BACKGROUND MUSIC, MOOD, PERSONALITY, WORK BEHAVIOUR AND PERFORMANCE OF GARMENT MANUFACTURING FACTORIES AT ATHI RIVER EXPORT PROCESSING ZONE IN KENYA

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2018

DECLARATION

I declare that this thesis is my original work and has not been submitted to any college, institution or university other than the University of Nairobi for academic credit.

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DEDICATION

I dedicate this work to my dear husband Dr. Geoffrey Chemwa and my loving children Cecilia, Seth and Bradley, for their love, encouragement and for giving me a reason to work hard in my studies to the end. I also dedicate this great work to my late father, Onyara Asuru and my loving mother, Agatha Onyara, for their prayers and support; my brothers Asuru, Erukan and Okoba for believing with me that everything is possible in Christ Jesus and my sisters Khainja, Amusolo, Nambuya, Ashepet, Kukucha, Ajilong and the late Amukode for being there when I needed each one of them or any of their children.

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ABBREVIATIONS AND ACRONYMS

AGOA	Africa Growth and Opportunity Act
EPZ	Export Processing Zone
EPZA	Export Processing Zone Authority
HR	Human Resource
HRM	Human Resources Management
K-S	Kolmogorov Smirnov
TPB	Theory of Planned Behaviour
US	United States of America
VAT	Value Added Tax

OPERATIONAL DEFINITION OF TERMS

Background music	Music that is passively listened to while the listener is performing a primary duty
Mood	Participants internal state of feeling when listening to music
Personality	Traits that determine ones affective and cognitive domains that eventually affect how they perform duties and how they generally behave.
Work behaviour	Participants behaviour at work
Work Performance	Quality and quantity of work produced by the employees
Preferred Music	Music type desired by the participant

ABSTRACT

The general objective of this study was to determine the role of background music, mood, personality, work behaviour and performance of tailoring workers at the EPZ in Athi River, Kenya. The specific objectives were to establish the effect of background music on employee performance, determine whether employee's mood mediates the relationship between background music and employee performance, establish the effect of personality on the relationship between background music and employee performance, establish the influence of work behaviour on the relationship between background music and employee performance and to establish whether the joint effect of background music, mood, work behaviour and personality on employee performance is greater than the effect of background music on employee performance. The study was based on the fact that there is little known knowledge about the effects of listening to background music in a factory set-up. It was anchored on structural evocation theory, Eysenck personality theory, theory of planned behaviour and James-Lange theory of emotions. It study adopted the positivist approach in conducting research since it operationalises concepts like background music, personality, work behaviour and employee performance to enable the use of quantitative data to test the research hypotheses drawn from the conceptual framework. The study was conducted in a natural work setup. The design was a field experiment. The study population was the 3 garment factories at the EPZ, Athi River. The study used systematic sampling design to come up with a representative sample. From a population of 4500, 357 estimated sample size was used for the study. 357 were divided by 3 to get a total of 119 tailors per factory. A systematic sampling procedure was used to obtain 119 tailors from each factory. This was done by listing all the 119 respondents for each factory and selecting every 12th. In the first factory, music was played throughout the day while in the second factory music was played on and off and in the third factory it was not played at all. The purpose of the variation was to assess the effect music has on performance at different times of the day. Diagnostic tests done included tests of validity, reliability, multicollinearity, heteroscedasticity, linearity and normality. The results were consistent with the assumptions of regression analysis. A descriptive analysis of the study shows that background music, mood, personality and work behaviour had an effect on performance of tailoring workers. T test done indicated that mean performance for factory 1 and 2 was significantly different from that of factory 3. Linear regression analysis done for hypothesis 1 indicated that the relationship between background music and employee performance was moderately strong for factory 1 (R=0.503) and weak for factory 2 (R = 0.146). Path Analysis proposed by Baron and Kenny was used for H_2, results indicated that mood mediated the relationship between background music and employee performance (R^2 = 0.562 for factory 1 and R^2 =0.108 for factory 2). Three step regression analysis was used to analyse H_3 and H_4. Results indicated that personality moderated the relationship between background music and performance (R^2 = 0.576 for factory 1 and R^2=0.119 for factory 2) while work behavior did not moderate the relationship between background music and employee performance (R^2 =0.314 for factory 1 and R^2=0.0.1 for factory 2). The joint effect of all the predictor variables was greater than the individual effect of background music on employee performance. Multiple regression analysis for H_5 indicate R =0.753 and R^2 =0.567 for factory one and R =0.384 and R^2=0.148 for factory two. The study therefore concludes that the effect of background music on employee performance is not direst but is through employee mood and that, that relationship is moderated by personality

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Creating a good working environment for employees is primarily the responsibility of the Human Resource (HR) department. For example, workers in a tailoring factory who tend to do repetitive tasks have set targets of how many pieces in terms of quality and quantity an employee should produce per day. In such factories where high quality products are expected from the worker and the targets have been set, the HR department needs to ensure that employees are energized, motivated, relaxed and given relevant support to be able to perform beyond the expectations of the organisation. Research (Lesiuk, 2005) has shown that background music can be used as a managerial tool to increase productivity of employees.

Human beings have always worked; similarly human beings have always made music. Human activities are characterised by music; restaurants, banks, supermarkets, hospitals and even offices play music to accompany their daily activities. Researches on different uses of music in life have been done. For example, Chamorro-Premuzic (2014), in his analysis of uses of music, believes that background music has three functions: to enhance performance of tasks, to influence the type of mood in individuals and to boost their thinking ability. This position is supported by Shek and Schubert (2009), North and Hargreaves (1999) and Lesiuk (2005) who have also demonstrated that background music is a significant factor in determining how employees perform their duties at work.

When a person is employed to work in an organisation, they carry with them their personalities, intelligence, skills, attitude and other traits which eventually affect their productivity, creativity and performance. Competition for talent in the job market, marketplace needs, gender balance and the changing work environment requires varied workforce (Gordon, 2002) to be able to perform and compete with relevant competitors in the market. Introverted and extraverted individuals will always be in any organisation.

The structural evocation theory emphasizes that if the structural dynamics of the music affecting the sensorium is related to the dominant psychodynamic expressive structure, the two will marry and this union will allow music to affect emotions directly (Taylor, I and Parpete F., 1958). Eysenck (1958), in his description of the personality theory, suggests that mind stimulation maximal in an introvert and extravert is vastly different from each other (Furnham and Bradley, 1997). Introverts require a minimum amount of stimulation, while extraverts are in need of stimulation. According to this theory, an individual having relatively low stimulation levels will perform best in environments having minimal stimulation whereas those with high thresholds of stimulation will require more stimulated environments for optimum performance.

Theory of Planned Behaviour (TPB) is a theory which envisages deliberate behaviour; it shows that behaviour depends on both incentive and skill (Ajzen, 2002). The theory of planned behaviour also holds that attitude can also predict behaviour. Another theory relevant for this study is Emotions Theory by James-Lange, which states that emotions may be termed as outcomes of physiology-based reactions brought about by the external environment (Cannon, 1987). The theory holds that the emotions experienced by an

individual are directly proportional to the external forces that cause them. The theory thus suggests that the change in the body physiology is primary and the brain reaction through the nervous system is what will cause emotions to be experienced.

According to Ireri (2012), Export Processing Zone tailoring workers are young people between the ages of 25-30 with lower academic qualification. Most of the workers possess high school certificates only, and 6.8% of the tailoring workforce is composed of graduates. Her study also shows that there is a very high turnover among workers. The high turnover is usually necessitated by working conditions at the factories. This current study was done at the EPZ factories among tailoring workers. The age bracket at the factories was appropriate for the study because the variance in age at the EPZ factories is not wide and there is availability of enough samples for the current study, EPZ wa also appropriate because of the availability of enough sample for the study.This study is important to the Kenyan economy since the study findings if adopted can help Kenyan workers especially those in factory set ups to increase their productivity.

1.1.1 Background Music

Music has been defined differently by different scholars. According to Dorrell (2005), music is a sound that we enjoy hearing. Music is perceived differently by different people; what is music to some people, may be noise to others, and so people have different music preferences. There are different genres of music that have developed over the years. Popular genres include classical music, popular (pop) music, traditional music or folk music, hip hop, jazz, country music, rhythm and blues, and rock music. Different people have categorised music differently. In this study, music was categorised using

Rentfrow and Gosling's (2003) preference of music using four aspects that include: those which reflect an individual's personality such as jazz, classical and blues, those which are intense and having a rebellious attribute such as rock music and heavy metal, those which are conventional such as pop, country and soundtracks, and finally those full of energy and rhythm such as soul, electronic and rap music.

