

RESEARCH ARTICLE

Available online at http://www.journalijdr.com



International Journal of Development Research Vol. 10, Issue, 08, pp. 39183-39189, August, 2020 https://doi.org/10.37118/ijdr.19660.08.2020



**OPEN ACCESS** 

# EFFECTS OF PSYCHOLOGICAL STRESS ON EMPLOYEES' PRODUCTIVITY IN MAIZE FLOUR PROCESSING COMPANIES IN NAKURU WEST SUB-COUNTY, NAKURU COUNTY, KENYA

## \*Loice Wanjeri Kabaki, Paul Omato Gesimba and Peter Koome

Faculty of Social Sciences, St. Paul's University, Kenya

Article History: Received 29<sup>th</sup> May 2020 Received in revised form 07<sup>th</sup> June 2020 Accepted 20<sup>th</sup> July 2020 Published online 30<sup>st</sup> August 2020

*Key Words:* Psychological stress, Employee Productivity, Occupational health, Occupational Safety.

\*Corresponding author: Loice Wanjeri Kabaki

It is the duty of organization to keep their workers safe from work related risks. The study aimed at investigating the effects of psychological stress on employees' productivity in maize flour processing companies. The study utilized the descriptive research design and targeted population was 204 employees of C01 and C02 maize flour companies in Nakuru West Sub-County in Nakuru County, Kenya. Stratified sampling technique was employed to acquire a sample that was equivalent to 30% of the target population. Data was collected using a questionnaire and an interview guide. Quantitative data was analyzed by the use of descriptive Statistics aided by package for social sciences (SPSS) software. Qualitative responses were summarized into category of themes, patterns and sub-topics. The study found that psychological stress affected the productivity of employees with increase in psychosocial stress leading to reduced employees' productivity. Based on the findings, the study recommends that companies should create optimistic work environment that gives employees hope that they can achieve their own goals.

*Copyright* © 2020, Laísa Faria Viana et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Laísa Faria Viana, Alfredo Kingo Oyama Homma, Antônio José Elias Amorim de Menezes, Jair Carvalho dos Santos et al. "Effects of Psychological Stress on Employees' Productivity in Maize Flour Processing Companies in Nakuru West Sub-County, Nakuru County, Kenya.", International Journal of Development Research, 10, (08), 39183-39189

# **INTRODUCTION**

Organizations are formed by individuals who are conformed to one another and share a common goal. Health and safety regulations are vital to the well-being of the worker and the employer. Health and safety risks are present in contemporary work environments. It is the duty of Organization management to keep their workers safe from work related risks. Globally, the most valuable assets in an organization are Human Resource (HR). Due to high human resource work performance, the efficient utilization of human resources foresees any company at the uppermost level and hence it is important for companies to make sure that they have a healthy and secure workplace for employees. A safe and healthy work atmosphere promotes work productivity and is a key element of worker human dignity (ILO, 2010). Investing in health and safety at work has to be looked upon as an investment rather a cost. The grade to which the company cares for the employee by the means of health and comfort in the workplace impacts their relationship (Dowing, 2015). However, in many companies within Kenya, there have been instances of lack of measures that are put in place concerning occupational health and safety in the workplace which has left employees exposed to health hazards of various categories.

Ojiemo, reports that such a scenario has resulted to a competitive disadvantage, damaging the companies' ranking amongst investors. Regardless of these observations, it is not known how influential health and safety has been in enhancing employees' workplace productivity. He adds that few empirical studies have interrogated the effects of workplace health and safety on productivity of employees that is characterized by improved efficiency, meeting of deadlines and enhanced performance (Ojiemo, 2012). The concept of employees' productivity involves the factors of the environment in the work place that the employer provides to their employees that could support the employees' performance at work (WHO, 2005). Unstable machines, poor lighting, unbearable noise and ventilation are some of the variables that could cause a lot of distress to the employee. The features that the company has were the determining factors of employees' performance. Work and health are related to the work environmental factors. According to Dembe employees job was impacted by the factors of their working environment (Dembe, 2001). It can cause physiological and mental reactions which can be a long term problem on the employees' performance. Globally, nationally and locally, a workforce that is healthy is paramount for sustainable social and economic development (Pandya & Ghumra, 2016). Health distresses,

