

RELATIONSHIP BETWEEN PERCEIVED WORK STRESS AND
PSYCHOLOGICAL WELLBEING OF MANAGEMENT EMPLOYEES IN A
UNIT AT MAJI MAZURI TEA PLANTATION IN KERICHO, KENYA.

NZIOKA IAN MUOKI

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Contents


Declaration and Approval	i
Dedication	ii
Acknowledgments	iii
Abbreviations	iv
List of tables	vi
List of figures	vii
Abstract	viii
Chapter One: Introduction	1
Background	1
Statement of the problem	2
Study Purpose	3
Specific objectives	3
Hypotheses	3
Significance	4
Scope	5
Limitations	5
Assumptions	5
Definition of key terms	6
Chapter 2: Literature Review	9
Introduction	9
Theoretical framework	9
1.1 Six Factor model of psychological wellbeing	9
1.2 Work stress Theories	10
Perceived work stress	12
Psychological wellbeing	13
Confounding variables Affecting Perceived Work Stress and Psychological wellbeing	15

Conceptual framework	18
Chapter 3: Methodology	19
Introduction	19
Research Design	19
Area of Study	19
Population of Study	19
Sample and Sampling Techniques	19
Data Collection Instruments	20
Reliability and Validity of Data Collection Instruments	20
Administration of the Instruments	21
Scoring of the Instrument	21
Methods of Data Collection	22
Methods of Data Analysis	22
Ethical Considerations	23
Pilot Study Results	23
CHAPTER 4: DATA ANALYSIS, RESULTS AND DISCUSSIONS	26
Introduction	26
Perceived Occupational Stress	30
Psychological Wellbeing	33
Relationship between Perceived Work Stress and Psychological Wellbeing	35
Relationship between confounding variables and Perceived work stress	36
Relationship between confounding variables and Psychological Wellbeing	39
Significance of subscales of perceived work stress in determining psychological wellbeing	41
Hypothesis 1: Relationship between Perceived work stress and psychological wellbeing.	43
Hypothesis 2: Relationship between Confounding variables with Perceived work stress and psychological wellbeing	43
Chapter 5: Conclusion and Recommendations	44
Conclusions	44

Recommendations	45
References	47
Appendices	53
Appendix – 1: Occupational Stress Index (OSI)	53
Appendix 2 - Ryff’s Psychological Well-Being Scales (PWB)	57
Scoring Instruction	60
Appendix 3: National Commission of Science, Technology and Innovation Authorization Letter	62
Appendix 4: Map of Chaik Ward	65

Declaration and Approval

This research project is my original work and has not been submitted for a degree in this University or any other University.


Signature 

Date11/November/2022.....

NAME: Nzioka Ian Muoki

REG. NO: C50/39259/2021

This report has been submitted with my approval as university supervisor.

Signature 

Date23/11/2022.....

Supervisor Name: Dr. Hildah Oburu

Psychology Department

University of Nairobi

Dedication

It is with gratitude that I dedicate this project to my family. Thank you to my mother and brother for the support they gave me throughout the study period, the encouragement and words of wisdom that helped fuel my journey. I also dedicate this study to my late great grandmother and grandfather who never failed to advise me to pursue education wholeheartedly. I dedicate this research to George, thank you for all the support and being a role model for me.

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Abbreviations

OSI – Occupational Stress Index

PWB – Psychological Wellbeing Test/Scale

SPSS – Statistical Package for Social Sciences

WHO – World Health Organization

CDC – Centers for Disease Control and Prevention

NACOSTI - National Commission of Science, Technology and Innovation

APA – American Psychological Association

PLC – Public Limited Company

U.K. – United Kingdom

COR – Conservation of Resources

RO - Role Overload

RA - Role Ambiguity

RC - Role Conflict

UGP - Unreasonable Group & Political Pressures

RP - Responsibility for Persons

UP - Underparticipation

PL - Powerlessness

PPR - Poor Peer Relations

IM - Intrinsic Impoverishment

LS - Low Status

SWC - Strenuous Working Conditions

P - Unprofitability

KCPE – Kenya Certificate for Primary Education

KCSE – Kenya Certificate for Secondary Education

AT - Autonomy

EM - Environmental Mastery

PG - Personal Growth

PR - Positive Relations

PIL - Purpose in Life

SA - Self-Acceptance

List of tables

TABLE 1: POPULATION AND PILOT SAMPLE	20
TABLE 2: OSI SCALE RELIABILITY	24
TABLE 3: PWB SCALE RELIABILITY	25
TABLE 4: PERCENTILE RANGE SCORES FOR OSI.....	31
TABLE 5: SCORES FOR OSI.....	32
TABLE 6: PERCENTILE RANGE SCORES FOR PWB	34
TABLE 7: SCORES FOR PWB	34
TABLE 8: OSI AND PWB CORRELATION.....	36
TABLE 9: CONFOUNDING VARIABLES (SCALED-ITEMS) CORRELATION WITH OSI AND PWB.....	37
TABLE 10: RELATIONSHIP BETWEEN GENDER AND OSI.....	37
TABLE 11: RELATIONSHIP BETWEEN MARITAL STATUS AND OSI	38
TABLE 12: RELATIONSHIP BETWEEN AREA OF WORK AND OSI	38
TABLE 13: RELATIONSHIP BETWEEN RANK AT WORK AND OSI.....	38
TABLE 14: RELATIONSHIP BETWEEN EDUCATION LEVEL AND OSI.....	39
TABLE 15: RELATIONSHIP BETWEEN GENDER AND PWB	39
TABLE 16: RELATIONSHIP BETWEEN MARITAL STATUS AND PWB.....	39
TABLE 17: RELATIONSHIP BETWEEN AREA OF WORK AND PWB	40
TABLE 18: RELATIONSHIP BETWEEN RANK AT WORK AND PWB.....	40
TABLE 19: RELATIONSHIP BETWEEN LEVEL OF EDUCATION AND PWB	40
TABLE 20: ANALYSIS OF REGRESSION.....	41
TABLE 21: REGRESSION ANALYSIS OF OSI SCALE ON PWB SCORE.....	42

List of figures

FIGURE 1: CONCEPTUAL FRAMEWORK	18
FIGURE 2: GENDER	26
FIGURE 3: AGE IN YEARS	27
FIGURE 4: MARITAL STATUS	27
FIGURE 5: AREA OF WORK	28
FIGURE 6: RANK AT WORK.....	29
FIGURE 7: LEVEL OF EDUCATION.....	29
FIGURE 8: YEARS OF WORK EXPERIENCE	30
FIGURE 9: OSI SCORES DISTRIBUTION	33
FIGURE 10: PWB SCORE DISTRIBUTION	35

Abstract

This research studied the association between perceived work stress of management workers and psychological wellbeing in a unit at Maji Mazuri Tea Plantation. Perceived work stress has been evidenced in different professions all around the world with psychological wellbeing studies being on the rise. The topic looks into exploring whether perceived work stress has an effect on psychological wellbeing on management workers. This topic is important to counselling psychology because it deals with one of the common problems reported for counselling; work stress. Counselling psychology seeks to enhance the wellbeing of the clients that seek counselling. Adults spend a bit part of their lives at work which has been estimated to be about a third of their lives. The topic helps understand what aspects of the occupational stress index are significant indicators for perceived work stress. By identifying these aspects, a counselling psychologist is better placed to assist the client work on them to achieve wellbeing. The findings also serve as tools that counselling psychologists can use in advising working environments to improve the wellbeing of their employees. This study is filling a gap of exploring the association between perceived work stress with psychological wellbeing for a tea plantation set up in Kenya. There are few to no researches on this topic in Kenya and the tea plantation sector.

The research applied a descriptive correlational design and used two standardized test to collect its data. These tests are the standardised occupational stress index (OSI) which was used to score the stress aspect of the study and the other test is the psychological wellbeing (PWB) which provided rating for the wellbeing aspect of the research. The tests were handed as questionnaires to the study participants. Analysis of Pearson's correlation and regression were done together with other statistical operations using SPSS.

The findings of the research revealed experience of moderate levels of perceived work stress as well as moderate levels of psychological wellbeing among the management employees working in a unit at Maji Mazuri tea plantation. The association between perceived work stress and psychological wellbeing was established as weak negatively correlated. Three subscales, powerlessness, low status and profitability, of occupational stress index were found significant in affecting the psychological wellbeing with perceived work stress accounting for 14.4% of psychological wellbeing as per the regression analysis.

The findings from this research are helpful in that they create literature for reference for future research on psychological wellbeing and perceived work stress in the tea plantation set-up. The findings help give more reference for validity and reliability of the OSI and PWB tests for

studying populations in Kenya. The results also help share feedback to Maji Mazuri on what aspects of perceived work stress need improving to improve the psychological wellbeing of management employee

Chapter One: Introduction

This research aimed to scrutinise the effects that perceived work stress possesses on psychological wellbeing among management employees of a tea plantation. As per the World Health Organization (World Health Organization [WHO], 2020), work stress is described as the reaction people have when confronted with work-related needs and obligations that they lack enough skills, knowledge, and ability to cope with. On the other hand, perceived work stress are the thoughts and feelings about how much stress one has related to work over a given time. Psychological wellbeing can be explained as the feeling of joy and happiness while functioning effectively with resilience amidst what is happening around a person (Tang, Tang, and Gross, 2019).

This chapter comprised the following sections: background, problem statement, study purpose, specific objectives, research questions, hypotheses, justification, study significance, scope, limitations, assumptions, and definition of concepts.

Background

Stress at the workplace and psychological wellbeing is continuously attracting more attention from researchers. Perceived work stress is a global challenge prevalent in different professions (Guruge & Ban 2021). Studies highlighted in literature have been conducted with a global perspective with little research on the topic found on tea plantations globally, little research on perceived work stress and the tea industry in Kenya generally, with no research found on the topic, to the knowledge of the researcher, on tea plantations in Kenya which this study identifies as gaps.

Perceived work stress impacts on employees and organisations bringing about negative effects on productivity, work performance, wellbeing, relationships, and mental health (Bhui et al., 2016 & Gilmartin, 2018) all which negatively affect psychological wellbeing (Suleman, Hussain, Shehzad, Syed, & Raja, 2018 & Asamoah 2017). Work stress elements that contribute to perceived work stress include role conflict, job uncertainty, a lack of advancement feedback, a lack of authority, poor working environment, interpersonal interactions, and a lack of engagement in decision making (Keshavarz, & Mohammadi, 2011), heavy workloads, high competition, great expectations (Gilmartin, 2018), poor or lack of support, poor communication, imbalance in the

effort-reward system, unfair treatment, and lack of transparency (Bhui et al., 2016), and personnel concerns, work-life balance, and a lack of job stability (Elflein 2019).

Poor/negative psychological wellbeing is detrimental to an employee as it is characterised by low self-esteem, unhealthy relationships, engaging in risk-taking behaviours (Tahar, 2017), poor mental health (Centers for Disease Control and Prevention [CDC], 2022), general stress signs and symptoms presentation with an incapacity to cope with stress (MAYO, 2022).

Statement of the problem

Employees should enjoy working environments that offer stimulation and growth whilst getting their psychological wellbeing operating at the optimum level. Psychologically fit employees can deliver more to the work they do and grow their respective organisations as highlighted by Gilmartin (2018). More of the employee's time can be focused on work as psychologically fit employees are less likely to take time to address burnouts, stress, anxiety, and physical ailments as described by Asamoah (2017).

Perceived workplace stress can have an impact on work performance, productivity, concentration, employees' health, and wellness, as well as their relationships and family life. (Gilmartin, 2018).

Perceived work stress has been linked to bringing about psychological distress and mental illnesses characterised by stress and anxiety (Bhui et al., 2016). (Asamoah, 2017) highlights how stress may lead employees to develop illnesses such as hypertension and even result to death with Tahar (2017) expounding on how perceived work stress affects physical aspects of employees resulting to low self-esteem, development of unhealthy relationships and engaging in risk-taking behaviours which all contribute to poor psychological wellbeing. Discussed literature on this study highlights that perceived work stress is a global phenomenon that is happening across professions. Studies of this topic on tea plantation setups are few globally with none found on the tea plantations in Kenya. According to an employee wellness program set up by Maji Mazuri plantation, 20-25% of cases reported by employees seeking help are on perceived work stress concerns.

This research sought to study this topic in a tea plantation set up and explore what aspects of perceived work stress significantly affect the psychological wellbeing of management employees in a unit at Maji Mazuri tea plantation. The aim was to assist the management team of Maji Mazuri tea plantation come up with measures to mitigate perceived work stress so as to improve psychological wellbeing of their management employees.

Study Purpose

The purpose of this research was to determine the association between reported work stress and psychological wellbeing of management personnel at the Maji Mazuri tea plantation in Kericho, Kenya.

Specific objectives

1. To estimate perceived work stress and psychological wellbeing among management workers in a unit at Maji Mazuri tea plantation in Kericho, Kenya.
2. To examine the association between perceived work stress and psychological wellbeing among management employees working in a unit at Maji Mazuri tea plantation in Kericho, Kenya.
3. To identify aspects of perceived work stress that are significant in determining the psychological wellbeing of management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya

Research questions

1. What estimate of perceived work stress and psychological wellbeing do management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya?
2. What association exists between perceived work stress and psychological wellbeing among management workers in a unit at Maji Mazuri tea plantation in Kericho, Kenya?
3. What aspects of perceived work stress are significant in determining the psychological wellbeing of management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya?

Hypotheses

1. There is no significant relationship between reported work stress and psychological wellbeing among Maji Mazuri Tea plantation management staff.
2. There are not any significant confounding variables (gender, marital status, area of work, rank at work, education level, age, years of work experience) affecting the association between the main variables (perceived work stress and psychological wellbeing) of the study.

