THE EFFECT OF PERCEIVED WORK ENVIRONMENT ON EMPLOYEE PERFORMANCE AND ORGANIZATIONAL EFFECTIVENESS IN BAHIR DAR UNIVERSITY

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ABSTRACT

The study examined the effect of two constituents of work environment (i.e. physical and psycho-social on employees' job performance and organizational effectiveness in Bahir Dar University. through stratified sampling technique, a sample of 213 employees was drawn from academic and administrative staffs. Statistical analysis was conducted by statistical package for social science (SPSS) version 20. The analyses revealed that participants who perceived their work environment as to be adequate and favorable scored comparatively higher on the measures of job performance and perceived organizational effectiveness. The two constituents of work environment were also found causing significant variance in employees' job behavior and their perception of organizational effectiveness. Regression analyses revealed that among the various components of work environment, working condition, safety and security, interpersonal relations, and rewards predominantly contribute to employees' job behavior and organizational effectiveness. The results also specified that psycho-social environment in work-place exert more impact on employees' job performance and organizational effectiveness than the physical environment does.

1. INTRODUCTION

Work environment allows people to perform their work optimally under comfortable condition (Roelofsen, 2002). How well the workplace engages an employee impacts their desire to learn skills and their level of motivation to perform. Skills and motivation level then influences employees' error rate, output rate, level of innovation, collaboration with others, absenteeism, and Length of service (Perrin, 2009). How well they engage with the organization, especially with their immediate environment, influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and, ultimately, how long they stay in the job (Leblebici, 2012). Work environment is one of management's focus areas for higher productivity, employee satisfaction and firm value (Al-Anzi, 2009). For any organization if employees are considered as assets then their utilization in terms of better productivity and enhanced performance are the main focus of all managerial activities. We should constantly pay attention to the needs and desires of human resources since they are important assets owned by every organization. It is expected that such a measure would result in improvement in job satisfaction, job performance and high loyalty to the company that can ultimately achieve various corporate objectives (Musriha, 2011). Management's new challenge is to create a work environment that attracts, keeps, and motivates its workforce. The responsibility lies with managers and supervisors at all levels of the organization. Businesses must step outside their traditional roles and comfort zones to look at new ways of working. They have to create a work environment where people enjoy what they do, feel like they have a purpose, have pride in what they do, and can reach their potential.

The workplace environment is the most critical factor in keeping an employee satisfied in today's business world. However, Today's workplace is different, diverse, and constantly changing. The typical employer/employee relationship of old has been turned upside down. Workers are living in a growing economy and have almost limitless job opportunities. This combination of factors has created an environment where the organization needs its employees more than the employees need the organization (Al-Anzi, 2009)**.** Workforce makes critical difference between success and failure. The effectiveness, with which organizations manage, develops, motivate, involve and engage the willing contribution of the employees will enable them to capitalize on their expertise most efficiently (Roelofsen, 2002).

However, Work environment is a wide industrial area where the employees are facing a serious problem in their work place like environmental and physical factors. An employee's workplace environment is a key determinant of the quality of their work and their level of performance as well as productivity and organizational effectiveness (Leblebici, 2012). Poorly designed workplace environment, working conditions, safety and security, interpersonal relationships, managing conflicts, etc are prone to occupational disease and it impacts on employee's motivation and subsequent performance, job satisfaction and productivity (Al-Anzi, 2009; Leblebici, 2012 & Dr.Chandrasekar,2011). Hence work environment has become a major topic for research studies. The aim of this research is to analyze the effect of perceived work environment on employees' job performance and organization effectiveness in order to contribute to theory and practice. The Central question of this research is: How do perceived physical and psycho-social work environment factors affect employee job performance and organizational effectiveness in Bahir Dar University for the year end 2005 E.C.?

1.2 Problem Statement

Past studies of work environment have had difficulty to reconciling on what constitutes work environment (Imran, Ashfaq, Soloman, & Mumtaz, 2011; Akintayo, 2012, Vischer, 2007, & Leblebici, 2012) and the consequences of good or bad work environment (Al-Anzi, 2009; Tjambolang, 2010 & Akintayo, 2012).Many researchers conceptualize work environment differently. For example, work environment may refer to only the physical environment within which employees engage in their work (Leblebici, 2012). It constitute Furniture, Workspace availability, light intensity, Weather/temperature, Ventilation/humidity, Noise/vibration, Premises hygiene/welfare facilities (Al-Anzi, 2009). For other researcher Work environment is the combination of factors (social support, physical working conditions, job characteristics, training and development and communication process) that influence work (Imran, Ashfaq, Soloman, & Mumtaz, 2011 & Vischer, 2007). Also Work environment refers to the immediate task and national environment where an organization drawn its inputs, processed it and returned the outputs inform of products or services for public consumption (Akintayo, 2012).

Another area of debate is the effect of work environment on a diverse set of outcome variables has also been one hot issue in this research tradition. Researchers have claimed that the physical environment has a tremendous impact on productivity and motivation. (Al-Anzi, 2009; Tjambolan, 2010 & Akintayo, 2012). Al-Anzi (2009) concludes that the quality of the employee's physical work environment has an impact on the level of employee's motivation and subsequent performance. About 86% of productivity problems reside in the physical work environment of organizations (Akintayo, 2012). The quality and quantity of work generated by employees are influenced by the office environment while poor environmental conditions can cause inefficient worker productivity as well as reduce their job satisfaction (Tjambolan, 2010). Quality of the physical workplace environment has a strong influence on a company's ability to recruit and retain talented people. Some factors in workplace environment may be considered keys affecting employee's engagement, productivity, morale, comfort level etc. both positively and negatively (Leblebici, 2012).

