

Employee health and wellness survey. A mixed method study on the health knowledge, attitude, perception and behaviour of contracted employees in Kenya

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Abstract

Background

Employee wellness is gaining momentum in Kenya's corporate world as companies now strive to expand their previously HIV workplace programmes into comprehensive employee workplace programmes that integrate health promotional initiatives. Considering the rise of non-communicable diseases in Kenya, this approach is more inclusive of not just the physical needs but also of the social and environmental aspects of employees' lives. The purpose of the mixed methods study is to gain an understanding of the factors associated with the ill-health of the contracted employees of a telecommunications company in Kenya (Safaricom Limited). To achieve this, aspects related to the health knowledge, attitude, perceptions and behaviour regarding the employees' health, the workplace environment as well as causes and level of stress of the employees were investigated.

Methodology

A pragmatist worldview informs the convergent parallel design of this mixed methods study conducted between 4^{th.} to 31st. May 2012 which consists of a quantitative strand using an online survey and a qualitative strand using interviews. Information gathered from a sample of 145 survey participants who were sample through quota sampling method, was used to (1) describe the employees' health situation and (2) to test the associations between work related stress with level of work related stress, between level of work related stress and health problems occurring due to work life and between the health problems due to work life and absenteeism due to illness. Data from 7 interviewees who were selected through convenience sampling methods was used to gather information on themes related to the illhealth of the employees. The goal of using a mixed methods approach is to compare results so as to gain a broader understanding about the wellness needs of the employees than that which would be obtained by either one of the methods.

Results

Quantitative findings show for example significant associations between stress caused by pressure and demands of job and high level of work-related stress X^2 (1, N= 116) = 13.30, p < .001, whereby the odds to an employee being highly stressed were 4.4 times higher is they were stressed due to pressures and demands of job. Similarly, qualitative results show that pressure of reaching monthly targets was a cause of stress to the employees. Convergence of results was also evidenced in working conditions such as constant glaring at the computers and long hours of standing, as well as in financial support of family/relatives that cause of stress in both data sets. However, divergence of data was identified concerning HIV/AIDS which according to descriptive statistics was not prevalent (4.3%, n= 62) among the employees but within the interviews it was revealed to be rampant. This shows that HIV/AIDS is a sensitive topic among the employees.

Conclusion

Promotion of wellness at the workplace can serve to bring a change not only to the employees and the company they work in but also to the community at large. It is through the active process of becoming aware of and making changes to a more successful existence that comprehensive workplace programmes in Kenya can reverse the trend of non-communicable diseases among their employees.

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List of Acronyms

AIDS Acquired Immune Deficiency Syndrome

GIZ Gesellschaft für Internationale Zusammenarbeit

HBP High Blood Pressure

HIV Human Immunodeficiency Virus

MMR Mixed Methods Research

TB Tuberculosis

WHO World Health Organization

WHP Workplace Health Programme

Chapter 1: Introduction

1.1.Background

In 2001, workplace programs were developed after a call to action by the then United Nations Secretary General, Kofi Annan to reinforce the battle against HIV (United Nations Special Session on HIV/AIDS). Today, due to the rapid increase of other non-communicable diseases (a cause of 50% of hospital deaths and hospital admissions, Kenya National Forum on Non Communicable Disease, 2011) beyond HIV, workplace programs have evolved and now adopt a comprehensive approach to cover a broad spectrum of issues that contribute to the wellbeing of employees. Workplace programs provide opportunities to address a broad range of preventable diseases, the health situation (Goetzel & Ozminkowski, 2008, p. 306) and hence the productivity of the workforce is improved (Berry, Mirabito & Baun, 2010, p. 8) and at the same time, escalating health care costs can be controlled (James, 2012, p. 1).

To implement a comprehensive workplace program and coordinate the various components within such a program, there is need for specialized support to companies to expand the approach towards comprehensive workplace programs. GIZ HSP (Deutsche Gesellschaft für Internationale Zusammenarbeit, Health Sector Program) in Kenya, through several Public Private Partnership (PPP) agreements, provides technical support towards implementation of workplace programs to various companies. In Kenya, the concept of workplace programs has mainly been on prevention and control of HIV/AIDS and related illness (Odero, 2010). However this HIV/AIDS prevention model is limiting since other influences on the health influences of employees (i.e. other diseases and workplace related factors that put employees at risk of becoming ill) are not taken into account. On the contrary, a workplace health promotion model, sometimes also referred to as employee wellness, has more potential of capturing wider influences related to a person's individual characteristics and behaviours, the social, physical and economic environment (determinants of health, WHO, 2012). Furthermore, the National Wellness Institute defines wellness as "an active process through which people become aware of, and make choices toward, a more successful existence" (National Wellness Institute). Thus wellness has a health promotion concept which is defined in the Ottawa Charter (1986) as "the process of enabling people to take control over and improve the conditions that determine their health" (WHO, 2012).

In this context, GIZ sees the need to expand HIV/AIDS programs of their partners into comprehensive employee wellness programs that cover a wider scope surround the health of the employees One of GIZ- PPPs is Safaricom Limited; the leading provider of mobile telecommunication services, voice, messaging, data and fixed broadband services in Kenya. This partnership aims to mainstream a comprehensive employee wellness Program that will promote the health of Safaricom employees, their dependants and contracted employees. An employee wellness Program can benefit Safaricom Limited in the long run by helping to reduce absenteeism of the workforce, increase work-efficiency, improve social harmony between Safaricom workforce and contracted employees and also give the company a positive reputation.

The World Health Organization and the World Economic Forum report clear and convincing evidence that many workplace health promotions (WHP) programmes targeting non communicable disease have been successful at improving employees' health by reducing risk factors, increasing employees' fruit and vegetable consumption, improving employee engagement and productivity, and producing return on investment through cost savings and increased productivity. World Economic Forum/WHO, 2008, as cited in Russell, 2009, p. 18)

This present study is concerned with describing and exploring issues surrounding the health of contracted employees of Safaricom Limited, who are also the target group of the comprehensive employee workplace programme in order to find out what should be addressed concerning their health at the workplace.

1.2.Purpose Statement

This mixed method study intends to gain insight of the factors associated with the ill-health of the contracted employees of Safaricom. In doing so, individual characteristics based on the knowledge, attitude, perception and behaviour regarding their health, the workplace

environment as well as causes and level of stress were examined. Taking a pragmatic worldview, a convergent parallel mixed methods design was employed. This is a type of mixed methods design in which different but complementary quantitative and qualitative data is collected and analyzed separately and then merged during the overall interpretation of the results. Online survey questionnaires were used to describe the employees' health status in terms of their knowledge, attitude, perception and behaviour as well as investigate associations between the employee's health problems and their lifestyle, conditions of the working environment and the stress experienced. At the same time, interviews from a smaller sample of the population were used to explore these same factors. The goal of collecting quantitative and qualitative data is to compare results so as to gain a broader understanding about the wellness needs of the employees than that which would be obtained by either one of the methods.

The objectives of the study are first to describe the employees' overall health situation by presenting their:

- a) knowledge on factors that may lead to diabetes, high blood pressure, malaria and tuberculosis as well as knowledge of their HIV status and that of their partners.
- b) attitudes towards HIV
- c) perceptions of health status
- d) lifestyle behaviours in terms of eating and physical exercise, smoking behaviour and alcohol consumption as well as physical behaviour
- e) the diseases they experienced within the last 12 months.
- f) conditions of the workplace environment and finally
- g) the causes and level of stress experienced within the workplace and at home.

Secondly is to identify associations between the health of the employees and the workplace by looking into the following variables: work-related stress, health problems due to work life in the last 12 months and absenteeism due to illness in the last 12 months. Following hypotheses were formulated to test these associations:

- 1. There is a relationship between work-related stress and level of work-related stress
- 2. There is a relationship between level of work-related stress and occurrence of health problems due to work life within the last 12 months
- **3.** There is a relationship between occurrence of health problems due to work life within the last 12 months and absenteeism due to illness within the last 12 months

1.3. Research Questions

The following research questions within the quantitative, qualitative and mixed methods research guided the conduct of this study.

- **1.** Quantitative research: what factors are associated with the ill-health of the contracted employees?
- **2.** Qualitative research: what themes emerged concerning factors associated with the illhealth of the employees?
- **3.** Mixed methods research: to what extent do the quantitative and the qualitative results agree on the factors associated with the ill-health of the employees?

1.4. Thesis Structure

This thesis has been sectioned into five chapters. The first chapter deals with the introduction that gives some background information about the study including the purpose of study and research questions. Secondly is the chapter on employee wellness that presents the concept of wellness and the importance of workplace wellness programmes. Thirdly is the methodology which is the largest part of the thesis comprising of the worldview underlying the research design used, the strategy of inquiry, the study participants as well as the procedures carried out for the quantitative and qualitative study. Fourth is a presentation of the independent results of both the quantitative and qualitative data. Lastly is the discussion of the results where the results of the two data sets are merged together for comparison and to check for convergence or divergence of information. Finally the mixed methods results are interpreted and recommendations are made.

Chapter 2: Employee Wellness

2.1.Definition of Terms

Central to this thesis are the terms wellness, workplace wellness, health promotion, workplace health promotion and wellness programmes as described below.

1. Wellness

Many researchers have contributed various useful definitions of the term "wellness"; however no universal description of wellness was found. In general, the term wellness has been used in various disciplines to describe good health that which is measured beyond specific biomarkers but incorporates subjective as well as psychological components and to some extent elusive dimensions. Under the section "concepts of wellness", different yet complementary definitions as provided by various researchers are depicted. In this section, however, definitions of wellness from three dictionaries are presented as introductory statements.

To begin with, the free dictionary states that wellness is

"a philosophy of life and personal hygiene that views health as not merely the absence of illness but the fullest realization of one's physical and mental potential, as achieved through positive attitudes, fitness training, a diet low in fat and high in fiber, and the avoidance of unhealthful practices (smoking, drug and alcohol abuse, overeating)".(Farlex, 2012).

Adjacent to this is the definition found in the dictionary of health promotion and education that states;

"A dimension of health that goes beyond the absence of disease or infirmity and includes the integration of social, mental, emotional, spiritual, and physical aspects of

health...Wellness refers to a positive state, illness to a negative state" (Modeste, 2004, p. 131).

In agreement to this is also the dictionary of public health which describes wellness as

"A word used by behavioral scientists to describe a state of dynamic physical, mental, social, and spiritual well-being that enables a person to achieve full potential and an enjoyable life." (Last 2007, p. 397)

All three definitions coincide with the World Health Organization (WHO) definition of health (1948) which states that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2003). This implies that wellness is characterized by

- an integrated system of physical, psychological, spiritual and social wellbeing and not by the absence of illness. Therefore wellness can be seen as a holistic system and not just as a sub category of a system (Els 2006, p. 47).
- a way of life in terms of diet, avoiding unhealthful practices (e.g. smoking, over drinking and over eating) as well as keeping the body fit. This therefore indicates the choice of realizing one's full potential.

In addition, wellness has gained even a broader context to include not just the above aspects but also the fulfilment of one's role expectations in all spheres of life as shown in the WHO health promotion glossary:

"Wellness is the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually and economically, and the fulfilment of one's role expectations in the family, community, place of worship, workplace and other settings." (Smith, 2006, p.5)

2. Workplace wellness

Workplace wellness is defined as "an organized, employer-sponsored programme that is designed to support employees (and, sometimes, their families) as they adopt and sustain behaviours that reduce health risks, improve quality of life, enhance personal effectiveness and benefit the organization's bottom line" (Berry et. al., 2010, p.4).

3. Health promotion

The Ottawa Charter (first international conference on health promotion, 1986) defined health promotion as the "process of enabling people to increase control over, and to improve, their health" (WHO 2013). Furthermore, it was described as a positive concept that highlights personal as well as social and physical capacities and therefore a responsibility of everyone and not just the health sectors. O'Donnell (2009) emphasizes that health promotion is the art and science of helping people discover the synergies between their core passions and optimal health, enhancing their motivation to strive for optimal health, and supporting them in changing their lifestyle to move toward a state of optimal health." Moreover, he adds that lifestyle change can be supported through a combination of learning experiences which increase awareness, motivation and build skills and through creation of opportunities that enable access to environments that make it easy to choose positive health practices (O'Donnell, 2009).

Within the workplace, health promotion is defined as "those educational, organizational, or economic activities in the workplace that are designed to improve the health of workers and therefore the community at large." (Chu, as cited in Baker et. al., 2002, p 7)

4. Workplace Health Promotion Programmes

Goetzel and Ozminkowski (2008) define workplace health promotion (WHP) programmes as "employer initiatives directed at improving the health and well-being of workers and, in some cases, their dependents" (p. 304).

A more expansive definition of a WHP programme (referred to as a workplace wellness programme by the author) follows "an organised programme in the workplace that is

intended to assist employees and their family members in making voluntary behaviour changes which reduce their health risk, improves their health knowledge and enhances their individual productivity and wellbeing" (Russell, 2009, p. 13).

2.2.The Concept of Wellness

The wellness movement started to form shape after the Second World War, as advances in medicines and technology lead to a reduction of infectious diseases as the leading cause of death. However, this was followed by an increased prevalence of lifestyle diseases associated with stressors in life and workplace that lead to higher health care costs. It thus became more interesting to find out what makes people well. With this perspective in mind, there was a need to shift from a bio-medical model where health was concerned with illness and the body was viewed in terms of isolated physiological systems, to a more holistic approach that is inter-relational and focuses not only on the negative elements (illness & disease) but also on the positive elements (e.g. happiness, satisfaction). Thus the term "wellness" was born as part of the change in the definition of health towards a more holistic perspective (Miller, 2010, p. 6-7). As seen earlier, the World Health Organization (1946) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2003).

The term "wellness" is attributed to programmes and situations that help to alleviate illness or health risks. It is also linked to improved sale of products and services. However, it is also used interchangeably with the term "health" and "wellbeing" to mean different implications. For example, the WHO (1946) definition of health suggests differences in meaning between health and wellbeing. Kirsten et. al. (2009) distinguishes the three terms in the following way.

 Wellbeing is used to refer to "the condition of specific aspects or domains of health/wellness such as the physical, the psychological or the social. These aspects of wellbeing focus on the whole person and therefore include the body, mind, spirit,

- emotions, behaviour, social relationships and the interconnection of the person to his/her environment.
- Wellness is viewed as an umbrella term for the optimal wellbeing of the different domains. For wellness to be realized there has to be harmony and balance between the body, mind, spirit as well as the social and environmental
- Health is "the state of optimal functioning of a human being, a state of enjoying good quality of life and experiencing a feeling of equilibrium as a result of having succeeded in optimising the potential in the total living environment" (p. 5).

In addition, she argues that there is no difference between health and wellness because both are in a sense unique in one's personal and subjective experiences in that the absence of illness is only one out of many personal and environmental conditions that have to be met for an individual to be or feel healthy/well (Kirsten et. al., 2009, p.5). Contrary, Jonas (2005) shows differing understandings between health and wellness. Health, he says is *a state of being* that is measureable at any given time (for example height and weight), through the use of physical and blood examinations, through evaluation of how one feels and functions in their home, work, family life, community and nation. He also adds that the health can be defined in relation to one's health promoting behaviour. On the other hand, wellness is a *process of being* that can be described as a lifelong journey (if one makes it so) to reach and maintain a healthy state of being that is maximally attainable.(as cited in Miller 2010, p. 10). Likewise, Schuster et. al. (2004) draws a link between the domains of health (physical, psychological, social and spiritual) and wellness by describing that wellness is higher order construct that incorporates these domains while reflecting on the individual self-perception (p. 351).

In an attempt to define wellness, various theorists have come up with concepts surrounding the meaning of wellness. Under the pioneering innovations of Dunn (1961), Travis (1981), Ardell (1977) and Hettler (1979), wellness has taken a modern concept that is presently used by various institutions. Halbert L. Dunn (1961) began the notion of *high level wellness* which he defined as "an integrated method of functioning which is oriented toward maximizing the

potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction within the environment where he is functioning" (Barwais, 2011). Later Dr. John Travis described that "high-level wellness involves giving good care to your physical self, using your mind constructively, expressing your emotions effectively, being creatively involved with those around you, and being concerned about your physical, psychological, and spiritual environments" (Barwais, 2011).

Don Ardell (1984) views wellness as a lifestyle approach that one follows for the purpose of pursuing the highest level of health; a lifestyle that is dynamic and evolves throughout life. (as cited in Barwais, 2011). In 1977, Ardell broadened the concept of wellness as "a choice to assume responsibility for the quality of your life … a mindset, a predisposition to adopt a series of key principles in varied life areas that lead to high levels of well-being and life satisfaction." While embracing wellness as a philosophy he includes self-responsibility, exercise and fitness, nutrition, stress management, critical thinking, meaning and purpose or spirituality, emotional intelligence, humour and play and effective relationships as resources for good health (Ardell, 2013)

Dr. Bill Hettler (1980), cofounder of the National Wellness Institute, emphasizes that "wellness is an active process through which people become aware of, and make choices toward, a more successful existence He developed a six dimensional model including social, physical, spiritual, intellectual, emotional and occupational wellness "(National Wellness Institute n.d.). The word "process" is used to mean that there is always possibility for further improvement, "aware" denotes that we continuously seek for more knowledge about how we can improve ourselves, "choices" indicates that we consider many options and select those in our best interest and "success" is what each individual determines to be his/her personal collection of accomplishments in life (Definition of wellness, 2013).