Background music is music played with the intention of being heard but not keenly listened to (Griffin, 2006). It does not require organised or analytical listening. In this study, background music is defined as music which is to be listened to passively while the listener is performing a primary duty. Here, music accompanies the work that the listener is engaged in. For this type of listening to be effective, the music must be pleasing to the listener and the volume must not be invasive but controlled to enable the listener to concentrate on the primary task (Griffin, 2006).

1.1.2 The Concept of Mood

Mood is generally referred to as an internal state of feeling. It is also a mental or emotional state (Miles, 2005). Music and mood are meticulously related, and can be used as a tool to enhance ones productivity. Mood can have an effect on decision making, perception, emotional and physical well-being of an individual. Psychologists have established that music an effects on the brain's neurons which produce serotonin, an important chemical that affects ones temperament. Boothby (2013) says music improves mood and boosts overall happiness of people which increases productivity. Exposure to long periods of stress and negativity may lead to health complications such as ulcerations, migraines, cardiac diseases and diabetic conditions (Andrea, 2013).

An awful mood can thwart an employee's work performance and lead to poor judgment that can eventually have an effect on an organisations performance. In contrast, a good mood can improve creativity and problem solving. By encouraging music listening at work, a firm may able to influence the individuals' emotions and moods. If a person is satisfied at work, they will have reduced levels of stress. This study defines mood as a participant's internal state of feeling when listening to music that can lead to their arousal or distraction as they perform their duties.

1.1.3 The Concept of Personality

Personality is the active trait inside an individual psychological structures that determine one's exclusive adjustment to his/her surrounding. The greatest and mostly used determinants of personality are based on the Five Factor Model (McCrae and Allik, 2002). This model asserts that individuals temperament varies on five broad personality dimensions. (McCrae and John, 1992; Matthews et. al., 2009). These dimensions include Openness to experience, agreeableness, conscientiousness, extraversion, and neuroticism.

Personality traits are important in determining both one's affective and cognitive domains which affect how they perform their duties or how they generally behave (Moynihan and Peterson, 2001). An individual's personality may not only be due to the environmental effect, but also hereditary characteristics (Ivancevich, Konospake, and Matteson, 2011). Hereditary characteristics are termed as those character traits which an individual obtains from their parents and are mainly transmitted through the genes. Heredity influences the sex of an individual, which in turn affects the personality of both women and men. The

ways individuals respond to the environment also defines their personality. It affects individuals from birth and continues almost to death.

Personality may be broadly classified into two temperament categories, namely introvert/extravert and neuroticism/stability (Eysenck, 1958). Extraversion is referred to as being outgoing, high spirited, enthusiastic, talkative and full of energy (Eysenck, 1958). The extraverts are often in need of external stimulation so as to perform best. Eysenck asserts that individuals vary on the stimulation levels required, and their productivity diminishes significantly when they become less aroused or stimulation is below the threshold levels. Based on Eysenck's Theory, the extraverts will only attain optimal performance when they are aroused and will tend to be bored when under no stimulation, while introverts are naturally aroused and hence will require a quiet environment.

On the other hand, emotional instability, also known as neuroticism, is best characterised by negative attributes such as being depressed and anxious. This is mainly brought about by increased activities of the sympathetic nervous system which is responsible for the fight and flight reflex response. Such people have low stimulation threshold levels and tend to have difficulties in expressing most of their emotions which leads them to experience the negative effects such as being nervous or easily upset.

However, the emotionally stable individuals have their thresholds of activation at relatively high levels. They also have good control over their emotions hence are only prone to negative effects by very stressing conditions while remaining collected and calm. This study used Eysenck’s two biologically-based categories of temperament:

extravert/introvert and neuroticism/stability. Eysenck developed an Eysenck's Personality Inventory (EPI) that measures the personality traits of an individual. EPI measures the two independent scopes of personality, introversion/extraversion and neuroticism/stability. EPI was used to identify the personality types of the participants.

1.1.4 Work Behaviour

Work behaviour is one's behaviour at work. It is usually more official than other types of human behaviour (Alexa, 2010). Job situations require that people behave in certain ways to be able to achieve the objectives of the organisation. Work behaviour varies from profession to profession as some professions are far more casual than others. Some of the behaviour related to work that people tend to show include: compliance with attendance, punctuality, interacting with colleagues and supervisors courteously, seeking assistance, using good judgment, displaying initiative, integrity, accepting changes and constructive criticism, good manners and habits, good personal appearance and hygiene, positive attitude, being courteous and friendly, and displaying good use and care of materials and equipment.

This study focused on two observable work behaviour traits based on Melissa Cooper's article in the Houston Chronicle on examples on employees' good behaviour. These behaviours included participants' ability to have a positive attitude, and their ability to meet deadlines (Houston Chronicle, n.d.). Workers who portray positive attitude are usually ready, available and willing to get the job done and done well; they feel appreciated, seek out quality work to remain busy and productive and eagerly desire to go above and beyond their normal duty. Those who aspire to meet deadlines are well organised, responsible and maintain a clean and organised work space.

1.1.5 Employee Performance

Viswesvaran and Ones (2000) define work performance by how well the employees are able to achieve the set organisational goals and targets considering their actions, attitude and behaviours in the activities the employees engage in. Work performance is directly linked to the task performance, which refers to the competency and completeness in undertaking various duties or obligations which are geared towards promoting the overall progression of the organisation. It may be attained by the implementation of certain technological requirements or by providing the required resources (Juslin and Västfjäll, 2008).

Anderson (2001) postulates that ability tends to be more efficient in the prediction of the task performance as compared to the individual's personality traits. Job performance is termed as the degree to which the employees are able to accomplish their delegated duties and roles as per their job descriptions. This may be measured through different approaches such as the quality and quantity of work done, the efficiency and speed in undertaking the job and the accuracy of the employee during the entire work process.

Anything that takes one's attention away from the work being performed can be a distraction. Distraction originates from unforeseen stimuli, which can be movements, visual disturbances, temperature extremities and increased noise levels. This may also be caused by technicalities such as system and services failures for example equipment or machine faultiness. Hence the normal task routines tend to be impaired either directly or indirectly (Anderson 2001). However, what would be distracting to some people may be considered by other people to be a concentration incentive. As such, some people may

have higher concentration levels in the presence of background music while others tend to prefer a quiet and relaxed environment.

The degree by which distractions affect how certain aspects perform, also lies on other determinants like the ability of an individual to concentrate at work, their motivations and how effective their coping strategies are at the work environment. For any organisation to experience a competitive advantage over the other players in the market, the work environment is important. A good working environment ensures minimal health problems, and an ergogenic atmosphere for work. The welfare of both employees and employers has gained increased importance in the recent past. In particular, the lack of conducive working environments, stress, work load and lack of employee satisfaction are among the leading problems in most firms. Therefore, it is important that a work environment allows a relaxed atmosphere to aid productivity (Mawson, 2002). The current study looked at performance in terms of quantity and quality of work produced by factory workers who were under a similar working environment but had varying background conditions.

1.1.6 Tailoring Firms at the Athi River Export Processing Zone, Kenya

In the early1980s, textile was the best manufacturing industry in Kenya both in terms of size and employment. The industry employed over 200,000 farming households that supplied cotton and about 30% of the labour force in the manufacturing sector (EPZA, 2005). The industry started to decline in the mid-1980s due to dumping of foreign second hand clothes, commonly known as *Mitumba,* in the local market and eventually collapsed in the 1990s. Since 2000, the African Growth and Opportunity Act (AGOA) programme

and the government of Kenya have supported the industry and as a result the textile and apparel organisations in the Kenya have produced a great variety of textile products for the local market and export.

The first EPZ program was established in Kenya in 1990. It was aimed at providing investment opportunities which are attractive mainly for the export-oriented businesses while operating within the designated areas/zones (EPZA, 2013). This was planned to assist the economy through improved productive capital investment, creation of jobs, technology transfer, and development of linkages and diversified exports. The scheme provides numerous incentives which target at luring more business to operate and be sustainable enough. In Kenya, there are six EPZ centres located in strategic locations. They comprise of Nairobi (Athi River Zone), Mombasa, Kilifi, Malindi, Voi and Kimwarer in Rift Valley region (EPZA, 2013). All these factories are managed by the EPZ Authority (EPZA).

