

**WORK-RELATED STRESS AND ASSOCIATED FACTORS AMONG  
EMPLOYEES OF HAWASSA INDUSTRIAL PARK, SOUTHERN  
ETHIOPIA, 2021**

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**JIMMA, ETHIOPIA**

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## **Abstract**

**Background:** Work-related stress is becoming an alarmingly growing public health concern worldwide. It is one of the major occupational health issues in high-income countries. Also due to globalization and changes in working conditions, people in low-income countries face growing work-related stress. Despite high prevalence globally, work-related stress among factory workers is not well studied in Ethiopia.

**Objective:** To assess work-related stress and associated factors among employees of Hawassa industrial park, Hawassa, southern Ethiopia, 2021.

**Methods:** An institutional-based cross-sectional study was employed among 419 employees of Hawassa industrial park using an interviewer-administered structured and pretested questionnaire through a face-to-face interview. A Simple random sampling technique was employed to get the sample and workplace stress scale (WPSS) was used to assess work-related stress. The collected data were coded and entered into EPI data 4.6 and exported to SPSS version 26 for analysis. Bivariate and multivariable logistic regression analysis was conducted to identify associated factors. The statistical significance was considered at P-value <0.05.

**Result:** A total of 413 respondents were involved in the study giving response rate of 98.6%. Of respondents 295(71.4%) were female and 118(28.6%) were male with mean age of 26.7 (SD = 5.707) year. Overall prevalence of work-related stress was 47.5%, 95% CI (43.2, 52.1). Temporary employment [AOR=0.41, 95% CI (.26-.64)], poor working condition [AOR = 2.12, 95% CI (1.32-3.43)], work experience <2<sup>1</sup>/<sub>2</sub>yr [AOR = 3.11, 95% CI (1.95-4.96)], poor learning opportunity [AOR= 1.82, 95% CI (1.10-2.30)], poor organizational support [AOR = 1.70, 95% CI (1.10-2.62)], current use of khat [AOR = 2.52, 95% CI (1.28-4.99)] and current use of alcohol [AOR = 2.27, 95% CI (1.44-3.58)] were significantly associated with work-related stress.

**Conclusion and recommendation:** The prevalence of work-related stress among employees of Hawassa industrial park was high. Temporary employment, poor working conditions, work experience <2<sup>1</sup>/<sub>2</sub> years, poor learning opportunities, poor organizational support, current khat use, and current use of alcohol were significantly associated with work-related stress. Enhancing stress management skills and primary prevention on identified risk factors was recommended.

**Key words:** Work-related stress, Employee, Industrial park, Ethiopia.

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## **Abbreviation and Acronym**

<b>AOR</b>	Adjusted Odds Ratio
<b>ASSIST</b>	Alcohol, Smoking and Substance Involvement Screening Test
<b>CI</b>	Confidence Interval
<b>COR</b>	Crud Odds Ratio
<b>DASS</b>	Depression Anxiety Stress Scale
<b>DSM</b>	Diagnostic and Statistical Manual of Mental Disorders
<b>ETB</b>	Ethiopian Birr
<b>GTP</b>	Growth and Transformation Plan
<b>JCQ</b>	Job Content Questionnaire
<b>NIOSH</b>	National Institute for Occupational Safety and Health
<b>OSS-3</b>	Oslo-3 Social Support Scale
<b>SD</b>	Standard Deviation
<b>SNNPR</b>	Southern Nation Nationalities and People Region
<b>USA</b>	United States of America
<b>WHO</b>	World Health Organization
<b>WPSS</b>	Workplace Stress Scale
<b>WRS</b>	Work-Related Stress

# CHAPTER ONE: INTRODUCTION

## 1.1 Background

Work-related stress is a harmful physical and emotional response when the needs of a job do not correspond with the employee's abilities, resources, or needs(1). Work-related stress occurs if the requirements of the job differ from the individual worker's resources and abilities to meet these requirements. Next to musculoskeletal disorders, this WRS is the second most reported work-related health problem(2).

Stress is a sensation of mental pressure and tension in psychological sciences. Low-stress levels may be desirable, useful, and even healthy to improve bio-psychosocial health and improve performance in its positive form. However, high stress can lead to biological, psychological, and social issues and even serious damage to people(3). The number of people who have stress caused or made themselves worse through work increases at an alarming rate and in developing countries, it becomes an issue of public health concern(2).

Work-related stress causes various health concerns and impropriety. The most common health concerns include back pain, muscle aches, headache, stomach ache, bloated stomach, constipation, high blood pressure, heart problems, depression, anxiety, fatigue, annoyance, asthma. Most would inevitably have these problems(4). However, the quality and productivity of work decrease with these negative developments, and disease and absence increase(5).

In addition, the financial implications of work-related stress and psychosocial risks are also linked to productivity decline, higher absenteeism, and employee turnover. Low work organization, poor work design, poor management, unsatisfactory working conditions, and a lack of support from colleagues and overseers can be responsible for stressful work(6).

Furthermore, stress can only have a positive impact on employees with a certain amount that an employee can manage, but it mostly exceeds the tolerable limits and harms employees. Therefore work-related stress is also one of the most critical concerns that organizations have to resolve for workers to easily deliver quality work(7).

More than half of workers in industrialized countries suffer from work-related stress and work-related stress is the second most common problem after back pain, according to the World Health Organization (WHO) reports(8).

In Ethiopia, the manufacturing sector is currently the sector that gets higher emphasis at the government level and GTP II includes the development of industrial parks and regional cluster for small and medium-sized enterprises, two major modalities or approaches aimed at limiting domestic capacity constraints in the industrial sector(9). Industrial workers are an important health prevention population, including the prevention of mental health problems especially stress which is related to their work(10).

To date, there is growing global concern about work-related stress and its impact, including issues related to gender, ethnicity, sexual harassment, violence, and mobbing at work, family, and underemployment. Also in developing countries, there is increasing concern regarding the health impact of work-related stress among industry workers(11).

In our country even though there are high emphasis and growth in industrial sectors and also many constructions of industrial parks, studies on work-related stress and factors related to it among industrial workers are limited.

## **1.2 Statement of the problem**

Globally, work-related stress is a major challenge to workers and also organizations. It affects the psychology and health of an individual and the effectiveness of an organization(12). In recent decades, globalization and technological progress have changed the world of work, introducing new forms of work organization, working relations, and employment patterns and contributing to the enhancement of work-related stress and its associated disorders(13).

The magnitude of recorded work-related stress has increased over the years, and the losses for organizations and businesses have escalated afterward too. It was found that up to almost a half (40 percent), the cost of losing the gross domestic product per annum from 0.5 to 3.5 percent, could be attributed to stress-related problems(14). The prevalence of work-related stress among employees of manufacturing sectors is high even though it varies across countries. It has been found to be 27.5% in Thailand(15), 23.9 in China(16), 25% in India(17), 21.3% in Iran(18), 28% in the Democratic Republic of Congo(19), and 45.2% in Ethiopia among employees in textile factory(20).

However, higher levels of stress may lead to health-related problems, including psychological or behavioral problems such as exhaustion, burnout, anxiety, and depression, as well as other physical disorders, such as cardiovascular disease and musculoskeletal disorders. The impact of emerging coping behaviors such as alcohol and drug abuse, smoking, unhealthy diets, poor sleep as well as the increasing number of accidents at work and non-communicable diseases is also becoming more and more a matter of concern(13).

On individual workers, the experience of work stress can cause unusual and dysfunctional behavior at work. These behavior contribute to poor physical and mental health which leads to a psychological problem; difficult to maintain a healthy balance between work and non work-life. As a result it may leads an employees to engage in unhealthy activities like substance abuse and may also affect their immune system(21).

If the problem affects key staff or a large number of employees, stress related to work may influence the health and functioning of the whole company. Unhealthy organizations do not take advantage of their employees' potential, which not only affects their efficacy in the competitive market but can also put their very existence at risk(22).

Work-related stress can also affect a company by increasing absenteeism, decreasing commitment, increasing outflows of employees, reducing productivity efficiency, and increasing risky activities. Accidents, increasing dissatisfaction from the customer and consumer, having contradictory effects on recruiting of human resources, increasing the number of legal complaints by employees experiencing work-related stress, and adversely affecting both the company's workforce and the external environment(23).

Prior findings from the research have shown that the risk, severity, and impact of stress associated with the work have differed, depending on cultural orientation, work nature, and working environment. Some of the factors that contributed to WRS among employees were the shift work, the use of a psychoactive substance, social support, over 50 h of work per week, long daily working hours, high work demands, time pressure, and too many administrative tasks socio- professional factors, and demographic factors such as age(18,24–26).

Work-related stress management results in work productivity, improved labor efficiency, reduced absenteeism, sound co-operation and friendly relations with all colleagues, and good achievement of mission and vision. Some mechanisms for stress management to be used within the different organizations include a redesign of work, training in stress management; environmental design; developing stress management training, and developing organizational systems for better work and management(21). However, in our country and also Hawassa industrial park those activities are not well known and applied.

In developing countries, the magnitude of work-related stress and its determinants are one of the major public health problems(27). In Ethiopia even though the investment of industrial zones has become increasing in the past ten years, little is known about the magnitude and the determinants of the problem on the most at-risk manufacturing industry workers. Therefore this study aims to assess work-related stress and its associated factors among employees of Hawassa industrial park. Additionally to provide information regarding the problem and importance if its management.

### **1.3 Significance of study**

Today, work-related stress which has been previously considered as a problem for the developed country is a growing concern and a major problem for developing countries as a result of processes of globalization, and the changing nature of work. Employees of manufacturing industries are highly vulnerable for work-related stress.

Therefore this study aims to assess work-related stress and also to identify its determinants. Besides, since there is no research carried out in the supposed area it is hoped that this study will be a baseline for the study area and make a significant contribution to further research and also for the organization, to give attention and deal with the problems in order to prevent the consequences and increase productivity.

Additionally the finding of this study will be used:-

- As an input for the government to focus and work on the problem since it can affect the national productivity
- For the management of Hawassa industrial park to get an insight of the problem and to design or adapt prevention strategies and support systems to improve the mental health of the workers.
- To provide information for the workers and also communities regarding the problem and its determinants, to involve them in prevention activities to increase productivity for the workers and also institutions

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1. Overview**

Stress is a common phenomenon throughout human life. It may be either external with environmental source, or caused by internal perceptions of the individual(3). The experience of work-related stress can cause unusual and dysfunctional work behavior for individual employees. This behavior, which leads to poor physical and psychological health, is a difficult one to maintain a healthy work-life. This may lead to unhealthy activities like drug abuse and may also affect individual's immune system. As a result, unhealthy workers will adversely affect the productivity of the organization(21). The review in this chapter is focused on two major themes which are related to the prevalence of work-related stress and the factors associated with it.

### **2.2. Magnitude of Work-related stress among industry workers/employees.**

More than 1/3 (35%) of employees said their job affect their physical and emotional condition. 42% of them claim that work-related stress interfere with their relationships and half of them said that they experienced demanding workload according to the seventh annual American survey(28).

From 31 January 2011 until 8 February 2011, Harris Interactive conducted an online workplace stress survey, on behalf of the American Psychological Association. Among 1546 adults aged 18 or over living in the United States who is either fulltime, part-time or self-employed, more than one-third (36%) of employees feel stressed or tense during their workday and almost half (49%) say low pay affects their stress on the workplace significantly. 20% say their daily average stress from work is 8, 9 or 10 on a ten-point basis(29).

According to the study on Depression, anxiety and stress symptoms among Fly-In-Fly-Out Australian resource industry workers over one-third (36%) of participants experienced stress symptoms related to their work, which they measure by above the clinical cut-off levels of The Depression Anxiety Stress Scale (DASS-21)(30).

Another study was carried out on workers between 18-65 years of age who were employed full-time working in Iran Saipa, one of the largest car manufacturers in the Islamic Republic of Iran. This study was conducted in 2004 and 2005 to determine the prevalence of stress related to work

among car manufacturers in the Islamic Republic of Iran and to assess their relation to injuries related to work. Belkic stress employment index was evaluated for work-related stress and the Work-related stress prevalence was 21.3%(18).

A cross sectional survey of sandstone mining operators in Karauli district of Rajasthan with the comparison group has been carried out between May and September 2014. Male mine workers reported psychological distress more than one-third of them (36 percent) compared to 14 percent of their peers in the comparison group. In general, the prevalence of work-related stress among miners was significantly higher (66%) than among comparison members.(31).

Besides according to cross-sectional study among 420 workers in 2012 in Le Lai II Shoe Manufacturing Factory in Haiphong City, Vietnam using Karasek's Job Content Questionnaire (JCQ) and the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM IV) tool for measuring stress and depression, relatively high proportion of workers (20.7%), had job-related stress based on Karasek's model(32).

In further a study carried out to assess the prevalence of and factors associated with work stress among employees in a university context in Tanzania using survey design within the quantitative approach overall, 18.4 percent of the respondents reported being psychologically highly stressed related to their work, while 46.5 percent reported being psychologically moderately stressed(33).

In the Democratic Republic of Congo (DRC) a cross-sectional study was conducted on work-related stress and its associated factors among textile factory workers 2015. According to this study 28% of individuals were suffering from work-related stress(19).

According to a cross-sectional study design employed among 403 employees in Bahir Dar Textile Factory in Ethiopia the prevalence of work-related stress was 45.2%. The study was conducted by using previously validated and reliable tools employed for the purpose were the workplace stress scale (WPSS), job content questionnaire (JCQ), and the National Institute for Occupational Safety and Health (NIOSH) generic job stress questionnaire, which were used to assess organizational and job content factors(20).