Advances in the understanding of wellness have led to further comprehensive definitions that include environmental wellness to the other dimensions mentioned so far (Physical, emotional, social, spiritual, intellectual and occupational). Renger et al. (2000) added environmental wellness to recognize the important impact of one's surroundings, a concept

also shared by May (2007), Hales (2008) and Ryff & Singer (2006). Furthermore, Renger et al. (2000) highlights the important role of knowledge, attitude, perception, behaviour and skill in each of the several wellness dimensions, including also the integration and balance between them (as cited in Miller, 2010, p. 8). Other theorists have also come up with other dimensions such as cultural, economic or financial and climate wellness (Miller, 2010, p. 18-20).

As evident from the above concepts, the multidimensionality of wellness can be described as never ending and subjective. Charles B Corbin from Arizona State University supports the multidimensionality aspect of wellness in the statement "Wellness is a multidimensional state of being describing the existence of positive health in an individual as exemplified by quality of life and a sense of well-being" (Wellness Proposals, 2013 & Definition of wellness, 2013). This therefore indicates that wellness is about keeping balance between and integrating various dimensions of wellness. It is a way of life aimed towards optimal health and wellbeing in which an individual integrates body, mind and spirit so as to live more fully within the human and natural context. (Sweeney and Witner (2001) as cited in Myers 2007, p.1).

At the organisational level, the World Economic Forum (2008) suggests that wellness be defined in an active manner as follows "corporate wellness could be described as an active process through which organisations become aware of, and make choices towards, a more successful existence. For both the individual and the organisation, the concept of wellness is one where active steps can be taken that reduce chronic disease and mitigate its debilitating impact on personal lives and organizational productivity" (Russell, 2009, p. 13-14).

2.3. Workplace Health Promotion and Wellness Programmes

Workplace health promotion refers to the systematic approach of designing programs to enhance the health of the company, and its most important asset, its employees (Bäker et. al. 2002, p. 1).

Workplace health promotion (WHP) programmes have been referred to in many different ways, for example: wellness, health promotion, health management, and health and productivity programmes (Goetzel and Ozminkowski, 2008, p. 305). The term programme is used as an umbrella term to refer to the overall framework of health promoting activities within the workplace.

In the past, WHP interventions focused solely on changing the behaviour of individual without making considerations of the interrelatedness of socio-ecological factors such as the physical environment of workplace (e.g. ergonomic facilities) and the psychosocial environment (e.g. social support, social norms related to healthy behaviour) and how the contribute to the health of the employee. WHP have now evolved to include a holistic integrated means of health promotion that considers not only the individual but also the organizational factors (Russell, 2009, p. 16). The concept of wellness is now a growing trend at the corporate level and is used as a platform for a range of employee health related initiatives such as ergonomics, wellness coaching, disease management and prevention, occupational health, stress management, smoking cessation, weight management, back care, health screenings, nutrition education, workplace safety healthful food choices at work meetings, events, and training programs, family friendly policies and facilities, work-life balance and much more (Russell, 2009, p. 5).

The workplace offers a convenient setting for introducing and maintaining health promotion programmes as it contains a group of people who share common occupational goals (Goetzel & Ozminkowski, 2008, p. 306). The first international conference on health promotion (Ottawa Charter, 1986) recognizes that "health is created and lived by people within the settings of their everyday life; where they learn, work, play and love" (WHO, 2013). A healthy workplace is defined by a place (1) where employees work together to gain an agreed vision for health and wellbeing at the workplace and the surrounding community, (2) that offers physical, psychological, social and organizational conditions that protect and promoted the health and safety of all employees, (3) which enables employees and managers to increase control over and improve their health, to be motivated, positive and

satisfied (Burton, 2010, p. 15). Since health promotion is concerned with enabling others to take control over and improve their health (Ottawa Charter, 1986, cited in WHO, 2013), a healthy workplace can be understood as one that incorporates health promoting activities for its employees.

Reasons why the workplace offers a pivotal location for promoting and supporting wellness include (but not limited to):

- Most people spend most of their time at work than anywhere else (e.g. around a third of their day), therefore it makes sense to reach to them at work.
- Workplaces offer the opportunity to easily access a large number of people, including
 those who may not access medical care (e.g. young men). In addition, WPH may be
 used to target the employees' family and friends as well as the community around,
 thus offering a chance to reach out to even greater populations.
- Because of the changing work life, work is becoming increasingly sedentary leading to a number of lifestyle diseases. People who work while sitting daily are more likely to develop overweight or obesity. Because of new technology, there hardly any declination between work and life and thus people are available around the clock which results in increased levels of stress and thus there more need of stress management programmes. Increased level of stress can lead to burn-out, absenteeism, increased employee turnover, short or long work disabilities, poor health choices (e.g. excessive drinking and smoking), mental illness such as depression, reduced quality of work and much more.
- Already existing infrastructures of the workplace make it possible to plan and implement low cost interventions (e.g. human resource personnel and communication channels such as Intranet which make exchange of information easy and fast
- Workplace health programmes are readily accessible, convenient and more affordable to employees than programmes offered within clinical settings or community based programmes.

• Workplaces provide an opportunity for implementing a comprehensive holistic wellness approach in which multiple levels of influences on the health of employees, including individual, interpersonal, organization and environmental factors can be addressed. This includes for example provision of counselling, health education, healthy food options in the cafeteria, onsite gyms or sport activities, health checkups, promotion of employee social networks etc. (Russell, 2009, p. 18-20).

Workplace health promotion programmes offer a number of benefits to both the employers and the employees. Benefits to the employers include (but not limited to).

- Reduced absenteeism and presenteeism
- Improved employee engagement, recruitment and retention
- A happier, more resilient workforce
- A positive workplace culture
- Improved industrial relations
- Increased employee performance and productivity
- Financial benefits including: Reduced health care costs, reduced costs relating to absenteeism and presenteeism, return on investment (from improved productivity [i.e. increased innovation or efficiency] or cost savings [i.e. reduced workplace accidents, fewer staff absences, greater staff retention meaning recruitment and training costs are minimised (Russell, 2009, p. 22-27).

On the other hand, employees can benefit through the following ways

- Health benefits of WHP (including physical well-being, reduced risk of chronic disease etc.)
- Increased mental well-being, energy and resilience, reduced stress and depression, and increased quality of life.
- Financial benefits (e.g. including reduced expenditure on medical costs and receipt of incentives).
- Improved job satisfaction (Russell, 2009, p. 27-29).

Summary

Wellness includes many areas of our lives. The concept of wellness as a process, it is more than a state of being. The term implies a proactive attempt to live authentically in all areas of life. Ideally, it is the optimum state of health and well-being that each individual can achieve,

Chapter 3: Methodology

3.1. Worldview and Philosophical Foundations

Research is described as a systematic inquiry, whereby data is collected, analyzed, interpreted in a way in order to understand, describe, predict or control a certain phenomenon or to empower people (Merten, 2010, p. 2). The nature of research is influenced by a researcher's worldview and thus how it is conducted. A worldview is "a basic set of beliefs that guide action" (Creswell, 2009, p. 6, & Morgan, 2007, p. 49) and is also referred to as a paradigm (Creswell & Plano Clark, 2007, p. 21 & 2011, p. 39) which Mertens (2010) describes as a way of looking at the world (p.7). The term paradigm also implies a theoretical research framework (Mackenzie & knippe, 2006) and is also defined as "loose collection of logically related assumptions, concepts or proposition that orient thinking and research" (Bogdan & Biklen 1998, as cited in Mackenzie & knippe, 2006). Thus the theoretical framework or the paradigm influences the way research is collected, analyzed and interpreted. Due to the various meanings of a paradigm, the term worldview has been chosen for this thesis.

Worldviews are composed of certain philosophical assumptions that guide and direct thinking and action. They include beliefs about ontology (the nature of reality), epistemology (what counts as knowledge and how knowledge is acquired), axiology (the role of values in research) and methodology (the process of research, Creswell, 2013, p. 20).

Creswell (2011) identifies four worldviews that provide a general philosophical orientation to research and can be combined or used individually. These include postpositivism,

constructivism, advocacy/participatory and pragmatic. These worldviews take different stances to the philosophical assumptions mentioned (ontology, epistemology, axiology and methodology) and thus influence how researchers conduct and report research (Creswell & Plano Clark, 2011, p. 39–41)

This study identifies with the pragmatic worldview, meaning that the researcher took a "what works" attitude to conduct the research while keeping in mind the ethical and methodological standards of doing research. As an underlying philosophical framework for mixed methods research (Creswell, 2009, p. 11, Creswell & Plano Clark, 2011, p.43 & Morgan 2007, p.70), the pragmatic worldview focuses on the research problem and the researcher uses all approaches available to understand the problem. It is not committed to any one philosophy and reality and researchers have the freedom to choose the methods, techniques and procedures of research that best meet their needs and purposes (Creswell, 2013, p. 28). Effectiveness counts as the criteria for judging the value of research, rather than checking whether the findings correspond to some "true" condition in the real world. Furthermore, effectiveness is regarded as establishing that the results "work" in accordance to the problem the researcher seeks solutions for (Mertens, 2010, p. 36). The criterion for judging whether the methods used are appropriate for the research problem is if the methods achieve their purpose (Mertens, 2010, p. 38).

In pragmatism, researchers seek many approaches to collect and analyse data instead of sticking to one way. What holds true is what works at the time of research and the researcher focuses on the "what" and "how" of research based on where he/she wants to go with it (Creswell, 2013, p.28). Morgan (2007) emphasizes that the research questions are not in themselves important and the methods are not automatically appropriate but rather a researcher has to make a choice about what is important and what is appropriate, based on what works best for answering the research questions (as cited in Mertens, 2010, p. 38). In view of the ethical goal of research, Morgan (2007) asserts that "it is not the pursuit of knowledge through "inquiry" that is central to a pragmatic approach, but rather the attempt to gain knowledge in the pursuit of desired ends" (p. 69).

In a similar way, mixed methods research draws liberally from both quantitative and qualitative assumptions, methods and procedures while looking into various approaches for conducting research so as to provide the best understanding of a research problem (Creswell, 2013, p.28). Thus pragmatism offers an open door to the mixed method researcher.

This study represents the pragmatic worldview in that it uses both quantitative and qualitative methods to collect information (e.g. quota and convenience sampling) and thus embraces the idea of multiple realities (ontology) by reporting different perspectives of the study participants. Secondly, knowledge is based on subjective views of the participants as depicted in the interview results (epistemology). Thirdly, by acknowledging the researcher's interpretation in conjunction with that of the participants, as well as biases present in the study, the value nature of the research (axiology) is revealed. Fourthly, the research process is characterized by a combination of both inductive and deductive methods of data collection and analysis that gives more strength to either of two alone (methodological). Lastly, the study is inherent to the pragmatic worldview as it is designed around research questions with the intent of answering them in the different ways that deem appropriate and utilizing the results in ways that can bring about positive consequences to those who will benefit from this research.

3.2.Research Design

Creswell (2009) describes a research design to be a plan or proposal to conduct research that directs the decision from broad assumptions to strategies of inquiry and the specific methods of data collection and analysis (Creswell 2009, p. 3). Selection of an appropriate research design was based on the nature of the research problem. From the three research designs: qualitative, quantitative and mixed methods research, the latter was found most appropriate for this study. The three research designs dominantly differentiate themselves in the approach to research, involving the philosophical assumptions used as well as in their distinct methodology. The following brief definitions provide a view of how each of the design is used.

- Qualitative research is based on exploring and understanding the meaning of
 individuals or groups assigned to a social or human problem. The process of research
 involves emerging questions and procedures, data collection in study participants'
 setting, data analysis that is inductively build from particulars to general themes and
 interpretation of meaning of data
- Quantitative research involves testing objective theories deductively by examining the relationship among variables which are measured using instruments and analyzed using statistical procedures.
- Mixed methods research (MMR) is an approach that combines both qualitative and quantitative methods of research in one study. It encompasses more than just collecting and analysing of both kinds of data but instead uses both approaches in conjunction with each other and thus creates greater strength in the study than in either the qualitative and quantitative research. (Creswell, 2009, p. 4). This form of design is also seen as a "an orientation toward social inquiry that actively invites us to participate in dialogue about multiple ways of seeing and hearing, multiple ways of making sense of the social world, and multiple standpoints on what is important and to be valued and cherished" (Greene, 2007, p. 20 & Evans 2012, p. 277).

For this study MMR was found appropriate as either quantitative or qualitative method alone would not have been sufficient. Since the study participants consisted of employees in different shops all over Kenya, a quantitative approach would have been best to provide a general understanding of the problem; however an in-depth understanding of the problem would be lost. Hence the strength of one method was used to offset the limitations of the other method and thus providing a deeper understanding of the research problem than that with either approach by itself. In addition, the design gives the researcher the freedom to choose all methods possible for addressing the problem and thus making the research process practical as it tends to solve problems using deductive and inductive thinking. In view of this, it is thus a good fit for a pragmatic worldview. However, this design involves extensive data collection and therefore one requires time to gather and analyse quantitative and qualitative data. Subsequently, it requires resources in terms of funds and efforts

As previously stated, a research design comprises of philosophical worldview(s) that a researcher brings into the study, the strategy of inquiry that is related to the worldview and the specific methods of research used. These three components form the basis of the framework for the mixed method design chosen for this study and will be described in the next sections.

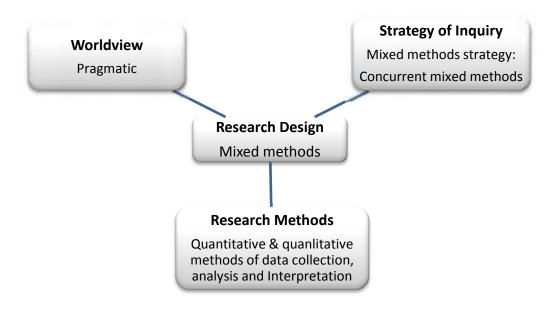


Figure 1: Framework of mixed methods design

(Adapted from Creswell, 2009, p. 5)

3.3.Strategy of Inquiry

Strategies of inquiry are types of qualitative, quantitative and mixed methods designs or models that provide specific direction for procedures in a research design (Creswell, 2009, p. 11).

3.3.1. Criteria for Strategy of Inquiry

Creswell & Plano Clark (2011) identify four decisive factors that influence the choice of strategy a researcher takes: (1) the level of interaction between the qualitative and quantitative strand, (2) the relative priority of the strands, (3) the timing of the strands, and (4) the procedures for mixing the strands (p. 64). The term *strand* is used to mean a

component of a study that includes the basic process of conducting qualitative and quantitative research involving posing a question, collection of data, analyzing of data and interpreting results based on the data (Creswell & Plano Clark, 2011, p. 63).

- a) The level of Interaction between the qualitative and quantitative strand can either be independent or interactive. An independent level of interaction involves collecting and analysing data of qualitative and quantitative research separately and only mixing the two during the overall interpretation of the study. On the other hand, in the interactive level of interaction, methods of the qualitative and quantitative strand directly interact before the final interpretation and this can occur at different points in the research process. For example, results from one strand can help to identify participants to study and questions to ask for the other strand. Alternatively, data from one strand may be transformed into the other type and both data are merged into one large database and analyzed together or one strand may be implemented within a framework based on the other strand type.
- b) Priority refers to the weighting/importance given to either the qualitative or quantitative methods to answer the research questions. Either both the qualitative and quantitative methods play an equal role in addressing the research problem or greater emphasis is placed on either one of them.
- c) Timing refers to the temporal relationship between the quantitative and qualitative strands in relation to the time the researcher collects the two data sets and the order in which he/she uses the results from the sets of data within a study. Concurrent timing happens when both the quantitative and qualitative strands are implemented during a single phase of the research study. Sequential timing takes place when the strands are implemented in two distinct phases, with the collection and analysis of one type of data occurring after the collection and analysis of the other type. Multiphase combination timing is when the researcher implements multiple phases of study that include sequential and/or concurrent timing within one mixed methods program.

d) Finally, the researcher has to decide where and how to mix the quantitative and qualitative strands. Mixing refers to how the researcher implements the independent and interactive relationship of a mixed methods study. This will depend on the point of interface (the point where qualitative and quantitative strands are mixed). That is either in the process of the design, data collection, data analysis or interpretation. Creswell & Plano Clark (2011) identify four mixing strategies including (1) merging the two data sets, (2) connecting from the analysis of one set of data to the collection of a second set of data, (3) embedding of one form of data within a larger design or procedure, and (4) using a framework (theoretical or program) to bind together the data sets (p. 64-68).

The six common mixed methods designs include: the convergent parallel design, the explanatory sequential design, the exploratory sequential design, the embedded design, the transformative design and the multiphase design. For this study a convergent parallel design was applied.

3.3.2. The Convergent Parallel Design

In this study the convergent parallel design, also known as the convergent design was employed. As table... shows, the convergent design is characterized by collecting both quantitative and qualitative data concurrently, equally prioritizing the methods, and by keeping the strands independent during analysis and then mixing the results during the overall interpretation (Creswell & Plano Clark, 2011, p. 70-71). Initially the convergent was design conceptualized as a triangulation design where the qualitative and quantitative methods were used for purposes of obtaining triangulated results. However, this brought about confusion with the use of triangulation in qualitative research. Over the years, the design received many names such as simultaneous triangulation, parallel study, convergence model and concurrent triangulation (Creswell & Plano Clark, 2011, p. 77). Its purpose is to attain different but complementary data on the same issue so as to best understand the research problem with the intention to offset the weakness inherent within one method with the strength of the other (or to add strength to the strength of the other). In addition,

this approach is also used to synthesize complementary quantitative and qualitative results in order to develop a more complete understanding about a topic (Creswell & Plano Clark, 2011, p. 77).