Justification

The study aimed to provide light on the link between perceived work stress and psychological wellbeing. Perceived work stress is a phenomenon that is present in diverse workplaces (Bhui et al., 2016 & Guruge & Ban, 2021) Perceived work stress affects both the workplace and employees (Elflein, 2019). As previously stated and highlighted in this research, various researchers have discovered a negative relationship between the first variable and the second variable in a variety of work industries and settings. Little to no research has explored this topic with relation to a tea plantation setup in Kenya. This therefore poses one of the major gaps the research sought to address. The study applied the Ryff Model of psychological wellbeing that conceptualises the concept of psychological wellbeing and integrated work stress theories that help understand the common work stress problems as highlighted in literature and studied by Srivastava and Singh (Srivastava & Singh, 1981). The research applied a descriptive correlational design, which has yielded best results on the subject. In terms of sampling, the study chose to do a full population study that sets it apart from the other studies it highlighted that used representatives of their population of study. The occupational stress index (OSI) and psychological wellbeing (PWB) standardised assessments were used in the study to assess perceived work stress and psychological wellbeing respectively, and help establish their validity and reliability for other researchers in the country.

Significance

Work stress is one of the greatest contributors of stress among the working population (Scott, 2020). According to research, more literature eludes that there exists a negative relationship between the first variable and the second variable in various organisations. Poor psychological wellbeing on the other hand can result to worry and anxiety (Bhui et al., 2016), suicide ideation, abuse of drugs and substances and other maladaptive ways to cope (Tahar, 2017). The purpose of this study was to investigate the connection between the first variable and the second variable on a tea plantation. There is little to no work done on this topic in the tea plantation sector in Kenya. The study aimed to promote the psychological wellbeing of tea plantation management staff while also assisting the tea plantation setup in exploring strategies to reduce perceived work stress. The study's findings will also be useful to academics looking for information on perceived occupational stress and psychological wellbeing in a tea plantation setting for future studies.

Scope

With the increase in undertaking research on psychological wellbeing and work stress, there has been a growth of interest on how to improve employees' wellbeing. Given this, the purpose of this study is to determine the relationship between the first variable and the second variable of management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya, in order to make recommendations to Maji Mazuri Tea plantation management on areas that require attention in order to improve psychological well-being. The study was restricted to Chaik ward Kericho, Kenya. The research used Ryff's six-factor psychological wellbeing theory and several work stress theories that formed an integrative background for better understanding of perceived work stress. The study took one month.

Limitations

The findings from this research must be seen considering the following limitations:

The perceived work stress experienced by the employees could be because of other factors outside those discussed in the integrated work stress theories. This study attributed perceived work stress to factors that mainly occur at the workplace which may not be the case. Stress can result from other aspects away from work such as financial issues, personal relationships either with friends or dating situations, family life and differences in personality (Scott, 2020). A more integrated approach for understanding the perceived stress of an employee should be explored.

Lack of enough resources. This study required a lot of resources ranging from acquiring stationary, transport, and time. The researcher covered a large geographical area and the questionnaires that were used took not less than ten minutes each hence costing some time investment from the respondents. For future research exploring the use of Google forms or another online tool would be ideal to mitigate this.

Assumptions

This study assumes that:

1. Management employees working in a unit at Maji Mazuri tea plantation in Kericho experience perceived work stress.
2. The time mapped to carry out the study will be sufficient.

Definition of key terms

Work stress/occupational stress/job stress – this term refers to the negative mental and physical reactions that occur when job needs do not match the talents and resources available.

Perceived work stress - This is the self-reported stress measure someone feels about their work.

Employee wellness Program – This is a program created by companies or organisations that seeks to help their employees with any problems that could affect their work performance, mental health, and physical health. The services offered by the service are counselling-tailored and are free and confidential.

Plantation – this is a farming estate that is characterised by large pieces of land tilled with a particular cash crop. The common plantations include coffee plantations, tea plantations, cocoa, sisal among others.

Psychological wellbeing – this is a positive mental state of an individual characterised by feeling of happiness and ability to cope with life challenges.

Management employees – this represents the team that has charge or authority over a group of people in the tea plantation, they coordinate, supervise and manage the daily activities of workers. The category involves titles of managers, supervisors and team leaders.

Stress model – this is a theoretical framework that is used to explain the possible causes of stress at the workplace.

Subscales – these are the identified factors within the psychological wellbeing and occupational stress index that help create the construct of psychological wellbeing and perceived work stress respectively, and with which the study used to populate data for the standardised tests. The occupational stress index has 12 subscales while psychological wellbeing has 6 subscales. The 12 subscales of the occupational stress index are defined below.

Role overload – this is an aspect of work stress that implies the requirements of the job role are more than the resources or capacity one has for such a role.

Role ambiguity – this is an aspect of work stress that implies lack of clarity in what one is expected to do in a particular role. It can result in one having to work several functions in an organisation and not tailor made to their expertise. It is the lack of description of what is expected in a job role.

Role conflict – This is an aspect of work stress in which an individual is pulled into opposing functions of their role. The conflict occurs when the individual is torn on which side to lean.

Unreasonable group and political pressure – this is an aspect of work stress that results from environmental influence of the people in a workplace. The pressure can result in affecting how one carries out their duty aimed at coping or fitting in the different groups the individual finds themselves.

Responsibility for persons – This is an aspect of work stress for employees who have the duty to care for others. These employees are typically in managerial positions involving supervising the work of the other employees.

Under participation - This is a type of work stress that exposes a lack of involvement in an organisation's decision-making while yet being a member of that organisation. It can be due to lack of seeking opinions and ideas from the employees and if the ideas are sought are not considered for implementation.

Powerlessness – This is an aspect of work stress that involves lack of control on matters that happen within the organisation. It can be due to lack of rules and regulations set up by management overtly not being followed, lack of consideration for employee needs and general lack of space to air out concerns.

Peer group relations – This is an aspect of work stress that explains the bonds that occur within peers in an organisation. Since the workplace involves various individuals, making friendships is a common workplace norm. The friendships can result in being harmful at the workplace for example when jealousy and personal friendship needs are prioritised.

Intrinsic impoverishment – This is an aspect of work stress that involves lack of development and to a great extent internal motivation. It is marked by being tasked with repetitive tasks that don't lead to development of new skills and abilities as well as not having a plan to help employees develop new skills and abilities at the workplace.

Low status – This is a type of job stress defined by a failure to recognize the significance of the employee's task. It can be evidenced by lack of pride on the part of the employee and societal significance of their job post and hence the job not enhancing the employee's social status. Low status can also result from lack of recognition on a manager's side on the importance of work done by their subordinates.

Strenuous working conditions – this is an aspect of work stress that is characterised by undertaking work functions that are posing a risk to the overall wellbeing of the employee or taking jobs that present with general risks to the employee. These factors lead the employee to be stressed and feeling their welfare is not taken care of.

Unprofitability – This is an aspect of work stress that is characterised by employees feeling not fairly compensated for the services they render to an organisation. This results from a comparison with what their fellow colleagues are being compensated and discovering that they are being underpaid. It can also result from feelings of not being rewarded enough for putting in extra effort at the workplace.

The first variable – this was used in the research to refer to the independent variable that is perceived work stress

The second variable – this was used in the research to refer to the dependent variable that is psychological wellbeing.

Chapter 2: Literature Review

Introduction

The theoretical framework, empirical literature evaluation, and conceptual framework of the study was presented in this section. The theoretical framework expounded on the theories and models the research based itself. This research used the Ryff's six-factor model theory to explain psychological wellbeing and an integration of work stress theories to conceptualise perceived work stress. The empirical literature review explored what has been done on the topic, how the variables interact and identify the gaps this research sought to fill. The conceptual framework mapped out the variables of the study and how they relate to one another based on literature obtained.

Theoretical framework

1.1 Six Factor model of psychological wellbeing

Carol Ryff created the six-factor model of psychological well-being theory in 1989. She integrated works from research by other scholars to build this model. Carol was able to bring out the multidimensionality of wellbeing to view it more than just positive emotions. She categorised psychological wellbeing into six aspects (Ryff & Singer, 2008).

These six factors on Ryff's scale are:

Autonomy – in this aspect, individuals high on autonomy are characterized by the ability to evaluate themselves from personal values, follow their path avoiding peer pressure, and control their behaviour from their internal regulation. Individuals low on autonomy are characterized by concerns of what others think about them, are unable to make their own decisions and rely on the judgement of others, they are easily influenced by peer pressure, and they do not stand on their set values.

Environmental mastery – in this aspect, individuals with a high environmental mastery are characterised by having control of happenings in their environment, they can tap into the opportunities happening in their environment and align their personal needs and values to the situations presented by their immediate environment. Difficulty in managing external activities characterises individuals low on environmental mastery, as well as feelings of entrapment in their environment, lack of sight of opportunities in their environment, as well as a lack of power over their surroundings.

Personal growth – Individuals that exhibit significant personal growth have a sense of ongoing progress, are willing to try new things and have a sense of reaching their full potential. These individuals see improvements in their lives over time, and changes that occur show more self-knowledge and effectiveness. Individuals that demonstrate poor personal growth are marked by a lack of improvement, boredom and lack of interest in life, stagnation, and a sense of being unable to adopt new attitudes or behaviours in their lives.

Positive relations with others – in this aspect, individuals with a strong positive relation have trusted, satisfying relationships with others, display emotions like empathy and affection to others, and are concerned about other people's wellbeing. They are actively involved in the relationship dynamics of human beings. Difficulty building relationships characterise individuals with weak relations with others, are often isolated, and do not care about the welfare and the back and forth involved in the human relationships.

Purpose in life – in this aspect, individuals with a strong purpose in life have aims and objectives that direct their lives, feel their present and past lives have meaning, and have a sense of significance in their lives. Failure to have goals in life characterises people with a weak purpose; they lack beliefs that give their lives meaning and lack a sense of direction in their lives.

Self-acceptance –It involves acknowledging the good and evil and positive feelings towards one's past for those with high self-acceptance. Those presenting with low self-acceptance are characterised by dissatisfaction with one's life, not feeling comfortable with one's past life, and wanting to change some personal qualities about themselves (Ryff & Singer, 2008).

1.2 Work stress Theories

An integration of work stress theories was applied to explain perceived work stress. Obbarius et. al., (2021) expounds on Lazarus and Folkman's transactional theory that was published in the year 1987 that suggests work stress results from how one appraises the situation they find themselves in. Once someone is faced with a stressor, two appraisals take place i.e., the primary and secondary appraisals. The primary appraisal occurs when people assess a prospective occurrence based on its potential impact on their life. It is characterised by threat, harm, and challenge. Threat involves the possible dangers that could result from the future change, harm involves similar events that have already happened and resulted in loss to the employee and challenge involves the harm associated in dealing with another situation. Secondary appraisal is focused more on the person. The secondary appraisal is divided into two subcategories i.e., focused on emotions, and focused on problem. Problem-

focused are measured by the number of solutions one can implement to deal with the problem, while emotion-focused are measured by strategies one can use to manage their stress. Both secondary appraisals are equally capable of manipulating stress. If a person has enough resources to deal with problems, then low levels of stress are registered, and if the person lacks enough resources to deal with problems, then high stress levels are registered. The critical tenet for this approach is that stress depends on the employee's appraisal of their circumstances.

Edward et. al., (1998) proponents of the person-environment fit model expound on the importance of employees having a fit in the environment they find themselves. A good fit can be described as the employee possessing the aspects a given job requires. Failure to have these required aspects results into a misfit and it is in this environment that work stress ensues. For example, an employee with poor communication skills working as a communication lead is likely to be stressed as the job requires communication skills they do not possess. Karasek (1979) the proponent of job demands-control-support model explain that work stress results from employees lacking control over their working circumstances. If one can influence what happens to them, then they have control, but if the environment dictates what happens, the employee has no control and is likely to experience more stress. Control in each job is matched by the strain brought about by the job. If there is a high match between the two, stress is less likely to happen.

The allostatic load model of stress proposed by McEwen and Stellar in 1993 suggests that prolonged stress burden continually causes more harm to an individual over time. The theory explores the result of prolonged stress on the body's neurological system that is responsible for responding to stress. Stress causes a strain on peoples physiological and psychological processes. Allostasis (an organism's attain balance by change) has three phases (Primary, Secondary and Tertiary allostasis). Primary allostasis, immediate responses are registered when one experiences a stressor. This involves the fight-or-flight response. It presents acute stress symptoms such as increased heart rate, sweating, difficulty in focus and breathing, among others. With persistent stress, the employee moves to the secondary allostasis, where stress results in significant body systems changes. This can include aspects such as blood pressure elevation. People responding to this stage may choose harmful coping mechanisms such as poor eating habits and drinking alcohol, which further adds to the stress. the tertiary allostasis level. At this level, one is sick with diabetes and heart diseases. Psychological illnesses such as clinical depression can be registered (McEwen & Stellar, 1993).

Pezaro (2018) expounds on the Conservation of Resources model (COR) that suggests that stress cannot be separated from general life stressors, it happens when there is a lack or risk of resources

being lost. Some of the pressures could be related to resources like esteem, physical belongings, sense of security, status, or time. Loss of resources can occur as one responds to activities both within and outside the work functions. This can influence creating anxiety and job dissatisfaction.

Perceived work stress

Stress is the body's reaction to an external or internal event that poses a challenge. It can be positive when it helps someone achieve goals or avoid danger or negative when it results in more challenges such as mental health problems like anxiety. Stress can last in a spur of the moment (acute stress) or last for a prolonged period of time (chronic stress) which may result in negative effects (National Institute of Mental Health [NIH], 2022).

