

**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH
SCIENCE SCHOOL OF PUBLIC HEALTH**



MASTER THESIS ON:

**ASSESSMENT OF WORK RELATED STRESS AMONG AIRCRAFT CREW
MEMBERS OF EHIOPIAN AIR LINES.**

BY

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ASSESSMENT OF WORK RELATED STRESS AMONG AIRCRAFT CREW MEMBERS OF
ETHIOPIAN AIR LINE

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ACRONYMS

AAU	Addis Ababa University
BMI	Body Mass Index
HSE	Health and Safety Executive
ILO	International Labour Office
IQR	Inter quantail Range

ITF	International Transport Workers Federation
OR	Odd Ratio
REC	Research Ethics Committee
SPSS	Statistical Package for Social Sciences
US	United States
UK	United Kingdom
WHO	World Health Organization

ABSTRCT

Background: Work related stress is a state which is accompanied by physical, psychological or social complaints or dysfunctions and which results from individuals feeling unable to bridge a gap with the requirements or expectations placed on them. The distinctive feature of the airline industry is that both aircraft and crew members are required to operate around the clock in order to maximize causing sleeping difficulties and fatigue.

Objectives: To assess the work related stress among aircraft crew members of Ethiopian Airlines.

Methods : A Cross-sectional study was done among 385 respondents of aircraft crew members of Ethiopian airlines in Addis Ababa, Ethiopia from April to July 2016. Participants of the study

were selected by using simple random sampling technique. A standard questionnaire from health and safety executive and international stress management questionnaire were used. Demographic information, work load and work related stress data of the crew members were collected by self administered questionnaire. The questionnaire was pre-tested in similar participants outside of the study area(i.e. Turkish airlines crew members prior to the actual data collection) and logistic regression analysis was done.

Results: The overall work related stress among the crew members was 78.2% and the crew members who attend long flight had work related stress(P-value 0.001;AOR 7.78;95% CI (1.36-44.2)). The crew members were pressured to work long hours on average 14 hours per day which was (67.3%) , with maximum 17 hours per day and 6 days (56.4%) per week, 24 days per month which was (57.9%). Almost all of them had irregular working shifts and experienced to frequent schedule change (90.7%), attend long flight (93.8%), did not get managerial encouragement (87.5%), all of them travel internationally for work, experienced unwanted shift patterns(93.8%), experienced unmanageable work load(86%) and difficulty to get sleep(84.4%).

Conclusion and Recommendation: The results of this study showed that there were increased in working long hours, fatigue and sleeping difficulty which create a powerful predictor of work related stress among crew members. Standard supervision is needed to raise the worker well-being and safety of the crew members.

1. INTRODUACTION

1.1 BACGROUND

Air craft crew members are carefully selected to fulfill many requirements including physiological features, language skills and physical fitness as well as in case of stewardesses, physical appearance [1].

The cabin crews have more stressors than other aviation groups [2]. Comparing of domestic versus international flight attendants (51%) worked on international routes higher exposed to stress than among flight attendant assigned to domestic routes [3]. The aviation industry is high

risk organization in which the employees are subjected to high levels of stress and circumstances that threaten their physical and mental health of employees [4]. Work related stress is a growing problem around the world that affects not only the health and well-being of employees, but also the productivity of organizations [5].

Global study by the international transport workers federation (ITF) of its affiliated trade unions in 116 countries in all regions of the globe – Africa , Asia /pacific ,Middle East , North America ,Latin/south America, and Europe shows a dramatic and global increase in stress and fatigue[6]. Civil aviation has become a major industry in our time and without air travel mass international tourism would not exist [7].

Air transport systems are independent involving air lines all service providers and authorities on the ground. Ethiopian airline was founded on 21 December 1945 and commenced operations on April 1946, expanding to international flights in 1951. The airline has been a member of the international air transport association since 1959 and of the African airline association since 1968 and is a star alliance member , having joined in December 2011. Its hub and head quarters are at bole international air port in Addis Ababa, from where it serves as a net work of 82 passenger destinations 19 of them domestic and 23 freighter ones. Ethiopian flies to more destinations in Africa than any other carrier. It is one of the fastest growing companies in the industry and among the largest on the African continent. It is also one of the few profitable airlines in the sub Saharan region [8].

The first scheduled flight took place to Cairo via Asmara in Douglas C-47 sky train. The national airline had been set up a few months earlier as Ethiopian air lines a joint venture with American airline, Trans world airlines. Following the successful inaugural flight to Cairo, a regular weekly service was established [9].

The company with a vision of becoming the most competitive and leading aviation group in Africa by providing safe ,market driven and customer focused passenger and cargo transport ,aviation training , flight catering and ground service by 2025 and with a mission to become the leading aviation group in Africa by providing safe and reliable passenger and cargo air transport and to ensure being an airline of choice to its customers, employer of choice to its employees and an investment of choice its owners and to contribute positively to socio economic development

of Ethiopia in particular and the countries to which it operates in general by undertaking its corporate social responsibilities and providing vital global air connectivity [10]. Ethiopian Cabin Crew Training Center is a leading provider of quality Cabin Crew with a proud tradition of training professional and world class cabin crew members and an outstanding reputation for excellence. Ethiopian Cabin Crew Training Center, with more than 57 years' experience is renowned for consistently offering the highest industry standard cabin crew members [11].

Due to the expansion of the air line industry and global travel, demand and opportunities for flight attendants /crew members / have expanded globally in recent years and the risk of stress is not well studied. In the united state of America stress costs 42 billion dollars and annual cost for mental health problem is 300 billion dollar for enterprises. And in Europe stress costs 180 millions of days lost and costs 20 billion euro for the European union countries [11].

Ethiopian air line its hub and headquarter is at Bole international airport, Addis Ababa –Ethiopia which serves a network of 82 passenger destinations have around 2500 crew members currently employed [12]. Work related stress among crew members had not well studied even though flight attendants are experienced to violence from distressed or dissatisfied passengers and passengers who behave in a violent or distressed manner can be a serious threat.

1.2 STATEMENT OF THE PROBLEM

Work related stress among crew members is a state which is accompanied by physical, psychological or social complaints or dysfunctions and which results from individuals feeling unable to bridge a gap with the requirements or expectations placed on them [13].

Airline cabin crews are in many ways a unique occupational group in terms of their irregular work patterns, unique set of job demands and lifestyle. The working environment of the modern commercial aircraft and the conditions in which airline cabin crew operate have been largely ignored in the industrial relations and organizational psychology [14].

The intensified competition within the airline industry, increased workload and additional stresses which affect cabin crew safety. Flight crew members are exposed to several risks and

hazards due to work organizational factors. They work in shifts that involve irregular hours, working weekends and public holidays and spending time away from home which adversely affect family responsibilities and leisure activities and may result in stress and fatigue. Flight crews flying on long flights are exposed to changes in external time, followed by changes in circadian rhythm, which leads to several symptoms known as jet lag. Jet lag and night flight may cause extreme fatigue and thus decreased performance and alertness. Flight attendants are also experienced violence from distressed or dissatisfied passengers. Passengers who behave in a violent or distressed manner can be a serious threat and a hazard to health and safety for cabin and flight crew and other passengers. Pilot, co-pilot and flight engineers suffer from high stress level in their work place. They perform a highly demanding job that requires high levels of knowledge and expertise and high levels of responsibility for the safety of many passengers. Operating an aircraft over night, flying in bad weather or in a high density traffic area, and keeping their flight on time are the most common causes of high pressure for the cockpit crew[15].

1.3 RATIONALE AND SIGNIFICANCE OF THE STUDY

Extreme fatigue, emotional stress and social and economic insecurities among the crew members previously unstudied is undergoing major change and characterized by worsening conditions of work. Since the crew members are exposed to more stressors sleep disruption , long period away from home ,Depression and job insecurity caused by regular medical and proficiency checks which contribute to feeling of stress .

Cabin crew works in attending a pre flight briefing ,assist for special need passengers, checking the safety equipment ,welcoming passengers on board and directing them to their seats, informing passengers of the air craft safety procedures ,checking all passenger seat belt, making announcements, serving meals and refreshment to passengers, selling duty free, reassuring

passengers safety procedure in emergency situation ,giving first aid to passengers where necessary, ensuring passengers disembark safely , completing paper work including writing a flight report. Pilot is ultimately responsible for everything happens on the flight include making major command decisions, leading the crew team, managing emergencies and handling particularly troublesome passengers all those major tasks to handle in the air craft contribute them expose to stress.

This study will provide understanding of work related stress mainly for Ethiopia air line to know the current status of their employees and support for further planning and to take corrective actions. This will be also help Addis Ababa University to investigate the problem since there is no research done in our country in this area and it will be used as baseline for further study by other researchers. The result and recommendations of this study are expected to be helpful in providing programmatic approaches to address the work related stresses .

2.LITERATURE REVIEW

2.1 Magnitude of work related stress

Work related stress in the aviation industry is increasing trend from time to time . Research done in Italy on self perceives health and mental health among women flight attendants reported self perceived health as fair to poor and psychological distress. Among flight attendants reporting health as fair to poor was associated low job satisfaction, with psychological distress was associated with job satisfaction , recent experiences of sexual harassment by passengers and frequent tension with partner over childcare [17].

Flight crew which include cockpit crew , pilot ,co-pilot ,flight engineer ,cabin crew and flight assistant are exposed to prolonged standing ,fatigue, stress, irregular working times, night shifts ,adaptation for long distance flying ,working away from home, extreme and demanding tasks[18].

Research done among Swedish commercial airline cabin crew on stress-related symptoms questionnaire answered flight attendants, stewards and pursers shows headaches ,concentration difficulties, fatigue were reported at rates of 18%,10% and 56% respectively. Pursers scored higher on control than the others and they lower associations between the strain measured by the demands control model and symptoms than stewards and flight attendants [19].

Flight crew members including pilots and flight attendants are exposed to several risks and hazards due to work organizational factors. They work in shifts that involve irregular hours, working weekends and public holidays, and spending time away from home, which adversely affected family responsibilities and leisure activities and may result in stress and fatigue [17].

Pilot's work is categorized as one of the high risk jobs and expected to be sensitive to stress. It was of importance to understand civil pilots baseline stress level ,source of stress as well as their reactions and habitual coping strategies and their flight performance in terms of their personality traits. Work stress ,reactions under stress, personality, present work and stress coping behaviors, had significant stress related to flight accidents [20].

Research done in United Kingdom (UK) on low cost commercial air operation indicates generate excessive levels of stress and fatigue amongst flight crew. Pilots responded they felt stressed and fatigued. Pilots suggests that stress and fatigue are issues that merit close attention because events like the September 11th,2001 terrorist attacks due to those idea flight crews have insights and ideas that benefit commercial aviation [21].

Research done on the self-reported health of United state(U.S) flight attendants compare to the general population shows male and female flight attendants had 3.7 and 5.7times the reported prevalence of diagnosed sleep disorders compared to the general population, adjusted for age . In addition, fatigue and depression in female flight attendants were about twice that of the population. Male flight attendants also had twice the expected prevalence of fatigue, however, their report of depression that occurred everyday or nearly every day showed a 5.7 times greater prevalence compared to the general population. Sleep disorders in flight attendants significantly affected nearly one in three flight attendants [22].