As indicated in *Figure 2* there are four steps involved in the conducting the convergent design. First, both quantitative and qualitative data is collected. These sets of data are concurrent but independent and have equal weights (priority) in addressing the research problem. Secondly, the two data sets are analysed separately using quantitative and qualitative analytical methods. Thirdly, after obtaining the results in each data set, the results are merged together into one. This occurs during interpretation where the results are directly compared to determine to what extent and in what ways the results converge, diverge or combine to create a better understanding of the research problem. This form of comparison has been referred to as confirmation, disconfirmation, cross-validation or corroboration (Creswell & Plano Clark, 2011, p. 78).

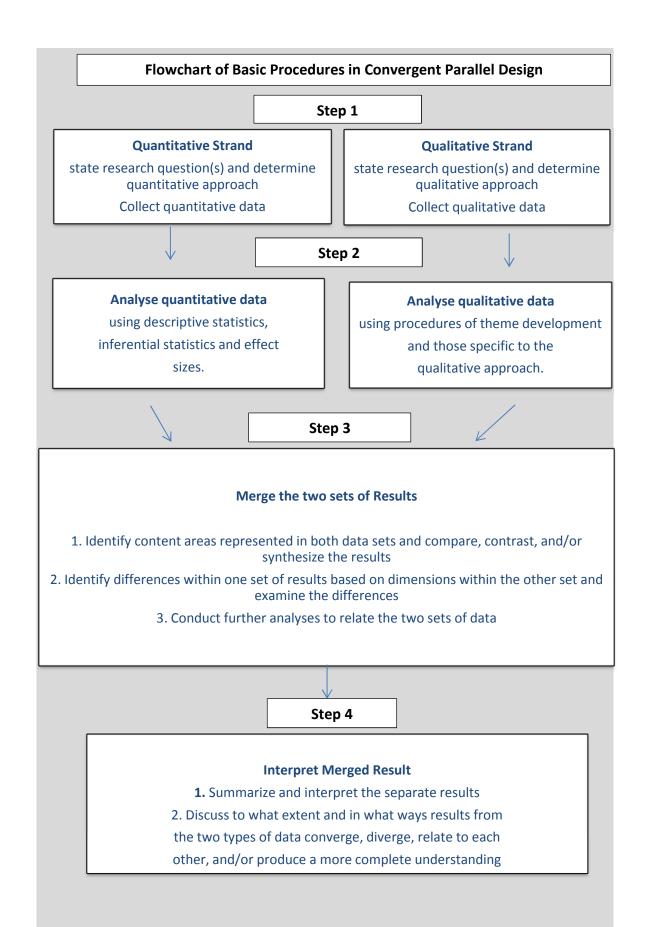


Figure 2: Flow chart showing the procedures of convergent parallel design

(Adapted from Creswell, 2011, p. 79)

The data collection phase of the study was a short period (one month) and therefore the convergent parallel design was suitable for this study as it is an efficient way of collecting both quantitative and qualitative data in one phase at the same (or roughly same) time. This mixed method design serves best the purpose of this research as the procedures employed help to broaden the understanding of a phenomenon by incorporating quantitative and qualitative methods. In addition, the concurrent data collection takes a shorter period of time as compared to one of the sequential approaches. It is also advantageous to the researcher as most researchers are familiar with it and can result in well-validated data. However certain challenges come along with this approach. The convergent design requires a lot of effort and expertise to study a phenomenon with two different methods because one is faced with extensive data and the nature of analyzing both text and numeric data can be time consuming. Secondly, one needs to consider the different samples and sample sizes when merging the two data sets. The different sample sizes could arise because both quantitative and qualitative researches are carried out for different purposes, namely generalization and in-depth description respectively. Thirdly, it is challenging to merge two sets of different data and their results in a meaningful way. Fourth, a researcher may find it difficult to resolve discrepancies that may arise when comparing results (Creswell & Plano Clark, 2011, p. 78 & 80).

3.4. Ethical Considerations

In conducting this study, several ethical issues that may arise in each phase of the research have been considered to ensure principles of ethics (respect of persons/autonomy, justice, Nonmaleficence (do not harm) and beneficence (do good).

First and foremost, conducting the research would only have been possible with the approval of the organizational leaders in each contractor company. The researcher first contacted the leaders of each company and planned a meeting with each of them at their

respective workplaces to inform the leaders about the study as well as to obtain information that would be useful in designing the study. In addition, each company received an Email containing information about the purpose and duration of study as well as the impact of the study for their employees. Before collecting data, a research problem that was beneficial to the researcher, the participants and workplace organization was identified. The researcher formulated an informed consent form that served to inform the participants and the organizations in which they worked at about the following points

- The researcher and sponsoring institute
- Purpose and scope of study
- Types of questions to be asked
- The use of the results after the study and the benefits to the participants
- Assurance of anonymizing participants' personal information and words
- Guarantee of confidentiality to the participant
- Notification that statements made will not be reported to the management or supervisors and that refusal to participate will in no way jeopardize their Job and that the result findings will not impact their employment status.

A consent form was available in both the quantitative and qualitative research process. A consent statement at the beginning of the online survey and a consent form before the start of all interviews was presented. Since the information collected also included questions about the workplace and the wellbeing of other employees at the workplace, confidentiality and anonymity played an important role in protecting the identity of the participants so as not to endanger their work positions and also to show respect to all participants. Achieving confidentiality was secured through use of a separate closed room while interviewing each participant, secure storage of tape recorders and transcripts, use of pseudonyms or initials in the transcripts instead of participants' names while analysing data and interpreting results. Being an external researcher who was not directly connected to the companies, this also reinstated the confidentiality involved especially during the qualitative research process. In addition, identities of contractor companies have also been protected by use of initials.

Moreover, the researcher has sole ownership of data and will only use it for purposes of study. In regard to the research design, scientific soundness was ensured by undertaking a properly designed research and seeking advice from supervisors. However, misinterpretation and misrepresentation of data especially in the qualitative interview data (if any) was only validated through repeated listening of the audio tape recorder. Unfortunately, respondent validation (where participants give feedback to the analysis before findings are published) was not possible as the researcher was no longer in the area of study.

3.5.Study Participants

The study participants for both the quantitative and qualitative parts of the study included employees from three contractor companies of Safaricom Limited. For confidentiality purposes, the name of these companies are presented in this thesis by letters A, B and C. Employees from all the three companies are situated in the main Safaricom Building in Nairobi as well as in different shops around the Kenya and have different job descriptions depending on the expertise of the company they come from. Two of the main areas they operate in are as M-PESA¹ team or as retail center representatives. The employees are recruited and employed by the contractor companies to work for Safaricom limited. They receive yearly contracts and work together with employees of Safaricom Limited who carry out similar/same responsibilities. For this study both male and female participants were chosen. The number of participants in the study as well as how they were sampled is explained in the next section.

3.6.Study Procedure

This section explains how data was collected, analyzed and validated in both the quantitative and qualitative part of the research. For the two sets of data the researcher chose the same participants, thus enabling comparison between the data sets. The quantitative sample size was much larger than qualitative sample size. Though as earlier mentioned, different sample

¹ M-Pesa: a renowed mobile money transfer through use of mobile phones

sizes may be seen as cause for disparities while comparing the data sets. Nonetheless, the researcher sought to gain an in-depth qualitative understanding and at the same time a rigorous quantitative examination. Subsequently, parallel data collection questions were designed. This means that the same concepts were addressed for both quantitative and qualitative data collection which also facilitated comparison of data. Independent data sets were collected using different instruments for data collection. For the quantitative study, an online survey questionnaire containing closed-ended questions was designed. On the other hand, semi-structured interviews were used for data collection in the qualitative research. The online survey was first administered to the contracted employees followed by the interviews which took place in the same month of data collection. The next sections give detailed descriptions of the procedures involved.

3.6.1. Quantitative study

3.6.1.1. Sampling Procedure

With respect to the nature of research in this study that involves questioning sensitive issues centered on the wellness of the employees, a non-probability sampling strategy was applied. Quantitative studies generally call for collection of data about attributes of individuals by estimating a proportion from a sample to a larger population so as to generalize to the population. This often requires drawing a scientific unbiased sample that is randomly selected so that each unit of the analysis has an equal chance of being chosen (Bernard, 2013, p.127-128 & Creswell 2009, p. 148). However, due to certain limitations mentioned below, a non-probability method was found more practical.

For the quantitative phase, quota sampling was applied. Quota sampling is a type of non-probability sampling method that excludes a random selection of participants (Bernard 2013, p. 163). The basic idea is that the researcher intentionally sets the proportions (quotas) of strata within a sample so as to ensure the inclusion of particular sub-groups of the population of interest. Sampling then proceeds using a non-random method of selection until the intended quotas for various sub-groups has been reached (Boston University School

of Public Health, 2013, & Statistics Canada, 2013). This sampling technique was chosen for the following reasons:

- A probability sampling technique was hard to implement as it was difficult to
 calculate a probability sample of employees from 3 different companies who worked
 in many and different shops around the country. Nevertheless, the researcher sought
 to create a sample that reflects the population parameters of interest. Bernard (2013)
 describes quota sampling as "an art that often approximates the results of probability
 sampling "(p. 164)
- Due to some limitations that hindered the study progress, data collection was carried
 out at the last month available for research. Therefore quota sampling served to
 urgently obtain the information needed.
- The quota sample has an effect of improving the representation of particular groups among the participants (each company was well represented), as well as ensuring that these groups are not over-represented (Lund Research, 2012).
- Quota sampling allows for stratification of a sample and thus the sample was stratified by company so as to ensure an almost equal representation depending on the population of employees in each company (Lund Research, 2012).
- In contrast to probability sampling techniques, especially stratified random sampling, quota sampling is faster, cheaper and easier to carry out as it does not require a sampling frame and one does not need to use strict random sampling methods (Bernard, 2013, p. 164 & Lund Research, 2012)

The total population of employees in all contractor companies is 522, with company A having 219 employees, company B with 158 employees and company C with 145 employees. Using Epi Info to calculate the required sample size from the total population, a sample of 221 participants was obtained with a 95% confidence interval. Then after proportional quota sampling based on the population of each company was carried out. For example, company A has total of 219 employees which represents 42% of the total population (522) and makes

up 93 employees of the sample size (221). As shown in table..for a sample of 221, 93 employees from company A, 66 from company B and 62 from company C were sampled.

Table 1: Sample sizes and total population

Company	Total Population	Sample Size	
Α	219	93	
В	158	66	
С	145	62	
Total	522	221	

Though quota sampling has various advantages, it is not as rigorous and accurate as a probability sampling method (Trochim, 2006). Because it is upon the researcher to choose who to sample unlike in probability sampling where participants are selected randomly, there exists selection bias (Statistics Canada, 2013) In addition, by using a non-probability sampling technique in quantitative research, it is to be understood that it is not possible to prove that the sample is representative of all contracted employees in the three companies.

3.6.1.2. Instrument Development

As previously stated, an online survey questionnaire containing closed-ended questions was used for quantitative data collection. The questionnaire was uploaded on *KwikSurveys*, a free online survey builder. Use of an online survey was appropriate for the study for the following reasons:

- The contracted employees mainly operate with computers and have access to the internet at the workplace.
- Safaricom contracted employees are distributed all over Kenya and the online survey
 provided a valuable tool for obtaining information from employees in different parts
 of country at a fast rate and at low cost since the online survey was free.

- Due to time constraints on the researcher's side, online survey offered the
 opportunity to collect data in a time-efficient way and also reach as many employees
 as possible within a short period.
- The nature of work in the Safaricom shops did not provide time to fill out questionnaires during working time and therefore online surveys provided a much convenient method of data collection as employees could fill out the surveys at their own allocated time.
- Online surveys are easy to fill out and make it easy to tabulate and analyse data They
 also enable the use of diverse types of survey question including dichotomous,
 multiple-choice, scales and both single response and multiple response questions.
- The online survey made it possible to limit the quota sample required for the study.
 Therefore, as soon as the quota samples in each company were attained, no more online questionnaires could be filled out.

The development of the items was guided by a combination of questions from other questionnaires whose validity was examined. Questionnaires used to formulate the questions include:

- 1. Baseline survey for GIZ-Safaricom Ltd Public Private Partnership Programme (Kenya HIV/AIDS Private Sector Business Council, 2011)
- 2. Befragung für Mitarbeiter und Mitarbeiterinnen der GIZ Mosambik über Wissen, Einstellung, Normen und Verhalten in Bezug auf Gesundheit am Arbeitsplatz und in der Familie" (English version: questionnaire for GIZ employees in Mozambique on knowledge, attitude, norms and behaviour at the workplace and in the family). (Roos-Bugiel, 2011).
- **3.** Knowledge, attitudes, perceptions and behaviour survey. German Development Cooperation (GIZ, 2007)
- The health needs assessment model questionnaire (Health Education Authority, 1999,p. 14-27)

- **5.** Employee health needs assessment methods and tools (East Midlands Public Health Observatory, 2011)
- **6.** General Health Questionnaire 12 (GHQ-12, adapted from the East Midlands Public Health Observatory, 2011)
- Warwick-Edinburgh Mental Well-being Scale (WEMWBS, adapted from the East Midlands Public Health Observatory, 2011)

Five variables were measured using the questionnaire. However, the questionnaire was divided into 6 sections of which two sections were grouped together to examine one variable. It should be noted that the questionnaire was formulated to collect information for GIZ Health Sector Programme (the organization assisting in developing the wellness programme for Safaricom Limited) and thus there are certain questions in the questionnaire that were not included for this study. The sections include: general information (pertaining to the demographic characteristics), general health and employee wellbeing (measured under the variable health status), consumption and physical behaviour (measured under the variable Lifestyle behaviour), work and health, and financial wellbeing (measured under the variable stress). The questionnaire can be viewed in the appendix.

Following is a description of the variables under study and what they entail:

- Demographic Characteristics: This variable consists of a set of seven questions (relevant to the study) that focused on employees' information about their sex, age, education level, marital status, number of children, position at the workplace and the length of working period at Safaricom Limited.
- 2. Knowledge of certain communicable and non-communicable diseases: this tested the knowledge of the employees on factors that could increase the risk of contracting Diabetes, High Blood Pressure, Typhoid, Malaria and Tuberculosis. Thus it contained 5 items.
- **3. Attitude towards HIV/AIDS:** this variable had 4 items that dealt with knowledge the employees HIV status, their partner's and their attitude towards HIV prevention.
- 4. Perceptions of health Status: this contained three items pertaining to the

- current health status of the employees (source: East Midlands Public Health Observatory, 2011, p 68)
- the medical conditions they suffer from and
- the mental wellbeing of the employees. The mental wellbeing was a likert-scaled question comprising of a combination of 7 items derived from Warwick-Edinburgh Mental Well-being Scale (WEMWBS)² and the General Health Questionnaire 12 (GHQ-12)³ and the health needs assessment questionnaire (East Midlands Public Health Observatory, 2011, p 68)

5. Lifestyle behaviour: This included 9 items on the following topics:

- Portion on vegetables eaten on a typical day: A portion of vegetables was defined as approximately one handful or 3 heaped tablespoons (East Midlands Public Health Observatory, 2011, p 68)
- Number of fruits taken on a typical day (East Midlands Public Health Observatory.
 2011, p 68)
- Frequency of high sugar content foods and high fat content foods taken per week
 where the employees acquire their lunch from
- Frequency of physical exercises per week (East Midlands Public Health Observatory, 2011)
- Frequency of alcohol intake, cigarette smoking and number of cigarettes smoked per day (East Midlands Public Health Observatory, 2011)

² Warwick-Edinburgh Mental Well-being Scale (WEMWBS): scale for assessing positive mental health (mental well-being). A 14 positively worded item scale with five response categories. It covers aspects of positive thoughts and feelings. (Source: National Health Survey Scotland, http://www.healthscotland.com/documents/1467.aspx)

³ General Health Questionnaire 12 (GHQ-12): instrument used to measure current mental health (source: Association of Public Health Observatories, http://www.nwph.net/lifestylesurvey/userfiles/mental/things/GHQ12.pdf.)

- **6. Conditions of the workplace:** this variable examined four relevant items on the questionnaire including: the physical working conditions, health problems as a result of the work life and number of days absent due to illness.
- **7. Causes of stress:** this comprised of 3 items on the causes of stress at the workplace and at home as well as financial related causes of stress.

A total of 34 closed-ended questions (questions with pre-set answers that appear in small or large sets of answer choices, Brace, 2004, p. 56) were developed for the survey. Of these some were dichotomous (two answer option questions e.g. Yes or No e.g.) while others were multiple choice (or multi-chotomous) questions which allowed respondents to choose one of the many answer options (Cvent, 2009). In surveying the attitudes, perceptions and behaviour rating scale questions were applied (questions measured on an interval scale on which respondents are asked to give their answer using a range of evenly spaced points, brace, 2004, p.79). These included 3-point, 4-point and 5-point scales running from most negative to most positive. Balanced scales (equal number of positive and negative responses) were used to avoid leading the response in a particular direction (Brace, 2004, p. 81-82 & Malhotra, 2006, p. 187). In addition, to reduce the effect of limiting participants to predetermined answers the option "other, (please specify)" was in included where appropriate

Other than the items, the questionnaire comprised of a cover letter in form of a consent form (informing the participant about the institution conducting the study, the reason for selection of participant for the study, objective of study and information on anonymity of participant and confidentiality of data) as well as an end statement (expressing gratitude to the participant) were included.