Work stress describes scenarios employees suffer emotionally and physically because of their work. This occurs when the employee lacks the know-how/capabilities and resources to deliver on that work as well as the work not meeting the needs of the employee (CDC, 2022). Work stress results from aspects such as heavy workloads, high competition, great expectations at the workplace (Gilmartin, 2018), poor or lack of support, poor communication, role conflict, imbalance in the effort-reward system, unfair treatment, and lack of transparency at the workplace (Bhui et al., 2016), people related issues, work-life balance, absence of job security (Elflein, 2019) and conflict in role, ambiguity of job role, lack of a promotion feedback, lack of authority, interpersonal relationships, bad working conditions and a lack of participation in decision making (Keshavarz & Mohammadi, 2011) among other factors.

Perceived work stress is self-reported work stress by an employee. The term perceived on its application to work stress means that the stressors at work have different impacts on employees. Therefore, perceived work stress as was studied in this research is the work stress an employee reports as going through or feeling (Erebak, 2016).

Scholars have identified work stress in different professions across the globe. In a qualitative survey conducted from a range of different organisations from public, private, and non-governmental organisations, unfavourable work practices and management techniques were recognized by participants as current causes of job stress in the United Kingdom (Bhui et al., 2016). On the list of most stress evoking jobs these days in the United Kingdom (U.K.) is that of a professor. It is characterised by heavy workloads, high competition and great expectations from the staff and students, and financial challenges, including research grants cutbacks. The evidence of universities worldwide being subject to work stress prone environments is on the rise (Gilmartin, 2018). A study

conducted at the University of Tehran, Iran, discovered that employees were under a lot of stress on the job. The main common factors resulting in job stress included: Role conflict, job uncertainty, an absence of advancement feedback, a lack of authority, poor working environment, interpersonal interactions, and a lack of engagement in decision making (Keshavarz & Mohammadi, 2011). A study conducted from 65 full-service hotels in the United States of America identified interpersonal tension at the workplace and overloads such as malfunctioning technology as significant causes of work stress. The study also found that employees in managerial posts suffered more work stress than those in non-managerial posts (O'Neill, & Davis, 2011). While investigating the consequences of work stress on employee performance, a tea plantation located in Sri Lanka by the name of Hayleys, identified occupational stress as a phenomenon present in the tea sector and affecting employee performance (Guruge & Ban, 2021). Malarvizhi & Jeyarathnam, (2016) on their study of identifying coping techniques on employees in sugar mills in Tamilnadu, India also confirmed the presence of work stress in plantation setups. A study to examine whether burnout, work-related stress, and sociodemographic factors that may have an influence on a population of nurses in Nigeria, showed that work stress was prevalent and further found out that sex had a significant correlation to work stress (Ezenwaji et al., 2019). A study to look into the impact of workplace stress on employee performance of an Oil Palm Plantation in Ghana found out that occupational stress was prevalent and arose from job conditions, career advancement and interpersonal relations (Asamoah, 2017). Evidence of work stress has been found in tea factories in Muranga County, Kenya (Mukuna, 2014), in Kenya Power Company through a study to find out the usefulness of the strategies the company has set up to mitigate work stress (Kamau, 2014), and among the police officers in Nairobi (Momanyi, 2018).

These sources help highlight the prevalence of work stress in different professions and across the globe. Little research on tea plantations regarding work stress have been conducted globally with none found to the knowledge of the researcher in Kenya. Research touching aspects like the set up under study (plantation), tea processing factories and the Kenyan working environment have shown that work stress is a present phenomenon.

Psychological wellbeing

Psychological wellbeing can be described as a positive mental state and optimum functioning of an individual and on their social life. A positive mental state is characterised by aspects such as satisfaction or happiness (Robertson, 2022). Tang et. al., (2019) define psychological wellbeing as a key aspect of mental health which includes feelings of joy, satisfaction and possessing healthy

problem-solving skills. Ryff and Singer (2008) further define psychological wellbeing by use of the six scales Ryff postulated in 1989 to further reiterate psychological wellbeing as more than positive mental state but a complex idea that involves the person and the environment interaction to bring about overall joy and satisfaction in life. According to Robertson (2022) there are two types of psychological wellbeing: Hedonic wellbeing which represents the first facet and is described as the subjective feeling of happiness. Hedonic wellbeing has two major components: an affective and cognitive component. People have hedonic wellbeing when they have a high positive influence and a high level of contentment with their lives. The other sort of psychological well-being is referred to as Eudaimonic wellbeing, and it is the more intentional element of psychological wellbeing and was studied by Carol Ryff who divided it into the six factors described in the theoretical framework section. Psychological wellbeing as was viewed in this study followed the eudaimonic approach as suggested by Carol Ryff.

Psychological wellbeing has been associated with good health as a component that aids people live healthy and long lives. It improves health not only by preventing proneness to sickness but also by reducing frequency of getting sick, quick wound recovery, setting the body with more physiological reserves and higher general recovery ability as supported by the Nun study where nuns who expressed more positive emotions tended to have higher life expectancy of about ten years than those nuns who portrayed fewer positive emotions. (Park et al., 2014). Psychological wellbeing is one contributor to quality sleep with a positive correlation established under studies by Zhai et al., (2018). Psychological wellbeing has been found as a contributor to coping skills. The higher the psychological wellbeing profile the higher the application of coping strategies (Freire et al., 2016). Other aspects that have shown the benefits of psychological wellbeing are on self-esteem (Nwankwo et al., 2020). Adverse psychological wellbeing may result in employees developing low self-esteem and unhealthy relationships and engaging in risk-taking behaviours such as substance abuse and suicidal behaviours (Tahar, 2017).

Stress at the workplace can impact performance of work, concentration, productivity, employees' health, and employees' wellbeing and their relationships and family life (Gilmartin, 2018). Work stress has been linked to bringing about psychological distress and mental illnesses. As a result of great workloads and interpersonal conflicts, work stress can bring about disrupted parenting on children, resulting in them acquiring mental ill-health. Employees are likely to develop anxiety and worry (Bhui et al., 2016). Stress has a significant negative effect on employees' wellbeing. This leads to implications on the whole organisation as well. Stress may lead employees to develop illnesses such as hypertension, depression, and cardiovascular illnesses. In some cases,

stress at work can result in death (Asamoah, 2017) all of which affect the psychological wellbeing of employees.

Perceived work stress and psychological wellbeing

Several studies have discovered substantial links between job stress and organisational commitment. (Wang et al., 2020) discovered a significant inverse link involving occupational stress and organisational commitment among Chinese teachers. Lack of organisational commitment speaks to one's personal mastery.

Leip and Schiff (2018) discovered a substantial weak negative connection between job-related stress and job autonomy while Clausen et al., (2021) in their study of the linear relationship between job autonomy and psychological wellbeing showed job autonomy as being positively associated with the second variable.

Work stress influences one's purpose. A moderate negative correlation has been studied between productivity and work stress by Ehsan & Ali (2019) with Klynn (2020) explaining that growth can arise from experiencing a stressing event, a phenomenon she names post-traumatic growth.

In Pakistan, the relationship between the first variable and the second variable was studied among secondary school principals. The researchers discovered that there was existence of a correlation of $r = -0.947$. This indicated the presence of a significant negative link between perceived job stress and psychological wellbeing (Suleman, Hussain, Shehzad, Syed, & Raja, 2018). In a study on road safety among personnel in Osun state of Nigeria, a negative correlation was found with occupational stress (Saka et al., 2018). Other studies that found a negative correlation between the first variable stress and the second variable Srivastav (2021), Mensah (2021). In contrast Chepkwony, (2017) in a study of effects of job stress on wellbeing of employees' wellbeing among medics in Baringo county, Kenya studied 164 medical workers. The workers included doctors, clinicians, and nurses. The researcher discovered that the association between job stress variables and psychological wellbeing was minor.

Confounding variables Affecting Perceived Work Stress and Psychological wellbeing

A study on differences in gender related to work stress was conducted in India among management faculties which include both the public institution and private institutions. Role stress scale was applied wherein ten different forms of stress in roles were examined. A 180-employee sample was drawn up and separated based on gender of participants. The study's findings were that women were more stressed compared to their counterparts' men in both the private institutions and public institutions. A higher stress level was observed among women who worked in private institutions compared to those that worked in public institutions (Chaturvedi, 2011). According to the

American Psychological Association's (APA) 2016 poll, stress in America was found more prevalent among the females than the males. On a scale of one to ten, ladies reported an average score of 5.1, while males reported an average score of 4.4 (Daily Life, 2019). A study conducted in India among university instructors sought to answer whether there exist gender differences in perceived work stress. 86 people filled in an online cross-sectional survey. Fifty-one of them were male, and 35 were female. Data on demographics and characteristics influencing occupational stress were collected via questionnaires. The Maslach Burnout Inventory (MBI) was one test that was used. The General Health Questionnaire (GHQ-12) was another test that was applied. The two were used to collect data on factors influencing occupational stress. The instruments were tested for their reliability and their validity. The findings showed that females scored higher on job stress (Solanki, 2021). A study on the association between gender and levels of occupational stress was conducted among Kisumu, Kenya, police constables. The data revealed a substantial link between gender and occupational stress levels (Atieno et al., 2014). A study in Greek conducted on Preschool, and Elementary teachers found no significant difference between both genders. The researchers examined the association between gender and occupational stress while looking into the link between working conditions, stress, and job satisfaction. 172 participants were drawn up from both primary schools and elementary schools in the Greek public school system. Data was gathered through the use of a questionnaire. A correlation test was used that showed no difference in stress levels among both genders (Galanakis & Alamani, 2020).

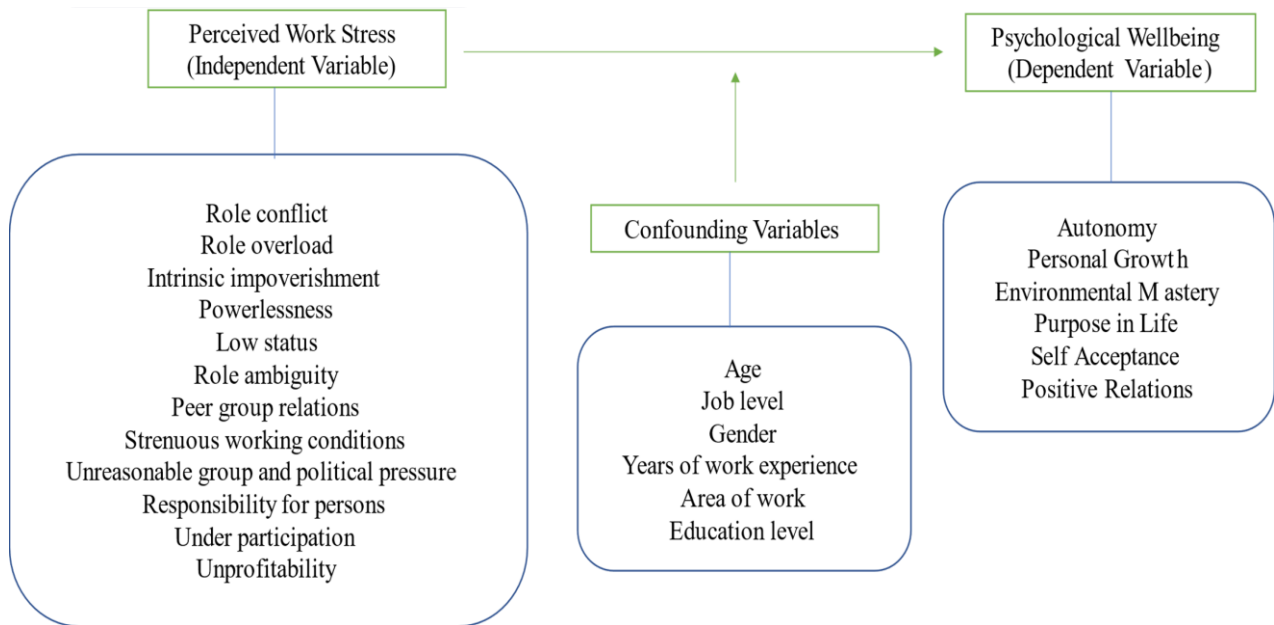
Research to find out the impact of age and level of experience among managers at a higher educational level on occupational stress discovered the presence of a noteworthy association between job stress and age. A sample of 120 managers in public higher learning institutions was identified in Punjab, Pakistan, utilising a simple random sampling technique. The revised occupational stress inventory was used to collect data (OSI-R). Both descriptive and inferential data were analysed, and the ANOVA and Pearson correlation was carried out. The sample was separated into three age groups: those between thirty and forty years, between forty-one and fifty years and those from fifty-one and above. Ages 30-40 years had a higher stress level than the other counterparts; ages 42-50 years had the lowest recorded stress levels, with ages 51 and above years old recording slightly higher stress levels than ages 41-50 years. This is to show that the youthful managers and older managers experienced more occupational stress than those managers at their middle age (Mahmood, Zamir, Ain, Nudrat, & Zahoor, 2013). Jayaswal (2020) While investigating the association between the first variable among female nurses and job satisfaction, he found that the younger nurses experienced more work stress compared to the older nurses.

Marriage is one factor that is associated with psychological wellbeing. The married individuals have been shown to be scoring higher on psychological wellbeing than the divorced/separated and single individuals. A study carried out in the United States of America seeking to better understand psychological wellbeing in terms of negative wellbeing i.e., depressive symptoms and positive wellbeing i.e., purpose in life, positive relations with others, self-acceptance, personal growth, autonomy and environmental mastery (Ryff's six factors) had a study sample of 1711. The findings were that individuals who were continuously married had low negative wellbeing as compared to the divorced/separated. The married individuals also had better positive wellbeing compared to the divorced/separated and the single individuals (Hsu & Barrett, 2020).

Employees in managerial roles (senior roles) suffer more work stress than those in non-managerial (junior roles). Employees in management positions had more work stress than those in non-managerial positions, as demonstrated by a study of 65 full-service hotels in the United States of America. (O'Neill, & Davis, 2011).