Another institutional-based cross-sectional study conducted to assess the prevalence of work-related stress (WRS) and its determinants among Huajian shoe manufacturing company employees in Dukem town, central Ethiopia, reveals that The overall prevalence of work-related stress was 40.4%. A total of 406 participants were involved in the study and previously validated tools employed for the purpose were the Work Place Stress Scale (WPSS)(24).

## **2.3. Factors associated with-work related stress**

### **2.3.1. Socio-demographic factors**

According to stress at work place survey conducted in the USA, one in four (25%) employed adults agree that job demands interfere with family size/home responsibilities. Fewer (10%) report the inverse – which family size/home responsibilities interfere with job performance(29).

The study conducted among 629 factory workers in Australia found statistically significant differences for age with stress. The binary logistic regression analysis revealed that participants in the 34–49 age categories were half as likely to experience Moderate/Severe/Extremely Severe stress as those aged 18–33. Participants in the 50–65 age categories were also half as likely to experience Moderate/Severe/Extremely Severe stress as those aged 18–33. But no statistically significant difference was found for gender, educational status and experience(30).

As the study conducted among 468 employees on Work-Related Stress dimensions among a subsidiary company workers of Iranian oil refining and distribution company there was a significant relationship between age, education levels and work experience with the mean score of job stress(34).

As the cross-sectional study conducted among 719 on Work-Related Stress and Coping Profiles among workers in outer garment sector in turkey, the level of work-related stress was statistically higher among the workers who had a chronic disease, low economic and education status. Psychological and physical physiological reactions to stress were found higher among women workers(35).

According to the cross-sectional study conducted among 86 workers from main four departments (quarry, production, packing and maintenance) on detection of stress among

workers in a cement factory in Egypt there was a statistically significant difference between work-related stress and types of work, working experience, presence of respiratory complaints and residency(36).

As Institution based cross-sectional study conducted from April 5 to 6 May 2015 among 592 healthcare workers in Mekelle Ethiopia, three variables age, work unit and monthly income were statistically insignificant with work-related stress while sex, marital status, education, work experience and job satisfaction were associated with work-related stress(37).

### **2.3.2. Organizational factors**

As the survey conducted among 1546 adult workers in the USA, low salaries were selected as having a significant impact more often than any other factor and also to high job demand and long working hours are significantly related with work related stress(29).

According to cross-sectional study conducted among gold mining company employees in Sweden, the workers work related stress is significantly associated with role conflict, role ambiguity, and work over load and job insecurity(38).

Other cross-sectional study was conducted among 719 employees to assess Work-Related Stress and Coping Profiles among workers in outer garment sector in turkey. This study showed that long working hour, having low economical situations and having chronic diseases have significant association with work-related stress among factory workers(35).

According to cross-sectional study conducted to assess the work-related stress among 4962 male workers (3078 day workers and 1884 night workers) aged 18 to 60 yr who work in Japanese steel company, the logistic regression analysis reveals that long working hours and onsite works are significantly associated with work related stress among employees in the company(39).

An institutional-based cross-sectional study conducted from February to March 2016 to assess the prevalence of work-related stress (WRS) and its determinants among Huajian shoe manufacturing company employees in Dukem town, central Ethiopia, reveals that Poor organizational support, inadequate work experience, poor salary offers, long working hours, overtime work, and poor physical environment were significantly and independently associated with WRS(24).

### **2.3.3. Job content factors**

According to study conducted to investigate the Effects of Job Stress on Employee Job Performance in Vietnam, working relationship, career development and work environments are significantly associated with work related stress(40).

The study aimed to present the pattern of job stress among car manufacturing workers in one factory was conducted in the Islamic Republic of Iran, and to assess its relationship with occupational injuries. Data were collected from 608 male workers (508 at-risk general workers and 100 with injuries in the last year). According to this study the main occupational stressors among the workers were time pressure (78.5%), mode of payments and evaluation (56.4%), interaction with people and machines (41.3%) and the stress of work tasks (37.7%)(18).

According to cross-sectional study employed among 403 employees in Bahir Dar Textile Factor in Ethiopia, there is significant association between work related stress and work place violence and also injury at work place(20). In addition study conducted to assess the prevalence of work-related stress (WRS) and its determinants among Huajian shoe manufacturing company employees in Dukem town, central Ethiopia, shows that poor physical environment were significantly and independently associated with WRS(24).

### **2.3.4. Substance use and psychosocial factors**

According to the study conducted among the employees of a shoe manufacturing factory in Haiphong City, Vietnam low and moderate social support are significantly associated with work related stress(41).

In addition the study employed among 403 employees in Bahir Dar Textile Factor in Ethiopia revealed that perceived social support and current substance uses are significantly associated with employees work related stress(20).

## 2.4. Conceptual Framework

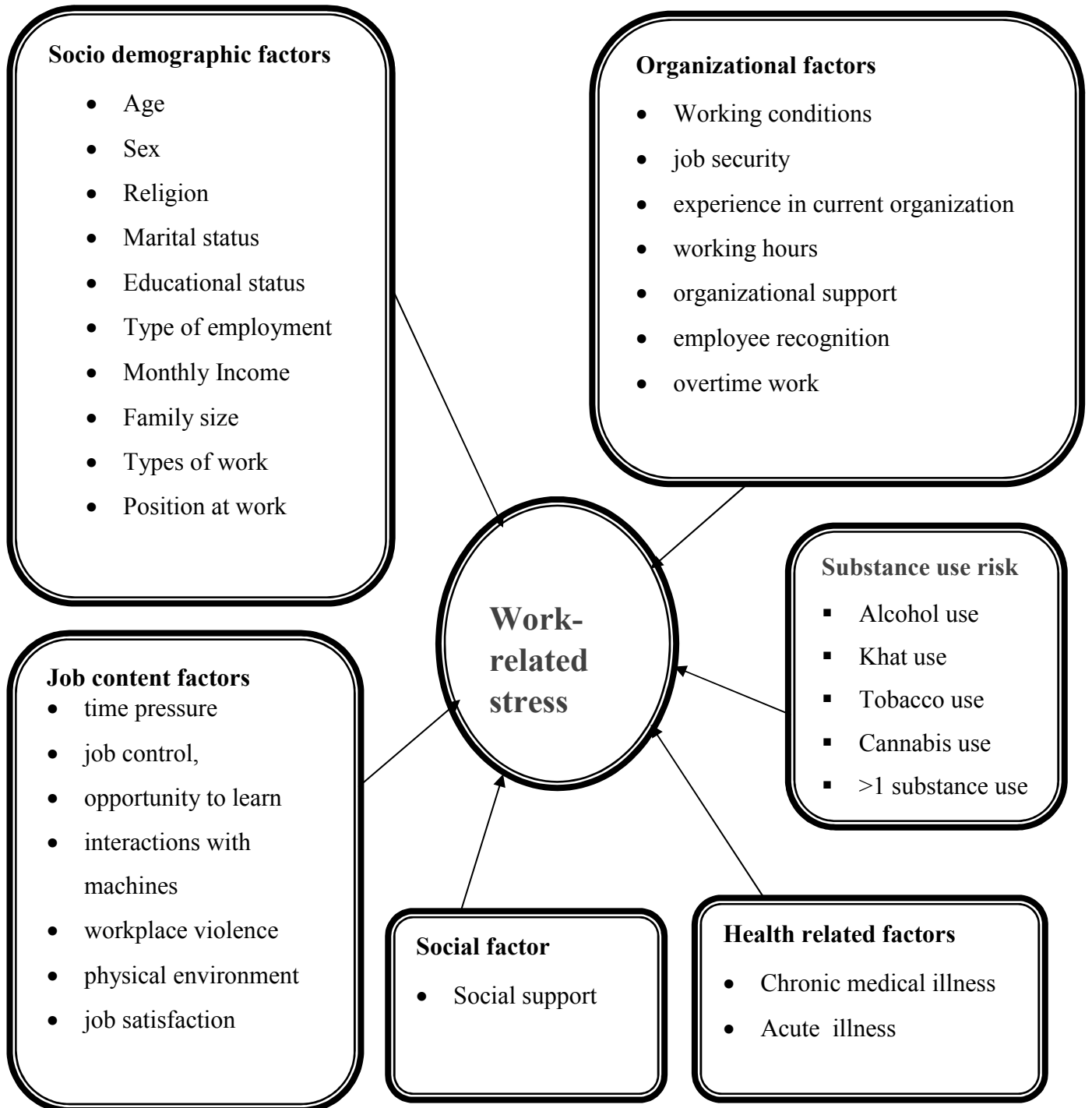


Figure 1: Conceptual framework of factors associated with work related stress among employees of industry.

## **CHAPTER THREE: OBJECTIVES**

### **3.1. General objective**

- To assess prevalence of work-related stress and associated factors among employees of Hawassa industrial park, Hawassa, southern Ethiopia, 2021.

### **3.2. Specific Objectives**

- To determine prevalence of work-related stress among employees of Hawassa industrial park, Hawassa southern Ethiopia, 2021.
- To identify factors associated with work-related stress among employees of Hawassa industrial park, Hawassa southern Ethiopia, 2021.

## **CHAPTER FOUR: METHOD AND MATERIAL**

### **4.1. Study Area and period**

The study was conducted from August 1 to 30, 2021, at Hawassa industrial park in Hawassa, the capital city of sidama region and SNNPR, southern Ethiopia. The Hawassa Industrial Park, which opened in July 2016, has been described as the Ethiopian government's "flagship" industrial park. It is found in Hawassa city, located 275 km from Addis Ababa, and the capital of Ethiopia. The city has a latitude and longitude of 7°3'N 38°28'E and an elevation of 1,708 meters (5,604 ft) above sea level. The company encompasses an area of 1.3 million square meters, of which 300,000-meter square is a factory shed build-up area. Currently, 22 leading global apparel and textile companies from America, China, India, Sri Lanka as well as different local manufacturers are operating within the park(42). Currently, the company has overall 13,700 workers across 52 shades and around 80% of them are female.

### **4.2 Study design**

An institutional-based cross-sectional study design was employed at Hawassa industrial park.

### **4.3 Population**

#### **4.3.1 Source Population**

All employees work in Hawassa industrial park.

#### **4.3.2 Study population**

Employees who were available in their workplace during the study period

### **4.4 Eligibility criteria**

#### **4.4.1 Inclusion criteria**

The study included employees who were currently working in the industry park.

#### **4.4.2 Exclusion criteria**

Those employees who were seriously ill, on annual leave or maternity leave during the data collection period were excluded from the study.

## **4.5. Sample size and sampling technique**

### **4.5.1 Sample size**

The sample size required for the study was calculated using a single population proportion formula by considering an estimated prevalence of work-related stress to be 45.2%, from the study conducted in Bahir Dar Textile Factory north-west Ethiopia, a 5% margin of error, a 95% confidence interval, and 10% non-response rate.

$$n = \frac{Z^2 P (1-P)}{d^2} = \frac{1.96^2 0.452 (1-0.452)}{0.05^2}$$

Where n is the sample size, P is expected prevalence (proportion) of work-related stress, d = margin of error and Z = standard score corresponds to 1.96.

Therefore the total sample size was determined by using the above formula

$$\begin{aligned} P &= 45.2\% \\ Z &= 1.96 \text{ at } 95\% \text{ CI} \\ d &= 5\% (0.05) \\ n &= \frac{1.96^2 0.452 (1-0.452)}{0.05^2} = 380.62 = 381 \end{aligned}$$

By considering 10% non-response rate the final sample size for the study was n = 419

### **4.5.2 Sampling technique**

First the total list of employees in the Hawassa industrial park was taken from the human resource office. Then a simple random sampling technique was employed through the computer generation random method by using Microsoft excel to select all 419 samples from the total list of employees. Finally the data was collected from the selected samples at their corresponding working place.

## **4.6. Study variable**

### **4.6.1. Dependent variable**

Work - related stress

### **4.6.2. Independent variable**

**Socio demographic factors**

- Age
- Gender
- Religion
- Marital status
- Educational status
- Types of employment
- Income
- Family size
- Types of work
- Position at work

### **Organizational factors**

- Working conditions
- Job security
- Experience in the current organization
- Working hours
- Organizational support
- Employee recognition
- Overtime work

### **Job content factors**

- Time pressure
- Job control,
- Opportunity to learn
- Interactions with machines
- Workplace violence
- Physical environment
- Job satisfaction

### **Substance use**

- Alcohol use



- Khat use
- Tobacco use
- Cannabis use
- >1 substance use

**Social and health related factors**

- Social support
- Chronic medical illness
- Acute illness

**4.7. Operational definition:**

**Work related stress:** A sum score below 60 of workplace stress scale was classified as having a work-related stress among participants(43).

**Working condition:** Poor working conditions was considered with the summed scores of participants' on questions to assess working condition are less than 10(24,44).

**Organizational support:** Poor organizational support considered with the summed scores of participants' on questions to assess organizational support was less than 7(44).

**Temporary employee:** employees those who had no permanent contract or recognition letter as permamanent employee from the organization.

**Time pressure:** High time pressure was defined as the summed scores of participants' on questions to assess time pressure more than 10(24).

**Job satisfaction:** A score measured using the job satisfaction scale as YES (32–50) and NO (10–31) (40, 41).

**Substance use risk:** Current and ever substance uses were considered when participants had used at least one of the specified substances in the last 3 months and use at least one of the specified substances in a lifetime, respectively, by using the adopted alcohol, smoking, and substance involvement screening test (ASSIST).