While other researchers assert that both the psycho-social and physical environment has impact on productivity, satisfaction and organizational effectiveness (Srivastava, 2008 & Vischer, 2007). Participants who perceived their work environment as to be adequate and favorable scored comparatively higher on the measures of job satisfaction, performance, and perceived organizational effectiveness. The two constituents of work environment were also found causing significant variance in employees' job behavior and their perception of organizational effectiveness (Srivastava, 2008).From the above debate one can summaries that work environment is physical environment within which employees engage in their work. Furniture, Workspace availability, light intensity, Weather/temperature, Ventilation/humidity, Noise/vibration, Premises hygiene/welfare, social support, physical working conditions, job characteristics, training and development and communication process are the factors for physical work environment in the work area. The physical work environment factors affect employee performance, job satisfaction productivity and etc.

Work environment is a significant factor for employees' performance, productivity, employee job satisfaction, etc. However, most of the previous studies relies heavily the physical work environment factors (Al-Anzi, 2009; Tjambolang, 2010; Akintayo, 2012 & Leblebici, 2012). Most studies didn't give attention to the psycho-social work environment factors and didn't consider both physical and psycho-social work environment factors except (Srivastava, 2000). So having this in mind, the researcher want to look in to the effect of psycho-social work environment factors in addition to physical work environment factors on employee job performance and organizational effectiveness in Bahir Dar University.Bahir Dar University is a university in the city of Bahir Dar, the capital of the Amhara National Regional State in Ethiopia. The University is a combination of two smaller institutes formed earlier, after the departments were gradually raised to a degree level starting from 1996. Currently, this university has several campuses, colleges and departments. The University has been organized under 14 major colleges in five campuses: Main campus, CoBE campus, Yibab campus, Technology campus and Zenzelima campus. Currently Bahir Dar University has more than 2338 permanent employees.

As it can be observed, there is a high level of employees turn over in the university. As I have preliminary investigated work environment factors are the cause for employees' turnover. Poor working condition, poor interpersonal relationships, inadequate employees' supervision, lack of commitment, inadequate facility, lack of recognition, etc. leads employees to dissatisfy and subsequent turnover. It is either due to the physical or psycho-social work environment factors or both. This makes the researcher to select the area as case study for analyzing the effect of perceived Physical and psycho-social work environment factors on employees' job performance and organizational effectiveness in Bahir Dar University.

Thus, in this study the researcher raised one Central question:

- How do perceived physical and psycho-social work environment factors affect employee performance and organizational effectiveness in Bahir Dar University for the year end 2010 E.C.?
- Sub Questions:
- Does perceived physical environment affect employee job performance?
- Does perceived physical environment affect organizational effectiveness?
- Does perceived psycho-social environment affect employee job performance?
- Does perceived psycho-social environment affect organizational effectiveness?
- Which factor dominantly and significantly affect on employees' job performance and organizational effectiveness?
- Which dimensions of physical & psycho-social work environment significantly affects employees' job performance and organizational effectiveness?

1.3 Objective of the Study

The main objective of this research is to analyze the effect of perceived work environment on employees' job performance and organization effectiveness in order to contribute to theory and practice.

- Specifically, the study is designed to:
- Examine the relationship between physical work environment and the employees' job performance & organizational effectiveness.
- Examine the relationship between psycho-social work environment and the employees' job performance & organizational effectiveness.
- Analyze work environment factors affecting the employee's job performance and organizational effectiveness.
- Identify which variable dominantly affect the employees' performance and organizational effectiveness.
- Suggest the recommendation to improve the working conditions for better performance and organizational effectiveness.

1.4 Research Hypothesis

An organization's physical environment and its design and layout can affect employee behavior in the workplace. As cited by Vischer (2007), the physical environment in which people work affects their job performance and job satisfaction (Brill, Margulis, & Konar, 1985; Clements- Croome, 2000; Davis, 1984; Dolden & Ward, 1986; Newsham, Veitch, Charles, Clinton, Marquardt, Bradley, Shaw, 1989 & Readon, 2004; Vischer, 1996).H1: There is a positive relationship between physical environment and employees' performance.To achieve high levels of employee productivity, organizations must ensure that the physical environment is conducive to organizational needs facilitating interaction and privacy, formality and informality, functionality and cross-disciplinarily (Leblebici, 2012).

H2: There is a positive relationship between physical environment and organizational effectiveness.

According to Vischer, (2007) Contemporary literature on stress in the work environment typically focuses on psycho-social factors. Psycho-social work environment factors affect employee job performance (Srivastava, 2008).

H3: There is a positive relationship between psycho-social environment and employees' performance.

Psychosocial environment of work organizations extend significant effect on job satisfaction and job performance of its members and also on effectiveness of the organization perceived by the employees (Srivastava, 2008).

H4: There is a positive relationship between psycho-social environment and organizational effectiveness.

According to Srivastava (2008) Psycho-social environment in work-place exert more impact on employees' job behavior and organizational effectiveness than the physical environment does.

H5: psycho-social work environment factors have greater effect on employee's job performance and organizational effectiveness than physical work environment factors.

2. RESEARCH METHODOLOGY

2.2 Research Design

There are several techniques which could be used to carry out research depending on the research problem area. When dealing with research problem, one can choose any of the three types of research (Yin, 1994): exploratory, explanatory, and descriptive. My research purpose and research question reveal that this study is mainly explanatory because data was collected through questionnaire to identify the cause and effect of perceived work environment on employees job performance and organizational effectiveness of the university. Explanatory research is a research type in which the primary goal is to understand the nature or mechanisms of the relationships between the independent and dependant variables. This approach used when it is necessary to show that one variable causes or determines the values of other variable Zikmund (1994). Hence, Explanatory research is being used to fulfill this study.

2.3 Research Approach

In order to achieve the objectives of this study, the researcher followed quantitative research methodology. Quantitative research was used to provide numerical measurement and analysis of the adoption circumstances. Survey questionnaires were used for standardization purposes to allow for aggregation of the results.

2.4 Population, Sample and Sampling Technique

2.4.1 Target Population

A population is any complete group of people, companies, hospitals, stores, college students or the like that share some set of characteristics (Zikmund, 1994). To recognize and treat a sampling frame difficulty, the target population will be redefined. The main objective of this research is to assess the influence of work environment on employees' performance and organizational effectiveness. So, permanent employees of the university were selected for this study.