Conceptual framework

Figure 1: Conceptual Framework



This study's conceptual approach proposes that perceived work stress negatively affects the psychological wellbeing of employees. The study conceptualises perceived work stress using the subscales of the occupational stress index (OSI) which are: role conflict, role overload, intrinsic impoverishment, powerlessness, low status, role ambiguity, peer group relations, strenuous working conditions, unreasonable group and political pressure, responsibility for persons, under participation and unprofitability that an integration of work stress theories brings out.

Psychological wellbeing was understood as feelings of joy and satisfaction with one's life that are quantified by Ryff's six-factor theory of psychological wellbeing and was studied under the six factors namely: personal growth, environmental mastery, autonomy, positive relations, purpose in life, and self-acceptance.

As the study points out, various confounding variables enter the picture and have an impact on the link between workplace stress and the second variable. These confounding variables are age, job level, gender, years of work experience, area of work and education level that this study took into consideration. These variables have been shown to either improve or thwart psychological wellbeing and or increase or decrease the perception towards work stress in highlighted research. This research sought to find out the effect these confounding variables have on the interaction between the dependent and independent variable. This conceptual framework was used to roll out this study in Kericho, Kenya.

Chapter 3: Methodology

Introduction

This chapter covered the research design, the study's population, the sample and sampling methodologies, data collection instruments (their validity and reliability), what to do to score the instruments, and data analysis.

Research Design

A descriptive correlational research design was implemented for this investigation. This research strategy seeks to collect information in a systematic manner in order to describe elements of the population under consideration. The correlational part of the study aims at studying the relationship between variables without interference or influence from the researcher. Data that is majorly used in descriptive research design is quantitative with qualitative data being applied sometimes for explanatory purposes. Variables under study in descriptive research cannot be manipulated and the researcher only measures them. The research design is advantageous in that it applies multiple data collection methods, it is fast and cost friendly, holistic in application of both qualitative and quantitative methods, and has external validity as the sample is studied in the natural environment with no manipulation of variables. The design faces some drawbacks among them it cannot explain the causes of the phenomenon, and suffers risk of false responses.

Area of Study

The study took place in Chaik ward in Kericho County, Kenya.

Population of Study

The study targeted a cross section of management employees working in a unit of a tea company. The unit carries three subunits which this research refer to as areas. These areas are departments, field and factory. Management employees as applied to this study represented the employees who are in an administrative capacity and plan, or coordinate or supervise work activities of other employees. The management employees are: managers, supervisors, and team leaders of the unit.

Sample and Sampling Techniques

The study targeted the entire population. The study took place in two phases. The first phase involved the application of a pilot study and the other involved the main study. The pilot study targeted 18 participants, an acceptable range of 11 - 30 according to Connelly, (2008) and Hill (1998) and made-up population sample per area as highlighted in table 1. The second phase of the

main study aimed at reaching the remaining part of the population. The remaining part of the population accounts for 90 participants. For modest population sizes, a sample size of 20% of the population is suitable for descriptive research, with 30 individuals being sufficient for a correlational study (Gay & Diehl, 1996).

Table 1: Population and Pilot Sample

Staff Category	Staff Population	50% sample	Sample per area	Sample per area (Pilot Study)
Managers	18	9	3	1
Supervisors	30	15	5	1
Team Leaders	60	30	10	6
Total	108	54	18	18

Data Collection Instruments

The Occupational Stress Index (OSI) and Ryff's Psychological Wellbeing (PWB) questionnaires were used to collect data for this study.

The Occupational Stress Index was created by Singh and Srivastava (OSI). The scale is made up of 46 items. The scale is scored on a likert scale of five points (Srivastava & Singh, 1981).

Psychologist Carol D. Ryff designed Ryff's Psychological Wellbeing (PWB) scale in 1989, and the 42 items scale that was used for this experiment was adapted from the original scale of 1989 in 2007 (Ryff et al., 2007).

Reliability and Validity of Data Collection Instruments

The PWB and OSI scales are standardized tests whose validity and reliability has been established. The Split Half approach was used to calculate the reliability coefficient of the Occupational Stress Index, which was found to be 0.937, while also determining the Cronbach Alpha coefficient, that was reported to be 0.90 (Srivastava & Singh, 1981). The reliability of the Occupational Stress Index (OSI) scale was backed up by the reliability obtained from a study of offshore installation workers (Chen, Wong & Yu, 2001), and testing occupational stress among employees in Bengali.

The validity of the PWB scale has been found sufficient in several studies. A study conducted in a university in Iran aimed at testing the reliability and validity of several tools found the Ryff scale valid for measuring psychological wellbeing and with a reliability coefficient of 0.82 (Bayani,

Mohammad, & Bayani, 2008), a study in U.K. testing the effectiveness of the PWB scale found it valid for measuring psychological wellbeing (Abbott et al., 2010), and on a paper to explain the factorial validity of the PWB scale, Shyrock and Meeks (2018) found the scale reliable and valid with the longer PWB scales presenting better internal consistency.

Both the occupational stress index (OSI) and the psychological wellbeing (PWB) tests, have been applied across the world and have been proven to be reliable and valid. Few studies were found by this research on the use of these tests in tea plantation setups and in the Kenyan setup. The study therefore sought to carry a pilot study to establish whether both tools are reliable and valid for use for conducting this study.

Administration of the Instruments

Two standardised tools were used in the investigation. Ryff's Psychological Wellbeing (PWB) scale and the Occupational Stress Index (OSI). The two scales were administered consecutively on the identified sample by use of a questionnaire. The questionnaire was printed out and handed to the participants to self-fill. A brief introduction of what the questionnaire intends to measure was explained to the participants and how to fill it was available in both print and verbal explanation.

Scoring of the Instrument

The Ryff's Psychological well-being scale (PWB) was used, which has 42 items. The items in the instruments are divided into positively and negatively phrased questions. For the positively phrased questions, the score one selects on the Likert scale was recorded as is. For the negatively scored items which represent the following questions,

(3, 5, 10, 13, 14, 15, 16, 17, 18, 19, 23, 26, 27, 30, 31, 32, 34, 36, 39, 41) were reverse scored i.e., for those who score 6 that was equivalent to 1, for those who score 5 that was equivalent to 2, for those who score 4 it was equivalent to 3, for those who score 3 it was equivalent to 4, for those who score 2 it was equivalent to 5, and for those who score 1 it was equivalent to 6. The instrument is divided into 6 subscales that are: personal growth, environmental mastery, autonomy, positive relations, purpose in life, and self-acceptance, with each containing 7 items that were analysed to find the overall score per subscale. The higher a participant's overall score on the scale, the better their psychological well-being, and the lower the overall score of a participant is on the scale, the lower their psychological well-being.

The occupational stress index (OSI), which contains 46 items, has a similar structure as the psychological wellbeing (PWB) scale in that it contains both positive and negatively worded

statements. For the positively worded items, their score was registered as scored by the participant in the questionnaire. For the negatively stated items, a reverse score was established that is, for the items that the participant who scored 5 got recorded as 1, for items the participant scored 4 got recorded as 2, for items the participant scored 3 got recorded as 3, for items the participant scored as 2 got recorded as 4, and for items the participant scored as 1 got recorded as 5. The negatively scored items are (6, 7, 8, 10, 14, 15, 18, 19, 21, 22, 30, 31, 32, 33, 38, 40, 41, 43). The test is split into subscales of: role conflict, role overload, intrinsic impoverishment, powerlessness, low status, role ambiguity, peer group relations, strenuous working conditions, unreasonable group and political pressure, responsibility for persons, under participation and unprofitability that was analysed individually. A total score for the test was obtained and interpreted as the higher the score a participant achieves the higher the perceived occupational stress, and the lower the overall score of a participant is on the scale, the lower the perceived occupational stress.

For both the occupational stress index (OSI) and the psychological wellbeing (PWB) test, percentiles were used to find where the scores of the participants is at.

Methods of Data Collection

The standardised occupational stress index (OSI) scale and the psychological wellbeing scale (PWB) were used to collect data for this study. A brief additional section of questions was added to the questionnaire to collect the demographic data. The questionnaires were handed to the study participants to self-fill.

Methods of Data Analysis

The research used Statistical Package for Social Sciences (SPSS) to carry out descriptive statistics, Pearson correlation, multiple regression and any other necessary operation to provide more insight on the research objectives. Descriptive statistics were analysed such as the demographics of the study and presentation of the scores on psychological wellbeing and perceived occupational stress.

Correlation was applied to check for the association between perceived work stress and psychological wellbeing. Multiple regression was applied to find what factors of job stress are significant in determining psychological wellbeing.

The research used a t-test and chi-square to test for the hypothesis. A t-test is used to test significance between means. The categories of t-test are: a one-sample t-test, an independent sample t-test and paired sample t-test. Burtchen (2015) argued that a t-test for correlation is related to paired sample t-

test which this research applied to test the significance of the correlation obtained. Chi-square was applied to test the second hypothesis that involves differences among categorical values.

Ethical Considerations

This research sought to follow all set ethical guidelines to ensure no harm befalls the participants. Linked with beneficence, the study offered result interpretation to the participants who were interested in knowing their scores on the standardised tests for measuring work stress and psychological wellbeing.

Express consent was sought from participants before joining the research. Explanation was offered to the participants about what the research seeks to accomplish and they were requested to join the study on a voluntary basis.

Confidentiality was maintained, and no participant's personal identifying information was disclosed. The questionnaires avoided putting any details that can trace back to the participant and any participant's concerns on confidentiality were addressed before participating in the study.

Privacy. The research kept the name of the tea plantation anonymous to protect its business image and adopted a name 'Maji Mzuri Tea Plantation' to represent the tea plantation under study.

Permission. The study sought to get permission to use the standardised tests (occupational stress index (OSI) and the psychological wellbeing (PWB) scales). Permission for the psychological wellbeing test is open access. Permission for the occupational stress index was sought from the authors. Permission to carry out the research in Kenya was requested from The National Commission of Science, Technology, and Innovation (NACOSTI).

The researcher worked closely with a supervisor and colleagues from the University of Nairobi for peer review on ethical consideration.

Pilot Study Results

The aim of the pilot study was to assess the reliability of the occupational stress index (OSI) and psychological wellbeing (PWB) applicability to the tea plantation sector in Kericho, Kenya.

Although the two standardised tests have been demonstrated as reliable, there was no data found on the reliability to the setup under study. The tools on the other hand have exhibited reliability in different work setups and countries as highlighted under the reliability section of chapter 3 of this research.

Connelly, (2008) offered a suggestion that 10% of the target sample is sufficient to carry out a pilot study. Another scholar on the other hand, Hill (1998) has suggested a pilot sample between 10 to 30 as being sufficient. Based on this, the study targeted to reach a pilot sample of at least 11 participants. 18 questionnaires were shared out. 6 questionnaires were shared to each area targeting the management employees. A time frame of 3 days was set and the pilot rolled out.

A pilot sample of 12 was obtained and the reliability of the scales tabulated using SPSS.

For the Occupational Stress Index (OSI) scale the following were the reliability findings

Table 2: OSI scale reliability

OSI subscales	Items per subscale	Total Items	Reliability Alpha
Role Overload	6	6	.867
Role Ambiguity	4	10	.67
Role Conflict	5	15	.829
Unreasonable Group and Political Pressure	4	19	.894
Responsibility for Persons	3	22	.909
Under Participation	4	26	.819
Powerlessness	3	29	.841
Peer Group Relations	4	33	.857
Intrinsic Impoverishment	4	37	.88
Low Status	3	40	.972
Strenuous Working Conditions	4	44	.793
Unprofitability	2	46	.656
Mean	3.83		.832

The reliability of the OSI scale as highlighted by Srivastava & Singh, (1981), & Chen, Wong & Yu, (2001) has also been established for this study. A score on Cronbach alpha of 0.832 was attained, and thus confirming the reliability of the Occupational Stress Index (OSI) for application on management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya.

For the Psychological Wellbeing (PWB) scale, the following were the reliability findings;

Table 3: PWB scale reliability

PWB Subscales	Items per Subscale	Total Items	Cronbach's Alpha Reliability
Autonomy	7	7	.848
Environmental Mastery	7	14	.686
Personal Growth	7	21	.847
Positive Relations with Others	7	28	.737
Purpose of Life	7	35	.867
Self-Acceptance	7	42	.721
Mean	7		.784

The reliability of the PWB as highlighted by Bayani, Mohammad, & Bayan (2008), Abbott et al., (2010) and Shyrock and Meeks (2018) for measuring psychological wellbeing has been established for this study. A Cronbach alpha of 0.784 was found and therefore confirming the reliability of using the Psychological wellbeing (PWB) scale to study the psychological wellbeing of management employees in a unit at Maji Mazuri tea plantation in Kericho, Kenya.

The pilot study was helpful in identifying the need to extend time for the main study responses to the questionnaire. The time devoted for the pilot study was a week and it was noted that more responses had trickled in past this time. Participants argued that due to being busy they needed more time. The late responses were not incorporated as the research had obtained the threshold to continue with the investigation. This discovery was incorporated into the main research that gave respondents 2-3 weeks to return the questionnaire.