**Social support:** based on Oslo-3 Social Support Scale (OSS-3), a score 3–8, 9–11, and 12–14 was considered to have low, medium, and high social support, respectively.

## **4.8. Instrument and data collection procedures**

### **4.8.1 Data collection tool**

A 20-point standard questionnaire (WPSS) was used to measure work-related stress. The American Institute of Stress validated this tool, which is now used in a variety of occupations. It is a standard questionnaire with a scale of 5-point Likert. The scores ranged from 1 (never) to 5 (very often). The inverse scores ranged between 5 (never) and 1 (very often). For all WPSS questions, the findings were summarized, and less than 60 scores were graded as work-related stress(28). The internal consistency, Cronbach's alpha coefficient of WPSS in the current study was 0.83.

The Job Content Questionnaire (JCQ)(46), and the National Institute for Occupational Safety and Health (NIOSH) generic questionnaires(47), inquired about organizational factors (working conditions, overtime work, experience in the organization, working hours, organizational support, employee recognition, and job security), and job content factors (time pressure, job demand, job control, resources, opportunity to learn, interactions of people with machines, illness, and physical environment). A poor working condition was defined as the summed scores of participants less than 10. Poor organizational support was considered after the summed scores of participants become less than 7. High time pressure was defined as the summed scores of participants more than 10. The Poor physical environment was defined as the summed score of participants scores were below 9. These instruments were used in a previous study conducted among bahirdar textile factory and dukem shoe factory employees in Ethiopia and it was valid and reliable(20,24). Job satisfaction was assessed with a job satisfaction scale. Previous research validated the tool, demonstrating that it is valid and useful in a wide range of occupational groups. The questionnaire consisted of ten items(48). The internal consistency, Cronbach's alpha coefficient of this scale in the current study was 0.87.

Social Support Scale (The Oslo 3-items) (OSSS-3) was used to collect data regarding the strength of social support. The sum score was categorized into three broad categories of social support. 3–8 poor social support, 9–11 moderate social support, and 12–14 strong social support. The Oslo-3 scale has been used in several studies, confirming the feasibility and predictive validity with respect to workplace stress(49).

Screening Test for Alcohol, Smoking, and Substance (ASSIST Version 2.0) is made up of eight items that measure lifetime (Question 1 rated “yes” = 1/“no” = 0; interview stops if “no”) and recent (past 3 months; question 2: interview continues for each substance used in the past 3 months only) of substance. After reviewing different literatures four questions adopted from the tool to assess the use of tobacco, alcohol, Khat and cannabis(50).

#### **4.8.2 Data collection procedure**

The data was collected through an interviewer-administered structured questionnaire, through a face-to-face interview to assess socio-demographic, substance use, social factors, health related factors, organization, and job-related factors, and work-related stress. Four data collectors (BSc nurse) were employed for one-month data collection periods and supervised by two supervisors (BSc psychiatry professional). The training was given for one day regarding the administration protocol of the data collection procedures for the data collectors by the main investigator.

#### **4.9. Data quality management**

The data quality was assured by training the data collectors and observing closely the data collection process and checking that each questionnaire is complete and coherent at the end of the data collection. The questionnaire was pre-tested on 5% (21 employees) of the sample size out of the study area (in the tabor ceramic factory) to ensure its validity. The main survey was not containing the results of the pre-test. Based on the pre-test findings, questionnaires were updated and the time required for an interview was also decided.

#### **4.10. Data processing, analysis and presentation**

The collected data was checked for its completeness and cleaned before entry into the computer. Then, data were coded, cleaned, edited, and entered into EpiData version 4.6 and exported to SPSS window version 26 for analysis. Descriptive statistics were presented in frequency, tables, texts, and summary measures. Bivariate and multivariable analysis was done to see the association between each independent variable and outcome variable by using binary logistic regression. All variables with  $P < 0.25$  in the bivariate analysis were included in the final model of multivariable analysis to control all possible confounders. The goodness of fit was checked by Hosmer-Lemeshow statistic at a  $P$ -value of greater than 0.05. The Statistical associations were measured by odds ratio with 95% CI. Adjusted odds ratio along with 95% CI was estimated to

identify the associated factors with work-related stress by using multivariate analysis in binary logistic regression. In this study, a  $P$ -value $<0.05$  was considered statistically significant.

#### **4.11. Ethical consideration**

The ethical clearance was obtained from Jimma University institutional review board (IRB) before the actual data collection and permission letter was obtained from Hawassa industrial park. The objective and purpose of the study were verified briefly to the study participants and confidentiality was assured. Finally, consent was obtained from the study participants before conducting the interview. The right was given to the study participants to refuse or discontinue participation at any time they want and the chance to ask anything about the study. All protection measurements for COVID-19 were taken and data collectors were put their signature for they could obtain verbal consent for the interview from the respondents.

#### **4.12. Dissemination plan**

The finding of the study will be disseminated to all relevant stakeholders through Presentation and publication in National or international peer-reviewed journals. Copies of the research were submitted to the psychiatry department, Jimma University's research and dissemination office, and also the final report will be communicated with Hawassa industrial park, the labour and social affair office, and for other concerned institutions and stakeholders for possible applications of the study findings.

## CHAPTER FIVE: RESULT

### 5.1. Socio demographic characteristics of respondents

From the total of 419 employees, 413 participated in the study giving a response rate of 98.6%. Most of the participants 295(71.4%) were female. The mean age of the participants was 26.7 (SD = 5.707) years. Of the study participants 189 (45.8%) were married and more than half 212 (51.3%) of the study participants were Protestant Christian religion followers. The majority 252(61.0%) of participants had a current educational status of above secondary school and about half 212 (51.3%) of the study participants were a temporary employees. More than three fourth 322 (78%) of the study participants were onsite workers and the majority 229(55.4%) of study participants had average monthly income (greater than 2629 ETB). (Table 1)

Table 1: Socio-demographic characteristics of employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

Variables	Categories	Frequency(n)	Percentage (%)
Sex	Male	118	28.6
	Female	295	71.4
Age	18 – 24	154	37.3
	25 – 34	216	52.3
	35 – 44	43	10.4
Marital status	Single	196	47.4
	Married	189	45.8
	Widowed	14	3.4
	Divorced	14	3.4
Current educational status	Illiterate	15	3.6
	Primary school(1 – 8)	16	3.9
	Secondary school (9 – 12)	130	31.5
	Above secondary school (TVET, degree or above)	252	61.0
Religion	Protestant	212	51.3
	Orthodox	162	39.2

	Muslim	38	9.2
	Other*	1	0.3
Average monthly income*	<2629ETB	184	44.6
	≥2629ETB	229	55.4
Types of employment	Permanent	201	48.7
	Temporary	212	51.3
Family size**	Less than 4	178	43.1
	Greater than or equal 4	235	56.9
Types of work	Office	91	22.0
	Onsite	322	78.0
Position at work	Yes	13	3.1
	No	400	96.9

Notes: Other religion: Adventist \*\*based on Ethiopia Demographic and Health Survey (EDHS)

\*based on World Bank poverty line cut point

### 5.1 Organizational and job related characteristics of respondents

Different organizational and job-related variables were assessed. From the total respondents more than half 210 (50.8%) had reported poor organizational support. Most participants, 295 (71.4%) had poor working conditions and 286 (69.2%) of the study participants reported as they had poor organizational job security. More than half 225 (54.5%) of the participant reported that they got poor recognition on their jobs from the organization. Regarding the job-related problems more than one-third 187 (45.3%) of respondents had high time pressure on their job and more than half 214 (51.8%) of participants reported low job control at their workplace. More than three fourth 313 (75.8%) of study participants reported poor learning opportunities and more than half 238 (57.6%) reported poor physical condition of a working environment. The study reveals most 348 (84.3%) of respondents did not satisfied with their job and 196 (47.5%) reported the presence of workplace violence. (Table 2)

## 5.2 Social and clinical characteristics of respondents

Most, 243 (58.8%) of the study participants reported medium social support and more than one-third 146 (35.4%) reported as they have high social support. Twenty-four (5.8%) of respondents claim they have low social support. The study reveals 33 (8.0%) of participants reported as they have chronic medical illness: - hypertension (n=8) (1.9%), diabetes (n=2) (0.5%), HIV/AIDS (n=8) (1.9%) and kidney disease (n=15) (3.6%). (Table 2)

Table 2 Organizational, job related, social and clinical characteristics of employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

Variables	Categories	Frequency(n)	Percentage (%)
Organizational support	Good	203	49.2
	Poor	210	50.8
Working condition	Good	118	28.6
	Poor	295	71.4
Organizational job security	Good	127	30.8
	Poor	286	69.2
Employees recognition	Good	188	45.5
	Poor	225	54.5
Work experience in years	< 2 1/2 years	148	35.8
	≥ 2 1/2 years	265	64.2
Working hour per week *	≤ 48hr	394	95.4
	>48hr	19	4.6
Overtime working hr per month *	≤ 20hr	76	18.4
	>20hr	337	81.6
Time pressure	Low	226	54.7
	High	187	45.3
Attention demand	Low	232	56.2
	High	181	43.8
Job control	High	199	48.2

	Low	214	51.8
Resource in working team	Enough	234	56.7
	Scarcity	179	43.3
Learning opportunities	Good	100	24.2
	Poor	313	75.8
Interaction with machine	Good	94	22.8
	Poor	319	77.2
Physical condition	Good	175	42.4
	Poor	238	57.6
Work place violence	No	217	52.5
	Yes	196	47.5
Job satisfaction	Yes	65	15.7
	No	348	84.3
Social support	Low	24	5.8
	Moderate	243	58.8
	High	146	35.4
Chronic medical illness	No	380	92.0
	Yes**	33	8.0
Current illness	Yes	292	70.7
	No	121	29.3

Notes: \* Based on Ethiopian labour proclamation 377/2003, \*\*presence of hypertension, diabetes, HIV/AIDS or kidney disease.



### 5.3 substance use characteristics of respondents

From the total study participants more than half 227 (54.9%) had a history of any substance use at least once in their lifetime, while 153 (37.04%) of them uses alcohol and 50 (12.1%) of them use Khat. Almost half 219 (53.02%) of respondents had a history of any substance use in the past three months, of which 146 (35.4%) use alcohol and 50 (12.1%) uses Khat. (Figure 2)

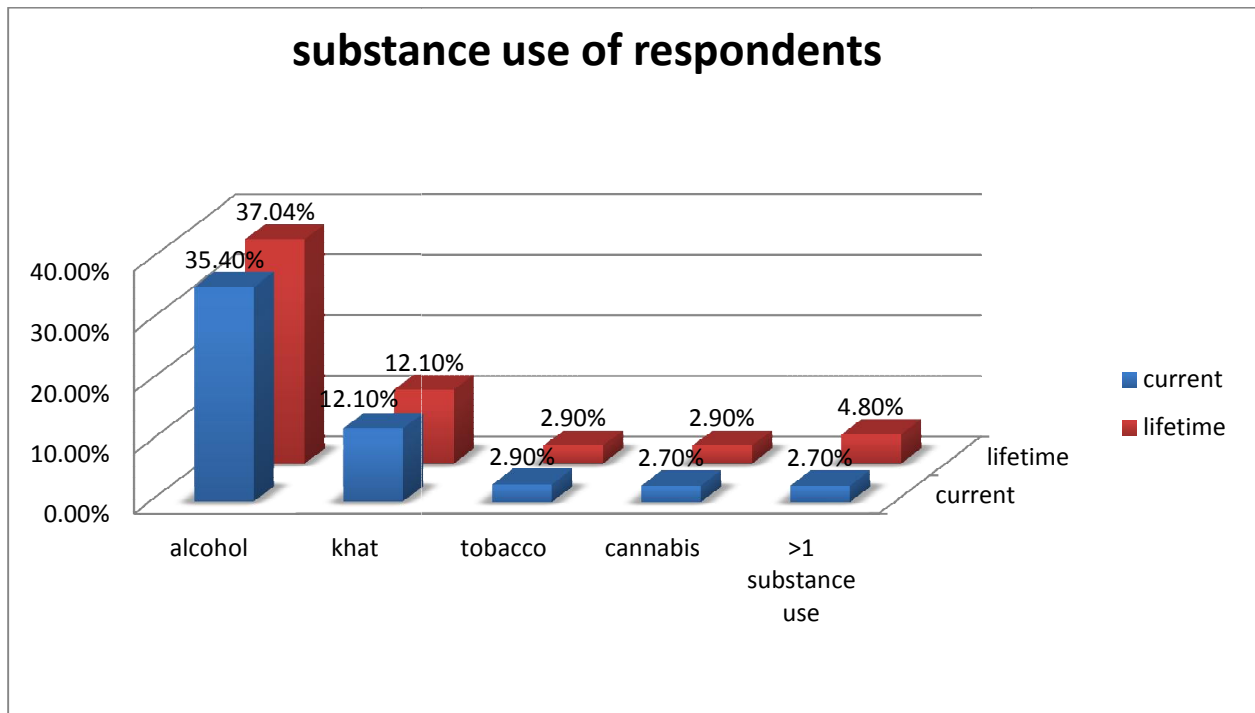


Figure 2 substance use characteristics of employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

#### 5.4 Prevalence of work-related stress

The overall prevalence of work-related stress in this study was 196 (47.5%) with 95% CI (43.2, 52.1). (Figure 3)