Research done by American college of occupational and environmental medicine on job stress among female flight attendants indicated comprising the domestic and international flight attendants (51%) of the study participants reported that they primarily worked on international routes. The number of self –reported block hours worked per month was higher among flight attendants assigned primarily to international routes. The most common events of flight attendants job stress conditions were flight delay and passenger –related needs or problems. Flight delays were often reported to result from adverse weather conditions, but delays were also reported to occur as the result of equipment problems or difficult passenger experience. Many reports of passenger related events occurred in conjunction with flight delays (e.g. passenger deplaning, passenger anger over canceled flight, passenger anxiety about missed flight conditions). Other passenger related events included uncooperative behavior (resisting seat belt use when required, sitting in a non assigned seat, and smoking in lavatory) and abusive behavior yelling and arguing with flight attendants and one reported incident of flight attendant being spit on. Flight attendant responded including concerns about treats of terrorism, infectious diseases and weather or mechanical emergencies in flight. In addition participants reported concern about potential long term health consequence of exposure conditions in the cabin environment relating to air quality and cabin air pressure [23].

Research done to Stockholm air crew on duty in a Scandinavian flight company crew members, the most common symptoms among aircrew were fatigue (21%), and the perceived stress due to excess of work was associated with fatigue, feeling heavy –headed , headache while those crew with better work control and work satisfaction had less fatigue. Airline crew that had been on an intercontinental flight previously had more fatigue, heavy headedness and difficulties concentrating. The researcher concludes that in view of increase of civil aviation, the working conditions for aircrews need further attention [24].

Research done globally of 16 countries in Africa, Asia/Pacific, Middle East, North America, Latin/South America and Europe in the post-9/11 era by international transport workers' in London on stress and fatigue study on aircraft crew indicates nearly two –thirds of respondents reported that their members felt that fatigue would affect both the performance of safety –related duties by cabin crew workers as well as their recognition of and reaction to potential security threats. Reported levels of fatigue were very high amongst cabin crew workers. Nearly half of all

affiliates reported that most cabin crew felt emotionally drained, and nearly 70% reported that most felt used up at the end of the work day. Most cabin crew had little freedom to decide on how to do their work. More than half of all respondents reported that no cabin regular shifts. These findings indicated a high risk of fatigue for cabin crew. The vast majority of affiliates reported that the required number of flight hours had increased for cabin crew workers. Cabin crew spent up to four hours traveling one way between airport and hotel leaving them with significantly reduced relaxation time at the end of the work shifts and reduced time for sleep. The pattern of long hours of work combined with insufficient time for rest and sleep clearly contributes to fatigue and has potential serious safety implications related to sleep deprivation and alertness on the job. Cabin crew averaged only 6.5 hours of sleep per night during layovers between flights [25].

Research done by flight safety foundation of cabin crew safety in Ireland on work related stress among flight attendants stress arising from aspects of the work environment perceived to be physically threatening or emotionally threatening is a major occupational health concern. They indicate that flight attendants experience high levels of work related stress in areas that have important implications for their health and that highlight a need for appropriate recognition and formal support. Work related stress among flight attendants has attracted renewed interest in recent years especially since sep11, 2001, when terrorists in the U.S commandeered four airliners which were flown into building in New York. Flight attendants are required to perform the dual role of providing safety and service. The increasingly high levels of safety in air transportation might have obscured the importance of their safety role. In the public's mind flight attendants may be more closely identified with the service role. Nonetheless flight attendants worldwide are trained to administer medical aid, direct the evacuation of airplanes, handle explosive device and manage ,control and restrain passengers who are violent, disorderly or abusive. The result shows there was significant association between the length of time spent in the job and role overload that is the longer the participants had worked as flight attendants, the greater their work load tended to be. In addition the longer they had been flight attendants, the greater their feelings of responsibility for subordinates [26].

2.2 Factors associated with work related stress

Work related stress is often regarded as an individual problem; however there are characteristics of job stressors that can cause a stress reaction in most workers. Work stressors can be seen as impediments in the work place that are due to inadequate work organization, leadership or technical and environmental design and imbalance between the amount of effort put into work compared to the rewards received. Research has identified concrete work stressors that may cause stress reactions and fatigue. Those include high work demands, lack of opportunities to control important conditions of the job, lack of support from coworker and supervisors within the work place, and emotional labor in dealing with the public, clients, passengers, co-workers, supervisors and management [25].

The different sources of stress and mental health among aircraft crew members are associated with safety and survival that emanates from work load, how work is organized and the organizational climate. The personal problems that stem from disruption to personal relationships which clinical research suggests act as a buffer to work stress and ever present concerns about loss of license as a consequence of the onset of a disqualifying medical condition as well as the normal physiological problems that occur naturally in everyday life of the population at large [27].

Many studies have found that shift work affects health and life quality however, data on quality of life for female flight attendants are lacking. One study in China explored quality of life and related factors such as demographic data, work status, fatigue, sleep quality and family functions as they relate to female flight attendants working on international routes. The physical health domain earned the highest mean score and the psychological domain earned the lowest. Results showed that eight predictors including religion, drug use, employment status, job stress, job passion, fatigue, sleep quality and family function explained 34.2% of variance. The variables fatigue, sleep quality and family function accounted for 21.3% of variance. The study concludes that health care providers should consider fatigue, sleep quality and family function factors when planning related health promotion and disease prevention programs for female flight attendants in the future [28].

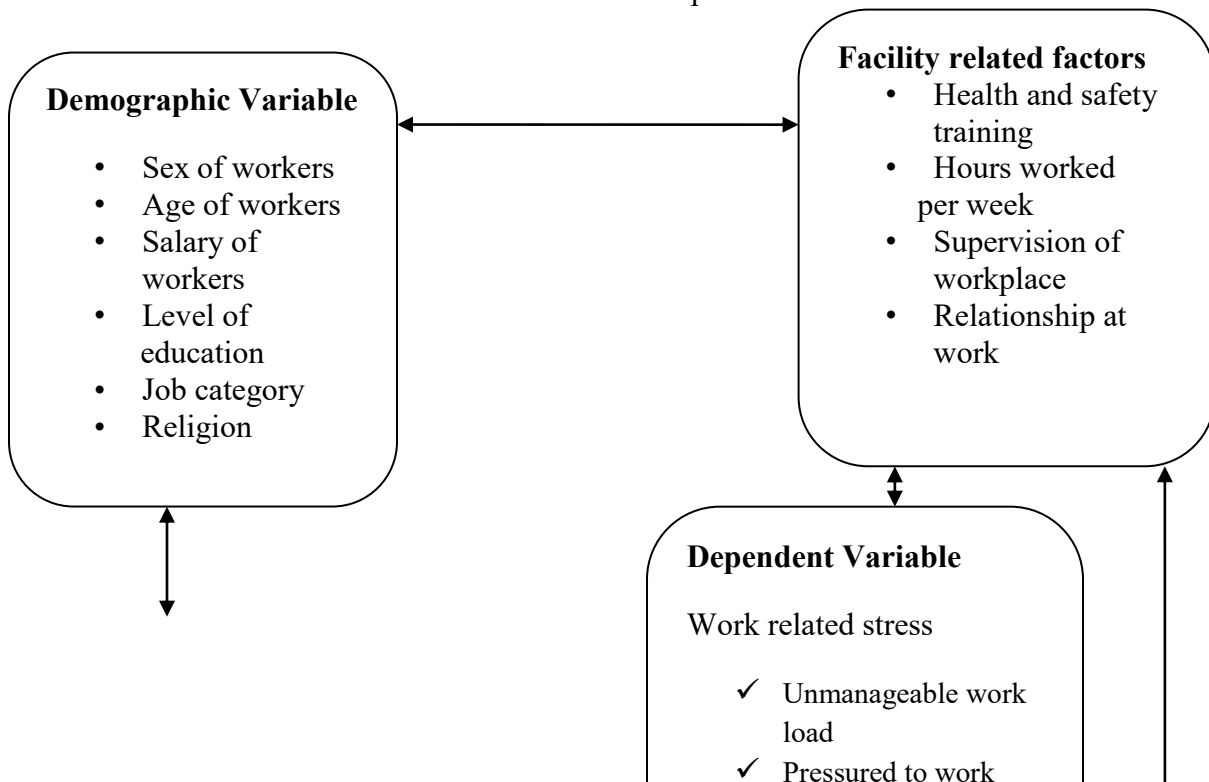
Cabin crew from 35 airlines participated in the research and they came from 32 countries, the majority being from North America and Asia. The majority of respondents were experienced

crew. About 67% had been in the job for 8 or more years and over half had in flight management roles. Almost all worked for scheduled carriers with 70% of crew flying 1-2 sectors per day and having 1-3 standby duties per month and 83% of crew reported high demands of workload experience of aggressive passenger and missing of meals. And 47% of crew reported low choice over work practices, being informed and 56% low supervisor supports [35].

A research done by flight safety foundation on cabin crew safety indicated that improving and redefining the existing regulatory frame work covering cabin crew standards and training in order to improve the crew stress by further training high tech aircraft about ability to operate cabin equipments ,requiring cockpit crew assistance in terms of equipment needed ,cockpit crew assistance on long flight directing and helping other attending and resolving conflict without cockpit [37].

2.3 Conceptual frame work

This conceptual frame work shows the socio economic, demographic, facility related factors, behavioral and work related stress of the Ethiopian airline crew members.