clearly, are a huge drain on a worker's capability to be productive. Most companies that are productive have employees who are healthy and happy, which is the basis of an organization that is successful (Pandya & Ghumra, 2016). Similarly, organization expenditures are minimized when there are measures in place concerning health and safety on employees (Mabuza, 2018). It is therefore essential for companies to prioritize and capitalize on safety and health at the workplaces and look at it as an investment rather than a cost. The measures of safety and occupational health at work have failed to be observed in many companies leaving the employees exposed to health hazards that vary (Kar & Mishra, 2016). According to Katsura and Gadzirayi (2010) more than five employees in food companies were given sick off leaves that take more than 2 working days. The study shows that 330 minutes of production time was lost in one of the food factories. This happened after employees who were deployed in the production department were given sick leave days that added up to 11 working days in the month of February 2008. In the month of March in the same year, another food factory of 7 employees lost 15 production days as a result of having 5 of the employees out of duty due to work related injuries (Katsuro & Gadzirayi, 2010). In the same factory 6 employees fell sick as they attended medical clinic, there was a loss of 690 minutes of production after these sick employees were advised by the medical doctor to rest for 10 working days. According to this study the factory lost double the employee's production time each month consequently due to absenteeism.

In Kenya the Occupational safety and health issues can be traced back to 1951's Factories' Ordnance Act, which later became the Factories Act Cap 514 laws of Kenya. 36,000 employees work on harsh conditions. According to Muchiri (2008) the number of accidents at workplace has continued to rise despite the fact that the Government has put in place laws to protect health and safety of employees. Muchiri reports that 12,941 work days were lost due to 1,035 accidents between 2001 and 2007 in Nairobi, Kenya. This high number of accidents and the attendant losses was attributed to failure to control work place shazards. Despite the value of the food processing industry in Kenya, the existing literature relating to the effects of health and safety on employees' productivity is inadequate thus there was a need to carry out this research in maize flour processing companies. Studies such as (Ezeamama, 2019; Hanaysha, 2016; Hatam et al., 2015; Massoudi & Hamdi, 2017; Okech & Njururi, 2016; Sabir et al., 2016) have all been conducted in high risk industries and therefore opening a research gap for the current study to be conducted in maize flour processing companies. Therefore, this study sought to investigate the effects of psychological stress on employees' productivity in maize flour processing companies in Nakuru West Sub-County, Nakuru County, Kenya.

## LITERATURE REVIEW

The study was guided by the Distraction Theory by Hinze (1997), which asserts that the productivity of an organization workforce diminishes as soon as they shift focus from the core work responsibilities. The theory posits that employee productivity is situational since psychological disturbances and the responses to them often vary from one organization to another (Albert *et al.*, 2013). This theory can be applied in a situation in which there are recognized safety hazard or mental interruptions that are present and also in the existence of a

clear work duty to execute (Tixier, Hallowell, Albert, van Boven, & Kleiner, 2014). Distraction theory points out that where the hazards are absent, the employees are not stopped from finalizing their errands (Hinze, 1997). On the other hand, work is greatly complicated in the presence of hazards. This theory includes two parts. The first one is that which deal with hazards that are posed by unsafe workplace physical settings and the other one concerns itself with an employee preoccupation with matters not directly related to the assignment that is being accomplished (Albert et al., 2013). Distraction theory suggests that as soon as an employee has lower probability of injury at that time there is achievement of task at a higher level (Tixier et al., 2014). Once an employee has a higher concentration distraction of the mind, there is higher probability of the employee experiencing injury and accomplishment of assignment at a lower level. Therefore, for employees to evade injury and accomplish productivity that is on the higher levels, they must what so ever avoid mental distractions (Oluoch, 2015).

Psychological Stress in Workplace: Workplace stress is harmful physical and emotional reactions that can happen when there is struggle between workloads on the employee and the degree of control employee has over accomplishing these workloads (Peterson, 2011). According to the World Health Organization, pressure at the workplace is unavoidable due to the demands of the present-day work setting. The way jobs are designed, the work organizations, and the way people manage them, can cause work stress. Having so much work to accomplish or having too little can cause stress. Working for hours without socializing may cause stress (WHO, 2005). A broader concept of the social support is linked with the phenomenon of relationship support in the environment people lives (Jaroslav & Miroslav, 2015). A study that was conducted by Guest et al. (2000) among 28,000 employees from 2,000 workplaces revealed that relationship exists between employee's attitudes in workplace performance and human resource management and this is true in Organizations. However, there are attitudes that make relationships to grow and flourish thus bringing about employees' productivity. A study that was carried out by National Safety Council in USA revealed that stresses rerated to work will cause one million employees to be absent on an average workday (Itasca,2013). Yorio et al. (2014) also argued that besides absenteeism, psychological stress in the workplace also affect productivity by reducing the level of employee work engagement and commitment towards organizational goals. Psychological stress also shapes employee productivity by affecting physical wellbeing, error rate, and innovation level (Wegge et al 2007).