CHAPTER 4: DATA ANALYSIS, RESULTS AND DISCUSSIONS

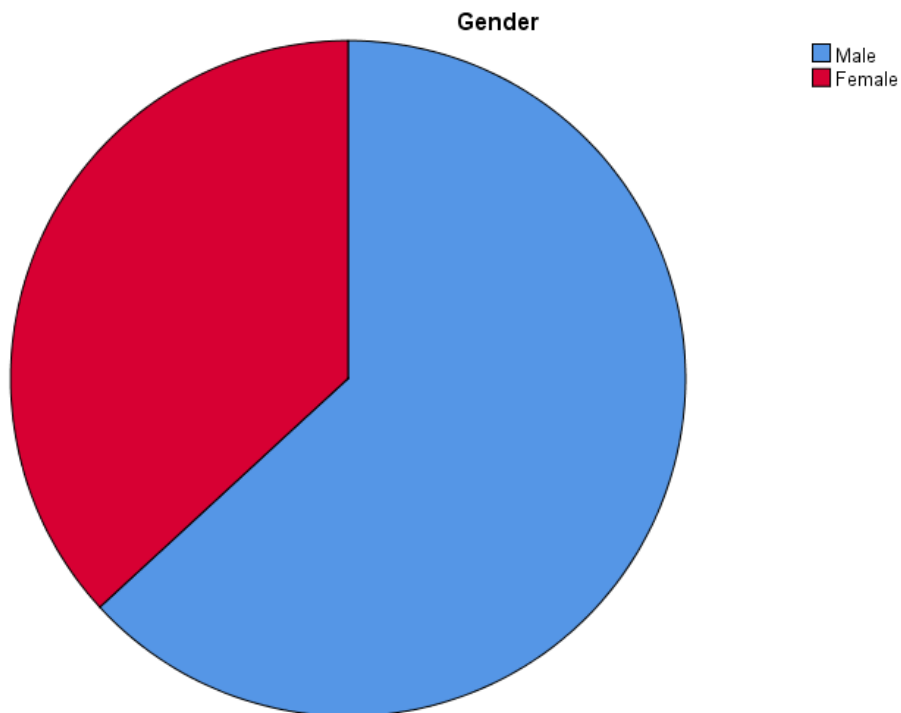
Introduction

The study managed to get 57 questionnaires returned from the 90 questionnaires that were shared out. This represents a return rate of 63% that falls in the acceptable range of 60% (Fincham, 2008).

The number of questionnaires received which are equivalent to the participants reached, achieved the required threshold for the study. As a correlational descriptive design study, and based on the subject population (108), the study required at least 30 people to enable a correlational analysis of the variables under consideration (Gay & Diehl, 1996).

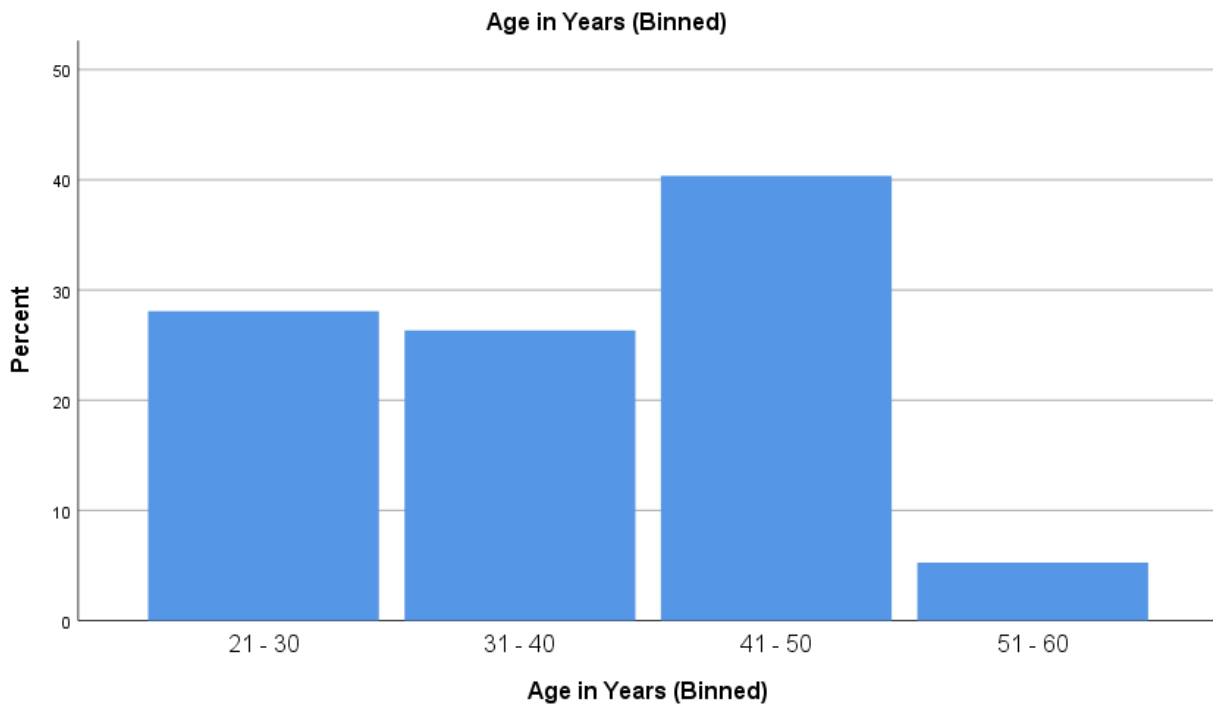
Below is the analysis for the demographics of the study.

Figure 2: Gender



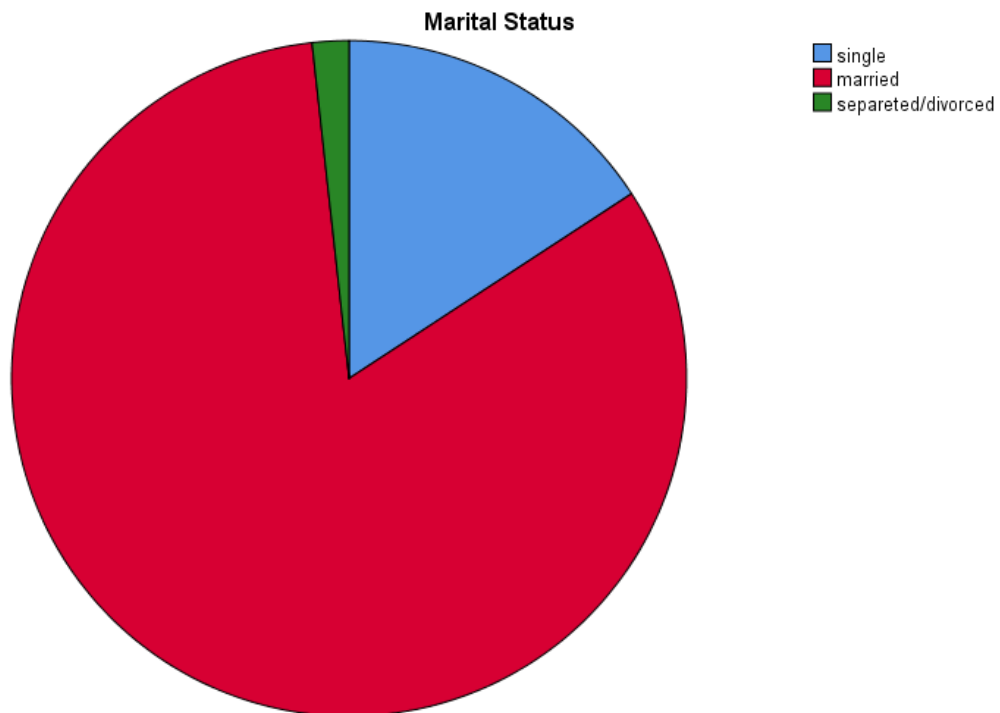
The men formed 63.2% and the females formed 36.8% of the sample as illustrated by the graph.

Figure 3: Age in Years



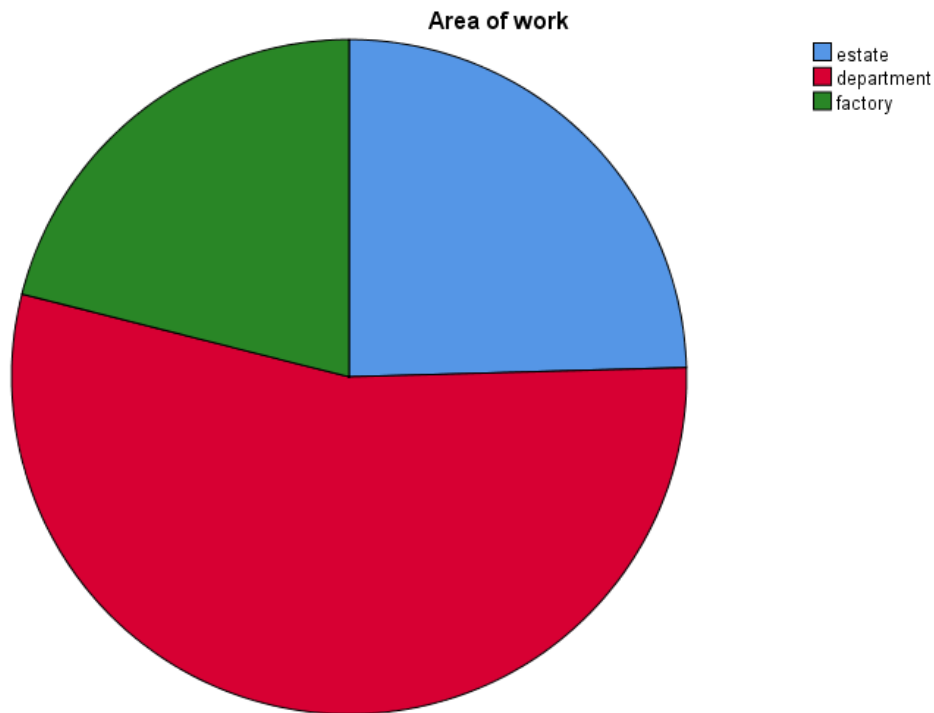
The ages for the sample collected were binned and represented as follows: for ages (21-30) years 28.1%, for ages (31-40) years 26.3%, for ages (41-50) years 40.4%, for ages (51—60) years 5.5% of the participants.

Figure 4: Marital Status



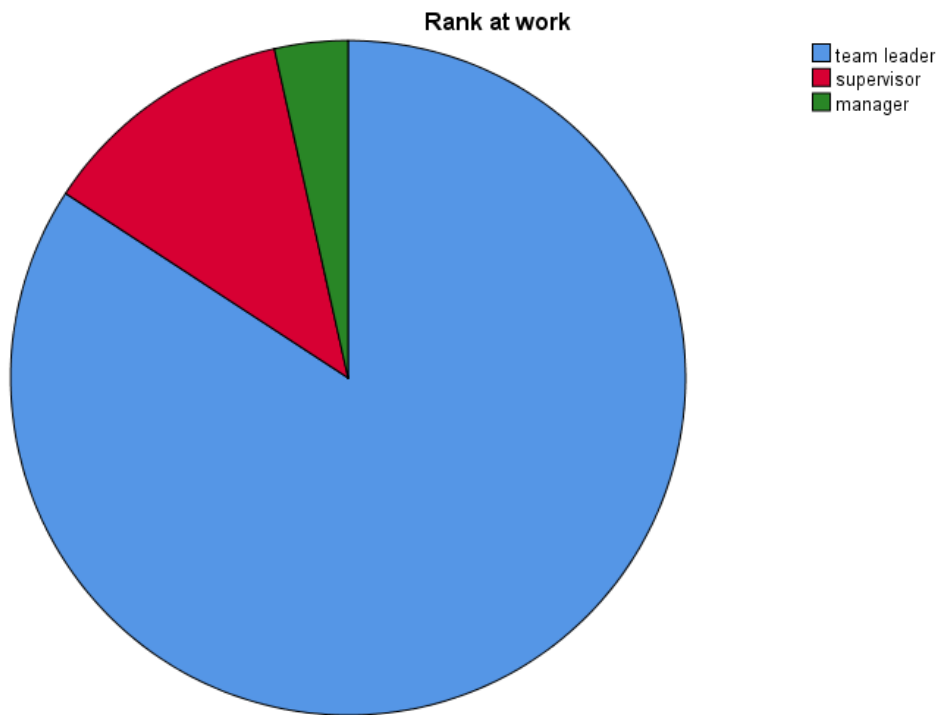
The status of marital representation of the participants was found as follows. The married participants formed part of 82.5%, the single participants formed part of 15.8% while the divorces/separated formed part of the 1.8% of the data.

Figure 5: Area of Work



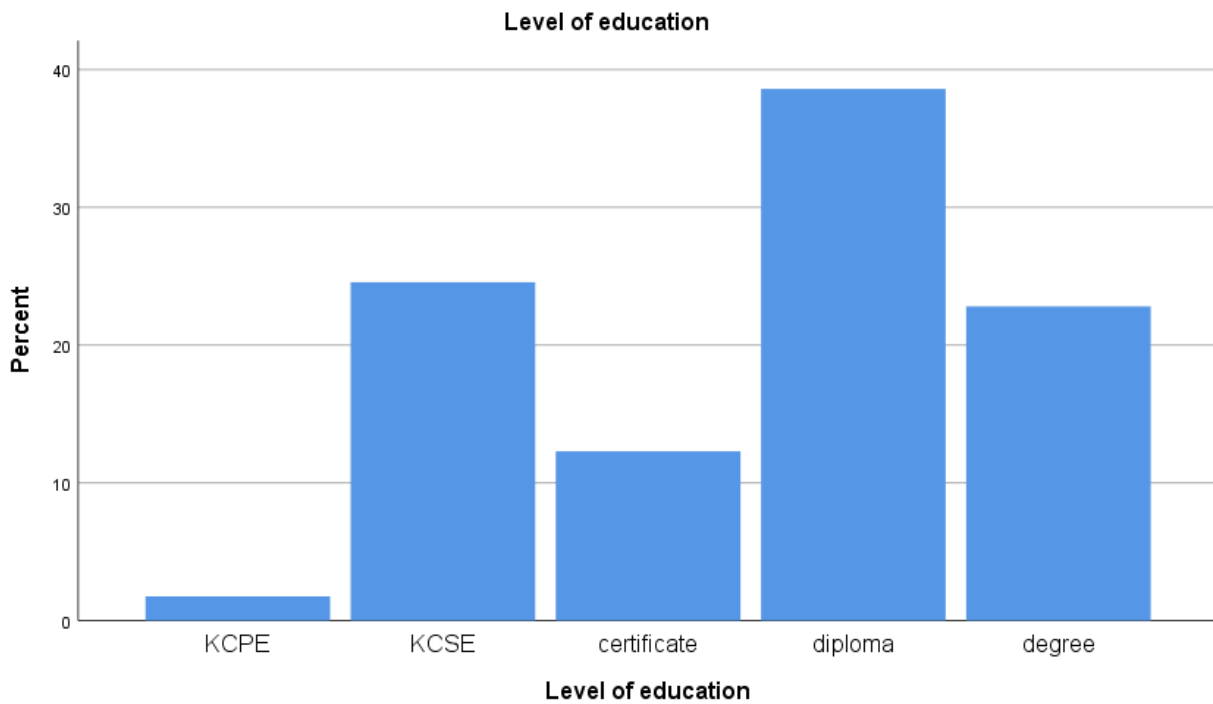
The area of work was represented as follows; estate was represented by 24.6%, departments were represented by 54.4% and factory was represented by 21.1% of the sample.