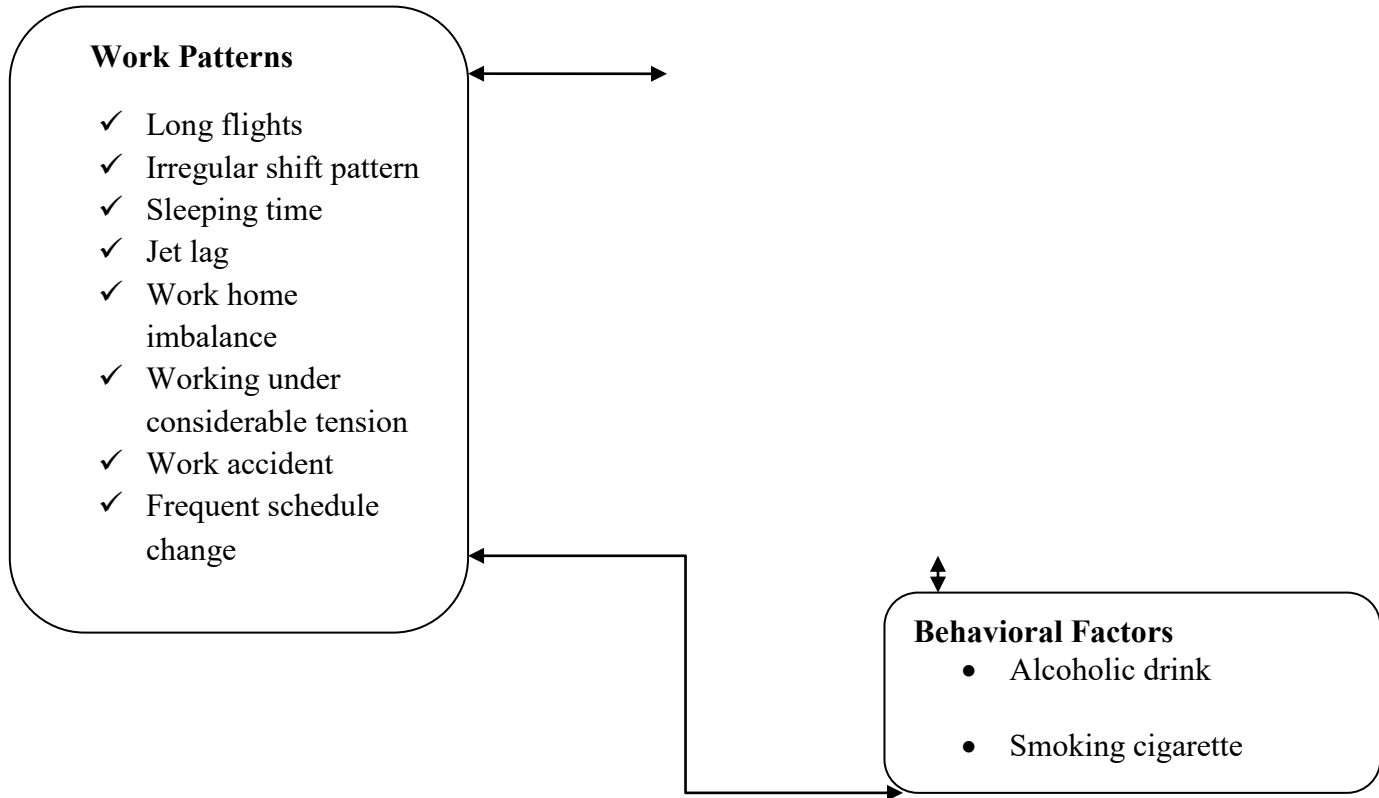


Figure 1: Conceptual frame work of Ethiopian air line crew members work related stress study.

3. OBJECTIVE

3.1 GENERAL OBJECTIVE

To assess magnitude of work related stress among aircraft crew members of Ethiopian airlines.

3.2 SPECIFIC OBJECTIVES

1. To determine the magnitude of work related stress among Ethiopian air lines crew members.
2. To identify factors associated with work related stress among crew members of Ethiopian airlines.

4. METHODS

4.1 Study Design

Cross-sectional study design was used to conduct study on work related stress among airline crew members from April to July 2016.

4.2 Study Area

The study was conducted in Ethiopian airlines which is found in Bole international airport serves the city of Addis Ababa and located in Bole area 6km southeast of the city and 65km north of DebreZeit, the national airline that serves destinations in Ethiopia and throughout the African continent, as well as nonstop service to Asia, Europe, North America and South America.

4.3 Source Population

The Source of population were Ethiopian air line employees currently on work including all staffs of the organization.

4.4 Study Population

The study population were the Ethiopian airlines crew members which include pilots, cabin crew and flight engineers who were actively working in their position or servicing international flights during the period of study.

Inclusion criteria

- Crew members-pilots, cabin crews and flight engineers

Exclusion criteria

- Crew members who did not work for the past 6 months
- Administration and office workers

4.5 Sample Size Determination:

Sample size was calculated by using single population proportion sample formula

$$n = \frac{(Z_{\alpha/2})^2 \cdot pq}{d^2}$$

Where

d=0.05, Margin of error.

P=0.5

Z $\alpha/2$ at 95% confidence level =1.96

$$q=1-p=0.5$$

$$n=\frac{(1.96)^2 \times 0.5(0.5)}{(0.05)} = 384$$

$$(0.05)$$

with 10% none response rate which is 38 ,will have total 422 sample.

A total of 422 questionnaire was distribute to assess the magnitude of work related stress among aircraft crew members and associated factors and sample size of each study group is as follow.

4.6 Data collection instruments

Data was collected by using a standard questionnaire developed from health and safety executive(HSE) for managing the causes of work related stress, international stress management questionnaire, American institute for preventive medicine work stress questionnaire, the learning trust stress assessment questionnaire, work safe sample brief stress questionnaires are used which includes demographic information, full detail of work related stress about crew members and those questionnaires are standard tools widely used in stress assessment studies [38-51]. The questionnaire was prepared in English because there are foreign crew members who are employed by Ethiopian airlines. The questionnaire was pre-tested in private airlines Turkish air line crew members prior to the actual data collection.

Five data collectors who are environmental health professionals were recruited and discussed the purpose of the study to minimize bias during data collection. The data collectors were trained using lecture for one day on basic principle of data collection. The principal investigator was collected and cross-checked the completeness of the questionnaire received from data collectors and takes corrective measures accordingly. Questionnaire was used for data collection and explain the study objectives before they fill and the questionnaire to the eligible subjects and data was collected when they returned for next trip.

4.6.1 Study Variables

Dependent variable

- Work related stress

Independent variable

- Socio-demographic variables;
- Behavioral factors
- Organizational factors
- Work environment

4.7 Operational Definitions

Work related stress: work related stress is measured by the combined response of the seven variables unmanageable work load, pressured to work long hours, fatigue, working very fast, low supportive feedback, emotionally drained, and difficulty to take decision. The likert scale responses (never ,seldom ,sometimes, often ,always) were changed into categorical as never and seldom in to no stress and sometimes, often and always were take as there was stress among the crew members at least three of the crew members were say yes it was considered they had stress among the crew members.

Work home imbalance: conflicts between job demands and outside obligations and create stress.

Fatigue: Felt worn out ;felt fatigued

Aircraft crew members: are both Cockpit crew and cabin crews members

Cockpit crew (pilot, Co-pilot, flight engineer): person carried by an air craft who are assigned by an operator to perform a duty associated with the operation of the flight or to perform a duty associated with the operation of aircraft flight time or undergoing or giving instruction in the control and navigation of the aircraft and in one trip three members involved.

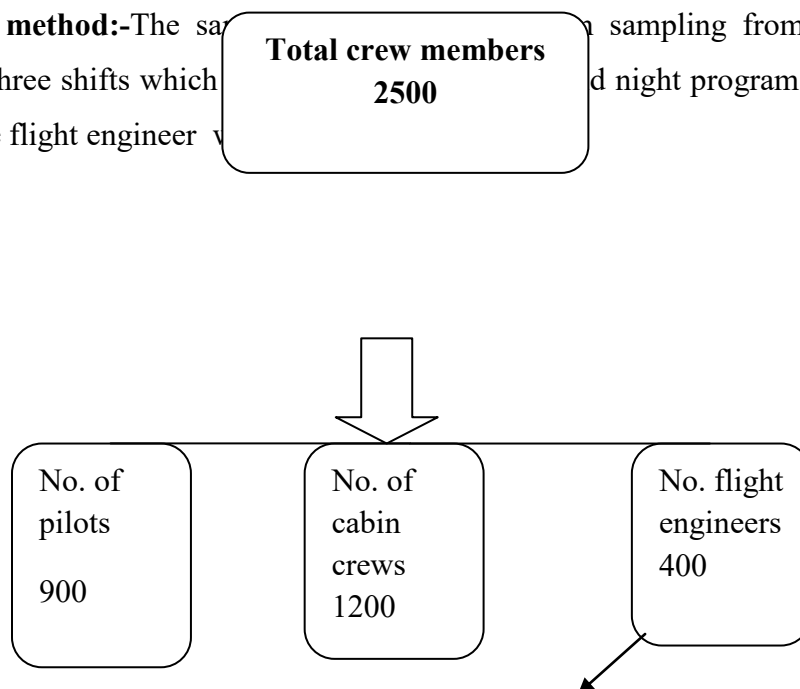
Aircraft Cabin crews members: include purser or in-flight service manager, flight attendant or cabin crew are people involved with looking after the passengers and in one trip eight members involved.

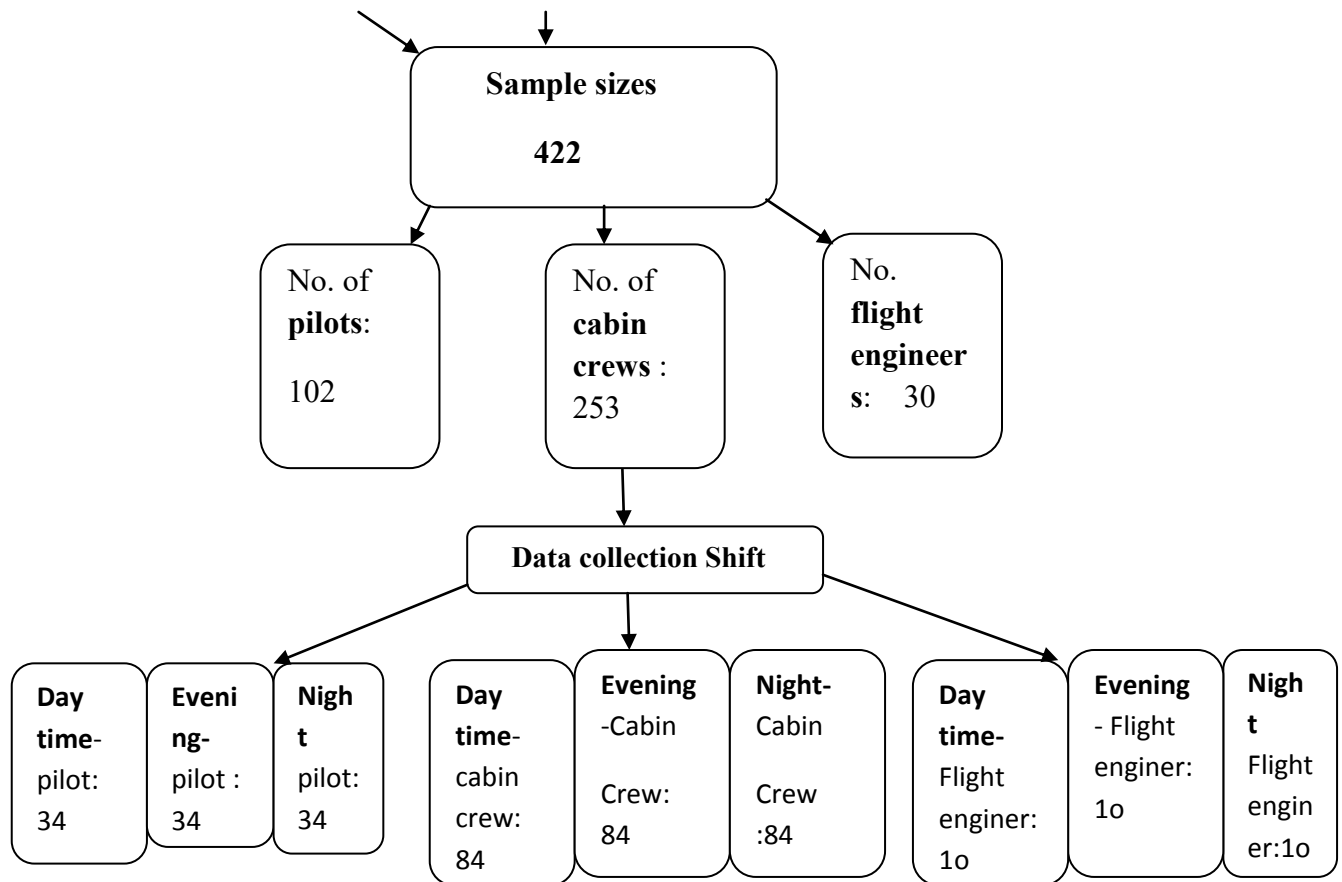
Jet lag: feeling tired and confused after long journey by aircraft raveling between places that have a time difference of several hours which include difficulty in initiating or maintaining sleep, day time sleepiness decrement in subjective alertness and performance.