## **RESEARCH METHODOLOGY**

The study applied the descriptive research approach and utilized both qualitative and quantitative methods. It targeted the population of 204 employeesof two maize flour processing companies in Nakuru West Sub-County coded 01 and 02 Maize Millers.Stratified sampling was used to select a sample of 61 employees, equivalent to 30% of the target population. The target population was stratified into three segments: upper management staff, senior and junior staff. Quantitative data was collected using questionnaires while interview guides were used to gather qualitative data.

A pilot study was conducted using a sample of 10 respondents selected at random from C03 maize millers in Nakuru East Sub – County, Nakuru, Kenya to establish the validity and

reliability of the instruments. The pilot data helped the researcher to identify and correct vague questions, inaccurate responses or other weaknesses. The researcher proceeded to the field to administer the research instruments after the permission had been granted by the managers of the selected maize millers. After data collection, quantitative data was scrutinized using descriptive statistics with the aid of Statistical Package for Social Sciences (SPSS) software. Qualitative responses were summarized into themes related to the research objective.

## **RESEARCH FINDINGS AND DISCUSSION**

A total of 56 out of the 61 employees who were selected to part of the sample completed the study marking a response rate of 91.8%. The majority (72.7%) of the respondents were male with only 27.3% being female. This indicates that maize processing companies employ more men than female due to masculine requirements of most of the roles at such companies. Approximately 37.5% of the respondents had secondary level of education as their highest level of education with 32.1% of them indicated that they had tertiary education. It was further noted that 17.9% of the employees had primary education as the highest level of education and only 12.5% of the employees had no formal education. In terms of age, the majority (51.8%) of the respondents were aged between 25 and 34 years of age followed by those aged below 25 years of age at a frequency of 28.6%. About 12.5% of the respondents were aged between 35 years and 44 years while those aged between 45 years and 55 years were only 7.1%. Half (50.0%) of the respondents were junior staff, 32.1% were part of the middle management with 17.9% of the employees working as senior staff. More than half (54.5%) of the respondents had a working experience of between 4 and 7 years while 20% had a working experience of more than 7years. The study further noted that 25.5% of the respondents had a working experience of utmost three years.

**Psychological Stress in Workplace:** Start from the margin stress was the independent variable of the study. It was measured using a five point Likert-scale contain items assessing several indicators namely: concentration while working, Job dissatisfaction, employee (colleague) absenteeism, enthusiasm (motivation) at work, sleeping at work during working hours and Sick leaves or off days. Other aspects also considered in measuring this variable included anxiety at workplace, relationship with other employees, job resignation or quitting and commitment of errors or mistakes at job place. Results are summarized in Table 1.

The study established that 35.2% of the employees sometimes had a poor concentration while working and on the other hand majority of them (38.9%) usually had poor concentration at work. A mean score of 3.37 was achieved in rating this metric which indicates that on average the respondents usually had poor concentration while working. This is therefore an indicator of psychological stress among the employees at the maize milling companies. The employees were in consensus in rating this metric as evidenced by a standard deviation of 0.958. This is in line to Kar and Mishra (2016) who noted that psychological challenges faced most of employees that this reduced their productivity since most of them had poor concentration at work place due to their pressing issues. In regard to whether employees slept during working hours, there was consensus among the employees that they rarely (44.6%) slept during working hours with 32.1% indicating that they never slept at all during working hours. None of the employees indicated that they usually slept during working hours. This could be due to strict supervision by senior or management staff. Again the working environment may not be conducive in doing so due to noises from mills. This is further evidenced by a mean score of 1.93 and a standard deviation of 0.783. This differs with the findings by Akther, Akter, and Uddin (2017) who noted that employees had mischievous behaviors at work place such as sleeping at work place when the supervisors were not around or even pretending to be working but in real sense they were not. However, Williams, Grajales, and Kurkiewicz (2015) noted that due to supervision, employees may be productive but against their motivation or will.

The study also sought to find out the frequency in which the employees committed mistakes or errors in their duties. In this regard, the study found that on average, the employees usually committed mistakes and errors in their workplace. This is supported by a man score of 3.34 that was achieved on this metric. In addition, it was found that majority (62.5%) of the respondents sometimes committed mistakes in their work place with 23.2% indicate that they usually made errors in their working. A standard deviation of 0.768 achieve on this metric indicates that the respondents' feedback was in concurrent. Massoudi and Hamdi (2017) asserts that psychological challenges among employees results to employee unproductiveness and inefficiencies. Focusing on the composite scores, psychological stress obtained a composite mean scoreof3.20 and a composite standard deviation of 0.820.