2.4.2 Sampling Frame

To establish the sample frame, lists of employees were obtained from human resource departments of the university. The total population of the university is 2338 permanent employees. Hence, respondents were selected from this population who are currently on duty by excluding the study leaves.

2.4.3 Sampling Technique

In this study, Stratified sampling technique was used because the population from which a sample is to be drawn does not constitute a homogeneous group. According to Kothari (2004), in a stratified sampling the population is divided into several sub-populations that are individually more homogeneous than the total population (the different sub-populations are called 'strata') and then we select items from each stratum to constitute a sample. Since each stratum is more homogeneous than the total population, we are able to get more precise estimates for each stratum and by estimating more accurately each of the component parts; we get a better estimate of the whole population. Thus, the population can be divided in to two sub groups: academic and administrative staffs. The groups can be considered as stratums. The researcher selects sample from each stratum in a proportion base because the physical as well as the psycho-social environment cannot be generalized from one campus/or college to the others. For academic staffs Proportion was made as per the college and for administrative staffs by the campuses because they are placed in campus level. Finally lottery random sampling method was employed.

2.4.4 Sample size determination

Using the following formula (Israel, 2009), 311 employees are selected.

$$no = \frac{z^2 \, pq \, N}{E^2 (N-1) + z^2 pq}$$

Where: z = Refers to the confidence level of the estimate (usually fixed at 1.96, corresponding to a 95% confidence level)

pq = population proportion (that is unknown and then fixed at its maximum value: 0.25)

N = is the size of the population,

E = is the sampling error (often < 0.05)

According to Godden (2004), when the population is finite and sample size is large, it is possible to minimize the sample size (262) using finite population sample size formula.

$$nf = \frac{no}{1 + \frac{no}{N}}$$ where: nf = finite population sample size,

no = sample size

Table 1
Sampling procedure and sample size determination from each stratum.

N o	Stratum	College/ School/ Institution/ campus	Total population	Proportion	Sample Size
1	Academic staff	College of Agriculture	65	0.039	10
		College Business & Economics	79	0.048	13
		School of Chemical & Food Engineering	69	0.042	11
		School of Civil & Water Engineering	51	0.031	8
		School of Computing & Electrical Engineering	130	0.079	21
		School of Mechanical & Industrial Engineering	84	0.05	13
		College of Textile Engineering	93	0.056	15
		College of Education & Behavioral Science	27	0.016	4
		College of Humanity	62	0.037	10
		Institute of land Administration	26	0.015	4
		School of law	15	0.009	3
		College of Medicine & Health	86	0.052	14
		College of Science	138	0.084	22
		College of social science	45	0.027	7
	Total		970		154
2	Administrative staff	Zenzelima campus	33	0.02	5
		CoBE campus	91	0.055	15
		Technology campus	266	0.16	42
		Yibab campus	76	0.046	12
		Main campus	205	0.125	33
	Total		671		107
	Grand Total		1641		262

Source: survey data, 2013

2.5 Data Sources

In this study, primary source of data were used to meet the research objectives. Primary data were collected through survey questionnaires. Questionnaires were distributed to the selected employees' of Bahir Dar University. Questionnaires were translated in to local language Amharic because most of the respondents are believed to be below bachelors, question in English language might not produce the required response and assumed to limit their participation on the survey. The researcher distributed the questionnaires to the employees of the university individually.

2.6 Variables, Instrument and measurement

2.6.1 Variables

There are two groups of variables in this research. These are the Dependent & independent variables.Dependent variables are job performance, organizational effectiveness.Job performance: Performance is defined as a function of individual ability and skill and effort in a given situation (Porter and Lawler, 1974). Performance very much depends on perception, values and attitudes. Performance has been defined as effective implementation of duties and job activities (Organ, 1998) or achievement of organizational and career goals effectively (Podsakoff, 1990). One of the basic goals of organizations is increasing performance in order to achieve greater effectiveness. In this study employee' job performance measured through the employees own job understanding, their attendance & punctuality, their dependability and their interpersonal relationship in the organization (Srivastava, 2008).

2.6.2 Organizational effectiveness

it is simply the increment of organizational profitability, market share, efficiency of investment and improves the position of service organizations in the community. Like job performance, perceived organizational effectiveness is measured employees satisfaction and their commitment for their organization (Srivastava, 2008). Independent variables are consists two components; the physical work environment and psycho-social work environment. These components can further be divided in the form of different independent variables.

2.6.3 The physical environment

working conditions, safety and security, legally prescribed provisions of employees' welfare are the dimensions which are used to measure this variable. It is measured through administering questionnaire to assess the extent of perceived adequacy and favorability of the above components of physical work environment (Srivastava, 2008).

2.6.4 The psycho-social environment

which is relating to both the psychological and the social aspects of something, or relating to something that has both of these aspects. Interpersonal relations, reward system, supervision are the different dimensions of psycho-social work environment variable. They measure to assess the extent of motivational orientation of psycho-social environment of the organization (Srivastava, 2008).Instrument: Structured survey questionnaire with 5-point Likert scale questions which contains separate sections for each of the independent and dependent variables.

3. RESEARCH MODELS

The relationship between the dependent & independent variables is as follows:

Employees' job performance/perceived organizational effectiveness/ = f (physical environment, psycho-social environment)

$$JP = \beta 0 + \beta 1 py + \beta 2 ps + vi \text{ ---------------- (1)}$$
$$OE = x0 + x1 py + x3 ps + si \text{ ----------------- (2)}$$

Where: JP = Employees job performance
   OE = Perceived organizational effectiveness
   Py = physical environment
   Ps = psycho-social environment
   vi & si = stochastic variables/error term
   β & x = Magnitude of the coefficients of the variables