4.8 Data quality management

To maintain data quality data collectors was trained and they were selected based on educational level and work experience. Moreover questionnaires was pre tested in Turkish air lines to see for accuracy of responses ,appropriateness of data collection tool and necessary amendments.

4.8.1 Sampling method:-The sampling from each flight by classifying into three shifts which and night programs two cabin crew, one pilot and one flight engineer





4.9 Data analysis

The data collection instruments was coded, checked and entered. It was cleaned and edited by simple frequencies and cross tabulation before analysis. The data was analysis with SPSS version 20 and checked for missing values before analysis. Descriptive statistics, frequencies and graphs(diagrams) was used for describing the study population in relation to relevant variables. Logistic regression analysis with their 95% confidence interval was used to assess degree of association between dependent and independent variables and test significance of association.

4.11 Ethical Consideration

Ethical clearance was obtained from research ethics committee (REC) of school of public health in Addis Ababa university. Following the endorsement by the REC, Ethiopia air line was informed about the objectives of the study through a support letter from school of public health in AAU to allow the study.

The purpose and nature of the study was explained to the study participants and the goal of this study was to assess work related stress among crew members and identify any and all areas that need to be addressed. In addition to that was not a test and no way reflects on personally so do not worry if they were lacking of information or unfamiliar with certain areas. Every single study unit was informed that participating in the research was voluntary and consent was obtain from participants. Confidentiality of the information was observed by anonymity not mentioning name of the study units in the questionnaire and not being distribute by the researcher. The questioner completed was coded and no names was put on the questionnaires. Name links to the codes was in a code drawer. Information was keep confidential and only pooled data will be presented.

4.12 Dissemination of results

After completion of this study, the results will be presented during thesis defense and final result will be submitted to Addis Ababa University School of Public Health. In addition to this the final document will be presented to Ethiopian air line and other responsible bodies. Beside this, the finding of the study will be published and disseminated through different journals and scientific publications.

5.RESULTS

5.1 Socio Demographic Characteristics

A total of 385 out of 422 air craft crew members were participated in this study which was 91.2%. The 385 participants were included in the Analysis. The mean age of the respondent was 37 years with minimum age 23 and maximum 51 years. The majority of the respondents were in the age group of 20-29(42.2%) and 30-44(48.6%). Majority of the participants were Orthodox Christian which accounts 252(62.5%), followed by protestant 48(12.5%). Concerning their educational status 234(60.8%) were 1st degree holder and 127(33%) were college diploma graduate. Only 6(1.6%) of the study participants were 2nd degree and above (Table 1).

The occupational status of the study participants were 253(65.7%) cabin crew, 102(26.5%) pilot and 30(7.8%) were flight engineers(Figure 2).

The monthly income of study participants was minimum of 8000birr(28.1%) and maximum of 60,000Birr(9.4%) most of them 37.7% were 9000birr.

**Table 1: Socio demographic Characteristic of Ethiopian airlines crew members,
Addis Ababa,thiopia,2016**

Characteristics	Category	Frequency (N=385)	Percent
Sex	Male	144	37.2
	Female	241	62.6
Age Group	20-29	154	42.2
	30-44	187	48.6
	>45	42	11
Religion	Orthodox	252	65.5

	Protestant	48	12.5
	Muslim	24	6.2
	Catholic	31	8.1
	Other	30	7.8
Marital status	Single	144	37.4
	Married	217	56.4
	Divorced	18	4.7
	Widowed	6	1.6
Educational Status	Secondary school	18	4.7
	College diploma	127	33
	1 st Degree	234	60.8
	2 nd degree and above	6	1.6
Employment pattern	Temporary	12	3.1
	Permanent	373	96.6
	≤5 years	156	40.6
	>5 Years	229	59.4

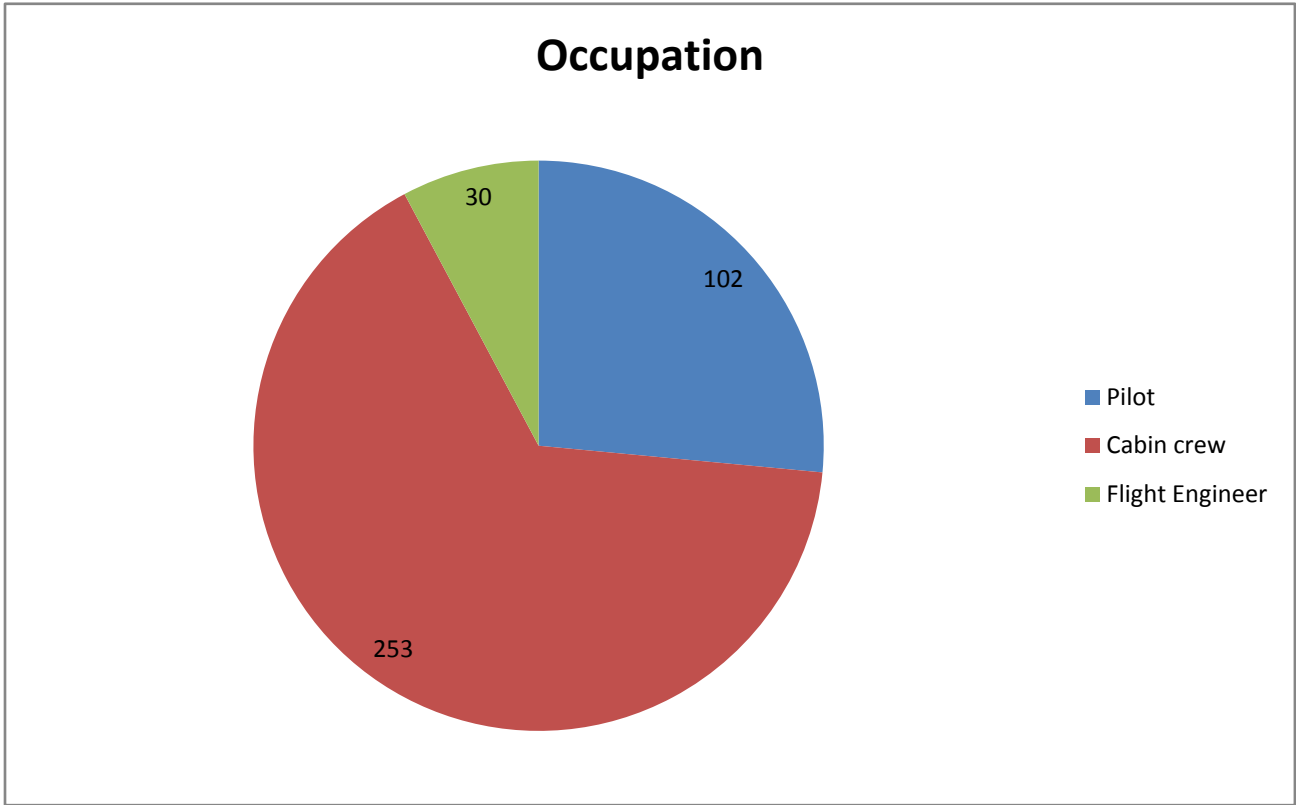


Figure 2: Occupational status of the study participants of Ethiopian airlines crew members Addis Ababa, Ethiopia 2016

5.2 Characteristics of Pattern and work Environment of Ethiopian airline crew members

Two hundred fifty three(65.8%)of the crew members had sleeping time less than 6 hours per day. Almost all of them (93.3%) spent from 10-17 hours per day, 36-50 hours per week, 5-6 days per week and 24days per month at work. They had irregular working shifts and experienced to frequent schedule change (90.7%), attend long flight (93.8%)

The crew members experienced difficulty in getting sleep(84.4%) even though the normal working is day time work with rest at the night these study group work long flights over night had effects on fatigue due to the restricted cabin space and restricted rest time and 25.2% of the crew members feel insecure while in flight due to extreme weather and mechanical conditions.

Table 2: Work Environment and patterns of Ethiopian airlines crew members Addis Ababa Ethiopia, 2016.

Characteristics	Category	Frequency(N=385)	Percent
Sleeping hours	≤6	253	65.8
	6-8	126	32.7
	>8	6	1.6
Unable to take sufficient break	Sometimes	102	26.5
	Often	90	23.4
	Always	193	50.1
Regularly attending long flights	Never	6	1.6
	Seldom	18	4.7
	Sometimes	48	12.5
	Often	229	59.5
	Always	84	21.8
Unmanageable work load	Never	18	4.7
	Seldom	31	9.4
	Sometimes	156	40.5
	Often	127	33
	Always	48	12.5
Frequent schedule change	Never	12	3.1
	Seldom	24	6.2
	Sometimes	90	23.4
	Often	199	51.7
	Always	60	15.6
Working under considerable tension	Never	18	4.7
	Seldom	60	15.6
	sometimes	114	29.6
	Often	96	24.9
	Always	97	25.2
Subjected to personal harassment	Never	90	23.4
	Seldom	60	1.6
	Sometimes	102	26.5
	Often	109	28.5
	Always	24	6.2
Worry about children and family onboard	Never	42	10.9
	Seldom	36	9.4
	Sometimes	108	28.1
	Often	60	15.6
	Always	139	36.1

The crew members were experienced with frequent schedule changes 349(90.7%) this one of the sources of stress from inadequate shift system ,long and odd working hours and lack of rest or break.

The Crew members work very intensively (96.9%), did not get managerial encouragement (87.5),all of them travel internationally for work, experienced unwanted shift patterns(93.8%),experienced unmanageable work load(86%) and difficulty to get sleep(84.4%),Three hundred sixty one of the study participants regularly attend long flight(93.8%) which was associated with fatigue leading to work related stress.

Most crew members were not given enough time to do their work(64.2%), were upset absent of job carrier(53.2%), had feeling of neglected from team members(50.2%), were working under considerable tension (79.7%), had difficulty to concentrate on their work(70.4%), Hesitate to start something new feeling not successful and boss scolding(75%) and doing things in their role against their better judgment (71.9%).