1.1.7. Tailors at the Factories in Athi River Export Processing Zone, Kenya

The study population is composed of the tailoring workers at the EPZ, Athi River. This zone is one of the largest export processing zones in the country. The factories there produce high quality goods that meet the international standards. Currently, there are twenty two (22) garments/apparel firms at the Athi River EPZ as shown in *Appendix 5*. The three factories sampled for this study are licensed to manufacture knitted garments. The population of the workers in these factories is majorly composed of young and middle aged people between the ages of 20 - 40. All the garments produced are exported

to the US under AGOA which allows its member countries to export certain goods to the US without taxes being paid.

The sampled factories have a population of 1500 tailors each. They produce garments on mass production basis. In those factories, work is divided into; assembly section, cutting section, distribution section, stitching section, quality checking section, pressing area, printing area and packaging area. At the assembly area, materials are assembled and arranged, then moved to the cutting section. Here, materials are only cut according to what is to be made/sewn, and then moved to stitching, then to the quality check, where the quality of the garment is assessed before it goes to pressing area and packaging, ready for shipment to the US market.

In the three sampled factories, all managerial and other work-related activities including payment of tailors wages is similar. This study introduced background music within a work set-up where workers are of different personality types and react differently to the same stimulus under similar circumstances so as to examine the influence background music will have on their performance.

1.2 Research Problem

The number of people listening to background music at work has been witnessed to increase in the recent past. It is not unusual to enter an office or factory and find people wearing headphones and listening to their selected music. People store music in their digital gadgets and play them at their convenience. This has made it easy for people to access music whenever it is required. People have made music and enjoyed listening to music; similarly people have always worked unless disable. The increasing presence of

music at places of work raises questions about the benefits music has to man as he works. Though it's a normal practice to many, reasons for the liking of music at work are not clear. Specifically, the studies conducted in the area have shown inconsistency on the exact influence that music has on work performance (Furnham, 1981).

Individuals come to work with different inherent abilities and acquire other behaviours during their interaction with peers at the work place (Ivancevich, et.al., 2011). These abilities and behaviours affect how background music affects their work performance. While strides have been made in the study area, these studies are not an all encompassing explanation to the studies in this area. More empirical studies need to be done to come up with theories and models of how background music affects the performance of workers doing repetitive tasks in a factory.

People working at a factory set-up have different work behaviours and different personality traits. All these diverse traits culminate into a normal work environment. Human beings behave differently even under similar circumstances, for example, introverts and extraverts will respond differently to the same stimulus because they are different (Rentfrow and Gosling, 2003). Uhlbrock (1961) as cited by Furnham (1981) established that most workers in the factories had a high preference to music being played at work as opposed to there being none. A factory work environment is a diverse one with people of different genders, academic backgrounds, culture, age and preferences. This current study was done at the EPZ Athi River because the location has workers from diverse background, who possess different personality types and so chances of getting desired were results were very high.

Although music is said to enhance work performance (Watson, 2014), it is not clear which type of music appeals to both introverts and extraverts doing tailoring work. There are few studies done on work performance in tailoring factories where routine work is done. For example, Padmasiri and Dhammika (2014) did a study on the impact of music listening on work productivity in a garment factory and established a significant effect. They used what they called relaxation music to gauge its impact on work performance in a garment factory. This relaxation music, negatively impacted on the performance of the workers, and they concluded that relaxation music is not good for work. There has not been any research known by the researcher so far done to examine the effects of background music on tailoring workers' performance in Kenya.

Oldham et. al. (1995) did an empirical study on Listening to music during work, the experiment was to determine the relationship between an individual audio headsets use and employee work reactions. The study had 256 full time office employees from 32 job titles who were provided with personal stereo headsets. Participants carried out jobs with varying levels of complexity. They were encouraged to listen to music as often as possible. Those who were given headphones performed significantly better at their job compared to those who did not use personal headsets during the music intervention weeks. There was an interaction effect between task complex and music listening and employees with the simplest jobs benefited most from music as opposed to employees with more complex jobs. The music listening technology used then is outdated for today's workplace. Most work places are open offices/workstations and it is considered rude to wear headsets as you attend to clients.

Various studies (Furnham and Bradley, 1997; Ladinig and Schellenberg, 2012; Rentfrow and Gosling, 2003; Lesiuk, 2005; DeNora, 2000; Haake 2006) have demonstrated that music is a significant factor in determining how people operate. It sets the mood of the workers, enhances their work performance, motivates them and creates an ambient atmosphere for work to be done. Researchers however agree that studies in this area are still at the embryonic stage and more research should be done (Shek and Schubert, 2009; North and Hargreaves, 2008). In studies done, there seems to be no application of the available theories which may be adopted as a framework in explaining how employee work performance is affected by music.

There is an increasing number of empirical studies on the background music-listening practices on work performance and environment, though there is scarce information on the effects of listening to background music in a factory set-up where workers do repetitive tasks and have set targets of production per day. Research by Shek and Schubert (2009) and North and Hargreaves (2008) reveals that music has brought benefits to people, they concluded that the research on the effects of music at the work place is yet to be fully explored.

Lesiuk (2005) did a study on quality of work, time and task affect and found out that music increases workers' positive affect and improves their mood. Though her study yielded positive results, it is not representative of all work environments and so cannot be duplicated to other work settings. Her study was done in a modern day workplace set-up and was restricted to software engineers only. For this reason, this research sought to answer the question, what is the role of background music, mood, personality, and work

behaviour in the performance of the tailoring workers at the Export Processing Zone in Athi, Kenya?

1.3 Research Objectives

Objectives of the study comprise of one general objective and specific objectives**.**

1.3.1 General Objective

The general objective of this study was to determine the role of background music, mood, personality and work behaviour in the performance of tailoring workers at the EPZ in Athi River.

1.3.2 Specific Objectives

i. To establish the effect of background music on employee performance.
ii. To determine whether employees' mood mediates the relationship between background music and employee performance.
iii. To establish the effect of personality on the relationship between background music and employee performance.
iv. To establish the influence of work behaviour on the relationship between background music and employee performance.
v. To establish whether the difference between the joint effect of background music, mood, work behaviour and personality on employee performance is greater than the effect of background music alone on employee performance.

1.4 Value of the Study

It is expected that outcomes resulting from this paper will help organisation's better equip themselves with knowledge about the relationship between background music and work productivity of employees working in a tailoring factory doing repetitive work.

The study will help Human Resource Policy makers to realise that listening to music is no longer an individual issue but a strong managerial tool that if best used can yield high performance and improve on productivity of the workers. This will assist them in distinguishing between music that aids performance and music that distracts one from working properly in a garment factory context.

Employees or factory workers will also benefit from this study because they will each understand why some music types interfere with their performance and other types of music aid their performance so that they can concentrate on that which will be helpful in aiding their performance at work. They will be able to personally analyse what is good music for them and what is noise so that they can choose from a wide array of genres the music that best works for them.

The findings of this study will trigger other research works in the field by proposing new ideas, concepts and theories of how music affects and can be used to enhance performance in other fields of work. More study work is required to further understand the relationship existing between background music and employee perfromance.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of pertinent literature. It presents theoretical foundations, interrogates the links among the variables of interest, summarises existing gaps in knowledge, the conceptual framework and research hypotheses.

2.2 Theoretical Foundation

Theoretical foundation is the basis of conducting research in an area. They are a related set of principles that can be brought to bear as a basis for making predictions and providing explanations for a variety of phenomena (Spector, 2008).This study is anchored on structural evocation theory, eysenck personality theory, theory of planned behaviour and James-Lange theory of emotions.

2.2.1 Structural Evocation Theory

The structural evocation theory highlights that if the structural undercurrents of the music affecting the sensorium is connected to the main psychodynamic expressive structure, the two will marry and this union will allow music to affect emotions directly (Taylor, I and Parpete F., 1958) which will then affect behaviour. It states that structural characteristics of music such as tempo and rhythm are the musical affective components. These musical affective components affect emotions directly allowing people to behave and elicit emotions in a certain way depending with the type of music they are listening to.

Music cannot be separated from its perceptual, symbolic and personal processes. Personal processes in music help in the understanding of how music induces and modifies human

behaviour, this means that musical experiences and activity emerge from this personal processes. These personal processes in an individual are the outward emotional and physiological expressions. Emotional expressions evoked during music listening may include happiness, sadness, joy, elation etc while the physiological expressions may include simple or complex movements involved in music listening like toe tapping and dancing.