3.2 Analytical Framework

It portrays the conceptual research model that is formulated about the relationship between physical and psycho-social work environment with employees' job performance and organizational effectiveness was conceptualized and depicted in Figure below.
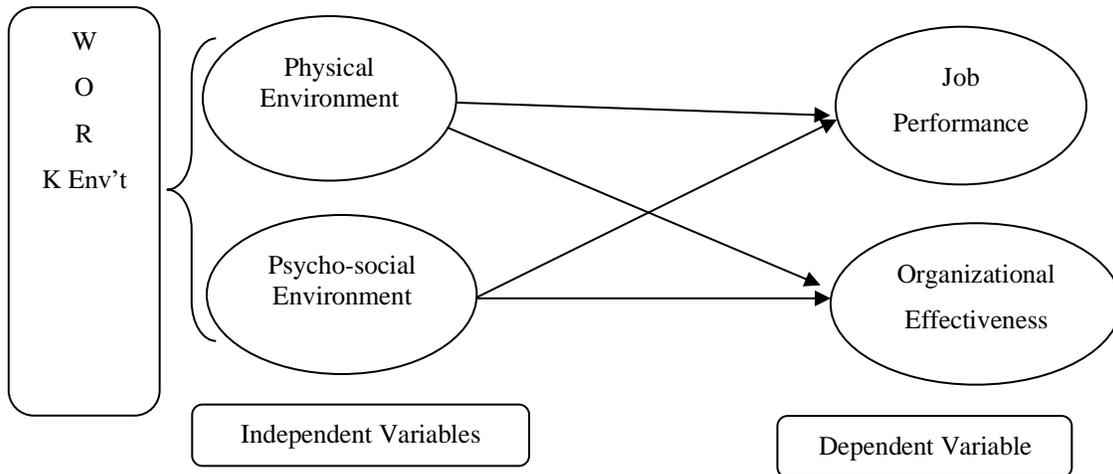

Fig. 1: Analytical framework

3.3 Data Measurement

In this research, ordinal scales data measurement was used. Ordinal scale is a ranking or a rating data that normally uses integers in ascending or descending order. The numbers assigned to the agreement or degree of influence (1, 2, 3, 4, and 5) does not indicate that the intervals between scales are equal, nor do they indicate absolute quantities. According to Zikmund (1994), using a Likert scale allows the respondents to indicate their attitudes by checking how strongly they agree or disagree with the constructed statements. Five alternatives are generally offered: strongly agree, agree, neutral, disagree or strongly disagree.

3.4 Data Analysis

In this study both descriptive statistic and inferential analysis were used to analyze the data. Descriptive statistics allows researcher to present the data acquired in structured, accurate and summarized manner (Collis & Roger Hussey,

2003). The descriptive statistics utilized in this research used to analyze the demographic data included frequency, percentages, etc. Inferential analysis is concerned with the various test of significance for testing hypothesis, normality, autocorrelation, multicolinearity in order to determine with what validity data can be said to indicate some conclusion(s). The data collected from the returned questionnaire were entered into SPSS (Statistical package for social science software) version 20 for analysis. The data was sorted to group questions according to applicable constructs under test. Finally correlation and regression analysis were performed. In this study, a multiple regression analysis was performed by using all the discrete variables (dependent and independent) variables available in the dataset.

3.5 Reliability and Validity Tests of the Instrument

Pilot study (preliminary test) was carried out using convenient sampling selection method in the university having the same characteristics with the participants of the main study. The advantage of doing a pilot study include; it helps to detect potential defects in the measurement procedures, it assists in identifying ambiguous items, and it allows the researcher to become aware of non verbal behavior that may occur due to the wording question(Singh,2009). Therefore, the researcher tried to insures the reliability and validity of the questionnaire. To measure the reliability of the questionnaire, the researcher applied a preliminary reliability test from 12 employees. A reliability score < 0.60 is considered as weak while reliability (cronbach's alpha) of > 0.70 is good (Nunnally, 1978). Both inter-item reliability and half reliability was conducted and it was good and acceptable since it is >0.70. The reliability result tells us about which elements would make up the score and which need to be dropped. A preliminary test showed that deleting item 8 of commitment dimension to increases total reliability (alpha) for the scale. Validity is the extent to which an instrument measures what it claims to. Factor analysis was conducted to measure the validity of the items. Most of the time the item loading is recommended to have above 0.3 level (Hair et al, 1998). Item 6 and 7 of commitment dimensions were deleted since they showed low loading (less than 30%) of the common factor. Content validity was also tested by consulting experts. The expert was requested to evaluate the Amharic version and identify whether the questions are in agreement with the scope of the items and the extent to which these items reflect the concept of the research problem. The expert also requested to evaluate whether the instrument used is valid statistically and that the questionnaire is well designed to provide relations and tests between variables. The expert was expected to agree that the questionnaire is valid and suitable enough to measure the concept of interest with some amendments, and do well in this regard.

4. RESULTS AND DISCUSSIONS

All the data obtained were coded and entered in to SPSS (statistical package for social science) version 20 and inferences were made based on the result. The research instrument used was survey questionnaire. The location of the study was Bahir Dar University. The study population comprised permanent employees of Bahir Dar University. A fairly representative sample was obtained by employing the use of a stratified sampling technique.

4.2 Demographic Profile of Respondents (N = 213)

Table 2
Demographic profile of respondents

Variables	Category	Frequency	Percent	cumulative percent
Sex	Male	126	59.2	59.2
	Female	87	40.8	100
Age	18 – 24	27	12.7	12.7
	25 –34	113	53.1	65.8
	35 - 44	53	24.8	90.6
	45 - 54	14	6.6	97. 2
	55 and above	6	2.8	100
Staff	Administrative	101	47.4	47.4
	Academic	112	52.6	100
Education	10/12 completed	6	2.8	2.8
	Diploma	40	18.8	21.6
	Bachelors	98	46.0	67.6
	Masters and above	69	32.4	100

As shown in the above table 4.1, from 262 respondents, 126 were males and 91 were females. Males made up the majority of respondents at 59% while females were 41%. The ratio of males to females in the sample size is 59 to 41.