Survey Pre-Test

Fur purposes to determining whether the questionnaire was easy to comprehend and also the duration of time needed to of fill out the questionnaire, the researcher made use of `pen and paper' pilot questionnaires which were distributed among certain GIZ employees. The reason for using GIZ employees was that at the time of developing the questionnaire the three contractor companies were not known to the researcher. Due to certain organizational problems within the project, the research process was slowed down. Nonetheless, feedback from the pilot questionnaires as well as from the researcher's supervisors and colleagues helped to shorten and simplify the questionnaire. Initially the pilot questionnaire contained 54 Items which would have been too long to fill out.

Limitations of Survey Questionnaire

Though an online survey questionnaire presents a number of advantages, it comes along with certain limitations that may have influenced the study in one way or another. Because the employees work mostly with computers it was automatically assumed that there were no technological variations in terms of availability of electricity in all the workplaces across the nation. Therefore, this may have influenced the number of employees in different counties who participated in the online survey. Online surveys are impersonal in nature and therefore there is no possibility of clarifying questions on the part of the respondents (if need be). This was on the knowledge of contraction of HIV. ("Do you think you can contract HIV through the following ways?").

3.6.1.3. Data Collection

Quantitative data was collected from the 4th-31st. May 2012. Due to confidentiality of respondents, the researcher sought not to collect the email address of the employees but made the survey questionnaire accessible through a web-link. The link including a note to the employees was sent to the supervisor who in turn sent the link to the employees. The researcher sent two Email reminders to the supervisors and requested them to remind their employees of the survey.

3.6.1.4. Data Analysis

The qualitative data obtained was analysed using SPSS 18 (statistics software). Before analysing, the raw data was converted into a form that could be useful for data analysis. This

included scoring the data by assigning numerical values to each response, cleaning data entry errors, excluding responses that were not useful for analysis (i.e. those that did not meet the inclusion criteria for analysis- which was all those who indicated the name of the contractor company that has employed them.) and recoding items on instruments with inverted score.

Analysis of data took place in two steps:

- 1. First, descriptive statistics for all the variables were generated. Since the data was mainly categorical, frequencies were calculated to show the distribution of the variables. For easier calculation, the item on mental wellbeing- "Please tick the box that best describes your feelings/thoughts of each statement over the last month"-was computed into a different variable with three categories on the likert scale instead of five. Therefore the scale was put together as follows:
 - "none of the time" "rarely = "rarely",
 - "some of the time", = "some of the time"
 - "often" "all of the time" = "often"
- 2. Secondly, inferential statistical analyses were performed to check for associations between the working conditions and health problems due to work life as well as stress causes and levels of stress in relation to the following hypotheses
- There is a relationship between work-related stress and level of work-related stress
- There is a relationship between level of work-related stress and occurrence of health problems due to work life within the last 12 months
- There is a relationship between occurrence of health problems due to work life within the last 12 months and absenteeism due to illness within the last 12 months

Calculations of all inferential statistics were done using the Person's chi square $test(X^2)$ since the data was mostly categorical. For easier calculations the item;

"Which of the following describes how you feel about your job in general?" was adjusted to have two categories instead of four. Therefore a new variable was computed to include the categories "lowly stressed" and "highly stressed" as shown in *Table 2*. Similarly, the item, "In the last 12 months, how many days have you been absent from work due to illness?" was also adjusted and computed into a different variable for purposes of easier calculations to include 3 instead of 5 categories as shown in table...

Item Initial categories New categories Which of the following not at all stressed Lowly stressed describes how you feel lowly stressed about your job in general moderately stressed Highly stressed highly stressed In the last 12 months, how never never many days have you been 1-5 days ≤ 10days absent from work due to 6 - 10 days illness? 11 - 15 days ≥ 10days > 15 days

Table 2: Adjustment of variable categories

3.6.1.5. Validity of Data

The validity of the instruments used for quantitative research could be assessed by looking into the validity of the questions obtained from other questionnaires. For example in the variable-perceptions of health status- the validity of statements used for the likert scale in measuring mental wellbeing were found already valid through a previous study. Goldberg & Huxley, 1980, found good content validity in the statements used to measure mental wellbeing by using the General Health Questionnaire (GHQ12). In addition, its Internal

consistency had been reported in a range of studies using Cronbach's Alpha, with correlations ranging from 0.77 to -0.93 (Goldberg & Williams, 1988).

3.6.2. Qualitative study

3.5.2.1. Interview Sample

The qualitative sample was obtained through convenience sampling in which the supervisors of each company identified interview partners for the qualitative study that were available for a particular day. Initially two interview partners from each company were to be represented but unfortunately one company did not provide an interviewee and therefore interviewee in one company were more represented than in the other. In total 7 interview partners comprising of three men and four women participated in the qualitative research.

3.5.2.2. Instrument Development

An interview guide was developed containing open-ended question on similar topics as in the quantitative questionnaire. The interview guide was divided into three sections, namely health and wellbeing, health and workplace and financial wellbeing. These sections contained questions relevant for answering the research questions whose results served to confirm the results of the quantitative part of the study. It should also be noted that not all the questions in the interview guide were used for analysis of this study as they were only relevant for GIZ Health Sector Programme. The interview guide can be viewed in the appendix. It contains an introductory statement, information on the aim of the study, the procedure of the interview; including length of time, type of recording, type of questions and also statements reaffirming the anonymity and confidentiality of the interview and that the information will not be handed down to their supervisors. In addition, information on the demographic characteristics of the interviewees, including, age, sex, marital status and workplace position was included.

3.5.2.3. Data Collection Procedures

Communication about the interviews took place between the supervisors and the researcher. Interviews were conducted between the 22 and 31st of May 2012. The interview setting was at the employee's workplace where either the interview took place in an enclosed room or at a quiet place outside the workplace. An information sheet about the interview was formulated and sent to the supervisors in the three companies. During the Interview, data was recorded using a tape recorder. The interviews lasted for about 45 minutes after which the recorded data was safely saved and later transcribed by the researcher.

3.5.2.4. Data Analysis

The transcribed qualitative data was analysed using MAXQDA; a computer-assisted qualitative data analysis software that enables one to carry out content analysis⁴. In analysing the qualitative data using content analysis, following steps were taken in the analysis

- 1. A coding frame was build using words from the open-ended questions. A simple coding frame of two levels containing main and sub-categories was used. The purpose of the coding frame was to reduce the variety of meanings in the material into specified categories.
- 2. The material was segmented (divided) into units of coding such that each segment fitted into once category of the coding frame. The material was divided into an already existing structure as was provided by the interview guide. Then the relevant parts of the material and units of coding were marked.
- **3.** The researcher then trail coded the coding frame which involved applying the categories to parts of the material, comparing for consistency and adjusting the

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⁴ Content analysis: a method of systematically describing the meaning of qualitative material. (Source: Schreier 2012, p. 1)

- coding frame where necessary. While carrying this out it was necessary to define the codes and keep a record of each change made.
- **4.** The coding frame was evaluated by assessing reliability of data and the validity of the data-driven coding frame.
- **5.** Lastly, the main analysis was carried out using a final version of the coding frame. This involved a similar step as in the trial coding, but this time with the whole qualitative material.

3.5.2.5. Validity of Data

As mentioned in the previous section, validity of data was carried out by assessing the data-driven coding frame. For an instrument to be considered valid, it should capture what it sets out to capture. Therefore the coding frame is valid to the extent that the categories adequately represent the main idea of the study. In this case face validity was applied. In other words, this is the extent to which the qualitative instrument gives an impression of measuring what it was supposed to measure. For this reason, following steps were taken

Three steps were taken to assess the face validity of the data-driven coding frame. Results of the pilot coding obtained while doing the trial coding were used to check for validity. (1) A residual category had been formed for purposes of assigning material that could not be described. If the residual category was assigned many segments, then the face validity was low. However, this was not the case as the residual category only contained a few segments. (2) Similarly, many segments were not assigned to one sub-category over and above the other sub-categories and thus the coding frame was sufficiently differentiated. Thus validity of data could still be assured. (3) The last step was to check whether the categories were too abstract that individual information was lost. Likewise this was not the case and thus validity of data was determined.

Chapter 4: Results

4.1.Quantitative Results

A total of 161 online questionnaires were filled by the contracted employees. As an inclusion criterion for the analysis, questionnaire responses that only had the name of the company but no other information (16 responses) were excluded from the survey. Therefore the following findings are based on 145 online responses.

4.1.1. Descriptive Statistics

a) Demographic Variables

Table 3 shows a summary of the demographic characteristics of the study participants.

Majority of the respondents (68%) were between the age of 25 and 30 years, followed by 18% aged 19-24 years, 13% of between 31-36 years old and lastly 1% aged between 37 and 42 years. Majority (73%) of the respondents are single, 26% are married and 7% are widowed. On education level of the employees, 65% indicated to have attained college level of education, while 30% have university educational level. In terms of position of employment, 23% of the respondents have started working at Safaricom, 52% are on the junior level, 20% are in the middle level while 1% is in the senior level (management/supervisor). When it comes to working period at Safaricom, most respondents (48%) have worked between 1-2 years, followed by 27% who have been in the business for more than two years. 6% on the other hand have been employed for 1-6 months, while 1% was there since less than a month.

Table 3: Characteristics of participants

(N=145)

Variables	n	%
Gender		
Male	61	42.7
Female	82	57.3

Age group (years)					
19-24	26	17.9			
25-30	98	67.6			
> 30	21	14.5			
Highest Education Level					
College	95	68.8			
University	43	3.2			
Marital Status					
Single	106	73.1			
Married	37	25.5			
Position at Workplace					
Entry level	36	25.4			
Junior level	75	52.8			
Middle level	29	22.4			
Senior level	2	1.4			
Working period					
≤ 6months	10	6.9			
7 – 12 months	26	17.9			
1 - 2 years	70	48.3			
> 2 years	39	26.9			

b) Knowledge on certain communicable & non-communicable diseases

In response to the question "Do you think your risk of contracting diabetes can be increased through the following ways?" most participants agree that eating fatty food (67%, n= 81/121), high alcohol intake (57%, n= 66/116) and taking too much sugar (83%, n= 103/124) are risk factors for diabetes.

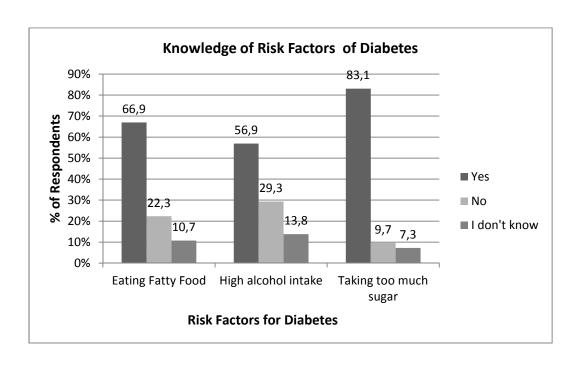


Figure 3: Frequency of employee's knowledge on risk factors of diabetes

High Blood Pressure (HBP) is known by most participants to be increased by stress (93%, n=113/122), by being overweight (90%, n=110/122) but not by blood transfusion (70%, n=79/133). There is however an almost equal percentage of those who think that blood transfusion is a risk factor for HBP (14%, n=16/113) and those who do not know (16%, n=18/113).

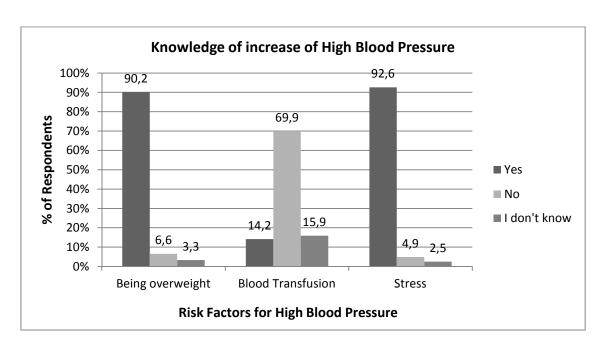


Figure 4: Knowledge of increase of high blood ressure

Many of the respondents are aware that drinking unboiled/untreated water (98%, n=123/125) and not washing hands after toilet use (86%, n=106/122) contribute to typhoid infection, while 21%, n=24/116) are of the opinion that sharing the same plate with an infected person will increase the chance of a of typhoid infection. Surprisingly, around 11% (n=122) think that not washing hands after toilet use will not increase a person's risk their risk of getting Typhoid .

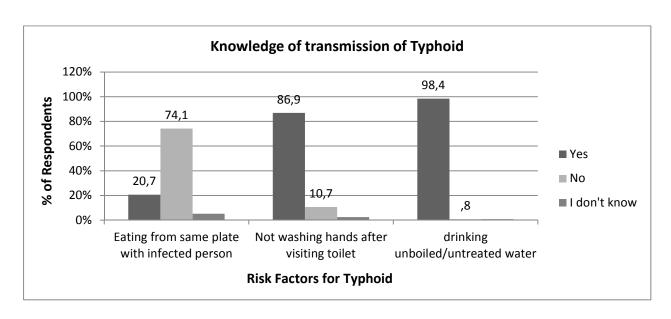


Figure 5: Knowledge of Risk Factors for typhoid

An almost equal percentage of participants reported that the risk of malaria cannot be increased through transmission from mother to child (70%, n= 82/118), by drinking contaminated water (69% of 79/114) and by sharing needles contaminated with blood (72%, n= 81/112). Nonetheless, malaria seems to be understood by some as a disease that is either transmitted from person to person through blood (i.e. from mother to child (25%, n= 30/118) and through sharing of blood contaminated needle/syringe (18%, n= 20/112) or through unclean water (24%, n= 27/114).

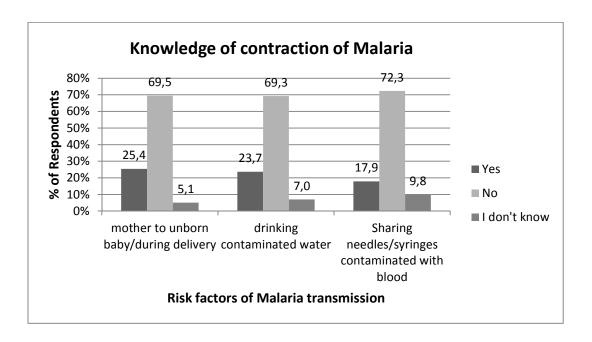


Figure 6: Knowldge on transmission of malaria

The risk of contracting tuberculosis (TB) is known to be accelerated by living in crowded conditions (92%, n=112/122) and sharing of cigarettes (81%, n=95/118). Other than one person, witchcraft is not accepted as a risk factor for contracting TB (97%, n=110/113).

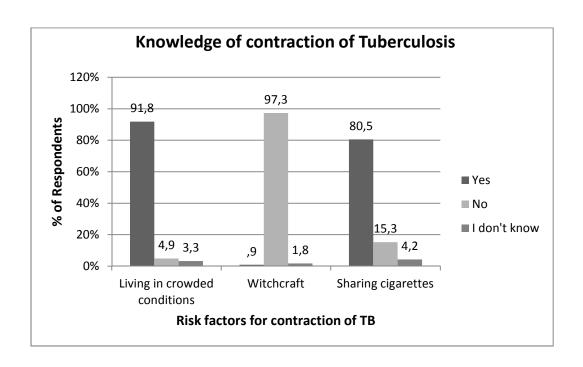
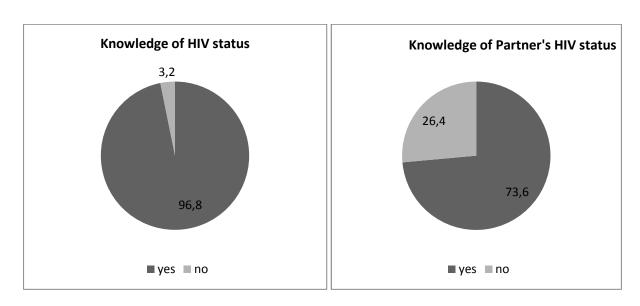


Figure 7: Knowledge of contraction of tuberculosis

In reference to knowledge of HIV status, 97% (n= 122/126) of the respondents know their HIV status; however, 26% (n= 32/121) respondents do not know their partner's status.



c) Attitude towards HIV

When asked to estimate their level of risk of being infected with HIV, 59% (n=128) respondents stated it was low while 17% estimated themselves as being at no risk at all.

Contrary to this, 6% indicated their risk level to be high and 7% have no knowledge of whether they are or are not at risk of being infected with HIV. Out of those who stated their risk of HIV to be low, 35% say they are faithful to their partners, 19% have a faithful partner 25% use a condom at all times, 20% do not change partners and only 1 participant states to have sexual contact with people who are healthy.