Three hundred fifty five (92.2%) of the crew members think that the company should change in some perspectives [Table 2].

5.3 Emotional Exhaustion Assessment of participants

The result of the investigation shows that many of the crew members 85.9% felt that they were emotionally drained from their work and 67.3% of them experienced difficulty to take decision [Table3].

Table 3:Emotional exhaustion of Ethiopian airline crew members

Characteristics	Category	Frequency(N=385)	Percent	YES	NO
Feel Emotionally Drained	Never	18	4.7	331(85.9%)	54(14.1%)
	Seldom	36	9.4		
	Sometimes	156	40.5		
	Often	151	39.2		
	Always	24	6.2		
Feel life is burden	Never	72	18.7	242(62.6%)	144(37.4%)
	Seldom	72	18.7		
	Sometimes	145	37.7		
	Often	72	18.7		
	Always	24	6.2		
Feel unable to think Clearly	Never	54	14.0	241(62.7%)	144(37.4%)
	Seldom	90	23.4		
	Sometimes	175	45.5		
	Often	60	15.6		
	Always	6	1.6		
Feel useless when boss scold with minor mistakes	Never	96	24.9	229(59.5%)	156(40.5%)
	Seldom	60	15.6		
	Sometimes	72	18.7		
	Often	54	14		
	Always	103	26.8		
Difficult to take Decision	Never	54	14	259(67.3)	126(32.7%)
	Seldom	72	18.7		
	Sometimes	96	24.9		
	Often	145	37.7		
	Always	18	4.7		
Get nervous when Organizational Requirement did not meet	Never	48	12.5	265(58.7)	120(35.8%)
	Seldom	72	18.7		
	sometimes	66	17.1		
	Often	66	17.1		
	Always	133	34.5		
Friction between colleagues	Never	12	3.1	295(76.6%)	90(23.4%)
	Seldom	78	20.3		
	Sometimes	253	65.7		
	Often	12	3.1		
	Always	30	7.8		

5.5 Behavioral characteristics

Thirty six of the participant (12.5%) are smoker and one hundred seventy five (45.4%) of them at least drink alcohol and Among the crew members 10.4% give birth within one year and 5.7 death of close family within one year which indicates there was not much influence for the result of the study even though these external influences were low adding with other stressful work conditions might lead to serious effects.



Table 4 : Behavioral/personal characteristics of Ethiopian airlines among crew members Addis Ababa-Ethiopia, 2016.

Characteristics	Category	Frequency(N=385)	Percent	YES	NO
Alcohol Drinking					
	Never	126	32.7	175(45.4%)	210(54.5%)
	Seldom	84	21.8		
	Sometimes	163	42.3		
	Often	12	3.1		
Cigarette Smoking					
	Never	337	87.5	36(9.4%)	349(90.6%)
	Seldom	12	3.1		
	Sometimes	12	3.1		
	Often	18	4.7		
	Always	6	1.6		
Give birth within one year					
	Yes	40	10.4	40(10.4%)	345(89.6%)
	No	345	89.6		
Death of close family within one year					
	Yes	22	5.7	22(5.7%)	363(94%)
	No	363	94.3		
Work related accident within one year					
	Yes	127	33.0	127(33%)	258(67%)
	No	258	67.0		
Feel the company should change in some perspective					
	Yes	355	92.2	355(92.2%)	30(7.8%)
	No	30	7.8		
Proud to tell people where they work					
	Yes	210	54.5	210(54.5%)	175(45.5%)
	No	175	45.5		
Feel to be part of the organization					
	Yes	168	43.6	168(43.6%)	217(56.4%)
	No	217	56.4		

Table 5: Summary of work related stressors among Ethiopian airline crew members Addis Ababa, Ethiopia, 2016.

Variables	Response				
	Never	Seldom	Sometimes	Often	Always
Feeling Fatigue	6(1.6%)	18(4.7%)	108(28.1%)	114(29.6%)	139(36.1%)
Working very fast	6(1.6%)	0%	66(17.1%)	96(24.9%)	217(56.4%)
Difficult to take decision	54(14%)	72(18.7%)	96(24.9%)	145(37.7%)	18(4.7%)
Emotionally Drained	18(4.7%)	36(9.6%)	156(40.5%)	151(39.2%)	24(6.2%)
Un manageable work load	12(3.1%)	12(3.1%)	90(23.4%)	187(48.6%)	84(21.8%)
Supportive feedback	24(6.2%)	48(12.5%)	199(51.7%)	72(18.7%)	42(10.9%)
Pressured to work long hours	0%	18(4.7%)	90(23.4%)	102(26.5%)	175(45.5%)

Table 6: Summary of work related stressors among Ethiopian airline crew members Addis Ababa, Ethiopia, 2016.

Variables	Response	
	NO	Yes
Feeling Fatigue	24(6.3%)	361(93.8%)
Working very fast	6(1.6%)	385(98.4%)
Difficult to take decision	126 (32.7%)	259(67.3%)
Emotionally Drained	54(14.3%)	331(85.9%)
Un manageable work load	24(6.2%)	361(93.8%)
Supportive feedback	72(18.7%)	313(81.3%)
Pressured to work long hours	18(4.7%)	367(95.4%)

5.6 Prevalence of work related stress

Work related stress among the crew members were 78.2% which was the combining effects of stressors from demand, control, support, relationship, role and change standards. The work related stress were measured by low supportive feedback, fatigue, emotionally drained, decision difficulties, pressured to work long hours, working very fast ,unmanageable work load were taken by their scale of severity from participants responses sometimes, often and always were counted.

The likert scale responses (never ,seldom ,sometimes, often ,always) were changed into categorical as never and seldom in to no stress and sometimes, often and always were take as there was stress among the crew members.

Table 6 and table 7 above shows the frequency of work stressors from demand, support, control, relationship, role and changes model of stress measures.

5.7 Work related stress factors among the Ethiopian air lines crew members

Table below indicated that the crew members aged 30-44 were 2 times more likely to had work related stress compared to those of aged 20-29 years(p-value 0.024; COR 2.06; 95%CI (1.09-3.86)). Females were 4.2 times more likely to had work related stress than male(p-value 0.001;COR 4.22;95% CI (2.53-7.02)).

Table 7: Binary logistic regression of the socio demographic of Ethiopian airlines crew members Addis Ababa-Ethiopia, 2016

Variables	Work related stress		Crude odd ratio 95% CI	Significant
	Yes	No		
Age				
20-29	6	36	1.00	P<0.01
30-44	132	30	2.06(1.09-3.86)	P<0.05
≥45	163	18	0.04(0.02-0.10)	P<0.001
Sex				
Male	90	54	1.00	
Female	211	30	4.22(2.53-7.02)	P<0.001
Religion				
Orthodox	122	18	2.83(1.28-6.28)	P<0.001
Protestant	86	16	1.11(0.436-2.38)	
Muslim	18	6	2.0(0.616-4.494)	
Other	31	48	1.00	
Work experience				
≤5	217	54	1.00	
5	102	30	0.87(0.837-0.905)	P<0.001

The crew members sleep less than 6 hours were 2.3 times more to had work related stress as compared to those who sleep greater than 6 hours(p-value 0.001;COR 2.34;95% CI(1.43-3.84)).
The pilots were 2.8 times more to had work related stress than the flight engineers (p value<0.05; COR 2.75;95% CI(1.19-6.34)).

Table 8: Binary logistic regression of the factors of work related stress of study participants Addis Ababa, Ethiopia, 2016

Variables	Work related stress		Crude odd ratio 95%CI	Significant	
	Yes	No			
Sleeping hours	≤6	211	42	2.34(1.431-3.841)*	p<0.001
	>6	90	42	1.00	
Occupational status					
Pilot	66	36	2.75(1.19-6.34)	P<0.05	
Cabin crew	223	30	11.5(4.89-25.42)	P<0.001	
Flight engineer	12	18	1.00		
Frequent schedule change					
Yes	322	20	9.63(4.56-20.33)	P<0.001	
No	27	16	1.00		
Get nervous when					
Organizational need not meet					
Yes	233	80	0.156(0.09-0.26)	P<0.001	
No	32	40	1.00		
Smoking Cigarette					
Yes	12	289	9.6(4.56-30.32)	p<0.001	
No	24	60	1.0		
Drinking alcohol					
Yes	135	50	0.59(0.36-0.98)	P<0.05	
No	45	70	1.00		
Regularly attending long flight					
Yes	330	13	0.24(0.10-0.57)	P<0.001	
No	31	11	1.00		
Experienced long shift pattern					
Yes	304	10	0.07(0.03-0.19)	P<0.001	
No	57	14	1.00		
Jet-lag					
Yes	12	289	0.15(0.07-0.33)	P<0.001	
No	18	66	1.00		
Work Related accident					
Yes	107	189	0.11(0.04-0.27)		
No	27	69	1.00		
Feel insecure while in Flight					
Yes	79	242	0.17(0.07-0.42)		
No	18	46	1.00		
Friction between colleagues					
Yes	0	84	5.2(3.11-8.9)		
No	12	289	1.00		
Verbal abuse from passenger					
Yes	106	210	0.14(0.07-0.27)		
No	69	42	1.00		
Work home imbalance					
Yes	6	78	0.31(0.16-0.62)	P<0.001	
No	6	295	1.00		

The table 9 shows that the crew members who attend long flight had work related stress (P-value 0.001; AOR 7.78; 95% CI (1.36-44.2)), jet lag (p-value 0.001; AOR 3.8; 95% CI (0.64-23.32)), occupationally being a pilot had 15 times more likely to had work related stress as compared with flight engineers (p-value 0.001; AOR 15.2; 95% CI (3.1-73.0)).