The respondents' age: 18-24 (12.7%), 25-34 (53.1%), 35-44 (24.8%), 45-54 (6.6%), and above 55 (2.8%). Majority of the respondents were between the ages of 24-34 years accounting for 53.1 %. The staff of respondents; 52.6 % of respondents were academic staff and 47.4% of the respondents were administrative staffs. Majority of the respondents were academic staffs. Finally, the above table also shows respondents' educational level; 10/12 completed (2.8%), diploma holder (18.8%), bachelors (46%) & masters and above (32.4%). Majority of the respondents were Bachelors.

4.3 Response Rates

Two hundred and sixty two (262) questionnaires were managed to employees of Bahir Dar University from five campuses and fourteen colleges/ institutions/ schools. A total of 213 useable copies of the questionnaire were returned. The percentages of the useable copies of the questionnaires were 81.2 percent.

Table 3
Response rates

Particulars	Total	Percentage
Total questionnaires distributed	262	100
Questionnaires collected	213	81.29

4.4 Reliability Analysis

It measures whether items in a category are measuring the same thing. If a variable has more than one items reliability can be measured by comparing the scores of any item with the total scores on all the items. Generally a reliability score < 0.60 is considered as weak while reliability (cronbach's alpha) of > 0.70 is good. The reliability result tells us about which elements would make up the score and which need to be dropped. Item 1 of employee welfare, item 7 of job understanding and item 8 of commitment dimensions were dropped. Because the alpha value indicates that deleting the variables from their respective groups can improve total reliability value.

Table 4
Reliability Analysis

Variables	No. of Items	Cronbach's Alpha (α)
Physical work environment	14	.834
Psycho-social work environment	17	.834
Employee performance	19	.840
Organizational effectiveness	8	.831
Whole items reliability	58	.923

Source: researcher's computation with SPSS

From the above table 4.3, it is seen that the reliability value was estimated to be α = 0.831- 0.840 between the scale. If the above calculated reliability values are compared with the standard value alpha of 0.7 advocated by Cronbach's, then it can be safely assumed that the scales used by the research are highly reliable for data analysis.

4.5 Factor Analysis

Factor analysis is used to reduce the dimensions of a variable to meaningful number of factors. Some times when the variable in consideration is not directly observed a factor scores can be generated that can represent the latent variable. It also used to avoid items which are not significant for analysis. Using factor analysis item 5, 6, 7 & 8 of satisfaction, item 5, 6, & 7 of commitment, item 3, 4 & 5 of interpersonal relations of the dimensions were dropped. Because, loading value of the item is less than 30%. The expert also judged the face and content validity of the questionnaires as adequate. Hence, the researcher satisfied the content and construct validity. Generally, 71 items using 5 Likert- type scales were used to measure physical environment, psycho-social environment, employees' job performance and perceived organizational effectiveness. However, 13 items were deleted by their factor loading and item reliability. Overall, 58 items using 5 Likert-type scale were used to measure these variables for analysis. Those items with factor loadings can be seen on table 5.

Table 5
Factor analysis result

Items	Physical	Psycho-social	Performance	Effectiveness
Safety and Security				
I am aware of risks and hazards of my work environment.	0.432			
The university is committed to ensuring my health and well being.	0.612			
I am satisfied with materials and equipment provided to perform my job.	0.662			
The University provides an environment in which I feel safe and secure.	0.746			
I am happy with university's' overall job security and safety.	0.684			
Working Condition				
I am satisfied with the job location working area of the university.	0.641			
I am satisfied with the present working hour/ time.	0.630			
Most employees in this university enjoy their work.	0.461			
I believe in and take pride in my work and my workplace.	0.828			
I am satisfied with furniture, lighting, noise, temperature & spatial arrangement of the office in the university.	0.352			
Employee Welfare				
Disable employees are fairly treated.	0.374			
I am well informed on the dangers of alcohol, chemical and substance.	0.438			
The university creates awareness on the dangers of HIV/AIDS & other disease.	0.700			
Managers care about the welfare of employees.	0.621			
Interpersonal relation				
I am satisfied with work relationships with the people around me.		1.000		
I feel accepted and valued by my colleagues.		0.667		
I enjoy with my coworkers.		0.463		
Reward				
I am satisfied with the compensation I get & I think it matches with my responsibility.		0.488		
I am happy with the recognition and rewards for employees outstanding.		0.690		
I am satisfied with the benefits my university extends to me.		0.620		
The university has a fair promotion policy.		0.622		
The reward procedures in this university are fair.		0.734		
If I work hard, I will receive extra pay (bonus) for my efforts.		0.649		
I have plenty of opportunities for reward in this university.		0.671		
I have plenty of opportunities for promotion in this university.		0.636		
Supervision				
My immediate supervisor treats me with respect.		0.907		
My immediate supervisor gives me feedback on my job		0.863		
I have opportunities to provide ideas into decisions that affect my work		0.393		
My immediate supervisor is committed to find a better solution to problems.		0.604		
I am listened, as well as invited to express my thoughts and feelings by my immediate supervisor.		0.788		
My immediate supervisor is quite competent in doing his/her job.		0.553		
Job understanding				
I have Adequately complete assigned duties.			0.929	
I Fulfill responsibilities specified in job description.			0.707	
Fulfilling my responsibilities give me a feeling of personal achievement.			0.750	
I have sufficient skill and knowledge to perform all parts of the job effectively, efficiently and safely.			0.488	
I Perform tasks which are expected from me.			0.873	
I work at full capacity in my entire job duties.			0.538	
Dependability				
Complete work assignments with very close supervision.			0.830	

Carries out instructions and responsibilities with close supervision.	0.773
Carries out work assignments with expected degree of independence and efficiency.	0.536
Committed to accomplish specific tasks.	0.540
Have ability to handle changes in the work independently.	0.490
Attendance and punctuality	
Demonstrates adequate attendance and punctuality.	0.623
Regularly ready for the workday and arrive on time.	0.531
Attendance at work is above the norm in the university.	0.716
Interpersonal relations	
Helps others who have heavy workloads.	0.336
Have a skill to Work effectively with other employees/departments in the university.	0.414
Has a skill of develop positive working relationships.	0.427
Helps each other as a team to improve work processes.	0.845
Helps each other to accomplish their own common objectives.	0.886
Employee satisfaction	
I expect to remain working here for at least the next two years, assuming I continue to meet performance expectations.	0.615
I would recommend our organization to friends as a good place to work.	0.813
Our company values are consistent with my personal values.	0.824
There are no processes or organizational barriers to my doing a good job.	0.610
Organizational Commitment	
I would be happy to spend the rest of my career with my university.	0.731
I feel as if my university's problems are my own.	0.830
I feel a sense of "belonging" to my organization.	0.821
My university has a great deal of personal meaning for me.	0.411

Source: researcher's computation with SPSS

Total explained variance for safety & security (40.496%), working condition (36.652%), employee welfare (30.169%), inter personal relationship (55.264%), reward (41.226%), supervision (50.216%), job understanding (53.600%), Dependability (42.140%), punctuality (39.427%), relationship (39.315%), satisfaction (55.252%), commitment (51.660%).