2.2.2 Eysenck's Personality Theory

Eysenck's Personality Theory was proposed by Eysenck in 1958. According to the theory, the cortical arousal threshold of introverts and that of extraverts is vastly different from each other. There is a difference between introverts and extraverts in their sensitivity of their arousal mechanisms and the thresholds at which cortical mechanisms inhibit arousal. The extravert is carefree, easy going, aggressive and loses his temper quickly, enjoys excitement, are impulsive and spontaneous while the introvert, on the other hand, is aloof and inhibited (Kline, 1981).

Eysenck's Personality Theory predicts damaging effects of music on employee work performance for introverts. This is because introverts have a lower optimum stimulation threshold and therefore require least amounts of stimulation (Furnham and Bradley, 1997). Introverts are constantly over-aroused and nervous and therefore require quietness and calmness to bring them to an optimum level of work performance. Persistent stimulation forms result in their arousal being surpassed thus the excitation is inhibited (Furnham, et.al., 1999).

On the contrary, extraverts will look out for excitation because their optimum stimulation threshold is higher. Extraverts are identified by being very social, talking a lot, having a high positive influence and an increased stimulation need. Extraverts, based on Eysenck's Personality Theory, have low arousal levels, they get bored easily in the absence of an external stimulant and thus require outside stimulations to move them towards an optimal altitude of performance at work.

2.2.3 The Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) started as the Theory of Reasoned Action in 1980 by Ajzen and Fishbein to predict an individual's intent to behave in a certain way at a specific duration and in a specific situation. Afterwards, behaviour was noticed not to be fully intentional and controlled. This led to the inclusion of the behaviour control perception. According to the theory, intention predicts best ones behavior where, intention refers to representing the readiness of a person to undertake a certain behaviour (Azjen, 2002).

TPB predicts intentional behaviour; it states that behaviour depends on both motivation and ability. Based on the theory, the behaviour of humans is led by three types of beliefs: belief concerning consequence of the behaviour, belief about the normative expectation of others, and belief about the presence of a factor that may facilitate or impede performance of the behaviour. The TPB holds that a particular attitude on behaviour at hand may be used in behaviour prediction. Besides attitudes, belief about how people will view the behaviour in question will also envisage behaviour (Azjen, 2002).

TPB however, does not have an explanation for other unpredictable factors of behavioural intention and motivation, such as fright, danger, emotional state or past experience. It does not take into consideration the environmental or economic factors that may affect the intention of a person to undertake behaviour. It presumes that behaviour is the consequence of a linear decision-making process, and does not consider that behaviour can be modified over time.

2.2.4 James–Lange Theory of Emotion

James (1884) and Lange (1887) as cited by Cannon (1987) independently proposed the James-Lange Theory of Emotion. The theory holds that emotions come about as physiology-based outcomes to external events. As such, the emotions are directly proportional to the external physiological ranges of arousal. The physiological reactions that people may experience such as bradycardia, cardiac arrhythmias, hypertension and mouth dryness are mainly brought about by the sympathetic nervous system, which in turn influences the emotions experienced as per this theory.

According to this theory, observing an external impetus leads to a physical response, that is, emotional response will depend on how those physical responses are construed and concluded. The physiological responses should be necessary to truly experience emotion. However, neuroscientists and experimental psychologists argue that even those people with muscle paralysis and lack responsiveness feel emotions such as happiness, anxiety, and fury (Cherry, 2017). Again, external happenings do not always lead to similar stimulus every time. A person may have exact same physiological response to a stimulus

yet experience an entirely different emotion. Factors like ones mental state, environment, reactions of other people may play a role in the resulting emotional response.

But for this theory to adequately describe emotion, different physiological responses for every emotion must be defined (Barrett, 2012). Barrett (2012) shows that experience of emotion is modulated by both physiological feedback and other information rather than consisting exclusively of bodily changes. People do not always show emotions using the same behaviours, some may withdraw when annoyed, or fight out of fright. She asserts that emotion is more complex than a mere physical feeling.

2.3 Background Music and Employee Performance

A study by Hilliard and Tolin (1979) as cited by Mcdonald (2013) observed whether there existed any stimulations due to the background music and its influence on work performance. The study established that companies having familiar background music had a higher employee performance as opposed to those which did not have. This concurs with the study by Etaugh and Michals (cited by Hilliard and Tolin, 1979) who proposed that undergraduates preferred to study in the presence of background music as it was perceived to improve their performance (Mcdonald, 2013).

On the other hand, a literature review undertaken by Uhrbrock (cited by Furnham and Bradley, 1997) reviewed findings on influence of music on performance in industries. The study found no support for the claim that productivity was increased by background music. In fact, it established that a small percentage of participants, 1-10%, did not like listening to music at work, music affected the overall quality of work negatively and that the music in the background only increased productivity of the employees who had easy

and repetitive tasks. Researchers have studied the effects of background music played during many different tasks, for instance driving (Dibben and Williamson, 2007). The relationship between music, the driver, and the automobile was studied by Oblad (2000) who presumed that more than just an attraction, individuals have specific expectations when they play music in the car.

2.4 Background Music, Mood and Employee Performance

Music is present in all human cultures. It is associated with relaxation and emotion regulation. Reasons for using music vary amongst individuals; some use it for enjoyment and entertainment, while others to influence their mood and emotions (Sloboda, 2005). The empirical studies conducted have revealed that the most important purpose of music listening is that of mood regulating (DeNora, 2010; North and Hargreaves, 1999).

Haake (2011) found that self-selected music inspired, relaxed and improved the mood of her participants. Shek and Schubert (2009) reported that people listen to music on their portable music player to block out noise and avoid interruptions from their colleagues at work. Hence, background music has two main roles as pertaining to work activities (Haake, 2011). This includes managing disruptions as a way of managing work-related stress and having control over the environment through portable devices and the internet (North and Hargreaves, 1999).

Lesiuk (2005), in her article the effect of music listening on work performance, mentions that when music listening in the work environment is encouraged by project directors and the workers are acquiescent to music listening, then music listening will certainly have a positive effect. Music can evoke powerful emotional reactions in people. It arouses

emotions, and these emotions are experienced as pleasurable by individuals (DeNora, 2010; Juslin and Laukka, 2003) which in turn creates an enjoyable workplace. Background music is listened to so that the listener can change or release emotions, can enjoy, be comforted, or even relieve stress (Juslin and Västfjäll, 2008) as well as for relaxation purposes or as a background accompaniment to everyday activities (Furnham, 1981; Sloboda, 2005).

Sonos, who is a speaker manufacturer, conducted a study on the relationship between music and mood (Titlow, 2016). The study revealed a general improvement in positive feelings and activity upon playing the background music. The study further found that background music made the daily activities and routines more enjoyable. (Titlow, 2016). Majority of the people in the study indicated that music helped them accomplish their tasks easily, while some stated that it made the food taste better. This concurs with the studies conducted by North and Hargreaves (2008) and Dibben and Williamson (2007) who showed that individuals responded differently based on the music they listened to.

2.5 Background Music, Personality and Employee Performance

Empirical studies that have been conducted on the impact of music on daily life have indicated that music may be used for impression management particularly in the young individuals (North and Hargreaves, 2008). To some music, helps them to gain a sense of uniqueness and gain inclusion in various groups. There is also evidence of individual differences in music preferences for vocal vs. instrumental music, fast vs. slow music, and loud vs. soft music (Rentfrow and Gosling, 2006).

Introverts and extraverts use music differently; In a study by Daoussis and McKelvie (1986) as cited by Chamorro-Premuzic (2014) it was shown that, even though extravert participants worked under musical backgrounds twice as much compared to introverts, both introverts and extraverts played the music softly. Both groups were given a reading recall test in which they were instructed to spend 10 minutes reading 2 passages (of about 900 words) with a view to answering specific questions immediately afterwards. Half of each group did the task in silence and half in the presence of rock and roll music played at low volume. While there was no difference in the scores of extraverts, introverts performances were as predicted, significantly poorer in the presence than in the absence of music.