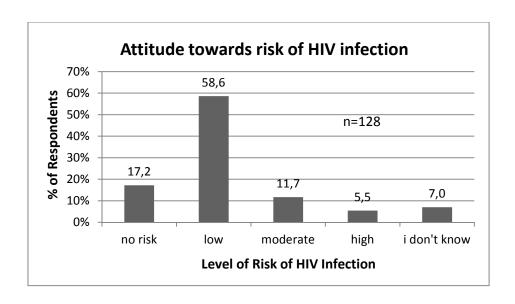


Figure 8: Estimation of risk of HIV infection

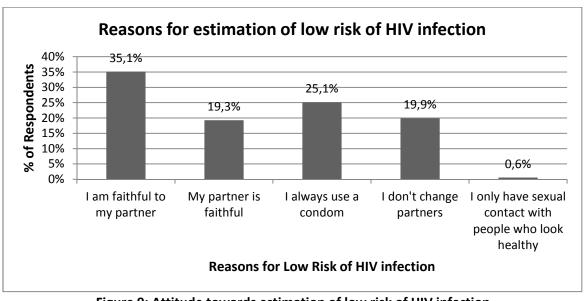


Figure 9: Attitude towards estimation of low risk of HIV infection

d) Perceptions of Health Status

The general health status was generally perceived to be 'good' by 69% (n=90/130) compared to 19% who say their health is 'very good', 10% whose health is at a 'fair' state and 2% who view their health to be 'poor'. None of the respondents stated to have 'very poor' health.

As *Table 4* shows 34% reported that they sometimes have feelings of depression, 45% stated they are sometimes constantly strained, 17% felt they were rarely satisfied with life and 13% indicated that their minds are not at ease. Positive feelings on the other hand were most frequent, with 62% feeling happy often,78% feeling useful often and 56% being able to deal with problems well.

Table 4: Employee mental wellbeing over the past one month

Feelings of employees over the			
past month			
	Rarely	Some of the time	Often
	n (%)	n (%)	n (%)
Satisfied with life (n= 124)	21 (16.9)	56 (45.2)	47 (37.9)
Feel happy (n= 121)	8 (6.6)	38 (31.4)	75 (62.0)
My mind is at ease (n= 119)	16 (13.4)	48 (40.3)	55 (46.2)
Feel useful (n= 116)	1 (0.9)	24 (20.7)	91 (78.4)
Deal well with problems (n= 122)	9 (7.4)	45 (36.9)	68 (55.7)
Constantly strained (n= 120)	43 (35.8)	54 (45.0)	23 (19.2)
Feel depressed (n= 122)	74 (60.7)	41 (33.6)	7 (5.7)

e) Lifestyle Behaviours

In terms of eating behaviour, most participants take 1-3 portions of vegetables (32%, n= 115) and pieces of fruits (31%, n=115) with an almost equal trend in the consumption of both vegetables and fruits. Interesting to note is that more portions of vegetables are consumed among the 'more than 5' category than the fruits in the same category.

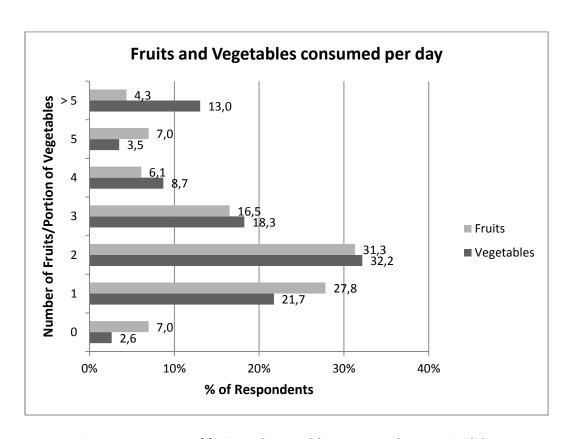


Figure 10: Amount of fruits and vegetables consumed on a typical day

In response to consumption of high sugar content foods, including soft drinks, cake, biscuits (as indicated on the questionnaire), the majority (47%, n=54/116) report to consume these 1-2 times a week. Others (17%, n=20/116)) on the other hand eat these kinds of food every day compared to 4% who say they never do. High fatty foods are also mostly consumed 1-2 times a week by most of the respondents (34.5%), while 22% report to eat them every day.

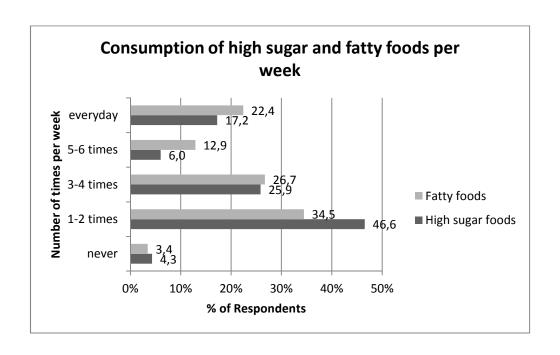


Figure 11: Amount of high sugar and fatty foods consumed per week

When asked to state where they get their lunch from, 46% (n= 117)of the respondents report that they carry food from home for lunch, 28% get their lunch from local restaurants with healthy food options, while 17% indicated that they buy their lunch from fast food restaurants.

In response to how often the employees engage in physical exercise per week, Figure...shows that 34% (n=40/118) do exercises 1-2 times a week. In comparison to those who do not engage in physical exercises (27%, n=32/118)) the margin is small. Moreover, it is interesting to note that about 21% (n=25/118) of the respondents do physical exercises every day.

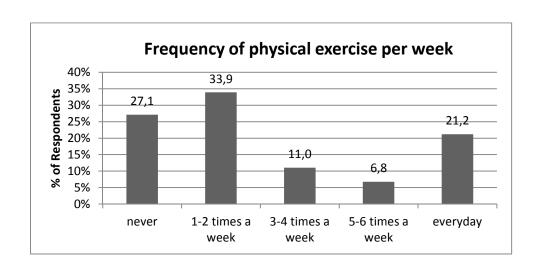


Figure 12: Engagement in physical exercises per week

Figure 12 reveals that many of the respondents either drink moderately to no alcohol at all. 48% (n=57/118) drink on special occasions only, whereas 33% (n=39/118) drink no alcohol at all. Similarly, smoking seems is not a common behaviour among the employees as 93% (n=110/118) do not smoke.

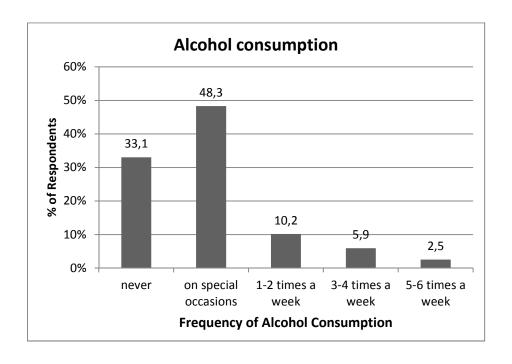


Figure 13: Frequency of alcohol consumption

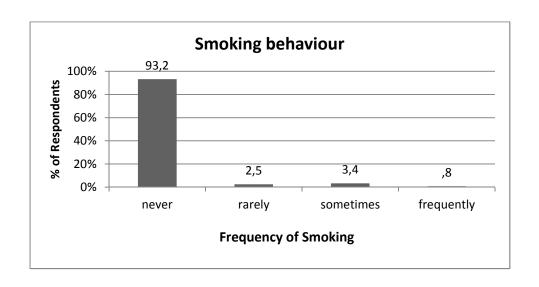


Figure 14: Frequency of cigarette smoking

f) Diseases Experienced

Within the last 12 months 62 respondents suffered from the diseases shown in figure... 18 (29%) had Malaria while 8/62 (13%) suffered from typhoid, 7 (11%) experienced back pain and 14 (23%) had dental problems.

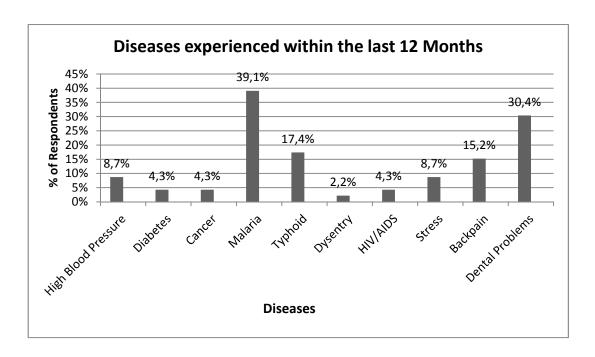


Figure 15: Diseases experienced within the last 12 months

g) Conditions of Workplace Environment

Figure 15 shows various working conditions affecting the health of the employees as identified by the respondents. The number one condition is constant glaring at computers (58% response) followed by uncomfortable working seats, poor ventilation and long hours of standing while working.

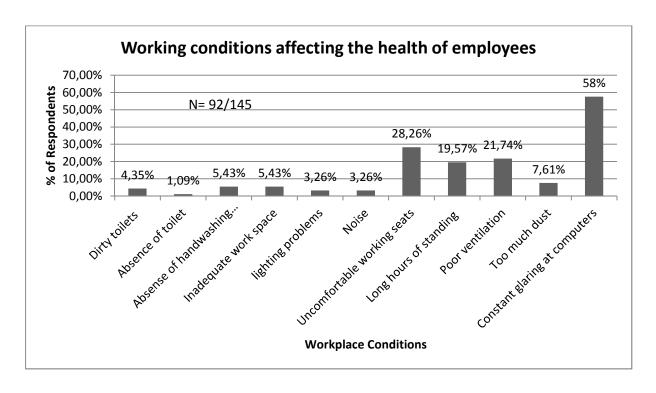


Figure 16: Working conditions Identified to affect the health of employees

In addition, 42% (n= 48/115) of the respondents say that, their health problems arose from their work life during the last 12 months in comparison to those who say their health problems did not arise from work (58%, n= 67/115). 32/133 (24%) participants suffered headaches, 28/133 (21%) had eye strain, 26/133 (20%) experienced exhaustion and 17/133 (13%) had backaches.

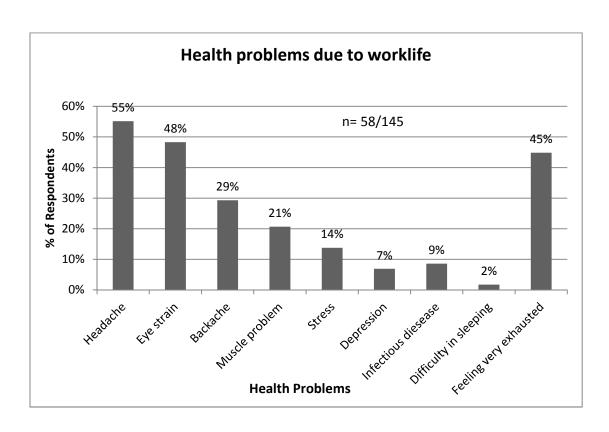


Figure 17: Health problems caused due to work life

h) Causes and level of Stress

a) Workplace related stress

When it comes to levels of stress at the workplace, very few feel highly stressed (5%) while the majority are either lowly stressed (47%) or moderately stressed (38%). Among the major possible causes of stress pointed out are: fear of losing job (20%), job pressure and demands (39%), monotony of duties (39%) and oppression from high level workers (26%). Other causes of stress include insufficient breaks (20%), followed by long working hours-more than 8hours (17%) and conflicts with fellow workmates (14%). In addition gender based violence was identified by one person as an issue that causes stress at the workplace.

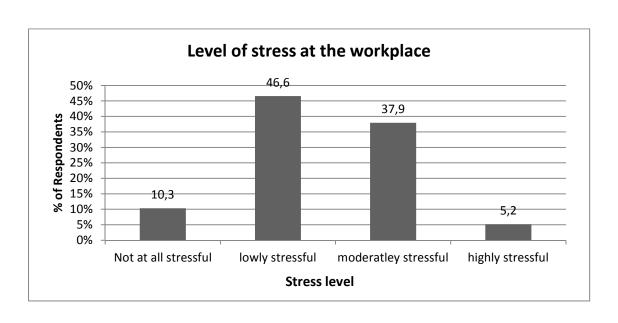


Figure 18: Level of stress at the workplace

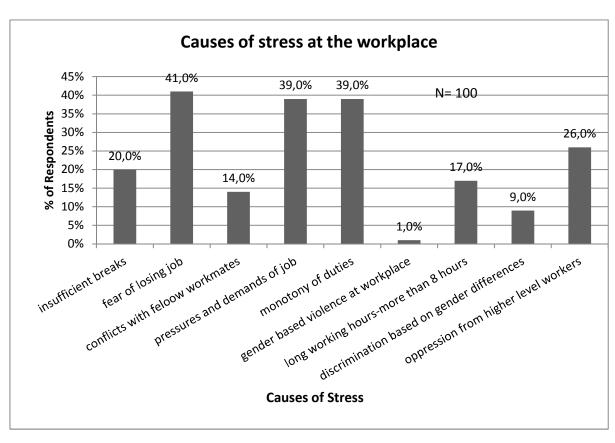


Figure 19: Causes of stress at the workplace

b) Home Related Stress

During the last 12 months, the respondents experienced stress at home out of the reasons seen in the figure below. The main stress factor resulting from home is financial support of family and relatives (66% of 111 respondents). Moreover, 42% seem to find it hard to balance their life and work and have stated this to be a cause of stress.

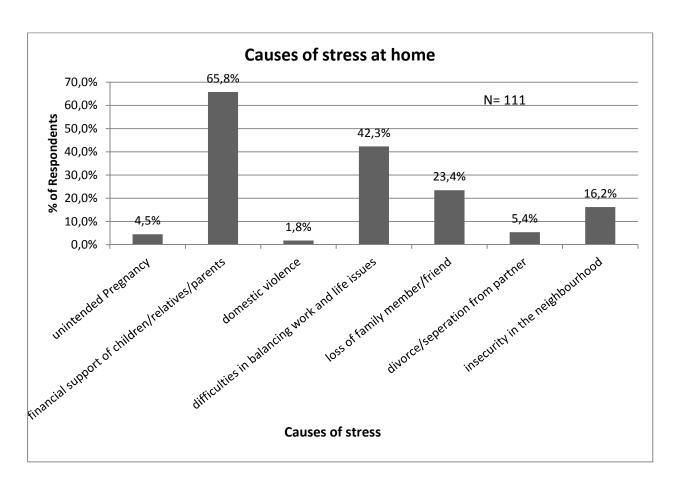


Figure 20: Causes of stress at home

The average number of people financially supported by the respondents is 3 (SD=1.77), whereby out of 108 participants 29% financially supports 2 people, 20% support 3 and 18% supports more than 5 people. Though as seen earlier most respondents are single, only 6% financially support themselves.

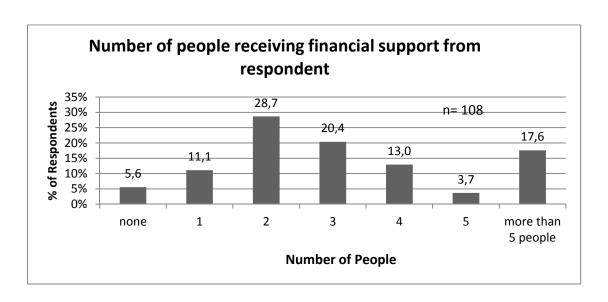


Figure 21: Number of people receiving financial support from respondents

A further look at the financial burden of the participants shows that 98% have a medical cover from their employees which according to their knowledge covers for in-patient (82%), out-patient (91%) and general check-ups (31%). However, there was very low response to coverage of antenatal care, maternity, treatment of chronic illnesses, HIV treatment and gynaecological care. With regard to dental care, most respondents were in unison that this is not part of the coverage.

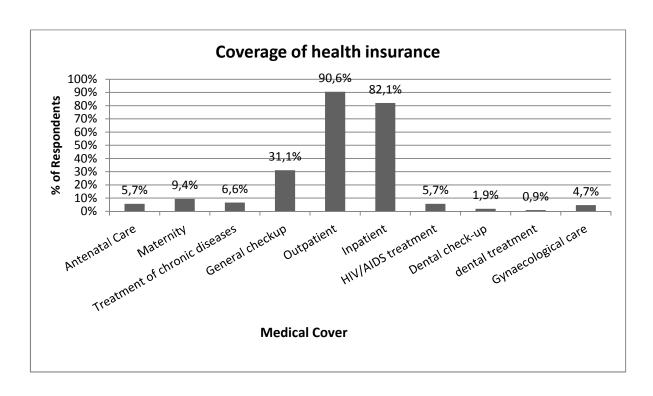


Figure 22: Coverage of health insurance

More than 80% of the respondents experience stress due to their financial situation, whereby 57% are moderately stressed while 25% are highly stressed and only 2% are not stressed at all by their finances.

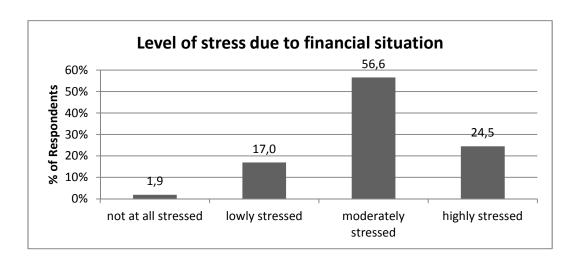


Figure 23: Level of financial-related stress

4.1.2. Inferential Statistics

In the second part of the analysis, inferential statistics were done to examine associations between the hypotheses:

- 1. There is a relationship between work-related stress and level of work-related stress
- **2.** There is a relationship between level of work-related stress and occurrence of health problems due to work life within the last 12 months
- **3.** There is a relationship between occurrence of health problems due to work life within the last 12 months and absenteeism due to illness within the last 12 months

The Pearson's chi square test was performed as the statistical calculation. Therefore it was important to check that the assumptions of the chi square were met. These included that each item contributed to only one cell in the contingency tables and that the expected frequencies should be > 5. All expected count was less than 5 for all. An alpha level of .05 was used for all statistical tests. P-values were exactly reported apart from those which were less than .001 which were depicted as < .001.