4.6 Normality Test

Distribution of the data is another issue in this research, whether it is normal/or not. To check the distribution of score is normal, we need to look at the values of kurtosis and skewness in the SPSS output. Positive value of skewness indicates too many low scores in the distribution, where as negative values indicate a build-up of high scores. Positive values of kurtosis indicate a pointy and heavy tailed distribution, where as negative values indicate a flat and light tailed distribution (Field, 2000). Skewness measures the degree to which cases are clustered towards one end of an asymmetry distribution. In general, the further the value of skewness is frm zero, the more likely it is that the data are not normally distributed (Field, 2000). Kurtosis measure the level of peakness in a histogram. High peak have positive kurtosis, while flater distribution have negative kurtosis.

In a normal distribution, the values of skew and kurtosis are 0. If a distribution has values of skew or kurtosis above or below 0 then this indicates a deviation from normal (Field, 2000). As we have seen from the following table 6, the skewness and kutosis approaches or around to Zero and it is almost normal. All variables were found to be normal.

Table 6

Tests of Normality Statistics

		Psycho-social environment	Organizational effectiveness	Employees Performance	Physical environment
N	Valid	213	213	213	213
	Missing	22	22	22	22
Skewness		.369	-.060	-.243	.087
Std. Error of Skewness		.167	.167	.167	.167
Kurtosis		.203	-.122	-.284	-.371
Std. Error of Kurtosis		.332	.332	.332	.332

Source: researcher's computation with SPSS

Frequency distributions come in many different shapes and sizes. It is quite important, therefore, to have some general descriptions for common types of distributions. In an ideal world our data would be distributed symmetrically around the centre of all scores. As such, if we drew a vertical line through the centre of the distribution then it should look the same on both sides. This is known as a normal distribution and is characterized by the bell-shaped curve. This shape basically implies that the majority of scores lie around the centre of the distribution (so the largest bars on the histogram are all around the central value).
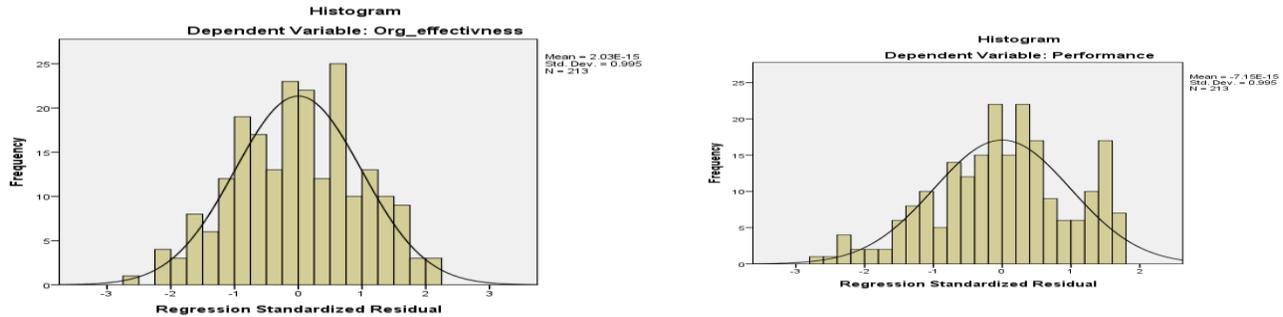

Fig. 2: Normal distribution of the data

4.7 Correlation

Table 7
Correlation table

		1	2	3	4
	Correlations				
Physical env't	Pearson Correlation	1			
	Sig. (1-tailed)				
	N	213			
Psycho-social env't	Pearson Correlation	.112	1		
	Sig. (1-tailed)	.000			
	N	213	213		
Employee Performance	Pearson Correlation	.304**	.412**	1	
	Sig. (1-tailed)	.000	.000		
	N	213	213	213	
Org. effectiveness	Pearson Correlation	.556**	.621**	.222**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	213	213	213	213
**. Correlation is significant at the 0.01 level (1-tailed).					

Pearson product moment correlation coefficient (r) was used to determine the strength of association between the dependent (OE & JP) and independent variables (Py & Ps). It is a parametric technique which gives a measure of the strength of association between two variables (Collis & Roger Hussey, 2003). As it can be shown in the above correlation matrix, each variable is perfectly correlated with itself and so r=1 along the diagonal of the table. Employee performance is positively and significantly related to physical work environment with a Pearson correlation coefficient of r = 0.304, p<0.01 and psycho-social work environment with r = 0.412, p < 0.01. The Pearson correlation matrix also shows a significant positive relationships between perceived organizational effectiveness and physical work environment (r = 0.556, p<0.01), and psycho-social work environment (r=0.621, p<0.01).