Studies conducted have also revealed that background music interferes with the cognitive ability of introverts (Furnham and Bradley, 1997; Furnham and Strbac, 2002). This may be attributed to the fact that introverts have a lesser ability to store information for future references. Furnham and Bradley (1997) indicate that although the level of immediate recall is not different between the introverts and the extraverts, performance is marginally lowered among the introverts. Neurotics are characterised by being anxious, uptight, and nervous, and are emotionally unstable and have low self-esteem (Delsing et. al., 2008). Along with increased anxiety, people who are high in neuroticism have greater activity in the brain areas that control the autonomic nervous system, which controls the body's alarm system. Psychotics are aggressive, antisocial and egocentric, manipulative and unsympathetic, and can be very creative with how they view the world and people around them (Delsing et. al., 2008).

2.6 Background Music, Work Behaviour and Employee Performance

Music has the capacity to subconsciously or consciously synchronise the movements of the listener to rhythms or simple body part movements, for example toe tapping or head nodding or dancing (Juslin and Västfjäll, 2008). These movements involve complex coordinations of cortical and sub-cortical somatosensory motor brain networks (Zatorre, et.al., 2007). Background music therefore allows for flexibility of the listeners at work, which aids in work performance.

People who enjoy a certain genre of music always have other attributes in common (Mas-Herrero et. al., 2013). Either they are of the same gender, same age group, similar academic qualification or background socialisation. In a work set-up, it is obvious that individuals will socialise. Having something in common to share with colleagues at work is important because it assists in bonding and socialisation processes. This makes work places an enjoyable place to be. Music liking is perceived to describe and express a person's identity (North and Hargreaves, 1999) such that when people socialise they use music preferences to know each other (Rentfrow and Gosling, 2006).

Several studies have been done among athletes during exercise. Some studies (Karageorghis et al., 2009) suggest that when an exerciser consciously moves in time with a musical beat, music provides him with ergogenic and psychological benefits in repetitive endurance activities. For example, during treadmill walking, music improves time one takes to be fatigued by 15% compared to motivationally neutral and control conditions. Other finding suggest that synchronous music may increase rhythmicity of

movement, resulting in an efficiency gain that is associated with lower relative oxygen uptake (Terry and Karageorghis, 2010). In steady-state aerobic exercise, motivational music has also been shown to improve affective states by up to 15%.

Similarly, listening to music can be an effective dissociation strategy, reducing perceptions of effort and fatigue by up to 12%. Research evidence demonstrates that music has consistent and measurable effects on the behaviour and psychological states of male and female exercise participants. Music can also positively influence performance by improving endurance and/or exercise intensity. When music is selected according to its motivational qualities, the positive impact on performance, for example, increases endurance, and psychological states like enhanced affect are even greater, which has important implications for exercise adherence.

2.7 Background Music, Mood, Personality, Work Behaviour, and Employee Performance

A study was done by Kniffin (2016) on how background music influences behaviour at work; the study showed that people who listen to happy background music are more likely to cooperate regardless of their age, gender or academic major than those who listen to unhappy music. Happy music makes people happy and happy people are more cooperative. This study also found that happy music was linked to increased cooperation, whether or not it boosted participants' mood.

Eysenck (1981) postulated that background music has the capacity to stimulate the brain. However, the effect tends to be negative to introverts. This is because introverts have a lower optimum stimulation threshold and therefore require least amounts of stimulation

(Furnham and Bradley, 1997) to perform a task. On the contrary, extraverts require external stimulation to bring them up to an optimal performance (MacDonald, 2013).

Empirical studies conducted on music also reveal that people are drawn to different music genres having certain connotations which they relate with. This may include love, toughness, rebellious and complications (Rentfrow, et.al., 2011). Rentfrow and Gosling (2003) observed specific alterations in liking for 14 broad music types in three samples. Outcomes from all the three studies showed four music-preference aspects that were categorized as reflective and complex (comprising classical, jazz, folk and blues*)*, intense and rebellious (rock, alternative, heavy metal), Upbeat & conventional (country, pop, soundtracks, religious), energetic and rhythmic (rap, soul, electronica).

The reflective and complex group is extraverted. The group also has very high self-esteem (Rentfrow and Gosling, 2003). The intense and rebellious group has gentle, creative, introverted, and low self-esteemed people. As for upbeat and conventional, people have a habit of exhibiting extraversion, emotional stability, and high self-esteem traits. Lastly, the energetic and rhythmic group exhibits high self-esteem, extraversion and assertiveness (Rentfrow and Gosling, 2003).

Familiar music may evoke meaning to some people, which eventually affects their productivity. Ladinig and Schellenberg (2012) examined liking for excerpts of unfamiliar music and rated the emotional responses of their participants based on the intensity, happiness and sadness of the participants. They found that those participants who had high introversion values tended to like sad sounding music.

An experiment was done by Mindlab International in which 26 participants were given a series of different tasks for five days in a row including spell-checking, equation solving, mathematical word problems, data entry and abstract reasoning. The workers completed these tasks while listening to one of four music genres or no music at all, to see which had the greatest effect on accuracy and speed of correct responses (Watson, 2014). The study found that participants made the most mistakes when not listening to any music at all. The study concluded that there are specific genres that people love to listen to while doing certain tasks.

This study found that workers were better at solving mathematical problems when listening to classical music, which improved accuracy by 12% compared to listening to no music at all. Classical music was the second best genre for general accuracy and spell-checking. Participants listening to pop music completed data entry tasks 58% faster than when listening to no music at all. Pop music was also found to be the best music genre for spell-checking quickly, and, alongside dance music, produced the fastest overall performance for getting work done; it cut mistakes by 14%, compared to not listening to music.

Ambient music led to the highest level of accuracy for respondents completing tasks involving equations. Dance music resulted in the highest overall accuracy and fastest performance across a range of work tasks. Participants listening to dance music produced more accurate results in spell-checking, solving equations and tackling tricky mathematical word problems, increased proofreading speed by 20% and were able to complete abstract reasoning tasks more quickly (Watson, 2014).

The study, however, did not consider participants' individual differences at work. People perceive music differently at different times of the day. The researcher in the above study limited their study to four genres only. Music has varied genres; limiting participants to four genres may not be a representative of the real situation. Exposing employees to varied types of music could probably give a different observation. People of different age groups respond to music differently, and varying music from all ages would possibly provide different results. Table 2.1 gives a summary of types of music and their related tasks as per the Mindlab study.

Table 2.1: Type of Background Music and Related Tasks

S/No	Music Type	Task
1.	Classical Music	• Better at solving mathematical problems • Best for general accuracy and spell-checking
2.	Pop Music	• Best for spell-checking quickly • Best for getting work done
3.	Ambient Music	• Best for completing tasks involving equation
4.	Dance Music	• Best for overall accuracy in spell-checking, solving equations and tackling tricky mathematical word problems. • Increases proofreading speed • Improves abstract reasoning

Source: A synthesis from the literature review

2.8 Summary of Gaps in Knowledge

Several studies have been done so far by scholars who used different methodologies in their research. This study has carefully looked at the methodologies that some of the studies employed, identified the knowledge gap in those studies and suggested favourable data collection methods to be used to achieve desired results. Table 2.2 shows a summary of gaps in knowledge.

Table 2.2: Summary of Gaps in Knowledge

S/No	Study	Methodology	Findings	Knowledge Gap	Focus of Current Study
1	Listening during work Quasi-Experimental Relationship Between Personal stereo headsets use and Employee Work Responses. (Oldham et. al. 1995)	256 office employees from 32 different departments were given personal music headsets. They did different jobs that had different levels of complexity. They listened to music oftenlyas they worked	Those who were given headsets performed significantly better compared to those without headsets during the study. There was a positive effect between task complex and music listening	The music listening technology (i.e. the use of headsets) used then is outdated for today's workplace. Most work places are open offices/workstations and it is considered rude to wear headsets as you attend to clients.	The study addressed the use of technological listening devices by installing a central music control point with speakers channeled to specific strategic points for all participants to hear and also to regulate music
2	Quality of work, time and Task Affect. (Lesiuk 2005)	Studied 56 software engineers for five weeks, she took a daily music listening record of the subjects.	Music listening increased the software engineers positive affect and improved their mood at work	Though her study was done in a modern-day work environment, it was limited to software engineers. Job and work dynamics are different. Asking participants to work without music for part of the study could be unnatural for some individuals which may also affect performance.	The current study was done in a natural work setting of the participants. Music was manipulated at intervals without participants realising the change of genres and the silence thereof. This was geared towards having the study done in a more natural work set-up.