Table 9: Multivariate logistic regression of Ethiopian airlines crew members Addis Ababa, Ethiopia, 2016

Variables	Category	Work related stress		Adjusted odd Ratio 95%CI	Significant
		Yes	No		
Sex					
	Male	90	54	1.00	P<0.001
	Female	211	30	1.3(1.54-6.49)	
Age					
	20-29	6	36	1.00	
	30-44	132	30	9.42(9.63-92.1)	
	>45	163	18	13.95(9.01-21.6)	
Religion					
	Orthodox	122	18	4.2(0.084-21.4)	P<0.001
	Protestant	86	16	19.2(0.117-31.7)	
	Muslim	18	6	3.2(0.036-29.1)	
	Other	31	48	1.00	
Employment					
	Permanent	321	52	5.9(0.005-6.5)	
	Temporary	5	3	1.00	
Occupational status					
	Pilot	66	36	15.2(3.1-73.0)	P<0.001
	Cabin crew	223	30	3(0.01-0.17)	
	Flight engineer	12	18	1.00	
Frequent schedule change					
	Yes	322	20	0.001(0.0-0.01)	P<0.001
	No	27	16	1.00	
Get nervous when Organizational need not meet					
	Yes	233	80	0.49(0.17-1.4)	
	No	32	40	1.00	
Smoking Cigarette					

	Yes	12	289	3.97(1.11-14.12)	P<0.001
	No	24	60	1.00	
Drinking alcohol					
	Yes	135	50	1.06(0.32-3.44)	
	No	45	70	1.00	
Regularly attending long flight					
	Yes	330	13	7.78(1.36-44.21)	P<0.001
	No	31	11	1.00	
Experienced unwanted shift Pattern					
	Yes	300	12	0.01(0.01-0.068)	P<0.001
	No	61	12	1.00	
Jet-lag					
	Yes	12	289	3.8(0.64-23.32)	
	No	18	66	1.00	
Work Related accident					
	Yes	107	189	0.056(0.006-0.560)	
	No	27	69	1.00	
Feel insecure while in Flight					
	Yes	79	242	58.63(1.97-1774.9)	P<0.001
	No	18	46	1.00	
Friction between colleagues					
	Yes	0	84	0.089(0.023-0.348)	P<0.001
	No	12	289	1.00	
Verbal abuse from passenger					
	Yes	106	210	0.114(0.017-0.764)	P<0.001
	No	69	42	1.00	
Work home imbalance					
	Yes	6	78	0.013(0.002-0.075)	P<0.001
	No	6	295	1.00	

6. DISCUSSION

This study had investigated the magnitude and factors affecting work related stress among the Ethiopian airlines crew members. Work related stress among the Ethiopian airlines crew members were 78.2%. The result was higher than the research done in UK which was the levels of fatigue were high amongst crew member workers. Nearly half of all study participants reported that most crew members felt emotionally drained, and nearly 70% reported that most felt used up at the end of the work day[21,25].

Crew members who had work experience more than five years were more at risk of work related stress as compared with ≤ 5 years experience. The result had similarity with the research done by American college of occupational and environmental medicine on job stress among female flight attendants with average age of the study participants was 37 years ranging from 27 to 55 years and as comprising with the domestic and international flight attendants half (51%) of the study participants reported that they primarily worked on international routes had work related stress[23].

Most study participants reported that had little freedom to decide on how to do their work had no regular shifts. These findings indicated a high risk of fatigue for crew members. The vast majority of the crew reported that the required number of flight hours had increased for crew member workers. The reduced time for sleep and the pattern of long hours of work combined with insufficient time for rest and sleep clearly contributes to fatigue and has potential serious safety implications related to sleep deprivation and alertness on the job. The crew members averaged only 6 hours of sleep per night during layovers between flights.

Females crew members were 1.3 times more likely to had work related stress than male (p-value 0.001; AOR 1.3; 95% CI(1.54-6.49)) This result was found similar with the research done in united kingdom on commercial air operation indicates generate excessive levels of stress and fatigue amongst female flight crew members.

By the nature of their job air craft crew members have specific job demands which put them at high risk of fatigue (89.1%). The crew members regularly attending long flights (p-value 0.001; AOR 7.78(1.36-44.21)) and time demands of long and odd working hours, working

irregular shift patterns ,crossing time zones during work this irregular rest break patterns put burden on the physical body and social life of the crew members.

Previous research shows comprising the domestic and international flight attendants half (51%) study participants reported that they primarily worked on international routes. The number of self –reported block hours worked per month was higher among flight attendants assigned primarily to international routes. The most common events of flight attendants job stress conditions were flight delay and passenger –related needs or problems [23].

Flight crew members including pilots and flight attendants are exposed to several risks and hazards due to work organizational factors. They work in shifts that involve irregular hours, working weekends and public holidays, and spending time away from home, which adversely affected family responsibilities and leisure activities and may result in stress and fatigue [17 ,23]

The normal working days regularly include day time working with rest at night but this does not similar to the normal working day or working life of crew members. Overnight stays in hotels or outside the workers own environment cause difficulties to sleep and long flights overnight(93.8%) have significant impact on fatigue level and restricted rest time.

As compared with the research done in U.S self–reported health of flight attendants compare to the general population shows male and female flight attendants had 3.7 and 5.7times the reported prevalence of diagnosed sleep disorders compared to the general population, adjusted for age . In addition, fatigue and depression in female flight attendants were about twice that of the population. Male flight attendants also had twice the expected prevalence of fatigue, however, their report of depression that occurred everyday or nearly every day showed a 5.7 times greater prevalence compared to the general population. Sleep disorders in flight attendants significantly affected nearly one in three flight attendants in the study [22].

Reported levels of fatigue were very high amongst cabin crew workers. Most cabin crew felt emotionally drained 85.9%, and felt used up at the end of the work day and reported that cabin crew had little freedom to decide on how to do their work. More than half of all respondents reported that no cabin regular shifts[table3].

These findings indicated a high risk of fatigue for cabin crew. The required number of flight hours had increased for cabin crew workers. Cabin crew spent up to four hours traveling one way between airport and hotel leaving them with significantly reduced relaxation time at the end of the work shifts and reduced time for sleep. The pattern of long hours of work combined with insufficient time for rest and sleep clearly contributes to fatigue and has potential serious safety implications related to sleep deprivation and alertness on the job. Cabin crew averaged only 6.5 hours of sleep per night during layovers between flights [22,25].

Most crew members felt emotionally drained and felt used up at the end of the work day(86%). In assessing the level of work demands of crew members their work requires to work very fast(98.4%)and believed that they had excessive amount of work to do(86%)[table 3,6].

This Result comply with the research done by flight safety foundation of cabin crew safety in Ireland on work related stress among flight attendants stress arising from aspects of the work environment perceived to be physically threatening or emotionally threatening is a major occupational health concern. The indicate that flight attendants experience high levels of work related stress in areas that have important implications for their health and that highlight a need for appropriate recognition and formal support.

The increasingly high levels of safety in air transportation might have obscured the importance of their safety role. In the public's mind flight attendants may be more closely identified with the service role. Nonetheless flight attendants worldwide are trained to administer medical aid, direct the evacuation of airplanes, handle explosive device and manage, control and restrain passengers who are violent, disorderly or abusive. The result shows there was significant association between the length of time spent in the job and role overload that is the longer the participants had worked as flight attendants, the greater their work load tended to be. In addition the longer they had been flight attendants, the greater their feelings of responsibility for subordinates [26].

The shift work in general put workers at high risks of fatigue and rotating shift systems are even more hazardous than the regular shift patterns as the body rhythm cannot adapt to a regular time pattern and the crew members work irregular shift (90.7%) which indicates a high risk of fatigue.

Another crucial aspect of work factor contribute to stress and fatigue affecting crew members is the length of time worked. The crew members are pressured to work long hours on average 14hours per day which is (67.3%) , with minimum 4 hours , maximum 17 hours per day and 6days (56.4%) per week ,24days per month which is (57.9%).

Strength of the study

To enhance the quality of the data ,the data collectors were trained well on data collection techniques and followed the supervisor and principal investigator every shifts and every day till the sample units were obtained.

Limitations of the study

Qualitative study was not studied.

The study can be strengthened by increasing the sample as the data analysis results and finding may vary substantially when sample size is increased or decreased and involvement of more participant would result more findings.

7. CONCLUSION

The crew members are exposed long flight, jet-lag, working odd hours, Lack of rest were the factors most contributing to fatigue and work related stresses. Significant associations were observed between constant pressure due to heavy work load among the crew members and the results study shows that there was a range of factors that have contributed increase in stress and fatigue. The increases in fatigue ,working long hours, effort –reward in balance ,social and economic insecurity create a powerful predictor of stress and fatigue among crew members.

All the study groups reported increase in the pressure to complete work tasks ,in the number of working hours and increased overtime resulted in fatigue which compromise the quality of work, reduce productivity ,increase risk of accident need immediate attention. Emotional exhaustion was high and increased among the study groups and the main factor was long , odd hours and lack of rest. Those increased work hours are risk for workers' health and for passenger safety and increased flight hours combined with the a number of other deteriorating conditions of work reflected increased emotionally exhaustion and emotionally drained. The result shows there was strong impact of stress among the aircrew members and there was high impact on work environment and conducive working environment in the organization increase employee performance and decrease their stress gradually.

8.RECOMENDATION

Ethiopian Airlines

The crew members need close and active collaboration and strong organizing effort from the company emphasizing on health and safety of their work .Adequate work organization ,leadership ,technical and environmental design and balance of effort is required.

The crew members need health and safety training and management due to the increased worsening of conditions related to long flights, jet lag and significant increase in sleep disorders. Preventive policies is required aimed at minimizing the risk of fatigue and work related stress.

Civil Aviation

Proper regulation of the civil aviation industry is necessary to eliminate many of the conditions that have contributed to the significant of increased in stress and fatigue. Standard supervision is needed to raise the worker well-being and safety.

Crew Members

The crew members need to understand the work related risks associated with and in their workplace and understand company policies, procedures associated with work place safety and implement aviation environment prevention programs.

Researchers

Qualitative data would be helpful to study major work related stress in the work condition of the crew members.

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10. Annex

Annex I. Participant's Information sheet

I-information sheet

Greeting :Good morning /afternoon!

Hello, my name is_____ I am data collector for master of public health student project in Addis Ababa University . I am conducting a survey with the aim assessing work related stress of aircraft crew members in Ethiopian air lines. This information I collect will help to your air line for planning services. Now you are randomly selected for the survey .the questions take about 15 to20 minutes.

Objective of the study:- to assess the magnitude and factors associated with work related stress among aircraft crew members in bole international air port.

Strictly confidential

This questionnaire provides you with an opportunity to describe your feeling and thoughts about your work and how you cope with the demands its places on you. There are series of questions about stress the demand of your job, the control you have over your work, the support you receive the working relationship you have, your role and responsibilities and any change processes that affect you. In each case you will asked to indicate whether you agree or disagree with a particular statements and/or will be asked to describe the situation from your point of view .There are not right and wrong answers and no “good” or “bad “choices answer openly and honestly by indicating how you actually feel and not how you believe you should feel. Make sure that you consider and respond to each question.

Name of principal investigator :Tekleweyni Gebremikael

Cell phone No.-0910309783 or 0938509754

E-mail: tekle200015@gmail.com

Annex II. Informed Consent

As to the information given ahead ,participating in this study has no any risk .Your name will not be written on this form and the information you give will never be shared to others. You may not answer any questions that you don't want to answer. Now I would like to tell you are selected randomly to be participant of the study. Your genuine response to the interviews will be very important for the purpose of the study. At the same time I would like to appreciate your voluntarily participation in the survey after a thorough understanding of the information given to you. I have read this form and comprehend and understand all conditions stated above.

Are you willing to participate in this study?

1.No(say thank you) 2.Yes (continue)

Name of principal investigator: Tekleweyni G/Mikael

Cell phone: 0938509754 or 0910309783

E-mail:tekle200015@gmail.com

Name of interviewer : _____signature_____

Result of interview:

1.complete-----2. Refused-----

3.Respondent not available-----4.Partialy completed-----

Checked by supervisor

Name.....Signature.....Date.....