4.8 Multicolinearity

Multicolinearity exists when there is a strong correlation between two or more predictors in a regression model. Multicolinearity poses a problem only for multiple regressions because it involves more than two predictors. Perfect Collinearity exists when at least one predictor is a Perfect linear combination of the others. One way of identifying multicolinearity is to scan the correlation matrix of all of the predictor variables and see if any correlate very highly (correlation of above 0.80 or 0.90).Another method is to produce a Collinearity diagnostics with the use of SPSS, and one of which is the variance inflating factor (VIF). The VIF indicates whether a predictor has strong linear relationship

with the other predictor(s). Although there are no hard and fast rules about what value of the VIF should be a cause for concern, Myers (1990) as cited by Field (2000) suggests that value of 10 is good value at which to worry. Bowerman and O'Connell (1990), also cited by Field (2000), and suggest that if the average VIF is greater than 1, then multicolinearity may be biasing the regression model. Related to the VIF is the tolerance statistics, which is a reciprocal of VIF (1/VIF). Such values below 0.2 are worthy of concern. Considering the regression model for this study all the VIF values are less than 2 and the tolerance statistics values are all below 1 (see tables 4.9 and 4.12) as such no multicolinearity is observed in this model.

4.9 Autocorrelations

For any two observations the residual terms should be uncorrelated (or independent). This eventually is sometimes described as a lack of autocorrelation. This assumption can be tested with the Durbin-Watson test, which tests for social correlation between errors. Specifically, it tests whether adjacent residuals are uncorrelated. The test statistics for this can vary between 0 and 4 with a value of 2 meaning that the residuals are uncorrelated (Manly, 2009). In our model the value of the test is closer to 2 (1.731 & 1.717). So it can be safely assumed that there is no problem of autocorrelation.

4.10 Multiple Regression Results

In this study, multiple regression analysis was carried out to get the predictive value of the constructs considered. Since the model is developed in such a way that each construct is being affected by other constructs, it is necessary to carry out a separate regression analysis against each variable which are considered to be affected by other variables. This was basically made to determine the linear combination of the constructs.

4.11 Regression of organizational Effectiveness on Physical and Psycho-Social

Work Environment

Table 8
Model Summary (1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.672[a]	.451	.435	.501	.451	28.252	2	210	.000	1.731

a. Predictors: (Constant), Physical environment, Psycho-social work environment
b. Dependent: Organizational effectiveness

Table 9
ANOVA (1)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	39.074	2	19.537	74.211	.000[b]
	Residual	55.285	210	.263		
	Total	94.359	212			

a. Dependent Variable: Organizational effectiveness
b. Predictors: (Constant), Psycho-social work environment , Physical work environment

Table 10
Coefficient (1)

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.868	.207		4.200	.000		
Physical environment t	.251	.078	.237	3.208	.002	.510	1.961
Psycho-social envi't	.519	.085	.455	6.147	.000	.510	1.961

a. Dependent Variable: Organizational effectiveness

From Table 10, it can be seen that the multiple R value of 0.672(67.2%) indicates a moderate positive relationship between the variables and R Square value for the model showed that 45.3% of the variance in the model can be predicted from the independent variables. The remaining 54.7% of the dependent variable is explained by other variables which are not depicted in the model. Moreover, R square change shows that the model will be valid if it is drown from the total population rather than the sample considered for this study. Table 4.8 presents the ANOVA report on the

general significance of the model. As p is less than 0.05, the model is significant. Thus, the combination of the variables (physical and psycho-social) significantly predicts the dependent variable (organizational effectiveness) (F=74.21; p < 0.05). Table 4.9 shows the Beta Coefficients that present the contributions of each variable to the model. The t and p values showed the impact of the independent variables on the dependent variable (Freedman, 2005). From this, it is clear that the psycho-social work environment had the highest impact on organizational effectiveness with comparing physical work environment constructs. Thus, the model for predicting perceived organizational effectiveness becomes:

OE = 0.868 + 0.251py + 0.519ps + si

Where: OE= organizational effectiveness, py = physical environment, ps = psycho-social

Environment, si = stochastic variables/error term

The b-values (beta coefficient) tell us about the relationship between the outcome and each predictor. If the value is positive we can tell that there is a positive relationship between the predictor and the outcome, whereas a negative coefficient represents a negative relationship. For these data all two predictors have positive b-values indicating positive relationships. So, there is a positive relationship between the predictors (physical and psycho-social environment) and an outcome (organizational effectiveness) since the value of beta coefficient is positive. As physical environment is good, organizational effectiveness improved; as psycho-social work environment is good, organizational effectiveness also improved.

4.12 Regression of Employee performance on Physical and Psycho-Social

Work Environment

Table 11
Model Summary (2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.482ᵃ	.232	.210	.405	.232	10.396	6	206	.000	1.717

a. Predictors: (Constant), Physical environment, Psycho-social work environment
b. Dependent: Employee performance

Table 12
ANOVA (2)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	7.505	2	3.752	21.548	.000ᵇ
	Residual	36.568	210	.174		
	Total	44.073	212			

a. Dependent Variable: Employee Performance
b. Predictors: (Constant), Physical environment, Psycho-social work environment

Table 13
Coefficient (2)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.971	.168		17.670	.000		
	Physical environment	.022	.064	.030	.342	.733	.510	1.961
	Psycho-social envi't	.305	.069	.391	4.442	.000	.510	1.961

a. Dependent Variable: Employee Performance

From Table 4.10, it can be seen that the multiple R value of 0.482(48.2%) indicates a moderate positive relationship between the variables and R Square value for the model showed that 23.2% of the variance in the model can be predicted from the independent variables. The remaining 76.8% of the dependent variable is explained by other variables which are not depicted in the model. Moreover, R square change shows that the model will be valid if it is drown from the total population rather than the sample considered for this study.Table 4.11 presents the ANOVA report on the general significance of the model. As p is less than 0.05, the model is significant. Thus, the combination of the variables (physical & psycho-social) significantly predicts the dependent variable (employees' job performance)

(F=21.54; p < 0.05). Table 13 shows the Beta Coefficients that present the contributions of each variable to the model. The t and p values showed the impact of the independent variables on the dependent variable (Freedman, 2005). From this, it is clear that the psycho-social work environment had the highest on use had the highest impact on organizational effectiveness with comparing physical work environment constructs. Thus, the model for predicting employees' performance becomes:

$$EP = 2.971 + 0.022py + 0.305ps + vi$$

Where: EP = employees' job performance, py = physical environment, ps = psycho-social

Environment, vi = stochastic variables/error term

The b-values (beta coefficient) tell us about the relationship between the outcome and each predictor. If the value is positive we can tell that there is a positive relationship between the predictor and the outcome, whereas a negative coefficient represents a negative relationship. For these data all two predictors have positive b-values indicating positive relationships. So, there is a positive relationship between the predictors (physical and psycho-social environment) and an outcome (Employees' job performance) since the value of beta coefficient is positive. As physical environment is good, employees' job performance improved; as psycho-social work environment is good, employees' job performance also improved.