3	Liking Unfamiliar Music: Effects of Felt Emotion and Individual Differences. (Ladinig and Schellenberg 2012)	They examined liking for excerpts of unfamiliar music taken from a wide variety of genres.	Liking music that evoked sadness tended to be stronger among participants who scored (a) high in introversion (b) high in openness-to-experience, which is characterised by curiosity.	It is not clear whether preferences and emotional reactions to music are predictive of long-term music preferences for genres.	The current study observed positive and negative responses to music and included personality, work behaviour, type of work, time of day and general work performance.
4	The Effect of Music Preference on Complex Task Performance (Mcdonald, Jordan 2013)	34 college students from a small, Christian, liberal arts university were sampled then separated into two groups.	The results revealed a significant interaction effect between level of extraversion and music condition.	The computers in front of the participants playing the music selections displayed flashy advertisements that may have been an added distractor during the testing conditions. Due to the age of the machines, the Internet connection capabilities sometimes failed.	The use of a computer as a music listening device may act as a distractor. The current study concentrated on audio music without any visual media. .

5	The Effect of Music Listening on Work Performance: A Case Study of Sri Lanka (Padmasiri and Dhammika 2014)	All the workers in a garment factory were sampled. A random sample of 50 machine operators out of 64 done. Data was purely primary and was collected by the use of a questionnaire which had five point Likert scale. Music played was categorised as music for relaxation. Data was analysed using Regression Analysis	They found a significant effect of music listening on work performance. Work performance decreases after music listening because the researchers used music for relaxation. This is considered not good for a work environment according to this research.	The researchers used what they termed as relaxation music. This music according to them is not suitable for work Researchers also used few music tracks in their data collection. This according to them affected their results. A work environment has varied people with different personality so minimizing the music into a few types could affect the findings.	A study of different genres was done by the researcher. A pilot study was carried out prior to the study to determine the type of music preferred by workers. These preferred varied music types were then used during the study

Source: A synthesis from the literature review

2.9 Conceptual Framework

The conceptual framework of this study considers how background music, mood, personality and work behaviour influence performance of tailoring workers at the EPZ, Athi River. It was expected that background music would influence performance of workers and that their relationship would be mediated by mood and moderated by work behaviour and personality and that there would be a greater joint effect of background music, mood, personality, work behaviour on employee performance than background music on employee performance alone.

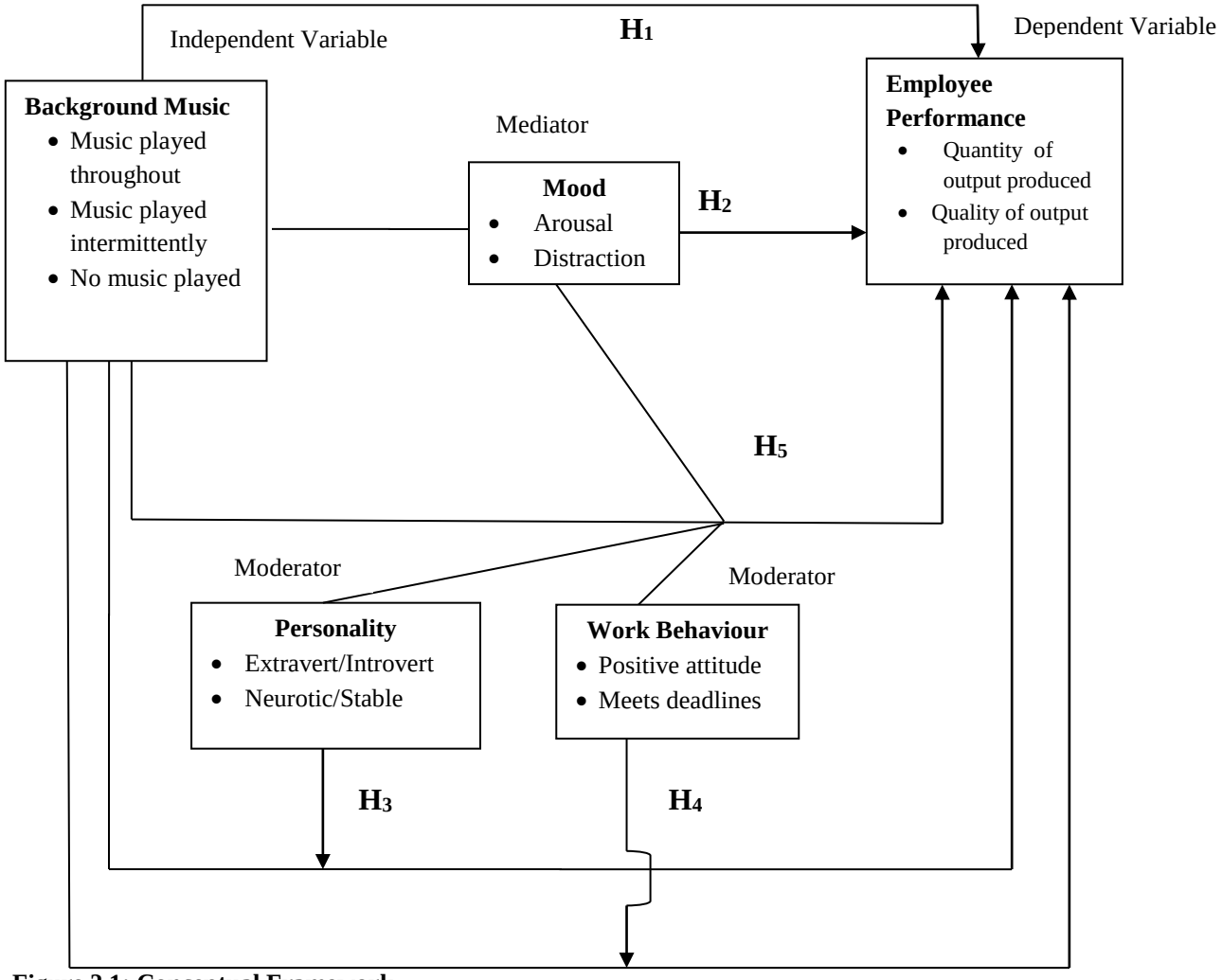


Figure 2.1: Conceptual Framework

The results of the study as conceptualized were expected to show that background music (independent variable) had a causal relationship with employee performance (dependent variable) and that, that relationship would be mediated by mood, moderated by personality and work behaviour, and that the joint effect of background music, mood, personality and work behavior would be greater on employee performance than the effect of background music on employee performance alone.

2.10 Research Hypotheses

H_1 There is a relationship between background music and employee performance.

H_2 The relationship between background music and employee performance is mediated by mood.

H_3 The relationship between background music and employee performance is moderated by personality.

H_4 The relationship between background music and employee performance is moderated by employee work behaviour.

H_5 The joint effect of background music, mood, work behaviour, and personality is greater than the effect of background music alone on employee performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights methodological details for the study. These methodological details include: Research philosophy, research design, target population, sample design, sample size, data collection techniques, measures of variables, diagnostic tests and data analysis.

3.2 Research Philosophy

There are several philosophical paradigms used by researchers. The two main philosophical traditions that guide research in social sciences are positivism and social phenomenology (Saunders, et. al., 2007). Phenomenological paradigm is viewed as qualitative while positivism is quantitative. Positivism is grounded on the notion that science is the singlemost way to learn the truth. It adheres to the view that only truthful knowledge gained through observation including measurement can be trusted. Here, the role of the researcher is restricted to collection of data and interpretation in an impartial way. Cooper and Schindler (2006) say that positivism takes a quantitative approach based on real facts, objectivity, neutrality, measurement and validity of results.

Positivists emphasize that the observer is independent from the observed. They also argue that knowledge about reality can only be discovered through self-observation and measurement. The current study adopted the positivist approach in conducting research since it operationalises concepts like background music, personality, work behaviour and

employee performance to enable the use of quantitative data to test the research hypotheses drawn from the conceptual framework.

3.3 Research Design

The study was conducted in a natural setting comprising garment tailoring factories. For this reason, the design of this study was field experiment. A field experiment applies scientific ways to experimentally observe an intervention in the real world rather than in the laboratory. Field experiments, like laboratory tests divides subjects into treatment and control groups and compare results between these groups (Humphreys, M and Weinsten J., 2009). This design was considered appropriate because it did not change behaviour of the study subjects. The study had a control group and two treatment groups. The two treatment groups were included to assess the effect of music on employee performance when music was played fully or intermittently and when it was not played.