This indicates that the respondents were on average in consensus in rating that they sometimes experienced psychological stress in diverse ways in their workplace. Most of high rated indicators of psychological stress included employee (colleague) absenteeism, sick leaves or off days and anxiety at workplace. Sleeping at work during working hours and poor relationship with other employees were among the least rated indicators of psychological stress among employees at maize milling companies in Nakuru West Sub-County. The challenges were also cited on diverse studies which is an indication of the challenges of employees in battling with psychological issues (Akther et al., 2017; Fitzgerald & Danner, 2016; Musyoka et al., 2016; Rafiqueetal, 2017; Ramya, 2017). This implies that sound decisions need to be taken in order to reverse the trend (Ezeamama, 2019; Hadi & Manaf, 2016; Hanc, 2019; Massoudi & Hamdi, 2017; Sabir, Akhtar, Bukhari, Nasir, & Ahmed, 2016). From the conducted interviews, most of the managers and supervisor indicated that some employees and especially junior staff were depressed, they were angry and fearful. These psychological challenges were evident in the way the employees related with the other employees and through headaches while others seem absent minded. One of the interviewees indicated that;

#### "Some employees seem depressed due to broken relationships and absent minded due to the noise by machines which end up causing headaches"

Some of the indicators of psychological stress among the employees as noted by the interviewed key informants were depression, mood changes, anger, anxiety, fear, broken relationships, headaches, ulcers, unfinished work, unhappiness,

Statement	Never	Rarely	Sometimes	Usually	Always	Total	
	F	F	F	F	F	Mean	Std.
	%	%	%	%	%		Dev.
Poor concentration while	2	7	19	21	5	3.37	0.958
working	3.7%	13.0%	35.2%	38.9%	9.3%		
Job dissatisfaction	0	9	21	19	5	3.37	0.875
	0.0%	16.7%	38.9%	35.2%	9.3%		
Employee (colleague)	0	2	26	25	3	3.52	0.660
absenteeism	0.0%	3.6%	46.4%	44.6%	5.4%		
Lack of enthusiasm	4	3	25	19	5	3.32	0.974
(motivation) at work	7.1%	5.4%	44.6%	33.9%	8.9%		
Sleeping at work during	18	25	12	1	0	1.93	0.783
working hours	32.1%	44.6%	21.4%	1.8%	0.0%		
Sick leaves or off days	0	2	24	26	4	3.57	0.684
	0.0%	3.6%	42.9%	46.4%	7.1%		
Anxiety at workplace	0	5	28	18	5	3.41	0.781
	0.0%	8.9%	50.0%	32.1%	8.9%		
Poor relationship with	0	18	32	4	2	2.82	0.716
other employees	0.0%	32.1%	57.1%	7.1%	3.6%		
Job resignation or quitting	0	13	16	19	8	3.39	1.003
	0.0%	23.2%	28.6%	33.9%	14.3%		
Commitment of errors or	1	2	35	13	5	3.34	0.769
mistakes at job place	1.8%	3.6%	62.5%	23.2%	8.9%		
Composite Scores						3.20	0.820

#### Table 1. Descriptive Statistics on Psychological Stress in Workplace

Table	2.	Descri	otive	Statistics	on	Employe	e Productivit	v
1 4010		Deseri	pure	Statistics	••••	Linpioge	c i i ouucui i i	

Statement	Never	Rarely	Sometimes	Usually	Always	Total	
	F	F	F	F	F	Mean	Std.
	%	%	%	%	%		Dev.
I have the ability to undertake work in an organized manner while	0	0	18	22	15	3.95	0.780
identifying priorities	0.0%	0.0%	32.7%	40.0%	27.3%		
I communicate effectively with customers	0	0	9	34	13		
·	0.0%	0.0%	16.1%	60.7%	23.2%	4.07	0.628
I participate in evaluation exercise	7	14	8	25	2		
	12.5%	25.0%	14.3%	44.6%	3.6%	3.02	1.168
I am punctual in my duty	0	0	1	33	22	4.37	0.524
1 , , ,	0.0%	0.0%	1.8%	58.9%	39.3%		
I have the ability to mentor other employees	0	3	18	27	8		
	0.0%	5.4%	32.1%	48.2%	14.3%	3.71	0.780
I meet my set work targets(goals)	0	1	13	30	12		
, , ,	0.0%	1.8%	23.2%	53.6%	21.4%	3.95	0.724
I accomplish my tasks on time	0	3	15	25	13		
1 5	0.0%	5.4%	26.8%	44.6%	23.2%	3.86	0.841
I adhere to moralprinciples of work	0	0	12	27	17		
1 1	0.0%	0.0%	21.4%	48.2%	30.4%	4.09	0.721
I embrace teamwork(team player)	0	1	20	18	17		
	0.0%	1.8%	35.7%	32.1%	30.4%	3.91	0.859
I put extra effort (hardwork) to complete an assignment	0	0	4	18	34		
	0.0%	0.0%	7.1%	32.1%	60.7%	4.54	0.631
I have the required competencies for my job	0	0	7	18	31		
1 1 55-	0.0%	0.0%	12.5%	32.1%	55.4%	4.43	0.710
Composite Scores				/ •		3.99	0.761

accidents, product errors, employee's shouting to one another and employees do not meet their targets. One of the respondents said that;