Table 14

Physical and Psycho-social component on Employees' Job Performance

Predictors	B	p
1. Physical work environment		
▪ Working condition	0.203	0.000
2. Psycho-social work environment		
▪ Interpersonal relations	0.245	0.000
▪ Supervision	0.080	0.041

Regression of employees' job performance on the physical and psycho-social work environment (predictors) revealed that among the components of the two constitute of work environment factors, working condition under the physical environment has a positive contribution (20.3%) for employees' job performance. Rest of the physical environment; safety and security and employee welfare found to be ineffective in contributing the employees' job performance. While interpersonal relations and supervision components of psycho-social work environment were found positively contributing (24.5% & 8% respectively) for employees' performance. The results also specify that working conditions and interpersonal relations at work were dominantly contributed for employees' job performance.

Table15

Physical and Psycho-social component on Perceived organizational effectiveness

Predictors	B	p
1. Physical work environment		
▪ Safety and security	0.221	0.000
▪ Working condition	0.262	0.000
2. Psycho-social work environment		
▪ Rewards	0.403	0.000
▪ Interpersonal relationships	0.146	0.027

In regarding to regression of organizational effectiveness, safety and security and working condition under physical work environment positively contributing (22.1% & 26.2% respectively) for perceived organizational effectiveness. While, reward (40.3%) and interpersonal relationship (14.6%) of psycho-social work environment was found positively contributed for perceived organizational effectiveness. Reward is a dominant predictor/ contributor of perceived organizational effectiveness.

4.13 Hypothesis Test

Based on the regression analysis of the above model, the physical work environment has a positive effect on employees' job performance (β = 0.022, p<0.05) and for perceived organizational effectiveness (β = 0.251, p<0.05). Hence, hypothesis 1 and 2 were supported. It implies that physical work environment has a positive impact on employees' job performance and organizational effectiveness. The psycho-social environment also has a positive effect for employees' job performance (β=0.305, p<0.05) and organizational effectiveness (β = 0.519, p<0.05). Hypothesis 3 and 4 were also supported. It implies that psycho-social work environment has a positive impact on employees' job performance and organizational effectiveness.

Lastly, in both models psycho-social work environment has a dominant effect on perceived organizational effectiveness and employees' job performance than the physical work environment does. It contributes 30.5% (2.2% contribution of physical environment) for employees' job performance and 51.9% (25.1%) for perceived organizational effectiveness. Hence, hypothesis 5 was also supported.

5. CONCLUSION AND RECOMMENDATION

5.2 Conclusions

The results of the study enable us to conclude that physical as well as psycho-social work environment of work organizations extend significant effect on employees' job performance of its members and also on effectiveness of the organization perceived by the employees. The findings of the present study are also in conformity(consistent) with the observations of earlier studies on the effect of perceived work environment on employees' job behavior and organizational effectiveness (Srivastava , 2008).The results also specified that among dimensions of two constituents of work environment, working conditions, interpersonal relations and Rewards in the work organizations play dominant role in determining the level of employees' job performance and the extent of organizational effectiveness. The physical work environment is low in explaining the model of employees' job performance and perceived organizational effectiveness. Psycho-social work environment is a dominant factor in predicting employees' job performance and organizational effectiveness. Thus, psycho-social work environment; in comparison to physical work environment of workplace exert greater impact on employees' job performance and organizational effectiveness.

The results of study demonstrated that perceived adequacy or inadequacy of work environment, both physical and psycho-social, extends noticeable effect on employees' job performance and perception of organizational effectiveness. The effect of work environment on job performance may be attributed to the employees' job attitudes formed out of cognitive appraisal of various components of work environment. Employees' job performance and their perception of organizational effectiveness comes from the feeling; employees' positive attitude towards various components or factors of job life. The employees who perceive and feel the work environment as to be adequate, safe and congenial, develop positive attitude towards various job components, which ultimately results in higher job performance and job involvement among these employees.

5.3 Recommendations

On the base of the findings/conclusion derived; the following recommendation was made by the researcher. In order to improve the employees' performance and organizational effectiveness, Bahir Dar University should consider the following points:As it was explained psycho- social work environment play significant role on organizational effectiveness and employees' job performance; BDU should emphasis on those components; on reward, supervision, & interpersonal relations. Under physical environment components; safety & security and working conditions has a positive impact and it is better to consider them. Make the university safe and comfort by paying attention to the needs and desires of human resource (since they are important assets owned by every organization) to perform their work effectively and efficiently. Make the employees to Participate/ or involve on the common issue of the university like decision making so that employees' develop belongingness, commitment and share the values for implementing the objectives and strategies of the institution.Create a good work environment by encouraging relationship among employees, with colleagues, and immediate supervisors so that they are motivated in performing tasks/activities in the institution.

The BDU should consider employees' work environment while making policies, rules and regulations in the university like reward packages. Give recognition for employees to increases their job satisfaction, motivation and subsequent performance so that effectiveness in the organization will be enhanced.Future Research ImplicationsThe results will have important implications and is believed to be helpful for the all colleges/ institutions/schools in Bahir Dar University in particular and in Ethiopia in general. While this study has revealed some interesting results, one should be careful of its limitations related essentially to its sample size and scope of the study. Although the researcher believes that this study is deep, it is still believed that it can be further extended to include more respondents from externals to make it more realistic and more reliable. Finally, due to different factors I couldn't touch other dimensions of work environment. Thus, further research needs to contain more desirable dimensions, in order to gain better insight.

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