The factory set up at the EPZ, Athi River was a convenient site for investigating the effect of background music on work performance of factory workers doing repetitive tasks. This was borne from a visit to the factories. It was observed that the design of the buildings at the factory allows for music pipes, wires and speakers for output and a control room for playing music. Work stations are on ground floor while offices/rooms are upstairs, from which observation of the respondents was done without them realising that someone was watching their activities. This greatly reduced the impact of the researcher's presence in the immediate environment and hence eliminated potential source of bias.

Although the unit of analysis was EPZ garment factories, data on mood, personality, and work behaviour was collected from tailors who participated in the study. The effect of

background music on mood, personality and work behaviour was observed individually because listening and appreciating music is perceived differently. It was also importatnt to observe performance of different tailors at different points of the production chain because that is what made the difference in the performance of different factories.

3.4 Population of the Study

There are 22 garment factories at the EPZ, Athi River (EPZA 2016). The researcher wrote to all the 22 garment factories at the EPZ explaining the study and asking for permission to conduct the study there. This was followed by a visit by the researcher to personally explain and respond to any questions by the respective managements of the factories. However, only three factories which happen to be under the same management responded positively.

All the three factories had 1500 tailors each working from 8am- 4:30pm with lunch break between 1:00pm and 2:00pm. There was therefore 4500 tailors distributed equally in the three factories. A preliminary interview with the General Manager of the factories revealed that the tailors were between the ages of 20 - 40 years; the factories have a similar set-up of work stations, communication channels, hiring procedures, wages payment, safety measures, disciplinary procedures and other human resources related aspects. Thus the three factories were matched in every respect except with regard to background music. The unit of analysis was the factory. Th three factories were conveniently selected for the study because they were willing to participate in the study and had similar workplace characteristics.

3.5 Sample Design

The study used systematic sample procedure to draw up a representative sample. Xu (1999), suggests that a population of 4500 requires a sample size of 357 at 95% confidence level and 0.5 margin of error *(Xu's sample estimate table is available in appendix 7).* Each of the 3 factories has 1500 tailors. 357 estimated sample size from the three factories was used for the study. This 357 was divided by 3 (The number of factories) to get a total of 119 tailors per factory. A systematic sampling procedure was then used to obtain 119 tailors from each factory. This was done by listing all the 119 respondents for each factory and selecting every 12^{th} person.

3.6 Data Collection

Being a field experiment, the study relied on primary data. Since all the factories were similar in design, operations and management of the factory, it did not matter which factory became a control or a treatment group. The researcher randomly picked factory one and two and used them as treatment groups while factory three became the control group. In factory one**,** music was played throughout the working time, while in the second factory music was played intermittently, (on and off). In the third factory music was not played at all. The purpose of the variation was to assess the changes in employee performance when exposed to music and when not exposed to music. The research instruments consitituted of; Rentfrow and Gosling (2003) preferred music checklist, Eysenck's Personality Inventory, observation checklist and the researcher administered questionnaire.

Data was collected on background music, mood of the participants, personality of the participants, their work behaviour and performance. Since the factory was the unit of

analysis it was importatnt to observe performance of different tailors at different points of the production chain because that is what made the difference in the performance of different factories.

3.6.1 Background Music

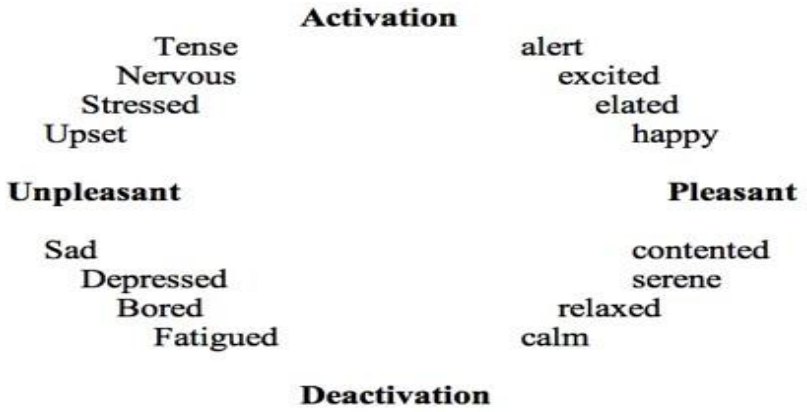
Data on preferred background music was collected using Rentfrow and Gosling (2003) preferred music checklist to determine the type of music participants prefer. That was the music that was played during the study. Participants were given a checklist that had music genres specified and they were required to tick the box which corresponded to the background music they preferred. After selecting the preferred music, they returned the filled forms to the researcher who then analysed them and used the music preferred by the majority in the study. Preferred music was categorised into four: reflective and complex music, intense and rebellious music, upbeat and conventional music and energetic and rhythmic music. The Rentfrow and Gosling preferred music checklist was applied in factory one and two. Factory one and two were treatment groups, while factory three was a control group.

3.6.2 Mood of the Subjects

Mood of participants was measured using the circumplex model of affect adapted from Russell (1980). This model arranges emotions on a two-dimensional grid, with one axis moving from pleasantness to unpleasantness, also called valence, and the other axis moving from activation to deactivation, also called arousal. Depending on how positive, elated, energetic one feels or vice versa, a dot is placed on an appropriate part of the grid to record current participant's mood. The circumplex model was adapted and modified to suit the design of this study. Numbers 1 representing negative mood and 2 representing

positive mood were placed on the observation sheet each time mood of the participants was observed. Those numbers were then used in the analysis of the study variables. The observation checklist was used to collect data on respondents' mood. Figure 3.1 illustrates the circumplex model.

Figure 3.1: The Circumplex Model of Affect



Source: Russell, J. A. (1980). A Circumplex Model of Affect. Journal of Personality and Social Psychology, 39, 1161-1178

For each respondent, mood was assessed and categorised into positive mood (alertness, happiness, excitement, elation, calmness and relaxation) and negative mood (stress, sadness, fatigue, upset and tense). Positive mood was coded 2 while negative mood was coded 1. Coding enabled quantitative analysis and achievement of study objectives and hypothesis testing. Two supervisors at the factories were requested to assist in data collection as raters. This was important because the supervisors understand the tailors. The researcher was aware that inter-rater reliability was important in the study and so explained to the raters the need to follow the modified circumplex model in data collection.

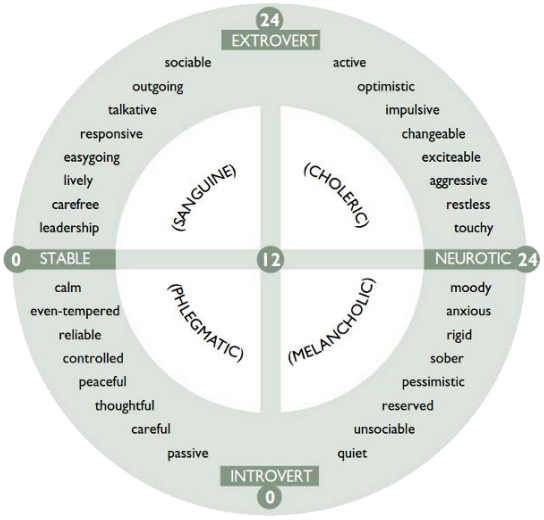
3.6.3 Personality of the Subjects

Eysenck's Personality Inventory (EPI) was used to gather data on personality traits of the participants. EPI measures two pervasive, independent dimensions of personality, Extraversion-Introversion and Neuroticism-Stability, which account for most of the variance in the personality domain (*EPI tool is in Appendix 2*). Each form contains 57 Yes-No items with no repetition of items. The inclusion of a falsification scale provides for the detection of response distortion. The traits measured are Extraversion-Introversion and Neuroticism-Stability which has 3 scores. The 'lie score' is out of 9. It measures how socially desirable the participant wants to be in answering the questions.

Those who score 5 or more on the lie score scale are considered liars who make themselves look good and are not being totally honest in their responses. The 'E score' is out of 24 and measures how much of an extravert/introvert the participants are. The 'N score' is out of 24 and measures how neurotic/stable one is.

After the participants filled in the EPI form, the data was then fed into EPI computer programme which generated personality traits of each participant. Figure 3.2 shows the personality quadrant used by Eysenck.