Figure 6: Rank at work



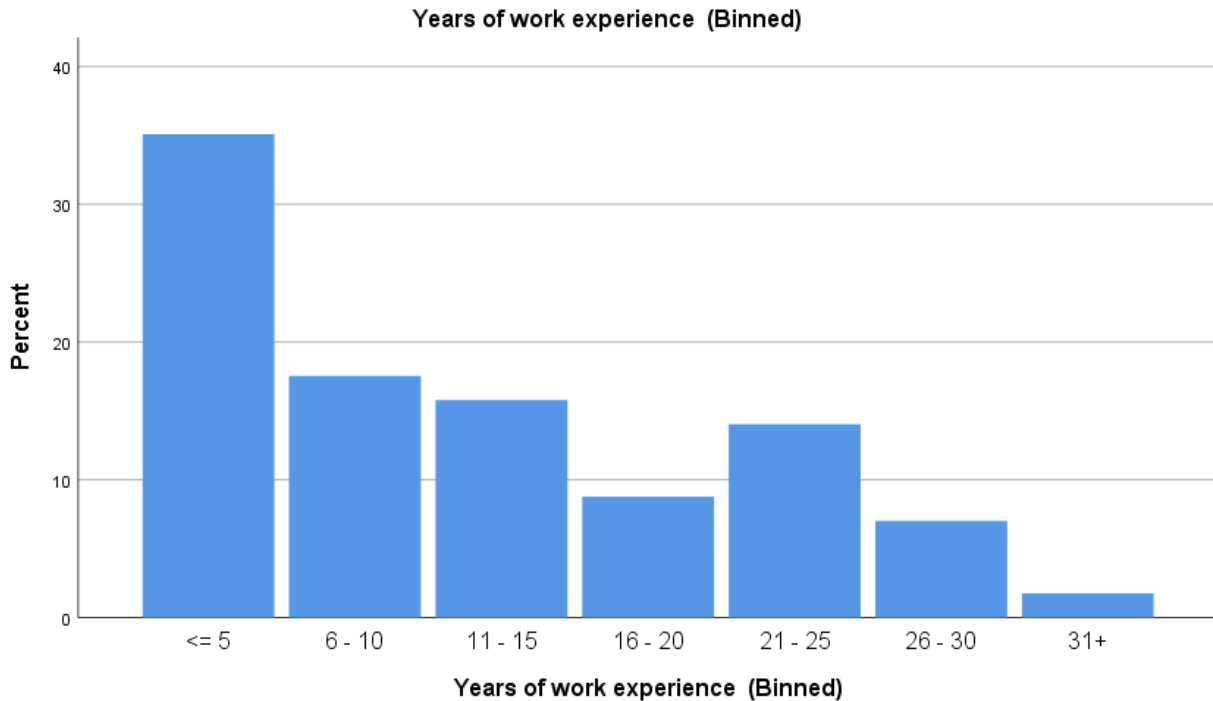
The rank at work was represented as follows. Team leaders had 84.2%, supervisors had 12.3% and the managers represented 3.5% of the data.

Figure 7: Level of Education



The level of education for the participants was as follows: 1.8% for KCPE, 24.6% for KCSE, 12.3% for Certificate, 38.6% for Diploma and 22.8% of participants had a degree level of education.

Figure 8: Years of work Experience



The years of work experience captured in a binned format for the management employees were as follow: (0-5) years was 35.1%, (6-10) years was 17.5%, (11-15) years was 15.8%, (16-20) years was 8.8%, (21-25) years was 14%, (26-30) years was 7%, and 31 years and above was 1.8%.

Perceived Occupational Stress

The scores attained for perceived occupational stress were highlighted on the identified 12 sub-scales of occupational stress. The interpretation of the scale used the percentiles values of the data obtained to classify the scores into low, moderate and high levels of perceived occupational stress. Scores below P₂₅ were classified as low, scores between P₂₆ and P₇₅ were classified as moderate with scores above P₇₅ were classified as high on perceived occupational stress as per the norms table below.

Table 4: Percentile range scores for OSI

Sub-scale	Low (below P ₂₅)	Moderate (between P ₂₆ and P ₇₅)	high (above P ₇₅)
RO	6 – 12	12-18	19 – 30
RA	4 – 7	8 - 11	12 – 20
RC	5 – 10	11 – 14	15 – 25
UGP	4 – 7	8 - 10.5	10.6 – 20
RP	3 – 9	10 - 12.5	12.6 – 15
UP	4 – 8	9 – 13	14 - 20
PL	3 – 6	7 – 10	11 – 15
PPR	4 – 9	10 – 12	13 – 20
IM	4 - 7.5	8 – 10	11 – 20
LS	3 – 5	6 – 8	9 – 15
SWC	4 – 8	9 – 11	12 – 20
P	2 – 4	5 – 8	9 – 10
Total OSI Score	46 – 105	106 – 129	130 - 230

Where:

RO is Role Overload. RA is Role Ambiguity. RC is Role Conflict. UGP is Unreasonable Group & Political Pressures. RP is Responsibility for Persons. UP is Underparticipation. PL is Powerlessness. PPR is Poor Peer Relations. IM is Intrinsic Impoverishment. LS is Low Status. SWC is Strenuous Working Conditions. P is Unprofitability.

Table 5: Scores for OSI

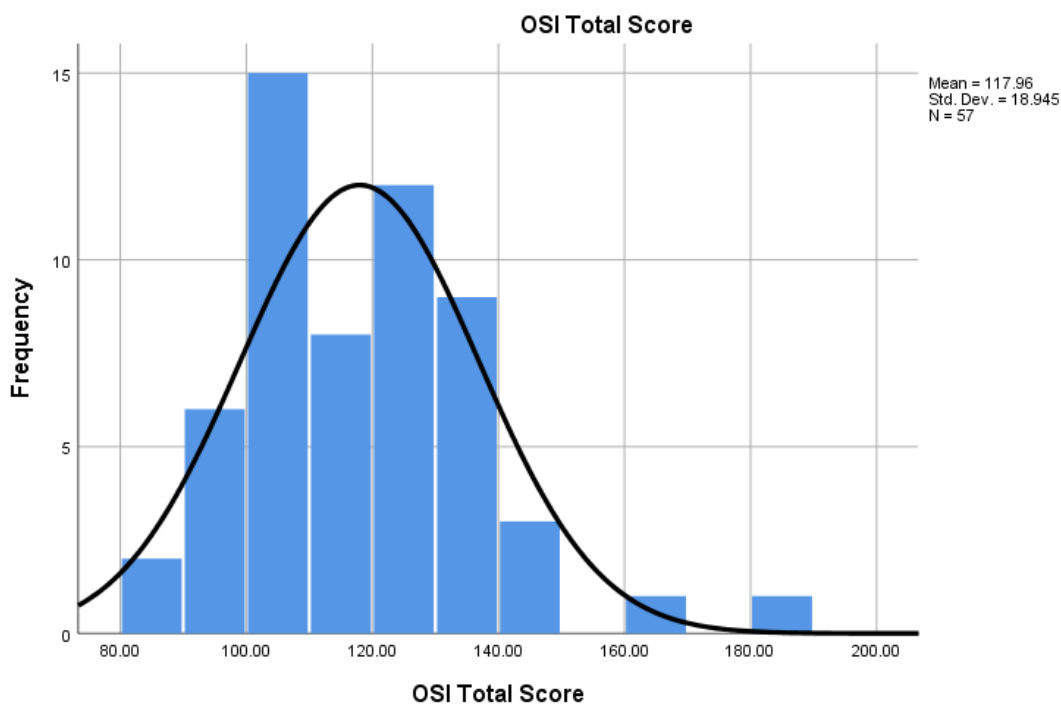
		N		Mean	Median	Mode	Level on Scale	a.
		Valid	Missin g					
Statistics	RO	57	0	15.5789	16.0000	17.00	Moderate	Multiple modes exist.
	RA	57	0	8.8947	8.0000	7.00 ^a	Moderate	The smallest value is shown
	RC	57	0	11.3509	11.0000	11.00	Moderate	
	UGP	57	0	9.0351	9.0000	8.00	Moderate	
	RP	57	0	10.4386	10.0000	10.00	Moderate	
	UP	57	0	11.1930	11.0000	8.00 ^a	Moderate	
	PL	57	0	8.4035	8.0000	6.00	Moderate	
	PPR	57	0	10.2807	10.0000	10.00	Moderate	
	IM	57	0	9.1053	9.0000	8.00	Moderate	
	LS	57	0	6.8070	6.0000	6.00	Moderate	
	SWC	57	0	9.8772	10.0000	10.00	Moderate	
	P	57	0	6.0175	6.0000	6.00	Moderate	
	OSI Total Score	57	0	117.9649	117.0000	117.00	Moderate	

The overall OSI score is 117 which is on the Moderate level of the scale. This means that management employees working at Maji Mazuri Tea plantation are experiencing moderate levels of perceived work stress. On the subscales of occupational stress index, the management employees at Maji Mazuri tea plantation scored as follows:

Moderate levels of perceived occupational stress on role overload scored at 15.5789, Moderate levels of perceived occupational stress on role ambiguity subscale scored at 8.8947, Moderate levels of perceived occupational stress on role conflict subscale scored at 11.3509, moderate levels of perceived occupational stress on unreasonable group and political pressure subscale scored at 9.0351, moderate levels of perceived occupational stress on responsible for persons subscale scored at 10.438, moderate levels of perceived occupational stress on under participation subscale scored at 11.1930, moderate levels of perceived occupational stress on powerlessness subscale scored at 8.4035, moderate levels of perceived occupational stress on peer group relations subscale scored at

10.2807, moderate levels of perceived occupational stress on intrinsic impoverishment scored at 9.1053, moderate levels of perceived occupational stress on low status subscale scored at 6.8070, low levels of perceived occupational stress on strenuous working conditions scored at 9.8772 and moderate levels of perceived occupational stress on unprofitability subscale scored at 6.0175.

Figure 9: OSI scores distribution



The histogram of the perceived occupational stress scores, is nearly symmetrical with mean score recorded as 117.96, the mode as 117 and the median as 117.

Psychological Wellbeing

The scores obtained for psychological wellbeing were analysed based on the 6 subscales of the Psychological wellbeing (PWB) test. The interpretation of the scale applied the percentiles values of the data obtained to classify the scores into low, moderate and high levels of psychological wellbeing. Scores below P₂₅ were classified as low, scores between P₂₆ and P₇₅ were classified as moderate with scores above P₇₅ were classified as high on psychological wellbeing as per the norms table below.

Table 6: Percentile range scores for PWB

Sub-scale	Low (below P25)	Moderate (between P26 and P75)	high (above P75)
AT	7 – 27	28 – 35	36 – 42
EM	7 – 28	29 – 35	36 – 42
PG	7 – 30	31 – 38	39 – 42
PR	7 – 29	30 – 35	36 – 42
PIL	7 – 30	31- 38	39 – 42
SA	7- 29	30 – 36	37 -42
Total PWB Scores	42 – 180	181- 210	211- 252

Where:

AT is Autonomy. EM is Environmental Mastery. PG is Personal Growth. PR is Positive Relations. PIL is Purpose in Life. SA is Self-Acceptance.