Annex III The Questionnaire

Socio demographic questioner						
S.No	Socio demographic questioner	Response				
1.	Age	_____ Years				
2.	Sex	1. Male 2. Female				
3.	Religion	1. Orthodox 2. Protestant 3. Muslim 4. Other				
4.	Marital status	1. Single 2. Married 3. Divorced 4. Other				
5.	Nationality	_____				

6..	Educational status	1. Secondary school 2. College diploma 3. 1 st degree 4. 2 nd degree				
7.	Occupation position	1. Pilot 2. Cabin crew 3. Flight engineer 4. Navigator				
8.	Employment pattern	1. Temporary 2. Permanent				
9.	Work experience	_____ years				
10.	Monthly in come	_____				

10.	How many hours per day you sleep?	_____ hours				
11.	How many hour per day, days per week you work?	_____ hours per day _____ days per week				

I. Stress Assessment Questionnaire

1.	Can you decide when to take a break?	1.Never	2.Seldom	3.somethimes	4.often	5Always
2.	Are you clear what is expected you at work?	1.Never	2.Seldom	3.somethimes	4.often	5Always
3.	Are you subjected to personal harassment in the form of unkind words or behavior?	1.Never	2.Seldom	3.somethimes	4.often	5Always
4.	If work gets difficult do your colleges help you?	1.Never	2.Seldom	3.somethimes	4.often	5Always
5.	Do you given supportive feedback on the work you do	1.Never	2.Seldom	3.somethimes	4.often	5Always

6.	Do you have to work very intensively?	1.Never	2.Seldom	3.somethimes	4.often	5Always
7.	Are you clear what your duties and responsibilities?	1.Never	2.Seldom	3.somethimes	4.often	5Always
8.	Do you have to neglect some tasks because you have too much to do?	1.Never	2.Seldom	3.somethimes	4.often	5Always
9.	Are you clear about the goals and objectives for your department?	1.Never	2.Seldom	3.somethimes	4.often	5Always
10.	Is there friction or anger between colleagues?	1.Never	2.Seldom	3.somethimes	4.often	5Always
11.	Do you unable to take sufficient breaks?	1.Never	2.Seldom	3.somethimes	4.often	5Always
12.	Are you pressured to work long hours?	1.Never	2.Seldom	3.somethimes	4.often	5Always
13.	Do you have to work very fast?	1.Never	2.Seldom	3.somethimes	4.often	5Always
14.	Do you have unrealistic time pressure?	1.Never	2.Seldom	3.somethimes	4.often	5Al

				mes		way s
15.	Do you receive respect at work you deserve from your colleagues?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
16.	Can your work time be flexible?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
17.	Do your line manager encourage you at work?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
18.	Do you regularly attend long flight?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
19.	Have you work as flight attendant for the past 6months?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
20.	Do you travel internationally for work?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
21.	Have you experienced to unwanted shift patterns?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
22.	Have you experienced to unmanageable Work load?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s
23.	Have you experienced to verbal abuse from passenger?	1.Never	2.Seldom	3.somethi mes	4.often	5Al way s

24.	Have you experienced to disciplinary charge brought by management?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
25.	Have you experienced to difficulty in getting to sleep?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
26.	Have you experienced to frequent schedule change?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
27.	Do you feel that you have been work load with too many jobs?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
28.	Do you wary about children and family always onboard?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
29.	Do you feel fatigue during your trips?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
30.	Have you experienced difficult passengers ?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
31.	Do you feel isolated from some social affairs?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
32.	Do you get always supervisory support?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
33.	Are you satisfied with your job?	1.Never	2.Seldom	3.somethimes	4.often	5.Always

34.	Is there work-home imbalance and child care difficulties?	1.Never	2.Seldom	3.somethimes	4.often	5Always
35.	Do you feel job insecurity?	1.Never	2.Seldom	3.somethimes	4.often	5Always
36.	Do you always experienced in flight medical emergency?	1.Never	2.Seldom	3.somethimes	4.often	5Always
37.	Have you experienced any harassment from passengers or other airline employees?	1.Never	2.Seldom	3.somethimes	4.often	5Always
II	Work load Assessment questionnaire					
1.	Are you given enough time to do what is expected to you on your job?	1.Never	2.Seldom	3.somethimes	4.often	5Always
2.	Have you got upset thinking that you are not able to make progress in your job or carrier?	1.Never	2.Seldom	3.somethimes	4.often	5Always
3.	Have you often feel that you are being neglected when you are in the team?	1.Never	2.Seldom	3.somethimes	4.often	5Always
4.	Do you work under considerable tension?	1.Never	2.Seldom	3.somethimes	4.often	5Always
5.	Have you find difficulty to concentrate on your work?	1.Never	2.Seldom	3.somethimes	4.often	5Always
6.	Do you often hesitate to start something new because you feel that you will not be successful and get scolding from boss?	1.Never	2.Seldom	3.somethimes	4.often	5Always
7.	Do you have to do your things in your role that against your better judgment?	1.Never	2.Seldom	3.somethimes	4.often	5Always

8.	Do you have the information you need for your work?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
III.	Emotional exhaustion questioner					
1.	Do you feel emotionally drained?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
2.	Do you generally feel that the life is burden?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
3.	Do you often feel that you are not able to think clearly?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
4.	Do you feel that you are absolutely useless why your boss scold you for minor mistake?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
5.	Do you find it extremely difficult to take decision?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
6.	Do you get very nervous when you did not meet organizational requirements in job?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
7.	Do you often feel that you are unable to think clearly?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
8.	Do you get stress by mostly external person?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
IV	Physical stress questionnaire					
1.	Do you have frequent headache while doing the job?	1.Never	2.Seldom	3.somethimes	4.often	5.Always
2.	Do you have to forget things easily?	1.Never	2.Seldom	3.somethimes	4.often	5.Always

				mes		s
3.	Are you losing weight?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
4.	Do you become restless and can't keep still while working?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
5.	Do you smoke cigarettes?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
6.	Do you drink alcohol?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
7.	Do you have at least one friend with whom you sometimes can share all personal details to him?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
8.	Do you feel tired and confused after long journey by airplane traveling between places that have a time difference of several hours (Jet lag)?	1.Never	2.Seldom	3.sometimes	4.often	5.Always
V.	Organizational commitment and External influences					
1.	Are you proud to tell people where you work?	1.Yes	2.NO			
2.	Do you feel yourself to be part of the organization?	1.Yes	2.NO			
3.	Do you feel to move from this company because of various reasons?	1.Yes	2.NO			

4.	Do you feel that the company should change in some perspective?	1.Yes	2.NO			
5.	Is there any work related accident happened within one year?	1.Yes	2.No			
6.	Is there any death of close family within one year?	1.Yes	2.No			
7.	Is there divorce within one year?	1.Yes	2.No			
8.	If you are a female have you born a child within one year?	1.Yes	2.No			

Annex IV Questionnaire Amharic Version

	ማህበራዊ እና ስነምግባር ነገር መጠይቅ	
ቁጥር	ማህበራዊ እና ስነምግባር ነገር መጠይቅ	
1.	ዕድሜ	አመት
2.	ፆታ	1. ወንድ

		2. ሴት
3.	ሀይማኖት	1. ኦርቶዶክስ 2. ፕሮቴስታንት 3. ሙስሊም 4. ሌሎች
4.	የጋብቻ ሁኔታ	1. ያላገባች/የላገባ 2. የገባ/ያገባች 3. የፈታ/የፈታች 4. ባለቤቱ/ቷ የሞተበት 5. አብረው የሚኖሩ 6. የተለያዩ
5.	ዜግነት	
6.	የትምህርት ደረጃ	1. ሁለተኛ ደረጃ 2. ኮሌጅ ዲፕሎም 3. 1ኛ ድግሪ 4. ዲግሪ እና ከዚያ በላይ
7.	መተዳደሪያ ስራ	1. ፓይለት 2. ሆስተስ 3. የበረራ መሀንዲስ 4. ናቪጌተር
8.	የስራ ቅጥር ሁኔታ	1. ጊዜያዊ 2. ቋሚ

9.	የስራ ልምድ	_____ ዓመት
10.	የወር ገቢ	_____
11.	በአማካኝ በቀን ምን ያህል ሰአት ይተኛሉ?	_____ ሰዓት
12.	በሰዓት ምን ያህል ሰዓት ይሰራሉ?	ቢያንስ ለ _____ ሰዓት በቀን ቢበዛ ለ _____ ሰዓት

	በሳምንት እና በወር በአማካኝ ለምን ያህል ሰዓት ይሰራሉ?	_____ ቀናት በሳምንት _____ ቀናት በወር				
	የስራ መርሀ ግብርዎን በራስዎ ምክንያት የመሰረዘ መብት አልዎት?	1. አዎ 2. የለም				
	1. የአእምሮ ውጥረት መመዘኛ ጥያቄ					
1.	እረፍት የሚወስዱበትን ጊዜ በራስዎ መወሰን ይችላሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
2.	በስራ ቦታዎ ከእርስዎ ምን እንደሚጠበቅ ግልጽ የሆነ ዕውቀት አልዎት?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
3.	ተገቢ ያልሆነ ቃል ወይም ባህሪ የግል ትንኮሳ ተጠቂ ሆነው ያውቃሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

4.	ስራ አስቸጋሪ ለሚሆንብዎ ጊዜ ባልደረቦችዎ ረድትዎት ያውቃሉ?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
5.	ክፍተኛ የስራ ጫና ባለበት ሁኔታ ውስጥ መስራት ኖረብዎት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
6.	በስራ ቦታ ስላሉብዎት ሀላፊነት እና ተግባር ግልጽ የሆነ ግንዛቤ አልዎት?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
7.	ስራ ስለሚበዛብዎት አንዳንድ የጠሰጥዎትን ስራ ችላ ማለት ያሉብዎት ጊዜ አለ	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
8.	የስራ ክፍልዎን ግብ እና አላማዎች በተመለከተ ግልጽ የሆነ ግንዛቤ አልዎት?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
9.	በስራ ባልደረቦች መካከል ግጭት ወይም የቁጣ ስሜት አለ?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
10.	በቂ የሆነ እረፍት የማግኘት ችግር አለብዎት	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
11.	ረጅም ሰዓት የመስራት ጫና	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

	አለብዎት	ም				
12.	እጅግ ፈጣን በሆነ ሂደት እንዲሰሩ ግሬት ይደረግብዎታል?	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
13.	ከእውነታው የራቀ የጊዜ አጠቃቀም ግሬት ይደረግብዎታል	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
14.	በስራ ቦታ ከስራ ባልደረሰችዎ	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
15.	የስራ ሰዓትዎ እንዲፈልጉት ሊስተካከል የሚችል ነው?	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
16.	የቅርብ አለቃዎ ስራዎን ያበረታታል	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
17.	ብዙ ጊዜ ረጅም የአውሮፕላን በረራ ያደርጋሉ?	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
18.	ላለፉት 6 ወራት በበረራ አስተናጋጅነት ሰርተው ያውቃሉ?	1.መቼም አልችል ም	2.እምብዛም አይለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
19.	ለስራ ከሀገር ውጭ በመደበኛነት ጉዞ	1.መቼም	2.እምብዛም	3.አንዳን	4.አብዛኛውን	5.ሁል