"Depression, mood changes, anxiety, fear, broken relationships, headaches, accidents, product errors, employees do not meet the target and anger."

Some of the causes of psychological stress among the employees were noted to be broken relationships, noise of the grinding machine, machine breakdown, unfinished work, much work, lack of motivation from managers and personal problems. The following excerpt was quoted;

"Broken relationships, noise of the grinding machine, machine breakdown, unfinished work"

From the interviews, the study sough to find out how psychological stress among the employees affected their productivity. Most indicated that psychological stress led to products errors, unfinished work, and slow pace of working, absenteeism, lack of self- motivation and emotional change and reckless behaviours. One of them asserted that;

"Products errors, unfinished work, slow as they work, absenteeism, lack of self-motivation."

**Employee Productivity:** The dependent variable was employee productivity. It was measured using a five-point Likert scale that assessed several items including employee's ability to undertake work in an organized manner while identifying priorities, effectiveness with customers, and participation in evaluation exercise, punctuality in their duties,

ability to mentor other employees and ability to meet their set work targets (goals). It also assessed ability to accomplish their tasks on time, adherence to moral principles of work, ability to embrace teamwork (team player), hardwork to complete an assignment and acquisition of required competencies for their work. Table 2 shows the descriptive results for the employee productivity. The study revealed that 32.7% of the employees sometimes undertook work in an organized manner while identifying priorities while this was the usual case by majority of the respondents at a frequency of 40.0%. The study also noted that 27.3% of the employees always undertook work in an organized manner while identifying priorities. A mean score of 3.95 and a standard deviation of 0.780 were achieved by the study and therefore implying that there was consensus among the respondents that employees usually undertook work in an organized manner while identifying priorities. This is a positive aspect of employee productivity. These results differ with those by Sarode and Shirsath (2015) who noted that most employees were not able to organize their work in most urgent and important tasks in their assignments and this reduced the productivity of the employees.

**Table 3. Pearson Correlations** 

Statement		Psychological Stress	
	Pearson	-0.521**	
Employee Productivity	Correlation		
	Sig. (2-tailed)	.000	
	Ν	56	

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The study also noted that majority of the employees (44.6%) usually participated in evaluation exercises while 25.0% of the employees rarely participated in the evaluation exercise. This shows that there was a divergence of response from the different employees sampled in the study and therefore an indication of low consensus among the respondents. The divergent opinions may be due to lack of the evaluation programs in either of the companies or certain cadre of employees. This is evidently shown by a standard deviation of 1.168 which is more than 1.000. In view of this variable the study noted that on average employees sometimes participated in the evaluation exercises. Appraisal systems were seen to improve the productivity of employees and it was noted that the appraisal systems had challenges such as unfair rating and lack of employee participation in designing the measures of productivity and job targets (Osborne, 2017; Sarode & Shirsath, 2015; Sultan & Zafar, 2016). A mean score of 3.95 was achieved on the metric on whether the employees were able to meet their job goals or targets. This therefore implied that on average the employees were usually able to meet their targets in their day to day duties in the companies they were working for. This is further evidenced by majority (53.6%) of the respondents indicating that they usually met their targets. None of them indicated a total failure in meeting the set work targets. A standard deviation of 0.724 achieved in regard to the ability to meet work targets implied that there was no much variance the responses given by the employees on the metric. This is a positive attributes of employee performance. However, Hanaysha (2016) noted that many employees were unable to meet their job targets and this resulted to low employee productivity. The study also found that most of the employees always put extra effort (hardwork) to complete an assignment as evidenced by 60.7% of the respondents. The study also noted 32.1% of the respondents usually put extra effort (hardwork) to complete an assignment. This is high

degree of employee productivity which is also evidenced by a mean score of 4.54. This implied on average the respondents tended to agree that they always put extra effort (hardwork) to complete an assignment. In addition, the study revealed that the respondents were in consensus in rating this metric as shown by a standard deviation of less than 1.00 (standard deviation=0.631). These results are in line with those by (Okech & Njururi, 2016) who noted that most employees were hardworking and were able to meet their job targets in time with few exceptions of delays by few employees. A composite mean score of 3.99 and standard deviation 0.761 were achieved in respect to the statements used to measure the level of employee productivity.