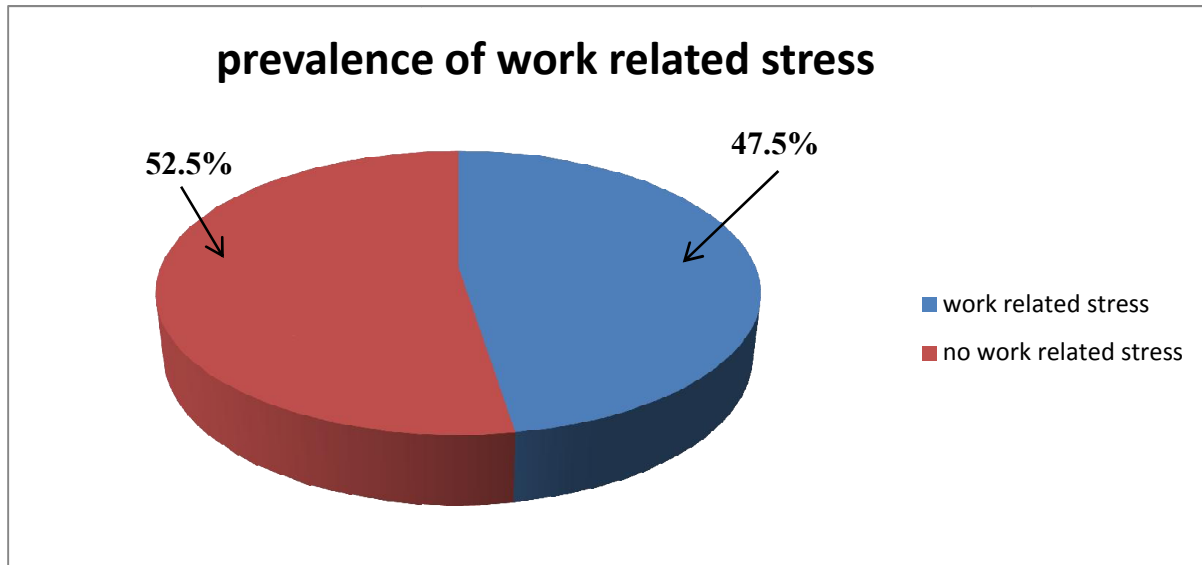


Figure 3 prevalence of work-related stress employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

#### 5.5 Factors associated with work related stress

##### Bivariate logistic regression analysis

Bivariate analysis was done to see factors associated with work-related stress. Hence, types of employment, family size, organizational support, working condition, work experience, learning opportunity, physical environment, workplace violence, current use of alcohol, current use of khat, and current use of more than one substance were found to be associated with work-related stress and entered to multivariate analysis (Table 3 and 4).

Table 3: Bivariate analysis of Socio-demographic characteristics of employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

Variables	Categories	Work-related stress		COR & 95%CI	P-value
		Yes	No		
		N (%)	N (%)		
Sex	Male	53(44.9)	65(55.1)	1	
	Female	152(51.5)	143(48.5)	1.15 (.75-1.77)	.513
Age	18 – 24	79(51.3)	75(48.7)	1.46 (.74-2.90)	.275
	25 – 34	99(45.8)	117(54.2)	1.18(.61-2.28)	.633
	35 – 44	18(41.9)	25(58.1)	1	1
Marital status	Single	96(49.0)	100(51.0)	1	1
	Married	83(43.9)	106(56.1)	.82 (.55-1.22)	.319
	Widowed	8(57.1)	6(42.9)	1.39(.46-4.15)	.557
	Divorced	9(64.3)	5(35.7)	1.88(.61-5.80)	.275
Current educational status	Unable to read and write	9(60.0)	6(40.0)	1.65(.57-4.77)	.355
	Primary school (1-8)	6(37.5)	10(62.5)	.66 (.23-1.87)	.434
	Secondary school (9-12)	61(46.9)	69(53.1)	.97(.64-1.49)	.897
	Above secondary school	120(47.6)	132(52.4)	1	1
Average monthly	<2629	89(48.4)	95(51.6)	1.07(.72-1.58)	.739
	≥2629	107(46.7)	122(53.3)	1	1

income					
Types of employment	Permanent	107(53.2)	94 (46.8)	1	1
	Temporary	89(42.0)	123 (58.0)	1.57(1.07-2.32)	.022*
Family size	< 4	92 (51.7)	86 (48.3)	1	1
	≥4	104(43.3)	131 (55.7)	.74 (.50-1.10)	.135*
Types of work	Office	44(48.4)	47 (51.6)	1	1
	Onsite	152(47.2)	170 (52.8)	.96 (.60-1.52)	.847
Position at work	Yes	5 (38.5)	8(61.5)	1	1
	No	191(47.8)	209(52.3)	1.46(.47-4.55)	.512

\* Factors that have association at p-value <0.25

1= reference category

Table 4: Bivariate analysis of Organizational, job related, substance use, psychosocial and clinical characteristics of employees in Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

Variables	Categories	Work-related stress		COR & 95%CI	P-value
		Yes N (%)	No N (%)		
Organizational support	Good	83 (40.9)	120(59.1)	1	1
	Poor	113(53.8)	97(46.2)	1.68(1.14-2.49)	.009*
Working condition	Good	41(34.7)	77(65.3)	1	1
	Poor	155(52.5)	140(47.5)	2.07(1.33-3.23)	.001*
Organizational job security	Good	61(48.0)	66 (52.0)	1	1
	Poor	135 (47.2)	151(52.8)	.97(.64-1.47)	.876

Employee recognition	Good	86(45.7)	102(54.3)	1	1
	Poor	110(48.9)	115(51.1)	1.13(.77-1.67)	.524
Work experience in years	< 2 <sup>1</sup> / <sub>2</sub> year	88(59.5)	60(40.5)	2.13(1.42-3.21)	<.001*
	≥2 <sup>1</sup> / <sub>2</sub> year	108(40.8)	157(59.2)	1	1
Working hour per week	≤ 48 hr	185(47.0)	209(53.0)	1	1
	>48hr	11(57.9)	8(42.1)	1.55(.61-3.94)	.354
Overtime working hour per month	≤ 20 hr	35(46.1)	41(53.9)	1	1
	>20 hr	161(47.8)	176(52.2)	1.07(.65-1.76)	.786
Time pressure	Low	112(49.6)	114(50.4)	1	1
	High	84(44.9)	103(55.1)	.83(.56-1.22)	.348
Attention demand	Low	108(46.6)	124(53.4)	1	1
	High	88(48.6)	93(51.4)	1.09(.73-1.60)	.676
Job control	High job control	100(50.3)	99(49.7)	1	1
	Low job control	96(44.9)	118(51.1)	.80(.55-1.19)	.273
Resource in work team	Enough	116(49.6)	118(50.4)	1	1
	Scarcity	80(44.7)	99(55.3)	.82(.56-1.22)	.325
Learning opportunities	Good	44(38.9)	69(61.1)	1	1
	Poor	152(50.7)	148(49.3)	1.61 (1.04-2.50)	.034*
Interaction with machine	Good	49(52.1)	45(47.9)	1	1
	Poor	147(46.1)	172(53.9)	.78 (.49-1.24)	.303
Physical environment	Good	71(40.6)	104(59.4)	1	1
	Poor	125(52.5)	113(47.5)	1.62(1.09-2.40)	.017*

Work-place violence	No	90(41.5)	127(58.5)	1	1
	Yes	106(54.1)	90(45.9)	1.66(1.13-2.45)	.011*
Job satisfaction	Yes	28(43.1)	37(56.9)	1	1
	No	168(48.3)	180(51.7)	1.23(.72-2.10)	.442
Social support	Low	12(50.0)	12(50.0)	1.14(.48-2.72)	.756
	Moderate	116(47.7)	127(52.3)	1.05(.69-1.58)	.824
	High	68(46.6)	78(53.4)	1	1
Ever(lifetime) use of alcohol	yes	69(44.8)	85(55.2)	.84(.56-1.26)	.405
	No	127(49.0)	132(51.0)	1	1
Ever(lifetime) use of Khat	yes	21(42.0)	29(58.0)	.78(.43-1.42)	.411
	No	175(48.2)	188(51.8)	1	1
Ever(lifetime) use of tobacco	Yes	7(63.6)	4(36.4)	1.97(.57-6.84)	.285
	No	189(47.0)	213(53.0)	1	1
Ever(lifetime) use of cannabis	Yes	7(58.3)	5(41.7)	1.57(.49-5.03)	.447
	No	189(47.1)	212(52.9)	1	1
Ever(lifetime) use of >1 substance	No	190(47.3)	212(52.7)	1	1
	Yes	6(54.5)	5(45.5)	1.34(.40-4.46)	.634
Current use of alcohol	No	111(41.6)	156(58.4)	1	1
	Yes	85(58.2)	61(41.8)	1.96(1.30-2.95)	.001*
Current use of Khat	No	165(45.5)	198(54.5)	1	1
	Yes	31(62.0)	19(38.0)	1.96(1.07-3.59)	.030*
Current use of	No	191(47.6)	210(52.4)	1	1

tobacco	Yes	5(41.7)	7(58.3)	.78(.24-2.52)	.684
Current use of cannabis	No	190(47.3)	212(52.7)	1	1
	Yes	6(54.5)	5(45.5)	1.34(.40-4.46)	.654
Current use of >1 substance	No	183(46.6)	210(53.4)	1	1
	Yes	13(65.0)	7(35.0)	2.13(.83-5.46)	.115*
Chronic medical illness	No	169(47.2)	189(52.8)	1	1
	Hypertension	5(41.7)	7(58.3)	.80(.25-2.56)	.706
	Diabetes	7(63.6)	4(36.4)	1.96(.56-6.80)	.296
	HIV/AIDS	8(61.5)	5(38.5)	1.79(.57-5.58)	.316
	Kidney disease	7(36.8)	12(63.2)	.65(.25-1.70)	.381
Acute illness	Yes	134(45.9)	158(54.1)	.81(.53-1.23)	.322
	No	62(51.2)	59(48.8)	1	1

. \*Factors that have association at p-value <0.25 1= reference category

### **Multivariable logistic regression analysis**

Variables associated with work-related stress on bivariate analysis were checked for multicollinearity before the final model, and all the candidates for final models had Variance Inflation Factor (VIF) less than 1.2 and tolerance of greater than 0.87. Therefore, there was no problem with collinearity. Multivariable logistic regression analyses have revealed that temporary employment, poor working condition, work experience less than two and half years, poor learning opportunity, poor organizational support, current use of khat, and current use of alcohol were significantly associated with work-related stress.

The finding from this study shows that temporary employees had a 59% reduced risk of work-related stress AOR=.41, 95% CI (.26-.64) than permanent employees. The study also reveals having poor working conditions was about 2.12 times more likely to have work-related stress AOR = 2.12, 95% CI (1.32-3.43) than having good working conditions. Additionally, employees who have work experience less than two and half year were about 3.11 times more likely to have

work-related stress than employees who have work experience greater than two and half years AOR = 3.11, 95% CI (1.95-4.96). Similarly, employees who have poor organizational support were about 1.70 times more likely to have work-related stress AOR = 1.70, 95% CI (1.10-2.62) than those employees who have good organizational support.

In addition, the odds of having work-related stress was 1.82 times higher AOR= 1.82, 95% CI (1.10-2.30) among employees who had poor learning opportunities as compared with employees who had good learning opportunities. Employees who report the current use of khat was about 2.52 fold more likely to have work-related stress AOR = 2.52, 95% CI (1.28-4.99) than nonusers. This study has also revealed that employees who have current use of alcohol were around two and half times more likely to have work-related stress AOR = 2.27, 95% CI (1.44-3.58) than employees who didn't report current use of alcohol. (Table 5)

Table 5: Multivariable analysis of factors associated with work-related stress among employees of Hawassa industrial park in Hawassa city, South Ethiopia, September, 2021 (N=413)

Variables	Categories	Work related stress		AOR & 95%CI	P-value
		Yes (%)	No (%)		
Types of employment	Permanent	107(53.2)	94(46.8)	1	1
	Temporary	89(42.0)	123(58.0)	.41(.26-.64)	<.001*
Organizational support	Good	83(40.9)	120(59.1)	1	1
	poor	113(53.8)	97(46.2)	1.70(1.10-2.62)	.017*
Work experience in years	< 2 <sup>1</sup> / <sub>2</sub> year	88(59.5)	60(40.5)	3.11(1.95-4.96)	<.001*
	≥2 <sup>1</sup> / <sub>2</sub> year	108(40.8)	157(59.2)	1	1
Learning opportunity	Good	44(38.9)	69(61.1)	1	1
	Poor	152(50.7)	148(49.3)	1.82(1.10-2.30)	.019*
Working condition	Good	41(34.7)	77(65.3)	1	1
	Poor	155(52.5)	140(47.5)	2.12(1.32-3.43)	.002*



Current use of khat	No	165(45.5)	198(54.5)	1	1
	Yes	31(62.0)	19(38.0)	2.52(1.28-4.99)	.008*
Current use of alcohol	No	111(41.6)	156(58.4)	1	1
	Yes	85(58.2)	61(41.8)	2.27(1.44-3.58)	<.001*

\*Variables with significant association at p-value <0.05, 1= reference category

## CHAPTER SIX – DISCUSSION

Stress in the workplace is a worldwide public health problem. Studies in African countries focusing on work stress, especially among industrial park workers, are scarce. The overall prevalence of work-related stress among employees was found to be 47.5% with 95% CI (43.2, 52.1). This finding was comparable with those studies done among vehicle repair workers in India(51) and Bahirdar textile factory workers, Ethiopia(20) where the prevalence of work-related stress was reported as 47% and 45.2% respectively.