Relationship between work-related stress and level of work-related stress

Table 5: Association between work-related stress and level of work-related stress

-		Causes of stress at the workplace (N= 116)				
		Fear of	Pressures	Monotony	Oppression	Insufficient
		losing job	&	of duties	from higher	breaks
		n (%)	demands	n (%)	level	
			of job		workers n	n (%)
			n (%)		(%)	
Level	Low (n=66)	19 (28.8)	13 (19.7)	16 (24.2)	10 (15.2)	10 (15.2)
of						
work	High (n= 50	22 (44.0)	26 (52.1)	23 (46.0)	16 (32.0)	10 (20.0)
related		22 (44.0)	20 (32.1)	23 (40.0)	10 (32.0)	10 (20.0)
stress						
chi-squa	re	2.88	13.30	6.03	4.64	0.47
Significa	nce (<i>p</i>)	= .09	< 0.001	= .01	= .03	= .49

Out of those who are lowly stressed, 19 (28.8%) are stressed due to fear of losing their job. Almost similar in number are those who are highly stressed 22 (44%) and are stressed because of fear of losing their job. This resulted in no significant association between stress caused by fear of losing job and whether the employees were lowly or highly stressed

Among those that are highly stressed, twice as many employees are highly stressed (26, 52.1%) due to pressure and demands of job in comparison to those who are lowly stressed (13, 19.7%). There was a high significant association between the stress caused by pressure and demands of job and whether the employees were lowly or highly stressed X^2 (1, N=116) =13.30, p < .001. A further look at the strength of the relationship calculated using odds ratio shows that the odds of employees being highly stressed were 4.44 times higher if they were stressed due to pressures and demands of job.

Similarly, 46% (23) of the employees that were highly stressed were stressed due to monotony of duties in comparison to 24.2% (16) of those who were lowly stressed, due to the same. This resulted in a significant association between the stress caused by monotony of duties and the level of stress experienced at the workplace X^2 (1, N= 116) = 6.03, p = .01.

Furthermore, among those who are highly stressed (10), 15.2% were stressed due to oppression while among the lowly stressed, 32% (16) were stressed of the same. There was a significant association between stress caused by oppression from higher level workers and level of stress experienced at the workplace X^2 (1, N=116) = 4.64, p = .03.

However the association between stress caused by insufficient breaks and the level of stress experienced at the workplace was non-significant X^2 (1, N= 116) = 0.47, p = .49.

2. Relationship between level of work-related stress and occurrence of health problem due to work life within the last 12 months

As table...shows, there is a greater percentage of individuals who developed health problems within the last 12 months due to the working life among those who have higher stress levels (54%) than among those who have low stress levels. For those who did not develop any health problem due to their work life, there are fewer who experienced high level of stress (46%) compared to those who experienced low levels of stress (68%). This resulted in a significant association between the occurrence of health problems due to work life (within the last 12 months) and the perceived level of work-related stress X^2 (1, N=115) = 5.47, p = .01.

Table 6: Association between level of work-related stress and occurrence of health problem in the last 12 months

		Level of work stress		
		Low n (%)	High n (%)	Total n (%)
Health problem due to work life	Yes	21 (32.3)	27 (54.0)	48 (41.7)
(within the last 12 months)	No	44 (67.7)	23 (46.0)	67 (58.3)
	Total	65 (56.5)	50 (43.5)	115

Chi-square (X^2) = 5.47

Significance p = .01

3. Relationship between occurrence of health problem due to work life and absenteeism due to illness

Findings show that within the last 12 months a total of 37 (34%) participants were never absent from work due to illness, 70 (63%) were absent for less than till up to 10 days while only 3 (3%) were absent for more than 10 days. Out of those who were never absent due to illness, 29.7% had health problems due to their work life. Furthermore, 47% of those absent due to illness had problems due to work life. There was a significant association between the health problem that occurred within the last 12 months due to work life and the number of days an employee was absent due to illness X^2 (2, N= 109) = 6.96, p =.03.

Table 7: Association between health problem due to work life and absenteeism due to illness within the last 12 months

		Absent due to Illness (last 12 months)		
		Never ≤ 10 days ≥ 10 da		≥ 10 days
		n (%)	n (%)	n (%)
Health problem due to illness	Yes	11 (29.7)	32 (46.4)	3 (100)
(last 12 months) n = 109	No	26 (70.3)	37 (53.)	0 (0)
	Total	37 (33.9)	69 (63.3)	3 (2.8)

Chi-square (X^2) = 6.96

Significance p = .03

4.1.3. Summary of Quantitative Results

The descriptive results show that most employees are conversed with the risk factors for Diabetes, High Blood Pressure, Malaria, Typhoid and TB. Interesting to note is that some (23%) think that Malaria can be transmitted through blood e.g. through sharing of blood contaminated needles (23%) while other think it can be passed from mother to unborn baby. (25%). Employees also know their HIV (97%) but 26% do not know their partner's status. In reference to their attitude towards HIV, low levels of HIV risk were attributed to being faithful, use of condoms always and no change of partners. Nearly 70% perceive their health to be good while 16% report to rarely have their minds at ease and 23% who often feel constantly strained. Inferential statistics resulted in significant results for all levels of associations i.e. between work-related stress and level of work-related stress, between level of work-related stress and occurrence of health problems due to work life and finally between health problems due to work life and no. of absent days due to illness.

4.2.Qualitative Results

A total of seven interviews were conducted. *Table 8* presents the characteristics of the interviewees.

Table 8: Characteristics of the Interviewees

Interview	Sex	Age	Marital Status	Workplace position
Partner (IP)				
1	Male	27	Single	RCR (Retail Center
1	Widic	27	Jiligic	Representative
2	Male	25	Single	RCR
3	Female	25	Married	RCR
4	Female	26	Single	RCR
5	Female	23	Single	RCR
6	Female	25	Single	RCR
7	Male	26	Married	RCR

The content analysis is based on five major categories that were deducted through the consolidation of themes present in the transcripts in combination with the objectives derived questions posed on the structured interview guide. The five categories include:

- 1. Perception of health
- 2. Lifestyle behaviour
- 3. Diseases/ill-health
- **4.** Workplace challenges to health
- 5. Financial challenges to health

The cores of the categories as well as their sub-categories are as illustrated below.

4.2.1. Category 1: Perception of Health

This category represents the views of the interviewees on the meaning of health and also on how they view their own health. How the employees perceive health was relevant to understanding their health behaviour and health needs. The sub-categories underlying this category include deductively derived descriptions of health and perceptions of health status as shown in the matrix below.

Table 9: Sub-Categories and paraphrases from the interviews

Sub-Category 1-a:	Descript	tion/Examp	ole
Description of health			
1. Wellbeing			
		. of erviewees	Examples
	Physical wellbeing	6	"my body is strong enough to operate"
			"being physically able",
	Mental wellbeing	5	"Having a sound mind"
	Emotional wellbeing	2	"my emotions do not overwhelm me,"
	Psychological wellbeing	1	"not stressed".
	Spiritual wellness	1	
2. Absence of sickness	"when am not sick then that	means am	healthy"
3. Personal initiative	"Health is our own initiative o	as individud	als"
4. Being complete	Health is also said to be cor in relation to being pe emotionally	=	= :
	"what keeps us going with	hout any	problems, being well-
	equipped in terms of having	no proble	ms physically, mentally
	or psychologically." (Interview	w partner (IP)-1)
5. Financial resource	"Being perfect financially" in support one self and others; my daily needs. I can suppor that are close to me without	"not havii t myself ar	ng streams to cater for nd I can support people

Sub-Category 1-b: Perception of health status	"Wanting": meaning that there are unmet health needs
	"I mean that there are some things I feel if done to me health wise I could, my production could improve or I could be better than the way I am". (IP-1)

Most of the Interviewees view their health to be good in terms of their physical health. Health is mostly perceived in relation to physical wellbeing and the mental status in which case a person is not sick. In addition some identify health to include a wider scale of the environment, the emotions, the spiritual wellbeing and being financially stable.

4.2.2. Category 2: Lifestyle Behaviour

This category depicts the behaviour of the Interviewees in relation to food consumption at the workplace, smoking behaviour, alcohol consumption and physical exercises.

Table 10: Sub-Categories and Examples

Sub-category	Examples
Eating behaviour	"My colleagues eat a lot of junk food like take a way burgers and
	sometimes nyama choma (grilled meat)"
	"Our eating habits, they are poornormally we eat a lot of beef
	burger, chicken"
	"I try to eat a balanced diet, I avoid junk foods as much as I can"
	(IP-7)
Cigarette smoking	None of the interviewees smoke and only one instance
	mentioned of a colleague who smokes.
Alcohol consumption	"I've seen that when we have eventsthe alcohol budget is
	always on the highest more than anything else"
Physical exercise	engage in exercises like going to the gym, walking instead of
	taking a bus for short distances

4.2.3. Category 3: Diseases/ Ill-health

Common health conditions experienced were flus, backaches, headaches and dental problems. Other diseases mentioned include ulcers and diabetes. Possible factors contributing to the illness were mentioned by one interviewee as poor diet, poor physical exercise and stress related to family, friends and financial issues.

In addition, HIV/AIDS was pointed out by one interviewee as a disease that is not openly talked about but that is prevalent among the employees.

"Oh yeah, I've heard Safaricom has AIDS. There's a lot of, there's a lot of infection going on, I've heard that HIV[...] Yeah, people have them but they don't talk about it."

4.2.4. Category 4: Workplace Challenges to Health

This category is made up of five sub-categories and mainly pictures the challenges faced at the workplace and how these relate to the health of the employees. These sub-categories include: stress, working conditions, working schedule, inability to access Safaricom's health provisions and workplace relations

1. Sub-Category: Causes of stress

At least four employees expressed that they experience mental distress due to theft at the workplace, especially if an item e.g. a phone or money is stolen and they have to repay it.

"uh, In a way, if you lose an item and you're told to pay it, definitely it gives you stress...mentally you think otherwise, you think like uh...why you? So it's something also that can contribute to mental stress." (IP-2)

"Enough times am faced with, uh, coming clean with my records....Yeah, actually in the shops most guys lose. You know while you're in shops, let's say you lose 4 (thousand shillings) and you've taken your stocks to sell for the day and you lose out

on a four, you will not go home until it is settled. Which means your salo (salary) will be cut off. Yeah it happens even to the permanent staff but huh, you think of what you're being paid and the money that is being cut off, you're like oh no! "(IP-6)

"There's a lot of pressure and a lot of theft in the shops especially if you're in the sales area. People can just come in log and steal money from you... You know where you put money in the safes. Let's say you've taken a break and a colleague comes and logs in and starts selling. When you come back you find out like you have 8000 Shs less, you'll have to account for that. If it's not accounted you pay. So theft, you have to deal with a lot of things."

"...sometimes like just another day you woke up, you come you order in sales desks, you're selling quite a good no. of phones, then not knowingly you find that you have a box sealed but there is no phone and its around 60k, 100k. So physical, mentally it will affect you coz at the end of the day you have to repay that phone. Doesn't matter where the phone got lost but the idea here is its who took the phone. You return the empty box, you did not take the empty box. You're not quite sure whether the phone was there when you were taking it. Let's say its theft "(IP-1)

Similarly, pressure of meeting targets and monotony of the job were also identified as causes of stress at the workplace.

"...sometimes there's a lot of pressure in the retail shops especially with targets, even my colleagues at work. The targets given to them is humongous, its so high and you know If you do not fulfil your target it is pushed on to the next month, so you have a burden and you're like ok how do I crack this? And enough times you over process yourself with thoughts and all. It can cause the ulcers, so I think, yeah" (IP-6).

"May be the targets at times, when they are giving targets you have to think outside the box. You don't meet them definitely you'll have stress "(IP-1)

"We usually have the same duties and sometimes it monotonous and this makes it stressful." (IP-4)

2. Sub-Category: Working conditions

Working conditions such as long hours of sitting or standing and working with the computer were pointed out to have effects on the employee health. Effects of long hours of standing were expressed as back pains while effects of using the computers for a long time were headaches.

"Ohh, yeah, and uhh its common that most of experience uuh, headaches because of use of machines "(1P-7)

Another issue was the use of air conditioners in the workplace which affects the health of some employees. While for one Interviewee the air conditioner is a cause for a cold, for another it was chest problems.

"Due to the AC (air conditioner), you see the cold in there, so I really got a flu but it didn't cause absenteeism, as in I just kept warm...Yeah...sometimes it really gets cold in there, unweza pata njee (you can find that outside) its very sunny but in there its freezing "(IP-3)

It was also mentioned that due to the nature of the job sometimes it is very hard to take a break and one ends up working for long hours.

"Ok, uh, where I work am a data guy and most of the time it's kind of very tricky to get, to take a break. So you work for long hours, you might work for straight 7 hours without taking a break." (IP-1

3. Sub-Category: Working schedule

The working schedule is a challenge to the employees' health. On one hand, some employees are not able to attend a course at the college after work.

"Well I'd like maybe to go to class and study in the evening and then you find because of the time schedule for your job you cannot be able to make it. So that means you stay stagnant on where you are, you can't be able to progress." (IP-1)

On the other hand, due to working in the late shift from 11am-8pm, (the earlier shift is from 8am-5pm) some expressed that they get home very late because the Taxi (provided by the company) that transports them home often arrives late; at 9pm and therefore by the time they get home its already 10pm. It was also mentioned that depending on which days one took an off, sometimes they would have to work from Monday to Monday. This is especially for those who work in shopping malls as they are also opened on the weekends.

"For one reason or another cab imechelewa (the taxi is late), mmechelewa kufunga (you've closed up late), you end up getting to the house at 10:30pm. Honestly speaking, someone's wife getting to the house at 10:30pm, 11pm" (IP-3)

In addition, an interviewee mentioned that the working schedules are challenging especially for parents as they either do not get time to spend with their children after coming late from work or even on the weekends for those who work in the malls. Thus some interviewees felt an imbalance between their work and life.

"Uh, Saturday and Sunday thats when you're baby is at home but you have to go to work. So for parents it's quite a challenge." (IP-3)

"...I'll come have a stray shift maybe cause am logging in at 11am, so I'll get to the house at 10:30, definitely she has slept (the baby) and the next morning am coming in at 8am. I leave her asleep, so I've had no time with my biashara (business), I've not see her yet. So its either you sacrifice one. One has to be sacrificed. So it has become so difficult to accommodate all of them."(IP-3)

Another major concern for one interviewee was the inability of the working schedule to accommodate emergency/unavoidable situation. According to one interviewee, it is difficult to find an employee to replace another in times of emergencies where an employee has to

seek a day off. This is because it is not the responsibility of the supervisors to look for employee replacements for a particular day but rather the task of employee who wants to take the day off (termed as local arrangement). An employee makes an arrangement with a colleague so that the colleagues can work on their behalf and the employee pays back by working for the colleagues on a different day. Emergencies that demand that the employee takes the day off include for example, when a child gets sick, burial of a relative/friend, exams etc. However local arrangements do not always work because they don't colleagues who are able and willing to work for them. Therefore the employees are forced go to work despite the situations they are faced with.

"My baby gets sick, I ask for your off tomorrow. You have, you can't. So that means...I come to work and forgo my baby's health. How will I work honestly?" (1P-3)

"And others sometimes come to work when they have really pending issues. Like I know of parents, I mean someone is coming to work, she has left a kid back home. Maybe at that time she...you know when you want to get an off day it has to be your off day. So if its not you're off day and you've left your kid at home. It is so hard to get someone to replace you with. So enough times you see someone coming to work, they're preoccupied, not concentrating and then enough times they fell sick. I think that one also contributes to ulcers and the state of mind not being together, yeah." (IP-6)

Inability of working schedules to accommodate certain situations is also seen when employees have to sit for exams for college classes they attend in the evening.

"Maybe even having exams, you understand? Yeah. So you've paid for exam fee, you've paid for a semester fee with all the struggle with the salary you're getting and then imagine you forfeit doing that exam because the shift was not accommodating." (IP-3)

4. Sub-Category: Inability to access Safaricom health provisions

Some employees expressed that they have no access to the Safaricom gym facilities. Though they had applied for it, it was not approved till the time of the Interview.

5. Sub-Category: Workplace relations

Workplace relations between the employees were described as good whereby the employees work as a team and are able to support each other in various aspects. Likewise, relations between the employees and their supervisors were also generalized as good. The employees felt that the supervisors were ready to assist them and that they handled workplace problems in a professional manner. However, in certain circumstances employees' wishes and supervisors' ideals do not seem to find common ground.

"...there's something maybe they may implement that you feel is not working for you...Like for example, at the moment what we're dealing with, if am in the 5pm shift (i.e. 8am to 5pm), I can forgo my lunch break and my tea break, that is one hour and leave at 4pm, right? I'll sit on my desk from 8:30am to 4pm having no break. That is my own suggestion. But then me instead of leaving at 5pm, I leave at 4pm, because some of us still have classes to attend, we need to upgrade our education so that we move to the next level. But you find they are not in agreement with that. They say we are stealing from the business. The business states that we leave at 5:15pm. So like honestly, they is so much traffic. You leave here at 5:15, by 5:15 hapa hakunanga matatu, lazima upande huko juu (over here there is no mini bus, so you have to go up there), that is 5:30pm...utafika tao (you will reach town at) 6:30pm. That's a class umelose (you've lost). You struggle too much to get school fees to pay for a class that you will never attend." (IP-3)

4.2.5. Category 5: Financial Challenges to Health

Financial challenges that influence the health of the employees were summed up within this category. Five sub-categories were composed including income inadequacy, financial disparities between contracted and permanent employees, support of family, the Safaricom Image and limited coverage of employer provided health insurance

1. Sub-Category: Income inadequacy

This sub-category shows how the employees felt about their income⁵ in relation to their health. There exist feelings of demoralisation due to earning less and also in comparison to what other people in the same branch of expertise earn. In addition, one interviewee pointed out not being able to afford a balanced diet and a gym facility as an effect of low income.