Table 7: Scores for PWB

Statistic		N		Mean	Median	Mode	Level on Scale	a. Multiple modes exist. The smallest value is shown
		Valid	Missing					
	PWB Total Score	57	0	194.0877	196.0000	195.00	Moderate	
	AT	57	0	31.1228	31.0000	31.00	Moderate	
	EM	57	0	31.5263	31.0000	29.00 ^a	Moderate	
	PG	57	0	33.3860	34.0000	34.00	Moderate	
	PR	57	0	31.5263	31.0000	31.00	Moderate	
	PIL	57	0	33.7368	35.0000	35.00	Moderate	
	SA	57	0	32.7895	34.0000	34.00 ^a	Moderate	

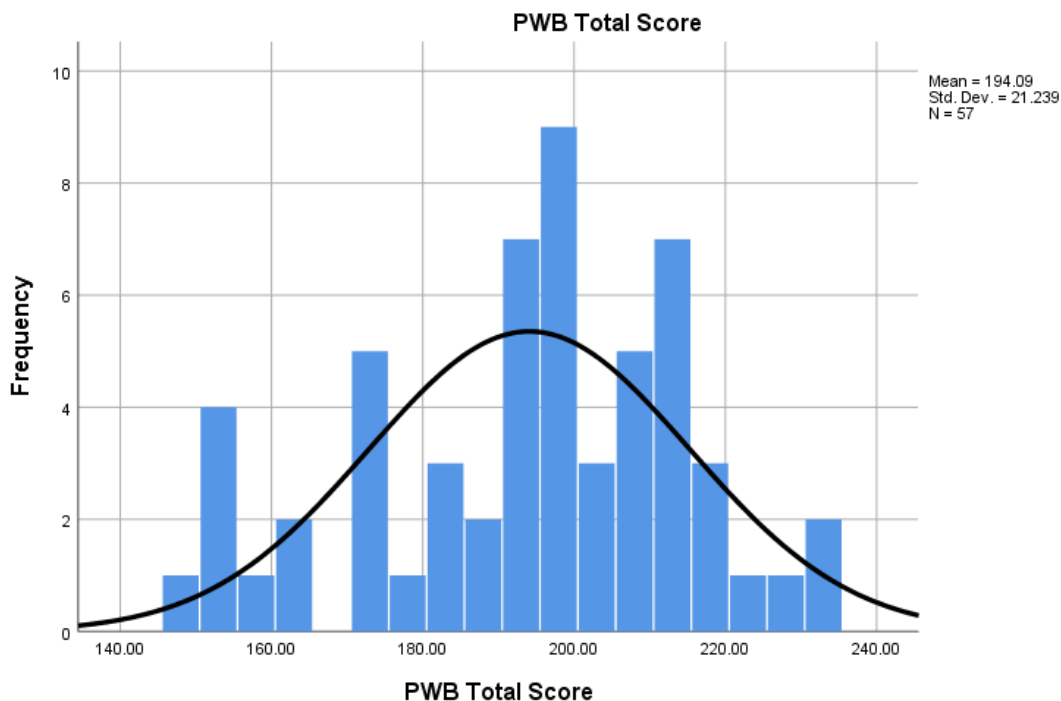
The PWB score recorded is 194.0877 which lies under the moderate level of psychological wellbeing. This means that management employees working at Maji Mazuri tea plantation face a

moderate level of the second variable. On the subscale of psychological wellbeing, the following were the scores:

Moderate level of psychological wellbeing rated at 31.1228 on autonomy subscale, Moderate levels of psychological wellbeing rated at 31.5263 on the environmental mastery subscale, Moderate level of psychological wellbeing rated at 33.3860 on the personal growth subscale, moderate levels of psychological wellbeing rated at 31.5263 on positive relations subscale, moderate levels of psychological wellbeing rated at 33.7368 on the purpose in life subscale, and moderate levels of psychological wellbeing rated at 32.7895 on the self-acceptance subscale.

Below is a histogram representing the PWB scores attained.

Figure 10: PWB score distribution



Relationship between Perceived Work Stress and Psychological Wellbeing

In order to investigate the existence of a relationship between the first variable and the second variable of management employees in a unit at Maji Mazuri tea plantation, Pearson's correlation has been applied. The correlation findings are as follows.

Table 8: OSI and PWB correlation

		OSI Total Score	PWB Total Score
OSI Total Score	Correlation of Pearson	1	-.379**
	Significance [2-tailed]		.004
	(N)	57	57
PWB Total Score	Correlation of Pearson	-.379**	1
	Significance [2-tailed]	.004	
	(N)	57	57

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

The correlation between the first variable and the second variable of this study is -.379. As a result, there is a modest negative connection between the two variables. In interpreting it, it means that when one of the variable increases, it leads to the decrease of the other but in a weak or a manner that cannot be relied upon. This correlation is significant based on the range of values of correlation.

The study results align with the findings by Suleman, Hussain, Shehzad, Syed, & Raja (2018), Srivastav (2021), and Mensah (2021) that a negative link is present between the first variable and the second variable.

The study additionally looked into the influence of confounding variables on the variables listed below:

Relationship between confounding variables and Perceived work stress

The study explored the association between gender, age, area of work, marital status, rank at work, working experience, and education against perceived work stress. The findings unearthed the following correlations between them as tabulated.

Table 9: Confounding variables (Scaled-items) correlation with OSI and PWB

		Correlations			
		Age in Years	Years of work experience	PWB Total Score	OSI Total Score
Age in Years	Pearson's Correlation	1	.847**	.141	-.076
	Significance [2-tailed]		.000	.297	.574
	(N)	57	57	57	57
Years of work experience	Pearson's Correlation	.847**	1	.146	-.110
	Significance [2-tailed]	.000		.279	.415
	(N)	57	57	57	57
PWB Total Score	Pearson's Correlation	.141	.146	1	-.379**
	Significance [2-tailed]	.297	.279		.004
	(N)	57	57	57	57
OSI Total Score	Pearson's Correlation	-.076	-.110	-.379**	1
	Significance [2-tailed]	.574	.415	.004	
	(N)	57	57	57	57

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

The findings for the relationships between age in years and years of experience that formed part of the confounding variables against the perceived occupational stress and psychological wellbeing scores yielded no correlations.

Table 10: Relationship between Gender and OSI

Chi-Square Test for Gender and OSI				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
0.312 ^a	0.309	0.273	57	Value
2	2	1		Df
0.855	0.857	0.601		Significance

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.16.

The p value exceeds 0.05. The findings demonstrate that there is no statistically significant association between gender and occupational stress index score ratings. This suggests that gender has no bearing on how people perceive work stress.

Table 11: Relationship between Marital status and OSI

Chi-Square Test for Marital status and OSI				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
3.373 ^a	3.098	0.753	57	Value
4	4	1		Df
0.498	0.542	0.386		Significance

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .25.

The p value is greater than or equal to 0.05. The findings demonstrate that there is no significant link between marital status and occupational stress index score ratings. This suggests that marital status has little effect on the experience of job stress.

Table 12: Relationship between Area of work and OSI

Chi-Square Test for Area of Work and OSI				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
6.008 ^a	6.403	1.171	57	Value
4	4	1		Df
0.199	0.171	0.279		Significance

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is 2.95.

The p value is greater than or equal to 0.05. The findings reveal that there is no significant association between the area of employment (Estate, Factory, and Department) and occupational stress index score ratings. This suggests that the field of employment has no effect on the sense of occupational stress.

Table 13: relationship between Rank at work and OSI

Chi-Square Test for Rank at Work and OSI				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
6.189 ^a	8.403	0.098	57	Value
4	4	1		Df
0.185	0.078	0.755		Significance

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .49.

The p value is greater than or equal to 0.05. The findings reveal that there is no significant association between work rank (Manager, Supervisor, and Team leader) and occupational stress index score ratings. This suggests that occupational rank has no effect on the sense of occupational stress.

Table 14: Relationship between Education level and OSI

Chi-Square Test for Level of Education and OSI				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
12.378 ^a	17.179	0.807	57	Value
8	8	1		Df
0.135	0.028	0.369		Significance

a. 10 cells (66.7%) have expected count less than 5. The minimum expected count is .25.

The p value is greater than or equal to 0.05. The findings demonstrate that there is no significant link between education level and occupational stress index score ratings. This suggests that education level has no effect on the sense of work stress.

Relationship between confounding variables and Psychological Wellbeing

The study explored the relationship between gender, age, area of work, marital status, rank at work, working experience, and education against Psychological Wellbeing. The findings indicated unreliable significance between them as tabulated.

Table 15: Relationship between Gender and PWB

Chi-Square Test for Gender and PWB				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
1.745 ^a	1.721	1.502	57	Value
2	2	1		Df
0.418	0.423	0.22		Significance

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.16.

The p value is greater than or equal to 0.05. The findings demonstrate that there is no significant association between gender and psychological well-being score ratings. This demonstrates that gender has no effect on psychological well-being.

Table 16: Relationship between Marital status and PWB

Chi-Square Test for Marital Status and PWB				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
3.723 ^a	4.245	0.109	57	Value
4	4	1		Df
0.445	0.374	0.741		Significance

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .25.

The p value is greater than or equal to 0.05. The findings demonstrate that there is no significant link between marital status and psychological well-being score ratings. This suggests that marital status has no effect on psychological well-being.

Table 17: Relationship between Area of work and PWB

Chi-Square Test for Area of Work and PWB				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
1.914 ^a	1.86	0.68	57	Value
4	4	1		Df
0.752	0.762	0.41		Significance

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is 2.95.

The p value is greater than 0.05. The findings demonstrate that there is no significant association between work area and psychological well-being score ratings. This suggests that the field of work has no effect on psychological well-being.

Table 18: Relationship between Rank at work and PWB

Chi-Square Test for Rank at Work and PWB				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
1.991 ^a	2.408	0.022	57	Value
4	4	1		Df
0.737	0.661	0.883		Significance

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .49.

The p value is greater than 0.05. The findings demonstrate that there is no significant link between job rank and psychological well-being score ratings. This suggests that job rank has no effect on psychological well-being.

Table 19: Relationship between Level of education and PWB

Chi-Square Test for Education Level and PWB				
Chi-Square of Pearson	Ratio of likelihood	Linear by linear Association	Valid Cases	
7.689 ^a	8.34	0.38	57	Value
8	8	1		Df
0.464	0.401	0.538		Significance

a. 10 cells (66.7%) have expected count less than 5. The minimum expected count is .25.

The value of p is greater than 0.05. The findings demonstrate that there is no significant association between educational level and psychological well-being score ratings. This demonstrates that education level has no effect on psychological well-being.

The research found no link between the key variables and the confounding variables. The empirical review presented by the research indicated to a great extent the presence of relationships with the

confounding variables. In trying to understand this mismatch, the study reverts back to the gap it sought to fill. The tea plantation set up in Kenya is understudied in terms of the topic of investigation. Literature analysed is general and not synthesised from tea plantation setups. The findings of no correlations with these major confounding variables raise interest in understanding the confounding variables dynamics on a tea plantation. The research therefore attributes lack of correlations to the unique area of study and the differences that lie within it. The study would recommend further studies to take up these confounding variables and explore them systematically to understand their interactions with OSI and PWB.

Significance of subscales of perceived work stress in determining psychological wellbeing

Multiple regression was used in the study to determine the connection between the second variable and the subscales of the first variable.

To carry out the regression, subscale items of perceived occupational stress (independent variables) are regressed on psychological wellbeing scores (dependent variable), the following table helps explain the relationship.

Table 20: Analysis of Regression

Analysis of Regression Summary Model	
Model	1
Standard Error of the Estimate	19.83331
Adjusted R Square	0.128
R	0.379 ^a
R Square	0.144

a. Predictors: (Constant), OSI Total Score

The investigation broadly tests if perceived occupational stress has a predictive effect on psychological wellbeing. The dependent variable, psychological wellbeing was regressed upon occupational stress index to test the hypothesis. Occupational stress index has significant effect in predicting psychological wellbeing and in the case of this study it accounted for 14.4% of the variance in psychological wellbeing.

Table 21: Regression analysis of OSI scale on PWB score

Regression Weights	Beta Coefficients	R2	F	t-value	p-value
RO	0.338	.556	4.59 5	0.410	0.684
RA	-1.031	.556	4.59 5	-0.817	0.418
RC	-2.027	.556	4.59 5	-1.970	0.055
UGP	-0.645	.556	4.59 5	-0.590	0.558
RP	-0.208	.556	4.59 5	-0.218	0.829
UP	-1.013	.556	4.59 5	-1.002	0.322
PL	3.176	.556	4.59 5	2.585	0.013
PPR	-0.423	.556	4.59 5	-0.365	0.717
IM	-1.709	.556	4.59 5	-1.225	0.227
LS	-3.606	.556	4.59 5	-2.421	0.020
SWC	0.826	.556	4.59 5	0.699	0.488
P	3.720	.556	4.59 5	2.950	0.005

The table above depicts the relationship between each scale of occupational stress index with psychological wellbeing.

The subscales the research found to be significant were powerlessness, low status and unprofitability that reported significance of $p < 0.05$ among the management employees of a tea plantation in Kericho.

[Hypothesis 1: Relationship between Perceived work stress and psychological wellbeing.](#)

To test the null hypothesis, there is no association between the first variable and the second variable, Pearson correlation was used, and a correlation of -0.379 was discovered. According to the connection, there exists a weak negative relationship between perceived work stress and psychological well-being.

A t-test was run on this correlation. It was used to determine the significance of the found connection between the first variable and the second variable. The t value obtained was 3.039 . When the p-value is looked up, a p value of 0.0036 was obtained. The significance level is less than 0.05 . As a result, the association between the first variable and the second variable is substantial, and we reject the null hypothesis that there is no relationship between perceived work stress and psychological well-being.

[Hypothesis 2: Relationship between Confounding variables with Perceived work stress and psychological wellbeing](#)

The research used chi-square tests to explore the relationship among the categorical confounding variables (gender, marital status, area of work, rank at work and education level) and the main study variables. The correlations of the scale confounding variables (age and years of work experience) had insignificant relationships and did not warrant running a t-test to test the strength of correlation. It had a null hypothesis that stated there are no significant confounding variables affecting the main study variables. The results of the chi-square indicated lack of significant relationships as all the p values were above the 0.05 threshold. This therefore leads to the acceptance of the null hypothesis that no confounding variable was found as significant in the relationship between perceived work stress and psychological wellbeing for this study.

Chapter 5: Conclusion and Recommendations

Conclusions

Psychological wellbeing is an item of great importance to the needs of a worker. Perceived occupational stress is a present phenomenon in the current working environments that presents across the world (Ezenwaji et al., 2019, Guruge & Ban 2021). Perceived work stress results to poor psychological wellbeing. An employee/person facing poor psychological wellbeing is likely to get into unhealthy coping mechanisms such as abusing substances and may lead to mental health issues, poor physical health (Freire et al., 2016, Tahar, 2017, & Zhai et al., 2018) The production an employee experiencing poor psychological wellbeing is most often than not dampened. Psychological wellbeing has been associated with good coping and improved self-esteem (Nwankwo et al., 2020) and reduced risk-taking behaviours.

