3	3	3	3	12	100.00
20	3	3	3	3	12	100.00
21	3	3	1	2	9	75.00
22	3	3	3	3	12	100.00
23	3	3	3	3	12	100.00
24	2	2	3	2	9	75.00
25	2	2	3	2	9	75.00
26	3	3	3	3	12	100.00
27	3	3	3	3	12	100.00
28	3	3	3	3	12	100.00
29	2	1	3	3	9	75.00
30	2	1	3	3	9	75.00
31	2	2	3	2	9	75.00
32	3	3	3	3	12	100.00
33	3	3	3	3	12	100.00
34	2	2	3	3	10	83.33
35	3	3	3	2	11	91.67
36	3	3	3	3	12	100.00
37	2	2	3	3	10	83.33
38	2	2	3	3	10	83.33
39	2	2	3	2	9	75.00
40	3	3	3	3	12	100.00
41	3	3	3	3	12	100.00
42	3	3	3	3	12	100.00
43	3	2	2	3	10	83.33
44	3	3	3	3	12	100.00
45	3	3	3	3	12	100.00

Item sr	R ₁	R ₂	R ₃	R ₄	$\sum X_r$	%
46	2	2	3	2	9	75.00
47	3	3	3	3	12	100.00
48	3	3	3	3	12	100.00
49	3	3	3	3	12	100.00

- * Items whose agreement of the judges less than 75% was discarded for the pilot study.
- The reliability of the judges on the total hundred items is Alpha =0.6548

Appendix F Additional comments on stressors and unsatisfying situations.

1. Trainees of TVET do not have the awareness of the program
2. Declared salary increments are not timely practical, there is delay in payment. Hit the iron when it is hot.
3. Nature of Flexibility of TVET pushes us to work or teach in unrelated fields or subjects and this is a source of current and future stress.
4. There is lack of sectional models for practical activities. There are no engine testing instruments to diagnose the various systems or problems that can occur in live engines. As a result, caring out my duties effectively and efficiently is stressing.
5. Administrative bodies are not transparent in our training center. Besides there is no effective coordination and communication among staff members.
6. We the teachers are not getting acceptance and values in the society. One of the reasons is we are less paid as compared to other similar employees in other organizational. please tell the government to pick up our profession
7. TVET should provide some income generating activities and teachers should get benefits out of that.
8. Providing short term training, adequate instructional material supply, and good leadership could minimize the stress of teachers.
9. The regulations and guidance given by the TVET on the policing practices are unsatisfactory.
10. The several pays I should get like salary increment, benefits, bonus are non – existence which are also considered as source of dissatisfactions. Short-term trainings are also not enough.

11. Most of the stressing factors are listed down in the questionnaire. The location of the training center could also be considered as a stressor since teachers walk about 2 km on foot for work and back to home with out service.
12. The Ministry of education curriculum designers do not consider the materials needed with the preparation of the manuals and they did not ever consider the local situation of the country say for foreign banking operation, C++ ... Computer training and others.
13. There is gap between the curriculum guide and materials available for training. Skill gaps for the implementation of the Curriculum, lack of skillful administrators are my worries. Comments given to the TVET are not put in to practice.
14. My source of dissatisfaction is salary. I really believe it is extremely un professional for the ministry of education to pay different rates and less pay to TVET teachers as compared to other organization. This job could have been paid more if I were in the same position at the factory.
15. I am dissatisfied with the salary I get
16. Less pay and no other benefit always made me to think and look for a better job and leave my profession.
17. I didn't get enough practical training at college. Students also have less interest to learn. I am also evolved in non teaching learning activities for no effect (eg. Maintenance club) . Because we meet to talk on problems no to solve the problems and non – of us has the skills how to maintain and repair machines. These points made me stressed in my job.
18. Workshop end products are not good and marketable. I am worried with the products of workshops produced by me and my students.

19. We are not paid according to the caliber and skill needed by the work . There is also mishandling of teachers by the administration.
20. Students' behavior, the School physical setting and societal attitude are not good which are my worries.
21. Lack of practical skills which are helpful to cope up with new a technology make me stressing g. Administrators should also reorganize and encourage teachers' works.
22. Lack of reference books is my worry since in the area of machine technology there is no market for my graduates. I have no social and student support. There is scarcity of budget for buying materials reference books, etc and this is stressing.
23. Rules and regulations must be practically applied and monitored. All teachers and administration bodies should know their responsibilities and cooperate each other. These things do not make me a happy in my work.
24. Due to economic reasons my families do not view my profession as good job and this is a high stress on my personality and my life.
25. Materials like student textbooks, reference materials are scarce for my job which made me to think about the job where ever.
26. I have the intention to leave the job if the salary is not improved and other benefits such as insurance are not introduced.
27. School conditions such as availability of materials, rooms, office, and weak relationships with the society lead me to dissatisfaction.
28. Team work sprit among teachers and departments does it exist
29. There are administrative problems, there is bad leadership.
30. Working on machines on free times and demonstrating to students now and then is stressor.

31. Poor administration in decision making and not enough salary are may worries..
32. I am expected to work many hours. It has a big impact on family life and personal wellness. I would say this is the most difficult aspect of my job.
33. Pay is not commensurate with hours on the job ... covering very routine and huge activities, which needs a lot of energy.
34. My only concern is lack of time to work on lesson planning, which is other than teaching.

Declaration

This is my original work, has not been presented for a degree in any other university. All sources of materials used for the thesis have been duly acknowledged.



Yitbarek Melles

This thesis has been submitted for examination with my approval as a university advisor.

Desalegn Chalchisa (PhD)