"I feel in the industry that am working on, it's like am the least paid, cause my competitors, people working in the same industry that am currently working on as a customer service representative for a telecommunication company - my competitors are earning - are taking by the end of the month more than am taking at the end of the company." (IP-7)

"Because of the low salary, sometimes I can't afford to eat a balanced diet and also I can't go to the gym since I can't be able to pay for it." (IP-4)

"Sometimes you see it should be a two way parallel thing, as work as you earn.

If you work so hard and earn so little, that demoralises you." (IP-1)

2. Sub-Category: Financial disparities between contracted and permanent employees

This subcategory covers the emotions and thoughts of the interviewees in regard to the differences between contracted employees and permanent employees. Findings reveal there is professional discrimination (as described by an interviewee) based on the education level of the contracted and permanent employees and also on the income (permanent employees are reported to receive twice as much as contracted employees, yet they have the same responsibilities).

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⁵ Monthly income is between 18,000 – 30,000 Kshs (about 163-273€)

"Yeah, personally I think there is professional discrimination cause you find that we do basically what the guys employed permanently do, but when it come to our pay or our reward consideration or even motivational factors, they are normally put before us. And you might find that some of us even those in under contract - in contractual terms - are even more productive than the guys who are employed permanently. But since its company policy that you cannot be under permanent employment without a degree, it becomes challenging for most of us."(IP-7)

"This is permanent staff and you're a local staff, a contractor. We are together here but simply because this is a permanent staff, you earn twice of what the local one is earning. At the end of the day you may find that they are not even quite good in what you are doing. They have to come and actually ask you how to solve that issue. Because I think people should be looked into their capabilities. Because I think most of us could have gone to school and gotten the degrees but simply because of the finances and so ...you are not able to do that. So why should we be separated because of the papers and according to capabilities you can do much more better than the other person?" (IP-1)

Furthermore an Interviewee expressed the fact that employees working in shopping malls do not receive compensation for working on holidays (unlike employees working in shops outside shopping malls). Instead of extra payment as in the case of permanent employees who receive double their income for working on holidays, contracted staffs are compensated with extra off-days.

"And back to your question when you were asking whether when we work on a holiday whether we get something higher, ideally for the permanent guys they are paid double their salary on that day but for us, you get they do not want to pay us for that day. What they want to do is compensate us with (for) that day. So if I worked on the 1st of June (a public holiday in Kenya), I'll be given an extra off day." (IP-3)

Findings also show feelings of marginalization among the contracted employees due to income differences between them and the permanent employees.

"And then again we'd like to live like the permanent staff because we are contracted staff. Of course we don't have the same salaries. You see them driving. For instance you see them having nice shoes, nice (all those) handbags and you can't have them. So you feel like you're marginalised or something." (IP-5)

"There are some groups that you cannot associate with cause you feel like you don't have what they have, you can't pay what they have...mmh, your psychological health is also affected. Sometimes you get so down, stress comes in, emotionally you find yourself with terrible mood swings. You feel like you want to take out your issues on everyone when in actually sense its not their fault." (IP-5)

However, one interviewee counteracted the feeling of marginalisation by stating that the Safaricom Limited had already made efforts to reduce the differences between permanent and contracted employees by including the contracted employees in their plans.

"...what I've seen from my end is that if someone is feeling isolated or discriminated, its them. I think the company has tried so hard. I see when we're having talks like this our bosses and all. They try to put everyone together...When we talk to our bosses in Safaricom, they try to include plus the contracted staffs in whatever they do, cause you see it's hard for them to leave them aside cause you realize the shop revenue is dependent of both permanent and contracted. They share the same target." (IP-6)

Moreover, it was pointed out that the contracted employees simply do not want people to know what they earn as it is easy to identify a contracted employee from a permanent one just by the name of the company on the badges they wear.

3. Sub-Category: Support of family or relatives

The support of family members was highlighted as a financial challenge by two interviewees who mentioned they financially support their siblings and parents. In addition, not being able to support the parents and siblings had a negative effect on the psychological wellbeing of an interviewee who experiences stress because of not being able to support the family and thus had the feeling of not taking care of her responsibility.

"Maybe you're not able to provide for your siblings and maybe your parents are not well off, so you find yourself getting stressed up. You feel like you're not achieving your responsibilities." (IP-5)

4. Sub-Category: The Safaricom image

This sub-category exemplifies the expectations that come along with working for Safaricom Limited; one of the biggest companies in Kenya. Interviewees reported that they are faced with people or even family members who expect them to pay or lend a hand simply because they work for Safaricom and therefore must be financially stable.

"...when you tell someone you work at Safaricom, what clicks in their mind is that you're earning more than 50,000kshs, which is not the case. So their expectations are so high." (IP-5)

"You see like for instance, uh, there's this notion or assumption that those guys from Safaricom like they are on the greenest pastures." (IP-7)

"...you cannot be able to support your parents and siblings like you would have wanted to...yeah. And I guess at the back of your mind you feel I've stigma from the society. Especially with the title Safaricom, everyone has high expectations from you which you cannot deliver." (IP-5)

5. Sub-Category: Limited coverage of employer provided health insurance

This sub-category illustrates the financial burden of employees when it comes to seeking health care. Furthermore, results show that the health insurance provided by the employers

only covers the employees and does not cover chronic illness, dental illness or conditions, ENT, antenatal care and eye illnesses. However, an interviewee reported that treatment of chronic illness is only possible at the onset of the disease

"Ok Like uh, like currently when I got my insurance cover the one that the employer provides, it has a roof, it has a ceiling, it cannot go beyond some measures like apparently it doesn't cover for optical and dental. So you find that if I have a problem regarding or involving any of the two I would have to seek my own like channel of solving that problem." (IP-7)

"Like for instance, I have a daughter and my insurance covers me only and I believe it's not helping in any way because, my daughter is more vulnerable to diseases than I can easily take care of myself. So if my insurance could have a slot and include my daughter, I could have peace of mind, yeah." (IP-7)

"...unless you get a condition that is not covered by the medical whatever scheme, I think that's the only time you'll really feel it. And you know the moment you're not able to cater for your health. Definitely your work will go down." (IP-6)

4.2.6. Summary of Qualitative Results

The qualitative results were composed of five major categories (themes), two of which contained five sub-categories (or sub-themes) each thus making up 10 sub-categories in total. The major themes were deductively formulated using the interview questions on the interview guide while the sub-themes were inductively created from the information given by the interviewees.

Findings reveal that interviewees perceived their health to be good mostly based on their physical health. However, other perceived health in terms of their psychological health, spiritual health, their surroundings and financial stability. In view of their lifestyle behaviour, all interviewees did not smoke, drink alcohol occasionally and the majority engage themselves once or twice a week in physical exercises. However, eating habits were

mentioned to be poor among employees at the workplace. In terms of diseases/ill-health, many of them have experienced headaches and backaches. With regard to HIV/AIDS, it is reported to be sensitive topic as employees do not talk about it. Workplace challenges were identified to include: stress causing issues, work conditions that influence the health, working schedules that are not flexible, inability to access health provisions of Safaricom Limited and . Finally financial challenges were identified to include income inadequacy, financial disparities between contracted and permanent employees, support of family members, high financial expectations of others on the employees due to the assumption made that they earn much more than in reality and limited coverage of the health insurance offered by the employer.

Chapter 5: Discussion and Conclusion

In this chapter, the quantitative and qualitative results that were previously analysed independently, are merged together in order to compare them and see if the results converge or diverge from each other.

5.1. Synthesis of Quantitative and Qualitative Results

A mixed methods data analysis was conducted to answer the question as to whether the quantitative and qualitative results agree on factors associated with the ill-health of the employees; in other words - whether the results for both analyses converge. In using a mixed methods analysis strategy one uses analytical techniques for merging the results, assesses whether the results from the databases are congruent or divergent and if they are divergent, then analyses the data further to reconcile the divergent findings. (Creswell & Plano Clark, 2011, p. 223).

As a means of conveying the merged results, the quantitative and qualitative results are presented in a summary table where they are presented side by side so as to easily compare them. For purposes of comparison between the two databases, dimensions on which the

data sets are to be compared were specified as: perceptions of health status, lifestyle behaviours, diseases/illness experienced, workplace challenges and financial challenges. Selection of these dimensions (themes) was based upon the search of answers for the mixed research question.

Table 11: Comparison of Information from Interviews and Survey Data

Major Themes	Interview results (qualitative)	Survey result (quantitative)
Workplace challenges	Causes of stress: Pressure to meet targets and monotony of duties, theft	Causes of stress:
-		Job pressure and demand, monotony of duties, long hours of working, insufficient breaks, conflicts with workmates etc.
	Working conditions: long hours of standing or sitting, use of computers for a long time and long hours of working.	Working conditions: constant glaring of the computer, long hours of standing or sitting etc.
	Effects: backaches and headaches	Effects: headaches, eyestrains, exhaustion, headaches
	Workplace relations: in generally is described as good	Workplace relations: conflicts with workmates are identified by some as a cause of stress at the workplace.
Financial challenges	Support of family/relatives: Limited coverage of health insurance	Support of family/relatives Limited coverage of health insurance
Lifestyle behaviour	Smoking behaviour: All interviewees did not smoke and only one instance of a colleague was reported.	Smoking behaviour: Nearly all participants did not smoke.
	Alcohol consumption: was identified as prevalent during events.	Alcohol consumption: Most of the participants reported to drink during special occasions
Perception of health	Most interviewees perceived their health as good whereby health is perceived mainly in terms of physical health	Majority of participants perceived their health to be good.
Diseases	Common ill-health mentioned includes: flus, backaches, headaches and dental problems. Other diseases mentioned include ulcers and	Malaria is the highest common illness stated followed by dental problems, typhoid, backaches

diabetes.	and stress.
According to one interviewee, HIV/AIDS is prevalent but is reported	
to be a sensitive issue as employees do not talk about it.	According to the statistics, very few participants suffer from HIV

5.2.Interpretation of Results

After merging the two data sets, the mixed methods results were interpreted to answer the mixed research question mentioned earlier; i.e. to what extent do the quantitative and qualitative results agree on the factors associated with the ill-health of the contracted employees? In doing this similarities and differences were sought between the two databases and conclusions were drawn out of them.

In both quantitative and qualitative results, employees perceive their health to be generally good. A further look at what exactly they understand under the word health shows that physical and mental wellbeing dominate the overall picture of health as one mentions "when am not sick then that means am healthy." Others on the other hand take the psychological aspect into perspective by describing health as "not stressed" while other perceive health as emotional wellbeing ("my emotions do not overwhelm me") and also as a financial resource for being able to cater for one's needs. In this respect, health was viewed to be multi-dimensional which reflects on the various dimensions of wellness as seen in chapter 2 (physical, emotional, social, spiritual, intellectual, occupational and environmental wellness)

Contrary to this, health was also perceived as incomplete ("wanting") meaning that certain things had to be included to improve the state of health. A further look at their health behaviour shows that the employees eat high sugar and fatty foods 1-4 times per week, including "junk food," thus depicting their" poor" eating habits (qualitative result). The employees consist of mostly non-smoker and occasional alcohol drinkers who engage in

regular exercise of wither walking, jogging or going to the gym (both quantitative & qualitative result).

As evident in Table 11, both data sets present similar findings in all the major themes. According to the quantitative statistics, pressures and demand of job, monotony of duties and oppression from higher level workers were significantly associated with the level of work-related stress. Pressures from work had the highest significant result, followed by monotony of duties. Similarly, the interviewees mentioned the same concerning their causes of stress at the workplace. Pressure and demands of work was linked to the high monthly target they have to reach. As evident from the interview, if one does not reach their target, it is pushed to the next month, thereby adding towards the next month's target. Therefore a build-up of pressure results in stress as is experienced by most of the employees. In addition, the pressure also arises from cases of theft which put the employees in a stressful situation as they have to pay back items that cost more than their income. Thus a deduction of salary to pay off the lost item can have profound financial consequences and can lead to the illhealth of the employees. Though not mentioned as a stress factor, the inability of the working schedule to accommodate emergency situations can lead to stressful situations especially if the cause of emergency is due to sickness, death or exams that have to be sat for.

Working conditions such as constant glaring at the computers and long hours of standing and their effects (headaches and back pains respectively) are both reported in the two data sets. Long hours of working are also reported which is attributed to the nature of the work that is characterized by attending to customers one after the other.

Similarities were also evident in the financial aspects influencing the health of the employees. Support of family or relatives took the lead in causes of stress at home, showing that many of the employees, though single are financially taking care or their parents and/or siblings. The responsibility of supporting the family/relative is perceived as a stress factor in two ways: (1) the employees have to support their family/relative despite having inadequate income and because of the high expectations of the family (that arise from the assumptions

that working for Safaricom, generates a lot of income) and (2) not being able to support the parents/siblings can lead to stress as the employees feel they are not taking up their responsibility as they should. Secondly, based on both data sets, the health insurance provided by the employers is limited to only out-patient and in-patient, exempting possibilities of having common illness treated. This includes for example treatment of HIV/AIDS, increasing non-communicable diseases such as diabetes, dental and optical problems. Quantitative results shows that dental problems (which can attributed to eating junk food (qualitative) and consumption of high sugar foods 1-4 times a week (quantitative) by most employees) of the employees are the second highest health problems experienced after Malaria. Lack of funds to treat certain diseases can ultimately lead to stress.

The only differences found was in the relations at the workplace where the quantitative results shows "conflict with fellow workmates" as a cause of stress among the employees while the qualitative result depicts the opposite; namely good relations among the employees. However, conflicts among the employees may be relative to certain areas, workplaces or even a few people and therefore cannot be generalized to all contracted employees.

In another instance, HIV was hardly identified as a disease among the employees yet interview results reveal that HIV is rampant among the employees and that they are quite silent about it. Due to the sensitivity of the issue and probably also fear that this information might reach their supervisors, the employees probably felt the need to conceal this information.

In overall, the both data sets converge to produce complementary results that confirm the statements in qualitative study and statistic results of the quantitative study.

5.3. Recommendations

Based on the results of the mixed methods analysis, following recommendations can be made.

- 1. On concerning working conditions e.g. constant glaring at the computers, computer screen protectors can be installed to lessen the effect of eye strain and headaches. Another work condition is long hours of standing or sitting. For this case high stools could serve those who stand for long hours and thus they can be able to sit from time to time, while simple exercises that can be done at intervals while working can be implemented to relieve the muscles off tensions and thus releasing pressure and relax the back muscles.
- 2. Pressure due to theft can be counteracted by providing the employees with personal padlocked/ password protected cabinets where they can lock their own goods for sale.
- **3.** Time management trainings can also offer an opportunity for the employees to learn how to plan and allocate their time so as that they can know how to go about the monthly targets.
- **4.** Through an interchange of responsibilities among employees of the same area/field at the workplace, the duties will not become very monotonous and thus result in less stress.
- 5. The working schedule can be adjusted to accommodate emergency situations that are unforeseeable e.g. sickness or burial. Furthermore, if employees already have plans for a particular working day e.g. they have to sit for an exam, they should be encouraged to report this matter much earlier so as to void having to look for a substitute and
- **6.** Employers could to occasionally invite financial speakers who teach and train the employees on matters to with planning, saving and management of funds. This would be very useful for those who are stressed because of support of family/relatives.
- **7.** With respect to the health insurance, it would probably be wise to encourage the employees to get a second one that at least covers the health areas that they need most.
- **8.** Workplaces could organize wellness days that serve to educate and address issues of disease prevention and management, healthy eating habits (especially because of the

- prevalent dental problems experienced) and lifestyle behaviours that could affect the health of the employees.
- **9.** Finally with regard to HIV/AIDS employees need to be encourage to take up HIV counselling services and every employee need to be sensitized so as to eliminate stigma within the working context.

5.5.Conclusion

The workplace offers an optimal health promotion setting that can reach a substantial number of a working population and in which multiple levels of influence on knowledge and behavior can be targeted. By educating employees on relevant healthy choices, they are equipped to make better decisions concerning their health and those of their families. Therefore the active process by which organisations become aware of and make choices towards a more successful existence can be used in any workplace as an underlying principle of promoting health among the employees.

The relationship between the workplace and its employees' health can be perceived in two angles; how the workplace affects the health of the employee and how the employees' health affects the workplace. Thus employee wellness can be interpreted to include what the employee brings to the workplace in terms of personal resources, health knowledge, attitudes and behaviours as well as what the workplace offers its employees e.g. in terms of the physical and psychosocial environment. Both poles will influence each other in one way or the other. Nonetheless, it is the active step taken by both the individual and the organization in realizing wellness within the working setting to reduce communicable and non-communicable diseases and mitigate the impacts on the personal lives and organizational productivity.

With lifestyle behavioral choices contributing to a significant proportion of non-communicable diseases in Kenya (50% of all hospital deaths and hospital admission, NCD Alliance, 2011.) evidence-based strategies to improve behavioral risk factors such as

healthier eating and regular physical activity need to be considered in workplace health programmes.