A rich theoretical framework was drawn to conceptualise perceived work stress from a group of stress theories. The theories elaborated in the theoretical framework postulate that perceived work stress can be as a result of the appraisal of a situation an employee may find themselves in terms of work, the environment they are working in could also be responsible for their perceived stress if they do not fit (failure to possess certain aspects required in that environment), the burden of prolonged stress on a workers life best expounded by the allostatic model of stress, and a theory on conservation of resources suggesting that stress can be as a result of external factors. The theory helps to merge with the aspects the occupational stress index intends to measure. For understanding psychological wellbeing Ryff's six-factor model theory of psychological wellbeing was applied. This research studied perceived work stress based on the 12 factors (role conflict, role overload, intrinsic impoverishment, powerlessness, low status, role ambiguity, peer group relations, strenuous working conditions, responsibility for persons, under participation, unreasonable group and political pressure and unprofitability) (Srivastava & Singh, 1981). Psychological wellbeing was studied based on the 6 factors (personal growth, environmental mastery, autonomy, positive relations, purpose in life, and self-acceptance) identified by Ryff (Ryff & Singer, 2008). A pilot study was run to confirm the dependability of the standardised tests employed in the study. The standardised tests were the 46-items occupational stress index (OSI) for assessing the perceived work stress and, the 42-items psychological wellbeing test (PWB) that was used to assess psychological wellbeing. The research managed to establish that the two tests are reliable and applicable in studying the variables.

The study's variables, perceived job stress as the independent variable and psychological well-being as the left-hand-side variable, were statistically analysed to determine what relationship exists between them. Previous research had discovered a link between the two variables (Suleman,

Hussain, Shehzad, Syed, & Raja, 2018, Srivastav, 2021). This study found a weak negative correlation between them. This implies that increased perceived work stress decreases the psychological wellbeing of employees though in a weak and unreliable manner. When regression analysis was carried out, the study found out that perceived work stress accounted for 14.4% of variance in psychological wellbeing. This therefore indicates the need to look into aspects of perceived work stress in order for management employees in Maji Mazuri tea plantation to lessen the burden on their psychological wellbeing. Among the subscales the research found significant predictors of psychological wellbeing are powerlessness, low status and unprofitability.

The conceptual framework aims to investigate the significance of confounding variables on the connection between the two research variables. The identified confounding variables for the study were gender, age, area of work, numbers of years in work experience, marital status, and job rank. The correlations obtained for the confounding variables with both psychological wellbeing and perceived work stress, found no confounding variable was significant to explain the relationship as identified by other researches. The lack of relationship could be related to the presence of other types of stress that is not perceived work stress or other perceptions within the workplace that could be explored. This leaves a gap in investigating what other factors could be contributors of psychological wellbeing.

Employees with high psychological wellbeing are happier, capable of coping well with their day-to-day normal stressing activities, are likely to have better sleep quality, suffer less from anxiety and worry (Bhui et al., 2016), experience low rates of illnesses (Asamoah, 2017), have improved connections and relationships with family (Gilmartin, 2018) with others get and able to be more productive.

Recommendations

The study recommends more work to be done on areas psychological wellbeing and perceived work stress on tea plantation setups and generally in the country. There is little research out there aimed at the tea plantation setup and more needs to be done to understand the dynamics involved in the tea business in terms of psychological wellbeing.

The research also recommends looking into aspects of improving psychological wellbeing that were found significant in occupational stress index as affecting psychological wellbeing. The items of perceived work stress the study found significant were low status, powerlessness and unprofitability. Programs to mitigate these three factors would go a long way in improving the psychological wellbeing of management employees in Maji Mazuri Tea Plantation.

Based on the psychological wellbeing scores registered by the management employees at a unit in Maji Mazuri tea plantation, an average moderate score of wellbeing was attained. This score was nearing the high levels of psychological wellbeing. The research recommends exploring what factors are resulting in these high scores and creating programs to strengthen those factors in order to further improve the wellbeing of the management employees.

A gap that the research passes on to the next researcher is to explore the same topic with non-management employees. Another gap the research identifies is doing an in-depth study of the confounding variables or other variables that could account for the remaining 85.6% of determinants of psychological wellbeing.

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Appendices

Appendix – 1: Occupational Stress Index (OSI)

Please read each statement carefully and decide how you feel about your occupation described by the following statements.

Scale:

1 = Strongly Disagree (SDA)

2 = Disagree (DA)

3 = Uncertain (U)

4 = Agree (A)

5 = Strongly Agree (SA)

Please indicate on a scale of 1 to 5; for example, encircle 5 If you Strongly Agree (S.A.), or encircle 1 if you Strongly Disagree (S.D.) and so on.

S.#	Statements	SDA	DA	U	A	SA
1.	I have to do a lot of work in this job	1	2	3	4	5
2.	The available informations relating to my job role and its outcomes are vague and insufficient.	1	2	3	4	5
3.	My different Officers often give contradictory instructions regarding my works.	1	2	3	4	5
4.	Sometimes it becomes complied problem for me to make adjustment between political/group pressures and formal rules and instructions.	1	2	3	4	5
5.	The responsibility for the efficiency and productivity of many employees is thrust upon me.	1	2	3	4	5
6.	Most of my suggestions are heeded and implemented here.	1	2	3	4	5
7.	My decisions and instructions concerning the distribution of assignments among employees are properly followed.	1	2	3	4	5
8.	I have to work with persons whom I like.	1	2	3	4	5
9.	My assignments are of monotonous nature.	1	2	3	4	5

10.	Higher authorities do care for my self respect.	1	2	3	4	5
11.	I get less salary in comparison to the quantum of my labour/work.	1	2	3	4	5

12.	I do my work under tense circumstances.	1	2	3	4	5
13.	Owing to excessive workload I have to manage with an insufficient number of employees and resources.	1	2	3	4	5
14.	The objectives of my work role are quite clear and adequately planned.	1	2	3	4	5
15.	Officials do not interfere with my jurisdiction and working methods.	1	2	3	4	5
16.	I have to do some work unwillingly owing to certain group or political pressures.	1	2	3	4	5
17.	I am responsible for the future of a number of employees.	1	2	3	4	5
18.	My co-operation is frequently sort in solving the administrative or industrial problems at higher level.	1	2	3	4	5
19.	My suggestions regarding the training programmes of employees are given due significance.	1	2	3	4	5
20.	Some of my colleagues and subordinates try to defame and malign me as unsuccessful.	1	2	3	4	5
21.	I get ample opportunity to utilise my abilities and experience independently.	1	2	3	4	5
22.	This job has enhanced my social status.	1	2	3	4	5
23.	I am seldom rewarded for my hard labour and efficient performance.	1	2	3	4	5
24.	Some of my assignments are quite risky and complicated.	1	2	3	4	5
25.	I have to dispose of my work hurriedly owing to excessive workload.	1	2	3	4	5
26.	I am unable to perform my duties smoothly owing to uncertainty and ambiguity of the scope of my jurisdiction and authorities.	1	2	3	4	5

27.	I am not provided with clear instructions and sufficient facilities regarding the new assignments trusted to me.	1	2	3	4	5
28.	In order to maintain group conformity, sometimes I have to do/produce more than usual.	1	2	3	4	5

29.	I bear the great responsibility for the progress and prosperity of this organization.	1	2	3	4	5
30.	My opinions are sought in framing important policies of the Organization/Department.	1	2	3	4	5
31.	Our interest and opinions are duly considered in making appointments for important post.	1	2	3	4	5
32.	My colleagues do cooperate with me voluntarily in solving administrative and industrial problems	1	2	3	4	5
33.	I get ample opportunity to develop my aptitude and proficiency properly.	1	2	3	4	5
34.	My higher authorities do not give due significance to my post and work.	1	2	3	4	5
35.	I often feel that this job has made my life cumbersome	1	2	3	4	5
36.	Being too busy with official work I am not able to devote sufficient time to my domestic and personal problems.	1	2	3	4	5
37.	It is not clear that what type of work and behaviour my higher authorities and colleagues expect from me.	1	2	3	4	5
38.	Employees attach due importance to the official instructions and formal working procedures.	1	2	3	4	5
39.	I am compelled to violate the formal and administrative procedures and policies owing to group/political pressures.	1	2	3	4	5
40.	My opinion is sought in changing or modifying the working system, instrument and conditions.	1	2	3	4	5
41.	There exists sufficient mutual co-operation and team-spirit among the employees of this Organization/Department.	1	2	3	4	5

42.	My suggestions and cooperation are not sought in solving even those problems for which I am quite competent.	1	2	3	4	5
43.	Working conditions are satisfactory here from the point of view of our welfare and convenience.	1	2	3	4	5
44.	I have to do such work as ought to be done by others.	1	2	3	4	5
45.	It becomes difficult to implement all of a sudden the new dealing procedures and policies in place of those already in practice.	1	2	3	4	5
46.	I am unable to carry out my assignment to my satisfaction on account of excessive load of work and lack of time.	1	2	3	4	5

Sub-scales of Occupational Stress Index (OSI) with their Items Serial Numbers

S. No.	Sub-scales of OSI	Serial of the Items in OSI
1.	Role Overload	01, 13, 25, 36, 44, 46
2.	Role Ambiguity	02, 14*, 26, 37
3.	Role Conflict	03, 15*, 27, 38*, 45
4.	Unreasonable Group and Political Pressure	04, 16, 28, 39
5.	Responsibility for Persons	05, 17, 29
6.	Under participation	06*, 18*, 30*, 40*
7.	Powerlessness	07*, 19*, 31*
8.	Peer Group Relations	08*, 20, 32*, 41*
9.	Intrinsic Impoverishment	09, 21*, 33*, 42
10.	Low status	10*, 22*, 34
11.	Strenuous Working Condition	12, 24, 35, 43*

12. Unprofitability

11, 23

Total

46

*False keyed Items

The true keyed items were rated as 5 for strongly agree, 4 for agree, 3 for undecided, 2 for disagree and 1 for strongly disagree while the false keyed items were rated as reversed

[Appendix 2 - Ryff's Psychological Well-Being Scales \(PWB\)](#)

(42 Item version)

Please indicate your degree of agreement (using a score ranging from 1-6 Strongly Disagree to Strongly Agree) to the following sentences.

	Statement	SD					SA
1	I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.	1	2	3	4	5	6
2	In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
3	I am not interested in activities that will expand my horizons.	1	2	3	4	5	6
4	Most people see me as loving and affectionate.	1	2	3	4	5	6
5	I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
6	When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
7	My decisions are not usually influenced by what everyone else is doing.	1	2	3	4	5	6

8	The demands of everyday life often get me down.	1	2	3	4	5	6
9	I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
10	Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
11	I have a sense of direction and purpose in life.	1	2	3	4	5	6
12	In general, I feel confident and positive about myself.	1	2	3	4	5	6
13	I tend to worry about what other people think of me.	1	2	3	4	5	6
14	I do not fit very well with the people and the community around me.	1	2	3	4	5	6
15	When I think about it, I haven't really improved much as a person over the years.	1	2	3	4	5	6
16	I often feel lonely because I have few close friends with whom to share my concerns.	1	2	3	4	5	6
17	My daily activities often seem trivial and unimportant to me.	1	2	3	4	5	6
18	I feel like many of the people I know have gotten more out of life than I have.	1	2	3	4	5	6
19	I tend to be influenced by people with strong opinions.	1	2	3	4	5	6

20	I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
21	I have the sense that I have developed a lot as a person over time.	1	2	3	4	5	6
22	I enjoy personal and mutual conversations with family members or friends.	1	2	3	4	5	6

23	I don't have a good sense of what it is I'm trying to accomplish in life.	1	2	3	4	5	6
24	I like most aspects of my personality.	1	2	3	4	5	6
25	I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
26	I often feel overwhelmed by my responsibilities.	1	2	3	4	5	6
27	I do not enjoy being in new situations that require me to change my old familiar ways of doing things.	1	2	3	4	5	6
28	People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
29	I enjoy making plans for the future and working to make them a reality.	1	2	3	4	5	6
30	In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
31	It's difficult for me to voice my own opinions on controversial matters.	1	2	3	4	5	6
32	I have difficulty arranging my life in a way that is satisfying to me.	1	2	3	4	5	6
33	For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
34	I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
35	Some people wonder aimlessly through life, but I am not one of them.	1	2	3	4	5	6
35	My attitude about myself is probably not as positive as most people feel about themselves.	1	2	3	4	5	6

37	I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6
38	I have been able to build a home and a lifestyle for myself that is much to my liking.	1	2	3	4	5	6
39	I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
40	I know that I can trust my friends, and they know they can trust me.	1	2	3	4	5	6
41	I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
42	When I compare myself to friends and acquaintances, it makes me feel good about who I am.	1	2	3	4	5	6

Scoring Instruction

1) Recode negative phrased items: # 3, 5, 10, 13,14,15,16,17,18,19, 23, 26, 27, 30,31,32, 34, 36, 39, 41. (i.e., if the scored is 6 in one of these items, the adjusted score is 1; if 5, the adjusted score is 2 and so on...)

2)Add together the final degree of agreement in the 6 dimensions:

a. Autonomy: items 1,7,13,19,25, 31, 37

b. Environmental mastery: items 2,8,14,20,26,32,38

c. Personal Growth: items 3,9,15,21,27,33,39

d. Positive Relations: items: 4,10,16,22,28,34,40

e. Purpose in life: items: 5,11,17,23,29,35,41

f. Self-acceptance: items 6,12,18,24,30,36,42

Demographic Questionnaire

1. Gender: (To check either: Male, Female, other)

2. Age: (to fill numeral)

3. Marital status: (to check either; single, married, separated/divorced)

4. Number of Children (write a number)
5. Area of work: (To check whether: Estate, department, Factory)
6. Rank: (To check whether: TL, Supervisor, Manager)
7. Years of work experience: (indicate a number)
8. Education level: (to check whether: KCPE, KCSE, certificate, diploma, Degree, Masters, PhD, Other)

Appendix 3: National Commission of Science, Technology and Innovation Authorization Letter



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P. O. Box 30623, 00100 Nairobi, KENYA

Land line: 020 4007000, 020 2241349, 020 3310571, 020 8001077

Mobile: 0713 788 787 / 0735 404 245

E-mail: dg@nacosti.go.ke /

registry@nacosti.go.ke Website:

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Appendix 4: Map of Chaik Ward