Even so, the finding of the current study was higher than those studies done in Dukem shoe manufacturing, Ethiopia, 40.4%(24), democratic republic of Congo, 28%(19), India, 25%(52), Iran, 21.3%(53), Thailand, 27.5%(54), Bristol City, 20%(55) and Vietnam, 20.7%(32). The reported discrepancies might be explained by that developed countries have organized safety precautions and facilitated access in advance to health and safety training with a better socio-economic status. They have also better-improved levels of health-care services and enforcement regulations than developing countries (except for those Dukem shoe manufacturing and Congo)(56). For the study done in Congo variation in sociocultural, study setting, and tools used to assess work-related stress might be possible explanations. They have used self-administered (Karasek and Siegrist's scale) while interviewer-administered (workplace stress scale) was used for the current study. In addition, the discrepancy observed with the study done at Dukem shoe manufacturing might be possibly explained by difference in study setting.

However, the current study finding is lower than studies done in Pakistan among medical educators(57) and Iran among nurses(58) where the prevalence of work-related stress was reported as 94%, and 68% respectively. The possible explanation for the difference observed might be the variation of the study population and the difference in sample size. The first study was done among 111 medical educators in one private college. Most of the educators in this college take on their teaching role in addition to their clinical activities, which might lead the individuals to more stressful conditions. In the study done among nurses in Iran, the sample size was 250 and they used different tools (OSIPOW) which assess three dimensions of work adjustment, occupational stresses, psychological strain, and coping resources to assess stress at the workplace. In addition, the work nature of their study population had high workloads and

needs the delivery of empathetic, culturally sensitive, proficient, and moral care in the working environment with increasing responsibility. On that account, the stated factors might be the possible explanation for the discrepancy observed with the current study.

In the present study, temporary employment was found to be negatively associated with work-related stress among employees. This finding is reconcilable with studies done in Norway(59) and Japan(60). This detection might be explained by that the average level of effort and effort-reward imbalance which may have been influenced by their work is higher among permanent workers than temporary. In addition, permanent workers might be influenced by a commitment that the employer has made to them by entering into a permanent employment agreements, which might expose them to more pressure to achieve(61). Nevertheless, this finding is inconsistent with the study done in northern Taiwan(62). The difference in study population and study settings might be the possible explanation for the observed inconsistency.

Outcomes from this study reveal that poor organizational support for employees was found to be an independent predictor of work-related stress. This is in line with the studies done in Nigeria(63), Sweden(64), and Dukem, Ethiopia(24). The possible explanation for this result might be employees whose employers provide insufficient support are often frustrated, apathetic, and might have poor achievement. As a consequence, this may lead to unsafe work practices, increased staff turnover, and even illness(13). This result is not consistent with a study done in Bahirdar, Ethiopia where poor organizational support is not significantly associated with work-related stress(20). The inconsistency might be explained by the variability of the study setting.

In the current study having work experiences less than two and half years was found to be significantly associated with work-related stress among employees. This is congruous with studies done in Egypt(36) and Dukem, Ethiopia(24). Less experience of interaction with a machine, working environment, and getting new experience might be the possible explanation for the association found. Although, this finding is irreconcilable with the study done at Hawassa, Ethiopia(25). In the study, they used to assess the association by categorizing the work experience of employees within the interval of 5 years to the highest of >10 years and this might be the possible explanation for the observed incompatibility of findings.

This study also reveals poor learning opportunities as independent predictors of work-related stress among employees. The findings from the study conducted in Malaysia(65) and Gondar, Ethiopia(66) concur with the association. Dealing with a certain fear of not having career development due to a lack of upgrading educational status resulting in absence of learning opportunities might be the possible explanation for the finding(67).

Finding from this study indicates poor working condition was a risk factor for having work-related stress among employees. This result is agreeing with the study done in Iran(68), India(69), and Ghana(70). The possible explanation for this association might be that employees who have a discordant relationship with supervisors, colleagues and also uncomfortable feelings towards their work will have more stress related to their job than others. However, the finding from a study conducted at Dukem, Ethiopia(24) is inconsistent with this, where the poor working condition was not significantly associated with work-related stress. The difference in study settings may explain the variation observed.

In the current study, current use of khat had a significant positive association with work-related stress among employees. The result observed in studies conducted at the bahirdar textile factory(20) and the amhara region, Ethiopia(71) is consistent with the finding. The time spent chewing khat may influence the working time of the individuals and also as the employees spent more time chewing khat they might experience the feeling of guilty and self-blame, which leads to frustration and stress in the long run(71).

In the present study current use of alcohol was also found to be independent predictor of work-related stress. This finding is consistent with studies conducted in the USA (72) and Germany(73). The Psychosocial and direct effects of alcohol on the brain might result in stress among employees. In addition, inconsistencies of employees' work performance and rewards related to that can cause unanticipated negative consequences among employees and this may lead to starting alcohol use as a coping(74).

## **Limitation of the study**

The following are some of the study's potential limitations that should be considered when interpreting the results:

- The study was prone to recall bias.
- Underreporting on variables, like substance use and workplace violence due to fear of consequence or social neglect (social desirability bias).

## **CHAPTER SEVEN: CONCLUSION AND RECOMMENDATION**

### **7.1. Conclusion**

The prevalence of work-related stress among employees of Hawassa industrial park was high. Temporary employment, poor working condition, work experience less than two and half years, poor learning opportunity, poor organizational support, current use khat and current use of alcohol were significantly associated with work-related stress.

### **7.2. Recommendation**

#### **To Hawassa industrial park**

- Give emphasis on improving employees' health, especially work related stress by removing the sources of stress and enhancing the causes of well-being thereby reducing the need for future interventions. This will be applied through management training, creating and investing in safe and health work environments.
- To create good working condition through preparing well designed work schedule like which might include, clear organizational structure and practice, appropriate selection and staff development, and clear job discription.

#### **To Hawassa city health bureau**

- Cooperating with the institution and enhancing health promotion, especially through giving stress management training and workshops.
- Working on early detection of stress among employees to prevent the consequence.
- Creating and enhancing awareness on substance use which may minimize the magnitude of using substance and also helps to reduce work-related stress.
- Creating a link between health institution and the industry park for better management of work-related stress.

#### **Ministry of labour and social affair (MoLSA) at the federal and city level**

- To contemplate this research as an input for further investigation and include in health and safety policy to enhance productivity and prevent work-related stress among industry employees.

**For future researchers**

- A longitudinal study is required to investigate the cause-effect relationship of risk factors.

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## **Annex I: Information sheet and consent**

**JIMMA UNIVERSITY**  
**INSTITUTE OF HEALTH AND FACULTY OF MEDICAL SCIENCE**  
**DEPARTMENT OF PSYCHIATRY**

### **Information sheet**

Dear Participants:

Code No: \_\_\_\_\_

My name is \_\_\_\_\_; I am hereby on behalf of Yohannes Sime who is a student undertaking a Master's Degree in Integrated clinical & community Mental Health at Jimma University. The research is one of the requirements for the degree and this letter serves to ask consent from you to take part in this research. The purpose of this study is to assess work related stress and associated factors among employees of Hawassa industrial park, Hawassa, southern Ethiopia, 2021, Which are common among peoples living in developing country like our own, especially in manufacturing industry. This will be an important input for the government and institutions those care and support the mental health of the employees in industrial zones.

Your participation in this research is voluntary. Your participation in this study is very important for the achievement of the study and there is no any risk that will come to you because of your participation in this study. If you decide not, to participate there will be no negative consequences for you and you have full right to withdraw at any time in-between from the interview if you do not wish to continue. All the responses given by you and results obtained will be kept confidential. Without your and other legal body's permission, any information will not be disclosed to the third person. You are not expected to give your name or phone number. The interview period will take about 20-30minutes. If you are willing to participate in this study, you need to understand and sign the agreement form, and then you will be asked to give your responses to data collectors.

Name of investigator: Yohannes sime                      phone: +251923101398

E-mail: [johnsime400@gmail.com](mailto:johnsime400@gmail.com)

**Informed consent form**

Are you voluntary to participate in the study?            Yes        No

I hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participate voluntarily in the research project. I understand that I am autonomous to withdraw from the project at any time.

Signature of participant

Date

\_\_\_\_\_

\_\_\_\_\_

Name and signature of data collector \_\_\_\_\_ Date \_\_\_\_\_

Name and signature of supervisor \_\_\_\_\_ Date \_\_\_\_\_

## Annex II: English version questionnaires

### Part I: Socio- Demographic Characteristics (please circle your appropriate response)

No.	Questions	Response	Remark
101.	Sex	<ol style="list-style-type: none"> <li>1. Male</li> <li>2. Female</li> </ol>	
102.	Age	_____year	
103.	Marital Status	<ol style="list-style-type: none"> <li>1. Single</li> <li>2. Married</li> <li>3. Widowed</li> <li>4. Divorced</li> <li>5. Separated</li> </ol>	
104.	Current educational status	<ol style="list-style-type: none"> <li>1. Illiterate</li> <li>2. Primary school (1-8)</li> <li>3. Secondary school (9-12)</li> <li>4. Above secondary (TVET, degree...)</li> </ol>	
105.	Religion	<ol style="list-style-type: none"> <li>1. Orthodox</li> <li>2. Muslim</li> <li>3. Protestant</li> <li>4. Others</li> </ol>	
106.	Monthly income	_____ Birr.	
107.	Types of employment	<ol style="list-style-type: none"> <li>1. Permanent</li> <li>2. Temporary</li> </ol>	
108.	Family size		
109.	Types of work	<ol style="list-style-type: none"> <li>1. Office</li> <li>2. Onsite</li> </ol>	
110.	Position at work	<ol style="list-style-type: none"> <li>1. Yes</li> <li>2. No</li> </ol>	

## Part II: WORK-RELATED STRESS QUESTIONNAIRE

The following questions are important that your responses reflect your work in the last six months

No.	Statements	Never	Rarely	Someti mes	Fairly Often	Very often
201.	Are you clear what is expected from you at work?	1	2	3	4	5
202.	Can you decide when to take a break?	1	2	3	4	5
203.	Different groups at work demand things from you that are hard to combine?	5	4	3	2	1
204.	Do you know how to go about getting your job done?	1	2	3	4	5
205.	Are you subjected to personal harassment in the form of unkind words or behavior?	5	4	3	2	1
206.	Do you have unachievable deadlines?	5	4	3	2	1
207.	If work gets difficult, do your colleagues will help you?	1	2	3	4	5
208.	Are you clear what your duties and responsibilities are?	1	2	3	4	5
209.	You have to neglect some tasks because you have too much to do?	5	4	3	2	1
210.	Can you talk to your line manager about something that has upset or annoyed you about work?	1	2	3	4	5
211.	Did you receive respect at work you deserve from your colleagues?	1	2	3	4	5
212.	Have you got supportive feedback on the work what you do?	1	2	3	4	5
213.	Do you think your working time can be flexible?	1	2	3	4	5
214.	Do your colleagues are willing to listen to your work-related problems?	1	2	3	4	5
215.	Do you have some say over the way you work?	5	4	3	2	1



216.	Pressure at work causes you to come to work when you are not well enough to work?	5	4	3	2	1
217.	Pressure at work causes you to do your job less well?	5	4	3	2	1
218.	Have you taken time off due to pressure at work?	5	4	3	2	1
219.	Have you consider leaving this organization due to pressure at work?	5	4	3	2	1
220.	Pressure at work has affected your health whilst working in this organization?	5	4	3	2	1

### Part III : Organizational risk factors

For each statement, please circle the number to indicate your degree of agreement/ sensation

No.	Statements	Strongly disagreed	Disagree	Neither	Agree	Strongly agree
<b>Organizational support</b>						
301.	Do you feel close to the people at work?	1	2	3	4	5
302.	Do you get along with your supervisors and manager?	1	2	3	4	5
<b>Working conditions</b>						
303.	Do you believe management is concerned about your health and safety?	1	2	3	4	5
304.	Do you feel good about working at this company?	1	2	3	4	5
305.	Do you believe work is good for your physical health?	1	2	3	4	5
<b>Organizational job security</b>						
306.	Do you feel secure about your job?	1	2	3	4	5
307.	Do you feel good at your job?	1	2	3	4	5

<b>Employees recognition</b>						
308.	Do you receive recognition for a job well done?	1	2	3	4	5
309.	Do you feel all your talents and skills are used at work?	1	2	3	4	5
<b>Working hours and experience</b>		Response				Remark
310.	How long have you been working in your current organization?	_____ years and _____ months				
311.	How many hours do you normally work per week in your job?	_____ Hrs./week				
312.	How many hours overtime do you work in your job in an average month? (Please mark "0" if no overtime)	_____ Hrs./month				

**Part IV: Questions on the job related factors**

Thinking about your job and describe how often you feel? Then circle the number to indicate you feeling