This therefore implied that on average employees were usually productive in their duties and that there was consensus in rating the various metrics of employee productivity. Punctuality in the duties of an employee, ability to put extra effort (hardwork) to complete an assignment and possession of the required competencies for their job were the most highly rated aspects of employee productivity. Most of the employees never lacked key competencies in their duties at the milling companies. In respect to employee productivity, most studies noted divergence of views with the ones established by this study (Ezeamama, 2019; Hanaysha, 2016; Hatam et al., 2015; Massoudi & Hamdi, 2017; Okech & Njururi, 2016; Sabir et al., 2016). This could be due to employee trying to impress that they are always productive against their reality. However, the study interviewed managers and supervisors to ascertain this and achieve data triangulation requirements.

#### **Correlational Analysis**

The Pearson correlation analysis was conducted to establish the effects of psychological stress on employees' productivity in maize flour processing companies in Nakuru West Sub-County, Nakuru County, Kenya. To transform the categorical data to scale, the study calculated the statistical mean scores of the responses given by each respondent per variable. In respect to this, the study obtained a single scale value ranging between 1 through 5 for each variable of the study. Results of the correlational analysis are as shown in Table 3. According to Fischer (2016) correlation measures strength of a relationships, its direction and significance. Bilgin (2017) asserts that a correlation coefficient ranging between |0.1| and |0.3| implies a weak relationship while a correlation coefficient ranging between |0.4| and |0.6| implies a moderate relationship. On the other hand, a correlation coefficient ranging between |0.7| and [0.9] implies a strong relation. The author added that a correlation coefficient of zero indicates a no relationship while a correlation coefficient more of |1| implies a perfect relationship. Kara (2015) asserts that a negative correlation coefficient implies an inverse relationship while a positive correlation coefficient implies a direct relationship between the two measured variables. In regard to significance, Leung (2016) asserts that p<0.05 implies that the relationship is significant while p>0.05 implies that the relationship is not significant. Significance of a relationship is an indication that the effect of relationship does not occur by chance (Kearney, 2016). According to Table 15, the study established that there was a negative and weak relationship between psychological stress and employee productivity, which was significant at 1% significance level. This indicates that when psychological stress increases, the employee productivity decreases and the vice versa.

Table 4. Regression Analysis Results

Variable		r	r <sup>2</sup>	Constant	F	Р
Dependent	Employee productivity	.638	.407	4.489	11.906*	.000
Independent	Psychological stress		Beta	Standardized Beta	t	
			-0.366*	386*	-3.315	.002

These results were consistent to those by Kaynak *et al.*, (2016) who noted reduced the psychological stress of employees was strongly associated with positive employee outcomes such as performance and retention. Al-homayan *et al.* (2015) also noted that there was a negative relationship between psychological stress and the employee productivity. In respect to this, Al-homayan *et al.* (2015) observed that lack of stress among employees improved their productivity.

### **Regression Analysis**

The study further sought to establish whether the independent variable predicted the dependent variable. In respect to this, the study regressed psychological stress against the productivity of employees at the maize flour milling companies in Nakuru Wets Sub-County. Results are summarized in Table 16. The study established that there was a moderate relationship between the independent variables of the study with the dependent variables. This was due to an R value of 0.638. It was further established that 40.7% of the variation in the level of employee productivity was due to changes in the dependent variables of the study. This is an indication that psychological stress accounted for 40.7% of the employee productivity. The regression model as a whole was significant it its prediction due to a F(3,55)=11.906 and a pvalue less than 0.05. This therefore implied that the regression model provides a good fit for the data. The individual effects of psychological stress on employees' productivity in maize flour processing companies in Nakuru West Sub-County, Nakuru County, Kenya was also significant but negative indicated by a beta coefficient of - 0.366. This coefficient implied that a unit increase in psychological stress, resulted to 0.366 units decrease in the employee productivity. Alhomavan et al. (2015) also noted that there was a negative relationship between psychological stress and the employee productivity. In respect to this, Al-homayan et al. (2015) observed that lack of stress among employees improved their productivity.