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Appendixes

Appendix A: KABP Questionnaire

Consent Form
Dear Participant,
The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)-Health Sector Program (GIZ-HSP) is conducting a study at your workplace. GIZ is providing technical assistance in the development and implementation of a comprehensive employee wellness Program at Safaricom Limited and would like to extend this service to the contracted employees of Safaricom. Therefore, you have been selected to participate in this knowledge, attitude, perception and behaviour (KAPB) baseline study in regard to your health and wellbeing at the workplace. The main objective of the study is to identify the health needs of contracted employees who work closely with Safaricom employees. Your participation is voluntary and neither your supervisor nor your manager will know how you responded to the questions. All information will be treated confidentially and your names will not be registered anywhere. To ensure your anonymity, the person carrying out this study does not know you. We would greatly appreciate your participation in the study. Filling in the questionnaire will take you about 30 minutes. Please fill in the questionnaire only once and answer all the questions that apply to you as truthfully as possible. Please start by giving your consent, the company you work for and your place of work. Thank you
Consent to participation
Company Top Image Sheer Logic Career Directions Place of Work
I. General Information
The following are some demographic questions about yourself. (<i>Please mark in the option boxes provided</i> .)
1. Please indicate your sex?
2. How old are you?

	☐ 19-24 ☐ 25-30 ☐ 31–36 ☐ 37–42 ☐ 43–48 ☐ 49 and above
3.	What is the highest education level that you have attained?
	☐ Primary ☐ Secondary (incomplete) ☐ Secondary (complete) ☐ College
	☐ University ☐ Other :
4.	What is your marital status?
	☐ Single with partner ☐ Single without partner ☐ Cohabiting (Living with partner) ☐ Married monogamously ☐ Married polygamously ☐ Divorced or separated ☐ Widowed ☐ Other (please specify):
5.	How many children do you have?
6.	None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ More than 4 What is your position at your workplace?
0.	What is your position at your workplace.
7	☐ Entry level ☐ Junior level ☐ Middle level ☐ Senior level
7.	How long have you been working at your workplace?
	☐ Less than 1 Month ☐ 1-6 Months ☐ 7-12 Months ☐ above 1 Year
	neral Health
The followi	ing questions deal with your knowledge and attitude towards your health in general.
8.	How would you describe your current health status?
	☐ Very Poor ☐ Poor ☐ Fair ☐ Good ☐ Very Good
9.	a) Have you gone for any medical check-up during the last 12 months to find out about your health status?
	☐ Yes ☐ No
	b) Have you been diagnosed with (or do you suffer from) any of the following medical conditions? (please tick all that apply)

	☐ High Blood Pressure ☐ Heart Disease ☐ Malaria ☐ Typhoid/ Cholera / Dysentery ☐ Tuberculosis ☐ Lung Disease (Chronic Obstructive Pulmonary Disease) ☐ Diabetes ☐ Asthma ☐ Cancer ☐ Sexually transmitted infections e.g. syphilis ☐ HIV/AIDS	☐ Hepatitis ☐ Stress ☐ Depression ☐ Back pain ☐ Digestive problems ☐ Dental Problem ☐ Pregnancy complications ☐ Complication due to abortion ☐ Other condition (please specify) ☐ None of the above ☐ Don't know
10.	Do you think you can contract the following	diseases through these ways? (please tick
	one box only in each row)	
	a) Diabetes (high blood sugar) Eating fatty foods	☐ No ☐ I don't know] No ☐ I don't know] No ☐ I don't know
	Living in crowded conditions Yes	☐ No ☐ I don't know
	Through witchcraft Sharing cigarettes Test Test Test Test Test Test Test Test	☐ No ☐ I don't know ☐ No ☐ I don't know
	c) Typhoid Eating from the same plate with an infected per Not washing your hands after visiting the toilet Drinking unboiled/untreated water	
	d) High Blood Pressure	
	Being overweight Yes Blood transfusion Yes Stress	No I don't know No I don't know No I don't know
	e) Malaria Transmission through mother to unborn infant/ Drinking contaminated water Sharing needles or syringes contaminated with	☐ Yes☐ No ☐ I don't know
	f) HIV Mosquito bite Sharing razors Eating from the same spoon with a HIV infected	Yes No I don't know Yes No I don't don't No I don't know
11.	a) Do you know your HIV status?] Yes
	-	

	b) Do you know your partner's HIV statu	s? Y	es		No	
		_		<u></u>		
	c) How high do you think is your level of	risk of beir	ng infecte	d with HI\	/?	
	☐ No risk ☐ Low ☐ Mod	lerate	☐ High	ı 🗆	I don't kn	ow
	d) If your rate of being infected with HIV	is low, why	is this so	? (Please	tick all tha	at apply)
	☐ I am faithful to my partner ☐ My partner is faithful. ☐ I always use a condom. ☐ I don't change partners ☐ I only have sexual intercourse with per ☐ Other (please specify):	ople who loo	k healthy.			
III. Em	ployee Wellbeing					
The followi	ing questions deal with your personal wellbeir	ıa				
12.	Please tick the box that best describes yo		/thoughts	of each s	tatement	over the
	last month? (please tick one box only in each	_	•			
		1		T	Las	1
		None of the time	Rarely	Some of the	Often	All of the
		the time		time		time
	At the present moment I am satisfied					
	with life					
	I've been feeling happy	\dagger				
	My mind has been at ease		ТĦ			
	I've been feeling useful					
	I have been dealing with problems					
	well					
	I've been constantly strained					
	I've been feeling depressed					
13.	Has any of the following caused you strettick all that apply)	ss at home	during the	e last 12 n	nonths? (please
IV. Co	☐ Unintended pregnancy ☐ Financial support of children/relatives/par ☐ Domestic violence (being beaten, raped of Sexual violence (e.g. rape) ☐ Difficulties in balancing work and life issu ☐ Fear of contracting HIV/AIDS ☐ Loss of a family member/friend ☐ Divorce/separation from partner ☐ Insecurity in the neighbourhood	etc. by husba	and/wife)			
	Other (please specify):					
1V. CO	Other (please specify): nsumption/Physical Behaviour					

14.	a) A partian of vagatables is approximately one handful or 2 beared tablespoons of vagatables				
14.	a) A portion of vegetables is approximately one handful or 3 heaped tablespoons of vegetables.				
	How many portions of vegetables, <u>excluding potatoes</u> , do you eat on a <u>typical day</u> e.g.				
	sukuma wiki, kunde, cabbage, tomatoes, carrots etc.?				
	□ None □ 1 □ 2 □ 3 □ 4 □ 5				
	b) How many fruits, of any sort, do you eat on a typical day e.g. banana, mango, pear				
	etc.?				
	Cto.:				
	□ None □ 1 □ 2 □ 3 □ 4 □ 5				
15.	How often do you drink or eat foods with high sugar content <u>per week</u> ? For example tea				
	with more than 2 teaspoons of sugar, soft drinks (soda), cake, biscuits etc.				
	☐ Never ☐ 1-2 times ☐ 3-4 times ☐ 5-6 times ☐ more than 6 times				
16.	On a typical week, how many times do you eat foods rich in fat e.g. mandazi, samosa,				
	kebab, fried potatoes/chips, fried fish/chicken, etc.				
	Never ☐ 1-2 times ☐ 3-4 times ☐ 5-6 times ☐ More than 6 times				
17.					
17.	During working hours, where do you normally get your lunch from?				
	From a fast food restaurant e.g. Kenchic				
	From a restaurant with healthy food options (freshly prepared food with low fat and				
	cholesterol)				
	☐ I carry food from home				
	I don't eat lunch				
18.	How often in the week do you do physical exercise for at least 30 minutes. For example				
10.	running, jogging or walking quickly so that your heart beat is raised.				
	Tanamag, jogging of Transmig quiency of that your flower boars to tanoour				
	☐ Never ☐ 1-2 times per week ☐ 3- 4 times per week ☐ 5-6 times per week				
	☐ Everyday				
19.	a) How often do you drink alcohol?				
	☐ Never ☐ On special occasions ☐ 1-2 times a week ☐ 3-4 times a week				
	Every day				
20.	a) How often do you smoke cigarettes/tobacco?				
	□ Never □ Rarely □ Sometimes □ Frequently □ Always				
	(If you don't smoke please move to question no. 21)				
	b) How many cigarettes do you smoke <u>per day?</u>				
	□ 1 5 □ 6 10 □ 11 15 □ A whole neek (20 sign retter) □ More than				
	☐ 1 -5 ☐ 6 -10 ☐ 11-15 ☐ A whole pack (20 cigarettes) ☐ More than				
V. Wo	20 ork and Health				
V. VVC	JIN AIIU LIGAIUI				
The guesti	ions below are related to your feelings at the workplace, how your work affects your health and				
	health is affected by your work.				

21.	Which of the following describes how you feel about your job in general?		
	☐ Not at all stressful ☐ Lowly stressful ☐ moderately Stressful ☐ Highly stressful		
22.	How satisfied are you with your job?		
	☐ Very Dissatisfied ☐ Dissatisfied ☐ Neutral ☐ Satisfied ☐ Very Satisfied		
23.	Which of the following has caused you stress at the workplace? (Please tick all that apply)		
	☐ Insufficient breaks ☐ Fear of losing job ☐ Conflicts with fellow workmates ☐ Pressures and demands of job e.g. having unachievable/hard to reach deadlines ☐ Monotony of duties (having to do the same things all the time) ☐ Gender based violence at the workplace e.g. sexual harassment, rape etc. ☐ Long working hours (more than 8 hours a day) ☐ Discrimination based on gender differences ☐ Oppression from higher level workers ☐ Other:		
24.	a) Within the last 12 months have you suffered from any illness, physical or mental		
	problem that you think was caused by your working life? ☐ Yes ☐ No		
	b) If yes, how would you describe the problem you experienced? Headache		
	☐ Eye strain☐ Backache		
	Muscle problems affecting arms, hands, neck, shoulder, hips, legs or feet		
	☐ Hearing problems ☐ Stress		
	Depression or anxiety		
	☐ Infectious disease (bacteria/virus) ☐ Difficulty in sleeping		
	Feeling very exhausted		
25	Other (please specify): In the last 12 months, how many days have you been absent from work due to illness?		
25.	in the last 12 months, now many days have you been absent from work due to limess?		
	□ Never □ 1-5 days □ 6-10 days □ 11-15 days □ more than 15 days		
26.	The following are working conditions that may affect your health. Which of these do you feel has affected your health? (Please tick all that apply)		
	☐ Dirty toilets at the workplace		
	Absence of a toilet		
	☐ Absence of water to wash the hands after using the toilet☐ Inadequate working space		
	Lighting problems e.g. too dim/too bright		
	☐ Noise at workplace ☐ Uncomfortable working seats/chairs		
	_ Chestine table from the content		

	Long hours of standing while working Lifting heavy weights
	Poor ventilation (poor air quality, too cold/ hot) Too much dust
	Eye strain e.g. from constant glaring at the computer
	Other (Please specify)
27.	Which of the following is offered to you at your workplace?
	Peer educators or focal persons
	☐ Free condoms☐ Voluntary Counselling and Testing or arrangements with an external VCT site
	☐ Sport activities or arrangements with external groups for games ☐ Information on diseases e.g. HIV/AIDS, STI, TB
	☐ Information on how to deal with cases of gender based violence
	Other (please specify) None of the above
28.	Which of the following health topics are you mostly interested in? (Please tick only a maximum of 5 items that mostly interest you)
	☐ Back Pain ☐ Stop Smoking (smoking cessation)
	☐ Alcohol reduction ☐ Work-Life Balance
	☐ Heart Health ☐ Prevention of infectious diseases e.g. ☐ Healthy Eating ☐ Typhoid
	☐ Physical Exercise ☐ Diabetes ☐ Asthma
	☐ Men's Health ☐ Sexually transmitted infections
	☐ Stress management ☐ Weight Management ☐ HIV/AIDS
	☐ Drugs Awareness ☐ HIV/AIDS ☐ Mental Health Awareness
	☐ Family Planning ☐ Other:
	Gender-based violence
VI. Fina	ancial Wellbeing
	ing questions are related to your financial burden and behaviour.
29.	How many people live in your household?
	☐ I live alone ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5 people
30.	How many people receive financial support from you? (Including spouse/partner, children, relatives etc.)
	☐ None ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5 people
31.	a) Do you have a social security cover? Yes No
	[Social security is an insurance providing social protection, where you receive benefits e.g.
	retirement benefit. An example is the National Social Security Fund (NSSF).]
	b) Where do you have a health insurance cover?

	 □ National Health Insurance Fund (NHIF) □ Other (please specify): □ I don't have a health insurance cover
	c) Does your employer offer you a medical cover? Yes
	(If no, please move to question no. 32)
	d) What does this medical cover (offered by your employer) include? (please tick all that apply)
	Antenatal care Maternity Treatment of chronic diseases General medical check-ups Outpatient care services In-patient care services HIV/AIDS treatment Dental check-ups Treatment of dental caries and other dental diseases Gynaecological care e.g. pap smear Other (please specify)
32.	a) How many creditors (persons/institutions who you owe money) do you have?
	□None □ 1 □ 2 □ 3 □ 4 □ More than 4
	(If none, please move to question no. 33) b) If you one or more creditors, approximately how much money due you owe them? Less than 5000 5000-10,000 40,000-50,0000 Above 50,000
33.	How often do you do the following?
	Never Sometimes Always
34.	How stressed do you feel about your present financial situation? Not stressed at all Lowly stressed Moderately Stressed Highly stressed

You have reached the end of the questionnaire Thank you very much for taking the time to answer the questions.

Your input is highly appreciated

Appendix B: Interview Guide

Knowledge, Attitude, Perception and Behaviour Study on the Health of Contracted

Employees of Safaricom

Date of Interview:

Time of Interview:

Interview Location:

Contractor Company:

Introduction

Hallo, my name is Charity Tongoi and I come from the German International Organization

(GIZ). I am currently undertaking a study on the health of contracted employees of Safaricom

Limited. The purpose of the study is to find out the factors affecting the health of contracted

employees of Safaricom by looking into the knowledge, attitude, perception and behaviour

patterns in regard to health and wellbeing at the workplace. GIZ partners with Safaricom to

provide technical assistance in the development and implementation of a comprehensive

employee wellness Program.

The Interview Process and Consent

This interview will take about 30 minutes. I am interested in getting an understanding of

what influences your health as an individual at the workplace or at home as well as what

affects your colleagues. I will ask open-ended questions using a set of questions. Please feel

free to explain your answers more and give examples. The questions will cover how you

perceive your own health, what factors hinder you from keeping a healthy lifestyle or

promote your health, diseases affecting your health as well as workplace and financial

challenges influencing your health.

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This interview is confidential. Everything you say in this interview will be kept private and your supervisors or managers will not know how you responded. All the research information gathered from different employees will be combined so that no one will be able to trace what you mention during the interview. Your names will not be registered in my report. Instead of noting down the responses, I will record this interview using a tape recorder so that I can review and analyse the information correctly.

Before we begin I would like to have your consent to this interview and some general information about yourself.

Consent: YES NO

If no, please explain why:

Background Information of Interviewee

Age:

Sex:

Marital Status:

Number of Children:

Workplace Position:

Are there any questions before we begin?

Working Period:

To avoid any interruptions, please keep your phone in silent or off so that we can proceed. Thank you

Interview Questions

Health and Wellbeing

- 1. What is your understanding about health?
- 2. How would you describe your health?
- 3. In what ways do you keep a healthy lifestyle?
- 4. What hinders/prevents you from keeping a healthy lifestyle? (in terms of nutrition, physical exercise, alcohol/cigarette consumption)
- 5. What diseases have you faced in the past year and how did it affect your work?
- 6. What do diseases/ill-health do most of your colleagues suffer from and how has it affected them?
- 7. What factors do you think contribute to the diseases/ill-health?

Health and Workplace

- 1. What physical, mental or psychological problems have you faced due to your work life?
- 2. What workplace factors do you think have contributed to your physical, mental or psychological problem?
- 3. Have there been cases of discrimination due to illness at the workplace? If yes, in what way have the employees been discriminated or experienced difficulty?
- 4. Are you able to balance your work and life? If yes, how do you do this? If no, what challenges are you experiencing?
- 5. How would you describe your workplace relationships to your colleagues?
- 6. How would you describe your workplace relationships to your supervisors and the management?
- 7. What solutions would you suggest for these workplace challenges?

Financial Wellbeing

- 1. In what ways are you able to manage your finances?
- 2. What financial challenges do you encounter or do other colleagues face?
- 3. In what way does your financial situation influence your health and performance at work?
- 4. What or who do you think might help you with your financial challenges?

Is there anything else that you would like to add to this interview that influences your health at the workplace?

Thank you so much for your time and for the responses.

Appendix C. Code System

- 1. Perceptions of health
 - Description of health
 - Perception of health status
- 2. Lifestyle Behaviour
 - Eating behaviour
 - Cigarette smoking
 - Alcohol consumption
 - Physical exercise
- 3. Diseases/Ill-health
- 4. Workplace challenges to health
 - Causes of stress
 - Working condition
 - Working schedule
 - Inability to access Safaricom health provisions
 - Workplace relations
- 5. Financial challenges to health
 - Income inadequacy
 - Financial disparities between contracted and permanent employees
 - Support of family or relatives
 - The Safaricom Image
 - Limited coverage of employer provided health insurance

Statutory Declaration

I hereby declare that I have composed the present thesis independently making use only of the specified literature and aids. Sentences or parts of sentences quoted literally are marked as quotations; identification of other references with regard to the statement and scope of the work is quoted. The thesis in this form or in any other form has not been submitted to an examination body and has not been published.

Place/Date Signature