	<b>Statements</b>	Never	Rarely	Sometimes	Fairly Often	Very often
<b>Time pressure</b>						
401.	How often does your job require you to work <i>very fast</i> ?	5	4	3	2	1
402.	How often does your job require you to work <i>very hard</i> ?	5	4	3	2	1
403.	How often does your job leave you with <i>little</i> time to get things done?	1	2	3	4	5
<b>High attention demand</b>						
404.	How often is there a <i>great deal</i> to be done?	5	4	3	2	1
405.	How often is there a marked increase in the work load?	5	4	3	2	1
406.	How often is there a marked increase in the amount of	5	4	3	2	1

	concentration required on your job?					
<b>Job control</b>						
407.	Can you exercise control in your position?	1	2	3	4	5
408.	Can you control the quality of what you produce?	1	2	3	4	5
<b>Resource</b>						
409.	Do you have enough resource in your team?	1	2	3	4	5
<b>Learning opportunity</b>						
410.	Do you think the work environment is encouraging and incites learning?	1	2	3	4	5
<b>Interaction people with machine</b>						
411.	Do you think that you can interact well with the machine?	1	2	3	4	5
<b>Physical conditions</b>		Response				Remark
412.	The level of <b>NOISE</b> in the area in which you work is usually high?	1. Yes 2. No				
413.	The level of <b>lighting</b> in the area in which you work is usually poor?	1. Yes 2. No				
414.	The <b>temperature</b> of your work area is usually uncomfortable?	1. Yes 2. No				
415.	The level of <b>air circulation</b> in your work area is poor?	1.yes 2.No				
416.	The <b>air</b> in your work area is smelling unpleasant?	1. Yes 2. No				
417.	In your job, are you exposed to <b>dangerous substances</b> ?	1. Yes 2. No				
<b>Workplace violence</b>						
418.	Have you been hit, pushed, physically assaulted, or otherwise attacked while working at this organization?	1. Yes 2. No				

419.	Have you been sexually assaulted or been the target of a sexual incident while working at this organization?	1. Yes 2. No	
420.	Have you been threatened with physical harm (orally, in writing, or otherwise) while working at this organization?	1. Yes 2. No	

**Part V: job satisfaction scale questionnaire**

No.	Questions /variables	Job satisfaction score				
		Strongly Disagree	Disagree	Do not know	Agree	Strongly satisfied
501	I receive recognition for a job well done	1	2	3	4	5
502	I feel close to the people at Work	1	2	3	4	5
503	I feel good about working at this Company	1	2	3	4	5
504	I feel secure about my job	1	2	3	4	5
505	I believe management is concerned about me	1	2	3	4	5
506	On the whole, I believe work is good for my physical health	1	2	3	4	5
507	My wages are good	1	2	3	4	5
508	All my talents and skills are used at work.	1	2	3	4	5
509	I get along with my supervisors	1	2	3	4	5
510	I feel good about my job	1	2	3	4	5
	Total score Result= _____					

**Part VI Oslo 3 Items Social Support Scale**

This part of the questionnaire contains 3 questions regarding your experience of social support and related issues. Please circle on the alternative that is applicable to you.

601	How many people are so close to you that you can count on them if you have serious?  Personal problems (choose one option)?	1. None 2. 1 or 2	
-----	-----------------------------------------------------------------------------------------------------------------------------------	----------------------	--

		3. 3-5 4. More than 5	
602	How much concern do people show in what you are doing (choose one option)?	5. a lot of concern and interest 4. Some concern and interest 3. Uncertain 2. Little concern and interest 1. No concern and interest	
603	How easy is it to get practical help from neighbors if you should need it? (Choose one Option)	5. Very easy 4. Easy 3. Possible 2. Difficult 1. Very difficult	

**PART VII Question to assess Substance-related and behavioral factors**

This question is about substance use. Please choose the option represents the participants and write appropriate answer for participants experience about his/her use of substance.

701.	In your lifetime, have you ever used any of following the substances?	1.Yes 2.No
702.	If your answer is Yes for Q-1, which substance do you use?	1.Alcohol (beer, wine, arake, teji, tella) 2.Khat 3.Tobacco product 4.Others specify
703.	In the past 3 months, have you used any of the following substances?	1.Yes 2.No
704.	If your answer is Yes, which substance do you use?	1.Alcohol 2.Kat 3.Tobacco product 4.Others specify

**Part VIII: health related factors**

	Questions	Response
801	Chronic medical illness	1. Hypertension 2. Diabetes mellitus 3. HIV/AIDS 4. Kidney disease 5. Others
802	You were in ill health which affected your work?	1. Yes 2. No

### ANNEX III: Amharic version Information sheet and informed consent

#### የመረጃ ወረቀት

እኔ ----- እባላለሁ በጅም ዩኒቨርሲቲ ስር ከሚከናወኑ ተግባራት አንዱ የተማሪዎች መመሪያ ማሙያ የሚደረግ ጥናት ነው ስለሆነም አቶ ዩሃንስ ስሜ በጅም ዩኒቨርሲቲ በሚሰጠው የሁለተኛ ዲግሪ ፕሮግራም የስነ አእምሮ ህክምና ትምህርታቸውን በመከታተል ላይ ይገኛሉ። እናም የመመሪያ ፅሁፋቸውን ከስራጋ የተገናኘ የአዕምሮ መጨነቅ የተቃሙ ሰራተኞች ላይ በምን ያህል እንደሚገኝ እንዲሁም ምንደረግ ጉዳዮች ተገዳኝነት አላቸው በሚል ርዕስ ዙሪያ ጥናት እያካሄዱ ይገኛሉ። ከዚህ በፊት የተሰሩ ጥናቶች እንደ ሚያመለክቱት በማደግላይ ያሉ ሀገሮች ኢትዮጵያን ጨምሮ ከስራጋ የተገናኘ የአዕምሮ መጨነቅ ቀጥሮ ከፍተኛ ነው። ይህ ጥናት በዋነኝነት ጥናቱ ለሚደርግበት ተቃም፣ ለመንግስት እንዲሁም የሰራተኞች ደህንነት ለሚመለከታቸው ተቃማት ግብአት በመሆን ያገለግላል ተብሎ ይታሰባል። በዚህ ምርምር ውስጥ ያለዎት ተሳትፎ በፈቃደኝነት ላይ የተመሰረተ ነው። ይህ ደብዳቤ በዚህ ጥናት ላይ ለመካፈልዎ ፍቃድ ለመጠየቅ ያገለግላል። ለመሳተፍ ፈቃደኛ ካልሆኑ በእርስዎ ላይ ምንም ዓይነት ችግር አይደርስበትም። በመሳተፍዎ የሚሰጡት ማንኛውም መረጃ በሚሰጥበት ይያዛል። ስምዎን ወይም ስልክ ቁጥር መስጠት አይጠበቅብዎትም። ቃለ-መጠይቁ ቢበዛ 30 ደቂቃ ይወስዳል። ለመሳተፍ ፈቃደኛ ከሆኑ መረዳትና የስምምነት ቅፅ ላይ መፈረም አለብዎት።

ጥናቱን የሚያካሄድ ስም: ዩሃንስ ስሜ ስልክ+251 923101398

ኢ-ሜል: [johnsime400@gmail.com](mailto:johnsime400@gmail.com)

በቃለ-መጠይቁ ላይ ለመሳተፍ ፈቃደኛ ነዎ? አዎ አይደለሁም

ፊርማ----- ቀን -----

እርስዎ የዚህ ጥናት ተሳታፊ በመሆንዎ በጣም እናመሰግናለን።

#### የስምምነት መስጫ

የሰነዱን ይዘት የተረዳሁ ሲሆን የምርምር ፕሮጀክቱንም አላማ ተረድቻለሁ። በዚህ ምርምር ፕሮጀክት ላይ እንደሰተፍ ፍቃደኛ ሆኛለሁ። በማንኛውም ሰአትም ከጥናቱ እራሴን ለማግለል መብት እንዳለኝ አወቃለሁ።

የተሳታፊው/ዋ ፊርማ..... ቀን.....

የመረጃ ሰብሳቢ ስምና ፊርማ..... ቀን.....

የተቆጣጣሪ ስምና ፊርማ..... ቀን.....

### Annex IV: Amharic version questionnaires

ክፍል አንድ፡ የማህበራዊ አኗኗር መጠይቆች (እባኩን በትክክለኛው መልስ ያክብቡ)

ተ.ቁጥር	መጠይቆች	መልስ	አስተያየት
101.	ጾታ	ወንድ ሴት	
102.	ዕድሜ	_____ አመት	
103.	የጋብቻ ሁኔታ	1. ያላገባ 2. ያገባ 3. አግብቶ የሞተበት 4. የተፋታ 5. አግብቶ የተለያየ	
104.	የአሁኑ የትምህርት ሁኔታ	1. ማንበብና መጻፍ 2. የመጀመሪያ ደረጃ ትምህርት ቤት (1-8) 3. ሁለተኛ ደረጃ ትምህርት ቤት (9-12) 4. ከሁለተኛ ደረጃ በላይ (የቴክኒክና ሙያ ትምህርትና ሥልጠና ፣ ዲግሪ ...)	
105.	ሃይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌሎች	
106.	ወርሃዊ ገቢ	_____ ብር.	
107.	የቅጥር ዓይነት	1. ቋሚ 2. ጊዜያዊ	
108.	የቤተሰብ ብዛት	-----	
109.	የሥራ ዓይነቶች	1. ቢሮ 2. ከቢሮ ውጪ	
110.	የስራ ቦታ ሀላፊነት (ስልጣን)	1. አለኝ 2. የለኝም	



**ክፍል II: ከሥራ ጋር የተዛመደ ውጥረት (የአፅምር መጨነቅ) ጥያቄ (WORK-RELATED STRESS QUESTIONNAIRE)**

ለሚከተሉት ጥያቄዎች የሚመልሱት መልስ ባለፉት ስድስት ወራት ውስጥ የሥራዎን ሁኔታ የሚያንፀባርቁ በመሆናቸው አስፈላጊ ናቸው

ተ.ቁ	መጠይቆች	በጭራሽ	አልፎ አልፎ	አንዳንድ ጊዜ	ብዙውን ጊዜ	በጣም ብዙ ጊዜ
201.	በሥራ ላይ ከእርስዎ ምን እንደሚጠበቅ በግልፅ ያውቃሉ?	1	2	3	4	5
202.	ዕረፍት መቼ እንደሚወስዱ መወሰን ይችላሉ?	1	2	3	4	5
203.	የተለያዩ በስራ ቦታ ላይ ያሉ ሰራተኞች እርስዎን ለማካተት ከባድ የሆኑ ነገሮችን ከእርስዎ ይፈልጋሉ?	5	4	3	2	1
204.	ሥራዎን ለማከናወን እንዴት መሄድ እንዳለብዎ ያውቃሉ?	1	2	3	4	5
205.	ሃላፊነት በጎደለው ቃላት ወይም ባህሪ መልክ የግል ትንኮሳ ደርሶብዎታል?	5	4	3	2	1
206.	የማይቻሉ ቀን-ገደቦች አሉት?	5	4	3	2	1
207.	ሥራ ከባድ ከሆነ የሥራ ባልደረቦችዎ ይረዱዎታል?	1	2	3	4	5
208.	ግዴታዎችዎ እና ሃላፊነቶ ምን እንደሆኑ በግልፅ ሰውቃሉ?	1	2	3	4	5
209.	ብዙ መሥራት ስለሚኖርብዎት አንዳንድ ሥራዎችን ችላ ማለት አለብዎት?	5	4	3	2	1
210.	በመስሪያ ቤት ሥራ አስኪያጅዎ ላይ ስላበሳጨዎ ወይም ስላናደዱት ነገር ማውራት ይችላሉ?	1	2	3	4	5
211.	ከሥራ ባልደረባዎ የሚገባዎትን የሥራ ቦታ አክብሮት አግኝተዋል?	1	2	3	4	5
212.	በሚሰሩት ስራ ላይ ደጋፊ ወይም አጋዥ ግብረመልስ አግኝተዋል?	1	2	3	4	5
213.	የሥራ ጊዜዎ በሚመች ሁኔታ ተለዋዋጭ ሊሆን ይችላል ብለው ያስባሉ?	1	2	3	4	5
214.	የሥራ ባልደረቦችዎ ከሥራ ጋር የተያያዙ ችግሮችዎን ለማዳመጥ ፈቃደኞች ናቸውን?	1	2	3	4	5
215.	በሚሰሩበት መንገድ ላይ የተወሰነ አስተያየት አለዎት?	5	4	3	2	1
216.	በሥራ ላይ የሚሰማዎት ግፊት ለመሥራት በቂ ባልሆኑበት ጊዜ ወደ	5	4	3	2	1

	ሥራ እንዲመጡ ያደርግዎታል?					
217.	በሥራ ላይ ያለው ጫና ሥራዎን በጥሩ ሁኔታ እንዳይሠሩ ያደርግዎታል?	5	4	3	2	1
218.	በሥራ ጫና ምክንያት እረፍት ወስደዋል?	5	4	3	2	1
219.	በሥራ ጫና ምክንያት ይህንን ድርጅት ለመልቀቅ አስበው ያውቃሉ?	5	4	3	2	1
220.	በዚህ ድርጅት ውስጥ በሚሠሩበት ጊዜ በሥራ ላይ ያለው ጫና በጤንነት ላይ ተጽዕኖ አሳድሯል?	5	4	3	2	1

**ክፍል III: ከድርጅቱ ጋር የተያያዙ ሁኔታዎች**

ለእያንዳንዱ መጠይቅ እባክዎን የስምምነት ደረጃ ለማመልከት ትክክለኛ ቁጥሩን ያክብቡ

ተ.ቁ	መጠይቆች	በጣም አልሰማም	አልሰማም	ሁለቱም አይደሉም	እሰማለሁ	በጣም እሰማለሁ
<b>ድርጅታዊ ድጋፍ</b>						
301.	በሥራ ላይ ካሉ ሰዎች ጋር ቅርበት ይሰማዎታል?	1	2	3	4	5
302.	ከእርስዎ ተቆጣጣሪዎች እና ሥራ አስኪያጅ ጋር ተስማምተዋል?	1	2	3	4	5
<b>የሥራ ሁኔታዎች</b>						
303.	የድርጅቱ አስተዳደር ስለ ጤናዎ እና ደህንነትዎ ያስባልብለው ያምናሉን?	1	2	3	4	5
304.	በዚህ ኩባንያ ውስጥ በመስራትዎ ጥሩ ስሜት ይሰማዎታል?	1	2	3	4	5
305.	ሥራ ለአካላዊ ጤንነትዎ ጥሩ ነው ብለው ያምናሉን?	1	2	3	4	5
<b>የድርጅት የሥራ ዋስትና (ደህንነት)</b>						
306.	ስለ ሥራዎ ዋስትና (ደህንነት) ይሰማዎታል?	1	2	3	4	5
307.	በሥራዎ ላይ ጥሩ ስሜት ይሰማዎታል?	1	2	3	4	5
<b>የሰራተኞች እውቅና</b>						