	ያደርጋሉ?	አልችልም	አደለም	ዴ	ጊዜ	ጊዜ
20.	ያልፈለጉት የስራ ፈረቃ ላይ ተመድበው ያውቃሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
21.	ሊያስተናግዱት የማይችሉት የስራ ጫና ተፈጥሮቦት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
22.	ከተሳፋሪ የቃል ጥቃት ደርሶብዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
23.	በስራ አመራር የስነምግባር ክስ ቀርቦብዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
24.	እንቅልፍ የመተኛት ችግር ገጥሞዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
25.	የስራ ምደባ መርሀ ግብር በተደጋጋሚ የመለወጥ ክስተት አጋጥሞዎት ያውቃሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
26.	ብዙ የስራ ጫና እንዳለብዎ ተሰምትዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንድ ደ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

27.	በበርራ ላይ ሳሉ ስለልጆችዎ ወይም ስለ ቤተሰብዎ ተጨንቀው ያውቃሉ?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
28.	በጉዞ ላይ ሳሉ ከባድ ድካም ተስምትዎት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
29.	ከተሰፋሪ ጋር ችግር ገጥምዎት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
30.	በጉዞ ላይ ሳሉ ከባድ ድካም ተስምተዎት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
31.	ምግብም የቅርብ አለቃ ድጋፍ ያገኛሉ?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
32.	በስራዎ እርካታ ይሰማዎታል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
33.	የስራ እና የቤተሰብ ሀላፊነት አለመመጣጠን እንዲሁም የልጆች እንክብካቤ ችግር አለብዎ?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
34.	በስራዎ ቀጣይነት ላይ ጥርጣሬ ይሰማዎታል?	1.መቼም አልችል	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

		ም				
35.	በበረራ ወቅት የጤና ድንገተኛ ችግር አብዛኛውን ጊዜ ይገጥምዎታል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
36.	ከተሳፋሪ ወይም ከሌላ የአየር መንገድ ስራተኛ ትንኮሳ ገጥሞታት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
37.	ከተሳፋሪ ወይም ከሌላ የአየር መንገድ ስራተኛ ትንኮሳ ገጥሞታት ያውቃል?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
II.	የስራ ጫና ምዘና ጥያቄ					
1.	የሚጠበቅብዎትን ስራ ለመስራት በቂ ጊዜ አለዎት?	1.መቼም አልችል ም	2.እምብዛም አደለም	3.አንዳን ዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

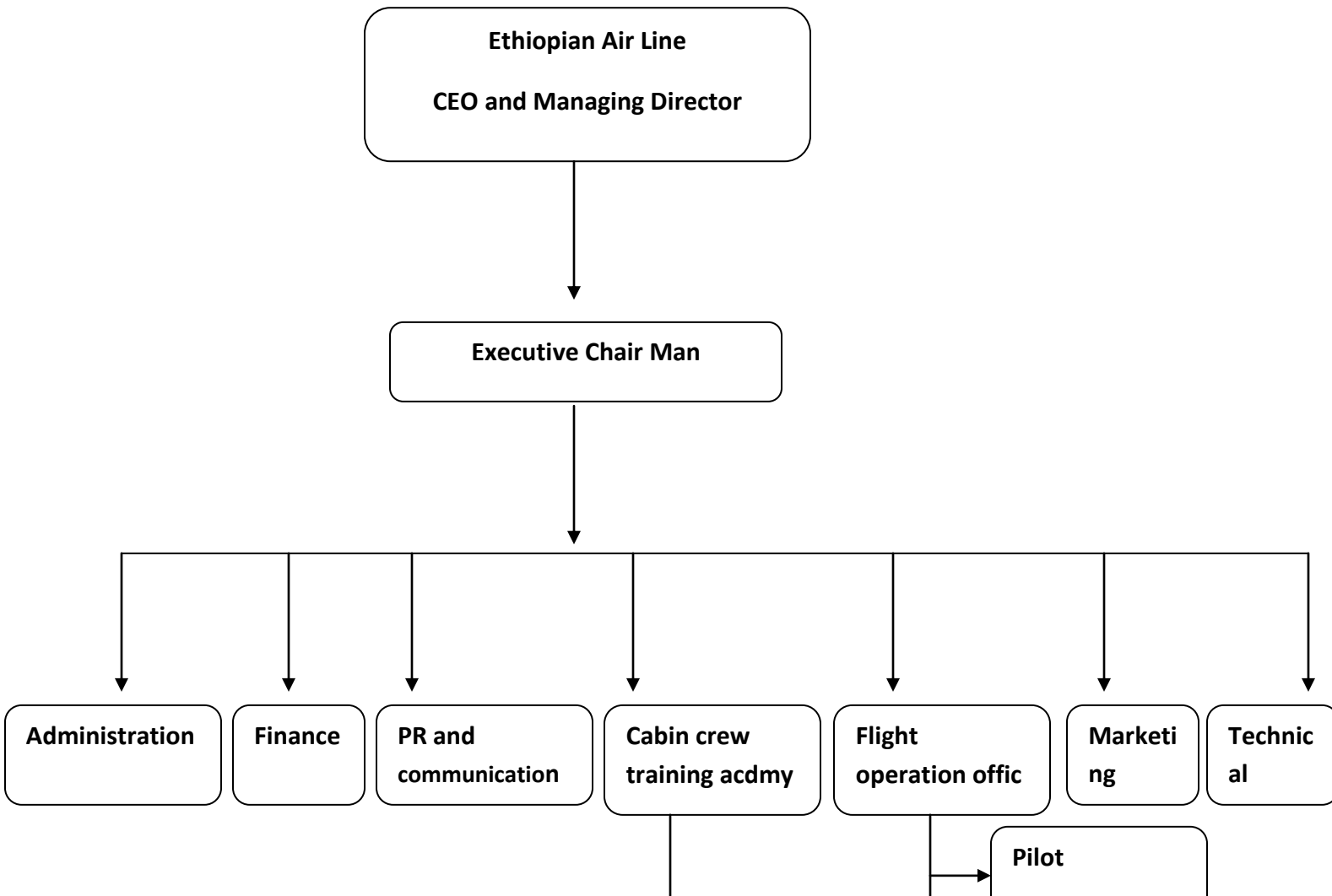
2.	በስራዎ ወይም በሙያ ህይወትዎ የመሻሻል እርምጃ የሌለ እንደሆነ ተሰምትዎት ተበሳጭተው ያውቃሉ?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
3.	በቡድን ስራ ወቅት ትረኩት ያልተሰጥዎት ሆኖ ተሰምትዎት ያውቃል?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
4.	የሚሰሩት እጅግ ከባድ በሆነ ውጥረት ውስጥ ነው?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
5.	በስራዎ ላይ ትኩረት ለማድረግ ችግር ገጥሞዎት ያውቃል?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
6.	አዲስ ነገር ለመጀመር ስኬታማ እንደማይሆኑ በማሰብ እና ከአለቃዎ ተቀባይነት ባለማግኘት ፍርሃት ምክንያት አመንትተው ያውቃሉ?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
7.	በስራዎ ላይ ትክክል ነው ብለው ከሚያስቡት በተቃራኒው ማከናወን የሚገባዎት ስራ ገጥሞዎት ያውቃል?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
8.	ለስራዎ የሚያስፈልገው መረጃ አለዎት?	1.መቼም አልችልም	2.አምብዛም አደለም	3.አንዳንድ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
III.	የስነ-ልቦና መድከምን የተመለከቱ					

	ጥያቄዎች					
1.	በስራ ወቅት የአእምሮ ድካም ተሰምትዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
2.	በአጠቃላይ ህይወት ከባድ የሆነ ጫና እንደሆነ ተሰምትዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
3.	ጥርት ያለ አስተሳሰብ ላይ እንዳልሆኑ ይሰማዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
4.	አለቃዎ በትናንሽ ስህተቶች ጭምር ስለሚያናንቅዎ ከፍተኛ የሆነ አልጠቅምም የሚል ስሜት ተሰምትዎት ያውቃል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
5.	ውሳኔ ለመወሰን በከፍተኛ ሁኔታ ይቸገራሉን?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
6.	በስራ ወቅት ድርጅቱ የሚጠይቀውን መስፈርት በማያሟሉበት ወቅት እጅግ የመፍራት ሁኔታ ይሰማዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
7.	ብዙ ጊዜ ጥርት ያለ ሀሳብ እንደማያስቡ ይሰማዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
8.	ብዙ ጊዜ በሌላ ሰው ውጥረት ውስጥ ይገባሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

	አካላዊ ውጥረትን የተመለከቱ ጥያቄዎች	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
1.	በስራ ላይ በሚሆኑበት ጊዜ አብዛኛውን ጊዜ ራስ ምታት ያጋጥምዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
2.	ነገሮችን በቀላሉ ይረሳሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
3.	ክብደት እየቀነሱ ነው?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
4.	በስራ ቦታ እረፍት የለሽ እና በአንድ ቦታ ተረጋግተው መቀመጥ ያስቸግርዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
5.	ሲጋራ ያጨሳሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
6.	አልኮል ይጠጣሉ?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
7.	ሁሉንም የግል ጉዳዮችዎን በተመለከተ የሚያዋሩት ቢያንስ አንድ ጓደኛ አለዎት?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ
8.	በአውሮፕላን ከአንድ ቦታ ወደ አንድ ቦታ ሲጓዙ የመድከም እና ግራ የመጋባት ስሜት ይሰማዎታል?	1.መቼም አልችልም	2.እምብዛም አደለም	3.አንዳንዴ	4.አብዛኛውን ጊዜ	5.ሁል ጊዜ

V.	ለድርጅት ያለዎት ቁርጠኝነት እና ውጫዊ ተጽእኖዎች					
1.	የት እንደሚሰሩ ለሰዎች ሲነግሩ ከራት ይሰማዎታል?	1.አዎ	2.የለም			
2.	ራስዎን የድርጅቱ አካል አድርገው ይቆጥራሉ?	1.አዎ	2.የለም			
3.	በተለያዩ ምክንያቶች ከዚህ ከባንያ የመውጣት ሀሳብ ይሰማዎታል?	1.አዎ	2.የለም			
4.	ከባንያው አንዳንድ እይታዎችን መለወጥ አለበት ብለው ያስባሉ?	1.አዎ	2.የለም			
5.	በአንድ አመት ውስጥ ከስራ ጋር የተያያዘ አደጋ ገጥሞዎት ያውቃል?	1.አዎ	2.የለም			
6.	በአንድ አመት ጊዜ ውስጥ የቤተሰብ ቅርብ አባል በሞት ተለይትዎቦታል?	1.አዎ	2.የለም			
7.	ባለፈው አንድ አመት ፍቺ ገጥሞዎታል?	1.አዎ	2.የለም			
8.	መላሽ ሴት ከሆኑ ባለፈው አንድ አመት ጊዜ ውስጥ ልጅ ወልደዋል?	1.አዎ	2.የለም			

Annex V. Organizational Structure of Ethiopian air lines



**Cabin crew
development
Manger**