#### **Conclusion and Recommendation**

Focusing on the composite scores, psychological stress obtained a composite mean score of 3.20 and a composite standard deviation of 0.820. This indicates that the respondents were on average in consensus in rating that they sometimes experienced psychological stress in diverse ways in their workplace. The study further revealed that there was a negative and moderate relationship between the psychological stress and the employee productivity, which was significant at 5% significance level. This is due to a correlation coefficient of -0.521 and p-value less than 0.05. The results therefore indicated that psychological stress of employees affected their performance negatively. The regression analysis established a beta coefficient of -0.366, which implied that a unit increase in psychological stress, resulted to 0.366 units decrease in the employee productivity. Based on this findings, the study concludes that psychological stress affected the productivity of To improve employee productivity, the study recommends that companies should motivate their employees through creation of optimistic work environment that gives employees hope that they can achieve their own goals. This would lead to solving challenges of job dissatisfaction, employee absenteeism, high employee turnover and lack of enthusiasm at work as established in the current study. In implementation of this recommendation, the psychological wellbeing of employees would improve and thus attaining high level of productivity. Since the current study was done in one county, a more conclusive verdict can be reached on the effects of psychological stress on employees' productivity by replicating the study in other counties in Kenya.

# REFERENCES

- Akther, S., Akter, S. and Uddin, M. K. 2017. Factors Influencing Job Stress in Privatized Banks of Bangladesh. *Global Management Review*, 11 1, 1–17.
- Al-homayan, A. M., Shamsudin, F. M., Subramaniam, C. and Islam, R. 2015 . Relationship among Job Demand-Resources, Job Stress, Organizational Support and Nurses' Job Performance. *Australian Journal of Basic* and Applied Sciences, 7 9 ,294–308.
- Albert, A., Hallowell, M. R., Kleiner, B., Chen, A., Golparvar-Fard, M. 2014 . "Enhancing Construction Hazard Recognition with High-Fidelity Augmented Virtuality." J. Constr. Eng. Manage., 140 7 ,04014024
- Bilgin, Y. 2017 . Qualitative Method Versus Quantitative Method in Marketing Research: An Application Example at Oba Restaurant.
- Dembe, A., 2001, 'The social consequences of Occupational Injuries and Illnesses', American Journal of Industrial Medicine, Vol. 40, pp. 403-417
- Dowing, S., 2015 *Effects of health and Wellbeing initiatives* on employee engagement East Africa Edition 3 2014 Mombassa Maize Millers 9 .pdf.
- Ezeamama, I. 2019 . Job Satisfaction and Employee Productivity in Anambra State Nigeria. *European Journal of Research in Social Sciences*, 7 2, 1–13.
- Fischer, C. 2016 . Qualitative Research Methods for Psychologists. Qualitative Research Methods for Psychologists. https://doi.org/10.1016/B978-0-12-088470- 4.X5000-5
- Fitzgerald, C. & Danner, K. 2016 . Evolution in the office: How evolutionary psychology can increase employee health, happiness, and productivity. *Evolutionary Psychology*, *10* 5, 770–781. https://doi.org/10.1177/147470491201000502
- Guest, D E, Michie, J, Sheehan, M and Conway, N 2000a Employee Relations, HRM and Business Performance: An analysis of the 1998 workplace employee relations survey, CIPD, London
- Hadi, A. and Manaf, A. 2016. The Influence of Dimensions of Job Burnout on Employees' Commitment: A Perspective of Malaysia. Saudi Journal of Business and Management Studies, 1 1, 169–178.https://doi.org/ 10.21276/sjbms.2016.1.4.3