308.	በጥሩ ሁኔታ ለሰሩት ሥራ ዕውቅና ይሰጥዎታል?	1	2	3	4	5
309.	ሁሉም ተሰጦዎች እና ችሎታዎችዎ በሥራ ላይ እንደዋሉ ይሰማዎታል?	1	2	3	4	5
<b>የሥራ ሰዓት እና ልምድ</b>		<b>ምላሽ</b>				<b>አስተያየት</b>
310.	አሁን ባለው ድርጅትዎ ውስጥ ለምን ያህል ጊዜ እየሠሩ ነው?	_____ ዓመት እና _____ ወር				
311.	በስራዎ ውስጥ በመደበኛነት በየሳምንቱ የሚሰሩት ሰዓት ሰዓት ነው?	_____ ሰዓት/ ሳምንት				
312.	በአማካይ ወር ውስጥ በስራዎ ስንት የትርፍ ሰዓት ስራ ይሰራሉ ሰዓት ይሰራሉ (የትርፍ ሰዓት ከሌለ እባክዎን “0” ብለው ይመልሱ)?	_____ ሰዓት/ወር				

**ክፍል አራት:- ከሥራ ጋር በተያያዙ ሁኔታዎች ላይ የተዘጋጁ ጥያቄዎች**

ስለ ሥራዎ ያስቡ እና ምን ያህል ጊዜ እንደሚሰማዎት ይግለጹ? ከዚያ ስሜትዎን ለማሳየት ትክክለኛው ቁጥር ላይ ያክብቡ

ተ.ቁ	መጠይቆች	በጭራሽ	አልፎ አልፎ	አንዳንድ ጊዜ	ብዙውን ጊዜ	በጣም ብዙ ጊዜ
<b>የሰዓት ጫና</b>						
401.	ሥራዎ ምን ያህል በጣም በፍጥነት መሰራት (እንዲሠራ) ይፈልጋል?	5	4	3	2	1
402.	ሥራዎ ምን ያህል በጣም ጠንክሮ መሰራት (እንዲሠራ) ይጠይቃል?	5	4	3	2	1
403.	ስራዎ ነገሮችን ትንሽ ጊዜ ለማከናወን ምን ያህል ይፈቅዳል?	1	2	3	4	5
<b>ክፍተኛ ትኩረት መፈለግ</b>						
404.	መሰራት ያለባቸው ብዙ ነገሮች፤ ምን ህል ጊዜ ይኖሩሃል?	5	4	3	2	1
405.	ክፍተኛ የሆነ የስራ ጫና መጨመር ምን ያህል ጊዜ ይኖራል?	5	4	3	2	1
406.	ስራዎት ምን ያህል ጊዜ በክፍተኛ ትኩረት መሰራት ይፈልጋል?	5	4	3	2	1
<b>የሥራ ቁጥጥር</b>						
407.	እርስዎ ባሉበት የስራ ቦታ ቁጥጥር ማድረግ ይችላሉ?	1	2	3	4	5
408.	ያመረቱትን ወይም የሰሩትን ስራ ጥራት መቆጣጠር ይችላሉ?	1	2	3	4	5
<b>ግብዓት</b>						

409.	በቡድንዎ ውስጥ በቂ ግብዓት አለዎት?	1	2	3	4	5
<b>የመማር ዕድል</b>						
410.	የሥራ አካባቢው የሚያበረታታ እና ለትምህርትን የሚያነቃቃ ነው ብለው ያስባሉ?	1	2	3	4	5
<b>ከማሸን ጋር ያለ ግንኙነት</b>						
411.	ከማሸን ጋር በደንብ ንክኪ አለኝ ብለው ያስባሉ?	1	2	3	4	5
<b>አካላዊ እና የአካባቢ ሁኔታዎች</b>		ምላሽ				አስተያየት
412.	በሚሰሩበት አካባቢ የጨህት (የሚረብሽ ድምፅ) ደረጃ ብዙውን ጊዜ ከፍተኛ ነው?	1. አዎ 2. አይደለም				
413.	በሚሠሩበት አካባቢ ያለው የብርሃን ወይም የሙብራት መጠን ደካማ ነው?	1. አዎ 2. አይደለም				
414.	የሥራ አካባቢዎ ሙቀት ብዙውን ጊዜ የማይመች ነው?	1. አዎ 2. አይደለም				
415.	በስራ ቦታዎ ውስጥ ያለው የአየር ዝውውር ወይም ማስገቢያ ደረጃ ደካማ ነው?	1. አዎ 2. አይደለም				
416.	በስራ ቦታዎ ውስጥ ያለው አየር ደስ የማይል ሽታ አለው?	1. አዎ 2. አይደለም				
417.	በሥራዎ ውስጥ ለአደገኛ ንጥረ ነገሮች ይጋለጣሉ?	1. አዎ 2. አይደለም				
<b>የሥራ ቦታ ጥቃት</b>						
419.	በዚህ ድርጅት ውስጥ በሚሰሩበት ጊዜ ተመትተዋል ፣ ተገፍተዋል ፣ አካላዊ ጥቃት ደርሶብዎታል ወይም በሌላ መንገድ ጥቃት ደርሶብዎታል?	1. አዎ 2. አይደለም				
420.	በዚህ ድርጅት ውስጥ በሚሰሩበት ጊዜ ወሲባዊ ጥቃት ደርሶብዎታል ወይም ለወሲብ ጥቃት ዒላማ ተደርገዋል?	1. አዎ 2. አይደለም				
421.	በዚህ ድርጅት ውስጥ በሚሠሩበት ጊዜ አካላዊ ጉዳት (በቃል ፣ በጽሑፍ ወይም በሌላ መንገድ) ዛቻ ደርሶብዎታል?	1. አዎ 2. አይደለም				

ክፍል አምስት: የሥራ እርካታ የሚመዘን መጠይቅ

ቁጥር	ጥያቄዎች	በሥራ ላይ ያሉት የእርካታ ሁኔታ				
		በጣም አልሰማማም	አልሰማማም	አላውቅም	እስማማለሁ	በጣም እስማማለሁ
501	በደንብ ለሰራሁት ሥራ ዕውቅና ይሰጠኛል	1	2	3	4	5
502	በሥራ ላይ ካሉ ሰዎች ጋር ቅርበት እንዳለኝ ይሰማኛል	1	2	3	4	5
503	በዚህ ኩባንያ ውስጥ በመሥራቱ ጥሩ ስሜት ይሰማኛል	1	2	3	4	5
504	ስለ ሥራዬ ደህንነት ይሰማኛል	1	2	3	4	5
505	የኩባንያው አስተዳደር ስለእኔ ያሳስበዋል ብዬ አምናለሁ	1	2	3	4	5
506	በአጠቃላይ ፣ ሥራ ለሥጋዊ ጤንነቴ ጥሩ ነው የሚል እምነት አለኝ	1	2	3	4	5
507	ደመወዜ ጥሩ ነው	1	2	3	4	5
508	ሁሉም የእኔ ችሎታ እና ክህሎቶች በሥራ ላይ ይውላሉ ::	1	2	3	4	5
509	ከተቆጣጣሪዎቼ ጋር ተስማምቻለሁ	1	2	3	4	5
510	ስለ ሥራዬ ጥሩ ስሜት ይሰማኛል	1	2	3	4	5
ድምር ውጤት= _____						

ክፍል ስድስት: የማህበራዊ ግንኙነት እና የግለ ተሞክሮዎን መጠይቅ::

ይህ የማህበራዊ ግንኙነት እና የግለ ተሞክሮዎን መጠይቅ ነው:: እባክዎ የሚወክለዎትን ምርጫ ያክብቡ እንዲሁም ተገቢውን መልስ በባዶ ቦታው ላይ ይሙሉ::

601	ምን ያህል ሰዎች አደጋ (ችግር) በሚያጋጥሙት ጊዜ በቅርብ የችግርዎ ተካፊዬ ሊሆኑልዎት ይችላሉ?	4. ከ 5 በላይ 3. 3-5 2. 1 ወይም 2 1. ምንም	
602	ምን ያህል ሰዎች አርሶ ስለሚያደርጉአቸው ነገሮች ግድ ይላቸዋል/ ቦታ ይሰጡላቸዋል?	5. ብዙ 4. ጥቂት 3. አርግጠኛ አይደለሁም 2. በጣም ትንሽ 1. ምንም	

603	ከቅርብ ጎረቤትዎ በተጨማሪም እርዳታ የማግኘት እድልዎ ምን ያህል ነው?	5. በጣም ቀላል 4. ቀላል 3. መጠነኛ 2. ከባዴ 1. በጣም ከባድ	
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**ክፍል ሰባት :- ደንዛዥ ዕዳችን የተመለከተ መጠይቅ።**

ይህ አደንዛዥ ዕዳችን የተመለከተ መጠይቅ ነው። እባክዎ የሚወክሉትን ምርጫ ያክብቡ።

701.	በህይወት ዘመንዎ፣ ከአደንዛዥ ዕዳች መካከል የተጠቀሙት አለ? (በሕክምና ከሚሰጡ ውጭ ያለትን)	1. አዎ 2. በፍጹም
702.	ለጥያቄ 501 መልስዎ አዎ ተጠቅሜ አውቃለሁ ከሆነ መጠይቁን ያቁሙ ከሚከተለት አደንዛዥ ዕዳች መካከል የትኞቹን ተጠቅመዋል?(ሆሕክምና ከሚሰጡ ውጭ ያለትን)	1. የአልኮል መጠጦች / ቢራ፣ወይን፣ጠላ፤ ዐረቄ ) 2. ጫት 3. ትንባሆ 4. ካናቢስ/ማርዮና/ ጋንጃ/ ሀሺሻ 5. የእንቅሌፍ ክረን(ዱያዜፓም) 6. ሌላ ካለ ይጥቀሱ _____
703.	ባለፉት ሶስት ወራት ከአደንዛዥ ዕዳች መካከል የተጠቀሙት አለ? (በሕክምና ከሚሰጡ ውጭ ያለትን)	1. አዎ 2. በፍጹም
704.	ለጥያቄ 503 መልስዎ አዎ ተጠቅሜ አውቃለሁ ከሆነ መጠይቁን ያቁሙ ከሚከተለት አደንዛዥ ዕዳች መካከል የትኞቹን ተጠቅመዋል?(ሆሕክምና ከሚሰጡ ውጭ ያለትን)	1. የአልኮል መጠጦች / ቢራ፣ወይን፣ጠላ፤ ዐረቄ ) 2. ጫት 3. ትንባሆ 4. ካናቢስ/ማርዮና/ ጋንጃ/ ሀሺሻ 5. የእንቅሌፍ ክረን(ዱያዜፓም)

		6. ሌላ ካለ ይጥቀሱ _____
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**ክፍል ስምንት - ከጤና ጋር የተያያዙ ሁኔታዎች**

	ጥያቄ	ምላሽ
801	በህክምና የታወቀ ህመም/ በሽታ	1. የደም ግፊት 2. የስኳር ህመምተኞች 3. ኤች.አይ.ቪ. / ኤድስ 4. የኩላሊት በሽታ 5. ሌሎች
802	በሥራዎ ላይ ተጽዕኖ የሚያሳድር የጤንነት ችግር አጋጥሞታል?	1. አዎ 2. አይደለም

## **ANNEX V: Sidaamiffa version information sheet and consent form**

### **TAJETE QOOLA**

Anni \_\_\_\_\_ yinanniehu jimu yuniversite hunda loosamano loosi giddo rosaanote maaso jeefate assinanni xinxalootti. Konni daafira yohaanis siime jimu yuniversite giddo uyinannita 2nki digire pirogiraame buggeete hikkimini roso harunssate aana leellano. Hattono maassote jeeffote borronssa loosu ledoo xaadinohunni buqqete qarri uurrinshate loosaasine aana mageeshinni leellanoranna hattono mayi dani hajo aana xaadooshu noonsa, yaano umi aana xiinxxalo assanni leellano.

Konni alibaanni loosanttino xinxxallo leellishano garnni lophphote aana noo gobbuwa itoophiyaa leendanna loosu ledoo amadaminohunni buqqete qarri kiiruu luphphiyitinote. Tinni xinxxallo qarunni lumihunni xiinxxallo assinanni uurrinshara manggistete hattono loosaasinetee keeranchimate hajo la'anonssa uurininnisha kai'ma ikkite horo uyitano yine henddanni.

Tenne buuxo giddo noo beeqqano beeqo assate uminssa fajonni ikka noossi.

Tinni borro tenne buuxo aana beqqate fajjo xa'mate ka'litano beeqqate fajjama ikka hoongiro mayi qarino di'iilanonssa. Beeqqano ikkatenni uyinaniti aye tajeno maa fudatenni maanxxanni. Su'ma woyi bilibilu kiiruu aate di-hasiissano. Qoolu xa'mo batidhuro 30 daqiiqa adhitano. Beeqqate fajjamaancho ikkinro sumuu yaate qixaabbino qitsee aana malaatise hasiissanno xinxxalo assanohu su'ma yohaansi siime

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afuu xa'mo aana fajamato? EE Deen'i

malaate \_\_\_\_\_ barra \_\_\_\_\_

atti tenne xinxalora karsamooto daafira galanteemohe.

Sumuu yaate amanooshe

Tinni sanade amadinoreenna xinxalotenna pirojekitette hedo affoomo tenne xinxalote pirejekitera beeqasincho ikkate fajamommo. Aye yannarano tenne xinxalonni umo'ya fusha dandeemota lede afoommo.

Beeqasinchu malaate \_\_\_\_\_ Barra \_\_\_\_\_

Taje ganba assinohu su'ma \_\_\_\_\_ malaate \_\_\_\_\_ Barra \_\_\_\_\_

Qorqoranchu su'mana malaate \_\_\_\_\_ Barra \_\_\_\_\_

## ANNEX VI: Sidaamiffa version questionnaires

Kiirro 1- miitimate heenanni garri xa'mo

(Ada/Halaale ikkitino qolo aana malaatisi)

A.Kiirro	Xa'muuba	Qolo	Hedo
101	Labaha/meeyate	- Labaho - Meyaate	
102	Diiro	_____ diiro	
103	Adhamate akate	1. Diadhinoho 2. Adhinoho 3. Adhena Reitinosi 4. Tiraminoho 5. Adhe ka'e baxinoho	
104	Rosu akata/deera	1. Nababbana borressa 2. Umidrimi roso (1-8) 3. 2nki dirimi roso(9-12) 4. 2nki drimi alee (TEVET) Digreete deera	
105	Amanote akata	1. Ortodokise 2. Islaama 3. Prootestante 4. Wole konni gobanni	
106	Aganu eo beera	_____ birra	
107	Loosu qixire akata/dana	1. Uurinshate _____ 2. Yanate geisha _____	
108	Maatesi kiirro	_____	
109	Loosu gara/akata	1. Birote looso gido _____ 2. Birote gobaanni _____	
110	Loosu dargi halafinate	1. Noe _____ 2. Dinoe _____	

Kiiro 2: loosu ledo finxonni hulullo(buuqete daafuro) Xa'mo( work-related stress)

Xa'moti gara

Konni woronni shiqino xa'mora sa'u 6 agani gido loosine akate regecci assano dafira hasiissanoretti.

A.K	Xa'mu'wa	horonta	Sae sae	Mitte mitte yannara	Duucha yannara	Lowo yannara
201	Loosu aana attewinni maa agarani	1	2	3	4	5
202	Foolisho mamoota adhatoro gumula dandato	1	2	3	4	5
203	Babbaxino loosu darga no loosasine ate karsitara jawa ikkino coye attewinni hasidhano	5	4	3	2	1
204	Loosoki alba qolte hasisate hito hadhatoro afooto?	1	2	3	4	5
205	Doogimale ikkitino garnni bushu arawinni buduu garnni gawajo illitinohe?	5	4	3	2	1
206	Dandiinanniki barru gawalo noohe?	5	4	3	2	1
207	Loos ayirihero, loosu jaala kalitanohe?	1	2	3	4	5
208	Loosu delallana hadara bade xawiise afooto?	1	2	3	4	5
209	Duucha jawaata looso loosa noohehura mitto mitto looso loosate badhe higate?	5	4	3	2	1
210	Loosu minni soorresira hanqisinohe nna daadilisinnohe coye hasawa danddato?	1	2	3	4	5
211	Loosu jaalakiwinni attera ikkanoha loosu dargi ayirinye afidhoo?	1	2	3	4	5
212	Loosate loosi aana ka'alo/irko asse qollanoha afooto?	1	2	3	4	5
213	Loosu yanna bifano akatinni yanate kiiro sooramanohaikkano yite hedato?	1	2	3	4	5

214	Loosiki jaala loosu ledo amadantino qara maciishate fajantinoretti?	1	2	3	4	5
215	Loosato doogo aana gummulote hedo noohe?	5	4	3	2	1
216	Loosu aana maciishantanoti xiiwama kaaja hoogoto yanaara loosu daafo gedde assitano?	5	4	3	2	1
217	Loosu aana nooti duhano loosu dancha gedde assite loosato gedde assitanohenni					
218	Loosu batinyi korkaatinni foolisho adhootonni?					
219	Loosu batinyi korkaatinni tenne uurinisha agurte fulate hede egeenoto?					
220	Tenne urinisha gido loosanni keeshito yannara loosu batinynyi keeranchimate aana qarra kalaqinonni?					

Kiiri 3- urinishate ledo amadamino akata

Mitte mitte xamora sumuu yaato deernni dancha qolora kiiri malaatisi

A.K	Xamu'ba	Lowo geisha sumuu diyeemo	Sumuu diyeemo	2nki gido dinoomo	Sumuu yeemo	Lowo geisha sumuu yeemo
Urinshate ka'alo/irko						
301	Loosu aana no manni ledo gambooshumacishamanohe?	1	2	3	4	5
302	Loosiki halafichi ledonna siraasika ajeki ledosumuu yooto?	1	2	3	4	5
Loosu akatuba						
303	Urinishate gashooti fayimakinna keeranchimaki haja hedote giddo woranoo?	1	2	3	4	5

304	Konni kubaniyira gido loosakira danchu hagiiri machiishamanohe	1	2	3	4	5
305	Loosu manimaki keeranchimara danchaho yite amanatoo?	1	2	3	4	5
Urinishate loosu wowe(keranchima)						
306	Loosiki hajora keeranchima machiishantanohe?	1	2	3	4	5
307	Loosiki aana danchuri machiishamanohe?	1	2	3	4	5
Loosasinete afama (Egeenama)						
308	Danchu akati loosoto loosira afamato gede asinanni?	1	2	3	4	5
309	Baalanta ogiimakinna dandimaki loosu aana hosinota machiishamanohe?	1	2	3	4	5
Loosu sa'atenna rosicho		Qolo				hedo
310	Xa-nootowa uurinshate gido mageeshi yanna loosanni keeshito?	_____ diirona _____ anaga				
311	Loosiki yannara dambete grnni mitte lamala giddo mee sa'ate loosato?	_____ sa'ate/lamala				
312	Mittu again gido mee loosu sa'ate ilafe loosato? Ilafe saate nookiro (0) yite sai?	_____ sa'ate/lamala				

Kiifle 4: loosu ledo amadamino akati aana qixxabino xa'mo loosiki garra hedote gido worte mageeshi yannara machiishamano xawiisi? Hakonni gedensanni hakchoki leellishate talitino kiiri xaaxxi (malaate assi)

A.K	xamuuba	horonta	Sae	Mitte mitte	Duucha	Lowo geisha duucha
-----	---------	---------	-----	----------------	--------	-----------------------

			sae	yanara	yanara	yanara
Sa'atete duurama						
401	Loosoki mageesha rahotenni loosa (loosamano gede) hasirano?	5	4	3	2	1
402	Loosoki mageesha kaajite loosa (loosamano gede) xa'mano?	5	4	3	2	1
403	Loosoki coyiki ajiishe gudate fajano?	1	2	3	4	5
Jawa gede illachiishe hase						
404	Loosa hassisanoha duucha coye mageesha yanna hadhanohe?	5	4	3	2	1
405	Lowo geisha duhano ikkinoha looso ledate mageeshi yana hedhano?	5	4	3	2	1
406	Loosiki mageeshi yannara lowo illacha tunge loosa hassirano?	5	4	3	2	1
Fayiimate akate						
407	Loosiki ima illiishano gadaddi fayiimate qarri aana no?	5	4	3	2	1
Loosu qorqorsha						
408	Atti nootowa loosu darga qorqorsha assa danddato?	1	2	3	4	5
409	Loosoto loosi guma qorqorsha assa danddato?	1	2	3	4	5
Loosu guma						
410	Gambooshu giddo guma ikkinori noo?	1	2	3	4	5

	Mashinete ledo no xaado					
411	Maashinete ledo kikkisama/egeeno noe yite hedato?	1	2	3	4	5
	Rosu kayo					
412	Loosu qarqari kakkasano hana rosoho baqi assanohe yite hedato?	1	2	3	4	5
	Bissuna qarqaru akata	Qolo			Hedo	
413	Loosato qarqarirra rarete (dimitse) machiishate duucha yannara lowote?	1. EE 2. DEEN				
414	Loosato qarqarirra noohu caabichu xawaaba aano grrri daafurnoho?	1. EE 2. DEEN				
415	Loosu qarqari ibbili duucha yannara diqawaxisano?	1. EE 2. DEEN				
416	Loosu darga nooti diilallotte akati deeri daafurinoho?	1. EE 2. DEEN				
417	Loosu dargi diilallo tashi yitanoki fooli no?	1. EE 2. DEEN				
418	Loosiki gido godaasano coyira tugano?	1. EE 2. DEEN				

Kiiri 5- loosu keeno kasiyano xa'mo

A.K	Xa'muuba	Loosu aana nooha lowo geisha summu diyeemo	Sumuu diyeemo	diafoomo	Sum yeemo	Lowo geisha summu yeemo
501	Seeke loosommo loosira baraarra uyinannie	1	2	3	4	5

502	Loosu aana noo manni ledo shiqino gambooshi noota machiishamanoe	1	2	3	4	5
503	Konni kubaniyira loosayara dancha fooli noe	1	2	3	4	5
504	Loosiya daafira galaabo machiishantae	1	2	3	4	5
505	Kubbaniyu gashanchi aane hajora hulullisanos yee amanee mmo	1	2	3	4	5
506	Xaphooma loosu heeshiya keeranchimara danchaho yeemoti heedo noe	1	2	3	4	5
507	Damooziya danchaho	1	2	3	4	5
508	Duuchunku anna kaajilenna amanynyot loosu aana hossano	1	2	3	4	5
509	Qorqoranote ledo su'muu yoommo	1	2	3	4	5
510	Loos'ya akata danchuri machiishamanoe	1	2	3	4	5
	Xaphoomu guma_____					

Kiir 6- mittimate xaadonna umiswonalish xa'mo tinni mittima xaadi wonalish xa'moti riqiwanohu doorte doisissi xakainni hasissano qolo mula fannu dargira wonshi.

601	Mageesha manti hedwelcho dano xadano woyite qarriki beeqasine ikka danditanorri	4.5 all 3.3-5	
-----	------------------------------------------------------------------------------------	------------------	--



		2.1/2 1	
602	Mageeshi manati ati assato coyira machiishamena darga aanohu	5- duucha 4-shiima 3- ada dilawano 2- lowo shima 1- nooridino	
603	Gamba yinohehuni qachu maninni mageeshi ka'alo afidhate kaayona	5- lowo geisha shota 4- shota 3- shiima shota 2- ayirado 1- jawa ayirado	

Kiirro -7- jaly assitano har'o xa'mo

Tinni jally assitano haja xa'moti doorotohunni malaate assi

701	Heeshoki yannara jally asitano har'o giddo horonsir'eototi no? (Hakime uyitanote gobbanni)	1- EE 2- Horonta
702	Xa'mo 501 golo EE horonsi're egeenoomo ikkinoro konni woronni no jally assitano har'o giddo hikonne horonsi're egeenotto? (Hakime uyitanohu gobbanni)	1- alkoolete agato (biira,woyine, farsho haraqe) 2- chaate 3- arado 4- kanabis/maryona/ganja, hashiishe) 5- goxanote kinine wole nooro xawise

703	Sau 3 agani giddo jally assitano har'o giddo horonsiroototti noonni? (Hakime uyitanohu gobbanni)?	1- Ee 2- Horonta
704	Xa'mo 503 golo EE horonsire egeenoomo ikkinoro xa'mo uurissi kooni woronni noo jalyy assitano har'o gido horonsire egeenoto? (Hakime uyitanohuni gobbanni)	1. alkoolete agato (biira,woyine, farsho haraqe) 2. caate 3.arado 4.kanabis/maryona//ganja, hashiishe) 5.goxanote kinine (duyazepam) 6.wole nooro xawise

Kiir 8: fayimate ledo karkatuba

	Xa'muuba	Qolo
801	Seedayanni daganno fayyimmate xe'ne	1. Gifite 2. Sukarete xibba 3. HIV/AIDS 4. Kulalitete xibba 5. Wollanno
802	Ati loosiki aanna qarra abitanno fayimate xe'negido notto/ta?	1. Ee 2. Deen

**APPROVAL SHEET**

The undersigned examining committee certify that the thesis presented by Yohannes Sime entitled WORK-RELATED STRESS AND ASSOCIATED FACTORS AMONG EMPLOYEES OF HAWASSA INDUSTRIAL PARK, SOUTHERN ETHIOPIA, 2021,submitted to Jimma University Institute of Health Department of Psychiatry in partial fulfilment of the requirement for master degree in integrated clinical and community mental health, compiles with the regulation of university and meet the accepted standards with respect to originality and quality.

Place of submission: Department of Psychiatry Institute of health

Jimma University

Date of submission \_\_\_\_\_

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Research advisor \_\_\_\_\_

1. \_\_\_\_\_ Signature \_\_\_\_\_ date \_\_\_\_\_

2. \_\_\_\_\_ Signature \_\_\_\_\_ date \_\_\_\_\_

Internal examiner

\_\_\_\_\_ Signature \_\_\_\_\_ date \_\_\_\_\_