- Hanaysha, J. 2016. Improving employee productivity through work engagement: Evidence from higher education sector. *Management Science Letters*, *1* 1, 61–70. https://doi.org/10.5267/j.msl.2015.11.006
- Hanc, M.-L. 2019 . Productivity and wellbeing in the 21st century workplace: Implications of choice. *Doctoral Thesis*. Retrieved from http://discovery.ucl.ac.uk/ 10073396/
- Hatam, N., Kavosi, Z., Lofti, M., Zarifi, M., Tavakoli, A., &Rahimi, M. 2015 . Localization of the Knowledge Workers' Productivity Questionnaire and Evaluation of the Productivity of Knowledge Workers of the Central Field ofShirazUniversity of Medical Sciences. International Journal of Travel Medicine and Global Health, 2 2, 51–60.
- ILO. 2010 . Safety and Health at Work. global topics Retrieved 10 December, 2010, from http://www.ilo.org/global/topics/safety-and-health-atwork/lang--en/index.htm.
- Jaroslav, N., Miroslav, K. 2015 . Stress in the Workplace Sources, Effects and Coping Strategies
- Katsuro, P. and Gadzirayi, C. 2010. Impact of Occupational Health and Safety on Worker Productivity: A case of Zimbabwe food industry. *African Journals of Business Management*, 4 13, pp.2644-2651, 9.
- Kar, B. and Mishra, D. 2016 . A Literature Review on Occupational Stress and Job Performance. *International Journal of Research in Commerce & Management*, 6 5 ,13–18.
- Kara, H. 2015 . Book Review: Creative Research Methods in the Social Sciences: Practical Guide. London: Policy Pres.
- Kaynak, R., Tuygun A., Elci, M. and Tamer Toklu, I. 2016. Effects of Occupational Health and Safety Practices on Organizational Commitment, Work Alienation, and Job Performance: Using the PLS-SEM Approach. International Journal of Business and Management, 11 5 ,146.https://doi.org/10.5539/ijbm.v11n5p146
- Kearney, J. 2016 . National Legal Research Teach-In Kit Tax Law Research Methods and Citation Issues. New Orleans: American Association of Law Libraries.
- Leung, S. 2016 . Evidence-based Research Methods for Chinese Medicine. Macau: Springer Nature.
- Mabuza, M. 2018 . Impact of an onsite occupational health clinic on organisational performance and employee wellbeing at a southern african maritime port. *Eurasian Journal of Medicine and Oncology*, 2 3, 152–164. https://doi.org/10.14744/ejmo.2017.24008
- Massoudi, D. and Hamdi, D. 2017 . The Consequence of Work Environment on Employees Productivity. *IOSR Journal of Business and Management*, 19 01, 35–42. https://doi.org/10.9790/487x-1901033542.
- Muchiri, F. 2008 . Do Occupational Health Services Really Exist in Kenya? A special focus on industry and other sectors, Nairobi: Occupational Safety and Health Profiles of Kenya.
- Musyoka, M., Ogutu, M. and Awino, Z. B. 2016. Employee Stress and Performance of Companies Listed in the Nairobi Securities Exchange. DBA Africa Management Review, 3 1, 115–129.

- Ojiemo, D. 2012. Occupational health and safety management practices among the electronic media houses in Kisumu County, Kenya. Mass media Printing Press
- Oluoch, E. 2015 .Effects of Occupational Safety & Health Programmes on Employee Performance, Nairobi
- Okech, T.,& Njururi, E. 2016. Determinants of employee productivity in Kenya's Private Limited Companies in the Manufacturing Sector. *International Journal of Economics, Commerce and Management, 4* 10, 661–676.
- Osborne, S. 2017 . Effective Employee Engagement in the Workplace. International Journal of Applied Management and Technology, 16 1, 50–67. https://doi.org/10.5590/IJAMT.2017.16.1.04
- Rafique, M., Ali, R. and Ahmed, I. 2017. Factors Affecting to Employee™s Performance. A Study of Islamic Banks. International Journal of Academic Research in Accounting, Finance and Management Sciences, 7 1, 312–321. https://doi.org/10.6007/ijarafms/v7-i1/2722
- Ramya, U. 2017 . A Study on Impact of Stress on Quality of Work life among Women Employees With Special Reference to Chennai City . International Journal of Latest Engineering and Management Research IJLEMR, 2 11, 45–49.
- Sabir, R. I., Akhtar, N., Bukhari, F. A. S., Nasir, J. and Ahmed, W. 2016. Impact of Training on Productivity of Employees: A Case Study of Electricity Supply Company in Pakistan. *International Review of Management and Business Research*, 3 2, 595.
- Sarode, A. and Shirsath, M. 2015. The Factors Affecting Employee Work Environment & It's Relation with Employee Productivity. *International Journal of Science and Research IJSR*, 3 11, 2735–2737.
- Sultan, M. and Zafar, M. 2016 . Office Design and its impact on employees' productivity: Evidence from Islamic Banks of Karachi. *International Journal of Scientific and Research Publications*, 6 6, 335–342. Retrieved from www.ijsrp.org
- Tixier, A., Hallowell, M., Albert, A., van Boven, L., Kleiner,B. 2014 . "Psychological Antecedents of Risk-Taking Behavior in Construction." J. Constr. Eng.
- Wegge, K.& Zimmermann, D. 2007 Accessibility, Usability, Safety, Ergonomics: Concepts, Models, and Differences. In C. Stephanidis Ed. : Universal Access in HCI, Part I, HCII 2007, LNCS
- Williams, M., Grajales, C. and Kurkiewicz, D. 2015. Assumptions of multiple regression: Correcting two misconceptions. *Practical Assessment, Research and Evaluation*, 18 9, 1–14.
- World Health Organization 2005 . *Work Organization & Stress*. Protecting Workers' Health Series 3.
- Yorio, L., Wacher, K. 2014 . Safety and Health specific High performance Work Practices & Occupational Injury and Illness Prevention. Journal of Saftey, Health & Environment Research, 10 1, 123-134.