Figure 3.2: Personality Quadrant



Source: Eysenck, H. J., and Eysenck, S. B. G. (1975). Manual of the Eysenck Personality questionnaire (Junior and Adult). Kent, UK: Hodder & Stoughton

3.6.4 Employee Work Behaviour

This study focused on two observable work behaviour traits based on Melissa Cooper's article in the Houston Chronicle on examples of employees' good behaviour. These behaviours included participants' ability to have a positive attitude and their ability to meet deadlines (Houston Chronicle, n.d.). Using Behaviourally Anchored Rating Scale (BARS) Pulakos (1991), a similar rating scale used for each participant was developed. The rating scale was standard for each respondent. This ensured consistency and accuracy in collecting data. Work behaviours that have significant impact on performance were written down. They included positive attitude and ability to meet deadlines. Performance dimensions for the critical incidents of work behaviours were developed.

The researcher sought the help of the two supervisors at the factory who assisted in observing the behaviour of the participants and rated them as required. The raters grouped behaviours in different dimension sets, then each dimension was defined, for example workers who portray positive attitude are usually ready, available and willing to get the job done and done well; they feel appreciated, seek out quality work to remain busy and productive and eagerly desire to go above and beyond their normal duty, while those who aspire to meet deadlines are well organised, responsible and maintain clean and organised work spaces. These acted as behavioural anchors that were used to measure work behaviour. Work behaviour was observed in three weeks and findings recorded in the observation data sheet developed by the researcher (*see appendix 4*). For each observable behaviour numbers 1 and 2 were used to code negative and positive behaviour respectively that were later used in the regression analysis.

3.6.5 Employee Performance

An observation data sheet was used to record information on the number of garments produced. Employee performance was measured by the quantity and quality of garments produced by tailors at the EPZ, Athi River in Kenya. Minimum performance was predetermined by the supervisors and in all the three factories, tailors had a set target of 700 garments to be produced during the three weeks study period. Employee performance observed was recorded as it were. The information on number of garments produced was obtained from the computers attached to the machines. Each machine had the ability to record the number of garments that had been successfully made and passed on to the next line of production. Tailors in all the three factories had a target of 700 pieces of clothes per day. This was the researcher's daily recorded output on the

observation data sheet that was later used during the analysis. Due to quality checks in every stage of production process in all the three factories, there was no record of rejected garments at the end of the production line.

3.6.6 Experimental Procedures

The first week of the data collection period was for the pilot study. Research tools were thus pretested before the collection of actual data. Pretesting was done in an EPZ factory at Athi River. The participants involved in the pilot study were tailors in the factories selected for the study but were not part of the sampled participants to be involved in the final study. The sample size for the pilot study was 10% of the study target population. This was in line with Saunders *et. al*, (2007) recommendation that a sample size of at least 10% of the target population is adequate. The target population for the study was 357 respondents. Thus, the 10% of the population was 36 respondents.

The researcher administered the questionnaire; the Eysenck personality inventory and preferred music check list to the 36 respondents. The data collection instruments were tested for validity and reliability. Music was played to the respondents and number of units produced recorded. Work behaviour was observed and recorded as 1 for negative work behaviour and 2 for positive work behaviour, and the results obtained analysed for reliability and validity. The results of the pilot study were used to measure whether there was consistency in responses or not and also whether the research tools were valid or not. The pilot study results indicated that the data collection tools were reliable and valid.

Phase one took one week and included a physical observation of respondent's regular work behaviour and work performance in terms of output or number and quality of garments produced in a day. Phase two also lasted one week. Here, respondents in factory

one and two identified the music they love to listen to using Rentfrow and Gosling preferred music checklist. Different types of music were played, from which the listeners selected the ones they prefer. Respondents filled a form/checklist showing their preferred music. Results from the checklist were used to compile preferred music by the participants that were later used for the study.

In the third phase, the data collection tools were administered. Respondents were observed for a period of three weeks to ascertain their actual work behaviour when their preferred music was played and when it was not played. In factory one, music was on throughout, while in factory two, music was on and off (e.g. Music was played in the morning, and off in the afternoon, or off in the morning and on in the afternoon for a period of four weeks) at intervals to ascertain their response to music and their resultant work behaviour, mood and performance. In the third factory, the work behaviour of respondents was observed and their performance measured. Here, an observation data sheet was used to collect required data on presence or absence of background music played, time of day, mood, work behaviour and performance. Data recorded in the observation sheet was later used in the analysis of data and to explain the findings of the study since these were real time observations and in case of discrepancies from the other tools administered it would be easier to refer from what was actually observed.

Eysenck's Personality Inventory was used to gather information about personality traits of the participants. Eysenck's Personality Inventory consisted of 57 questions as suggested by Eysenck and Eysenck (1975). EPI was administered to all the 119 respondents from all the three factories. The questions consisted of yes or no questions.

The results of each participant were then keyed in the Eysenck Personality Inventory computer programme to come up with personality types of each individual. The responses from the participants were fed into a computer application programme which then produced personality traits per individual participant. All stable and unstable extraverts were grouped together and measured as 2 on an interval scale; similarly all stable and unstable introverts were grouped together and measured as 1 on the interval scale.

Work behaviour was assessed for all the respondents working in the three factories. The researcher assessed and recorded the observed work behaviour of the respondents for three weeks and summarised the tailor's behaviour as per Melissa Coopers observable work behaviours. Work behaviour was categorised into positive attitude and ability to meet deadlines. For positive attitude, the researcher looked out for being ready, available and willing to get the job done, while for ability to meet deadlines the researcher looked out for being organised, responsible and clean.

Employee performance observed was recorded as it were. The information on number of garments produced was obtained from the computers attached to the machines. Each machine has the ability to record the number of garments that have successfully been made and passed on to the next line of production. Tailors in all the three factories had a target of 700 pieces of clothes per day. This was recorded in the observation data sheet that was later used during the analysis. Due to quality checks in every stage of production in all the three factories, there was no record of rejected garments at the end of the production line.

The final phase was 3 weeks long, in the first 2 weeks, the researcher administered questionnaire to the workers to get information on their exposure to background music and how they think background music affects them. The last week's main activity was to conduct interview to debrief the respondents and detect those among the participants that would have guessed the research hypotheses so that they can be excluded from final data analysis. The experimental procedures used in this study closely related to those by Watson (2014) who examined listening to music as an improvement to accuracy at work and Pasick (2014) who developed a guide to listening to music at work. An earlier study by Oldham et. al., (1995) and another one by Lesiuk (2005) adopted related experimental procedures and achieved findings comparable to those of this study.

3.7 Diagnostic Tests

This section focuses on the tests of validity, reliability, multicollinearity, heteroscedasticity, linearity and normality**.**

3.7.1 Test of Validity

Validity relates to ability of the instrument to measure the construct as purported. It refers to how well an instrument measures what it is designed to measure (Cooper and Schindler, 2003). The data collection tools were subjected to face and content validity tests. For face validity, experienced researchers including the researcher's two supervisors and her colleagues were requested by the researcher to confirm that the study items would obtain data that meets researcher's objectives, while for content validity, data collection instruments were pretested on a sample of tailoring workers and thereafter modifications made for clarity, meaning and relevance.

3.7.2 Test of Reliability

Reliability is the extent to which results are free from error, or the degree to which a research instrument yields consistent results (Cooper and Schindler, 2003). To ensure stable and consistent results, the researcher carried out a pilot study to make sure that the tools for data collection can be relied upon to give information that is accurate. The pilot study confirmed that the data collection tools could be relied upon. Cronbach's Alpha coefficient was used to measure internal consistency. George and Mallery (2003) suggested the following thresholds: Alpha > 0.9 is Excellent, > 0.8 is Good, > 0.7 is Acceptable, > 0.6 is Questionable, > 0.5 is Poor. This study adopted 0.7 as an acceptable lower limit.

To ensure inter rater reliability, the researcher made sure that the raters involved were supervisors who worked with the tailors daily and knew them. A detailed requirement of what was expected when rating the participants was also availed to the raters in collecting qualitative data. Qualitative data heavily depended on the rater's ability and experience with the participants.

3.7.3 Test of Multicolinearity

Multicollinearity is a state of very high inter-correlations or inter-associations among the predictor variables (Lani, 2010). It is therefore a type of disturbance in the data, and if present, the statistical inferences made about the data may not be reliable. In the presence of high multicollinearity, the confidence intervals of the coefficients tend to become very wide and the statistics tend to be very small. Multicollinearity was detected by variance inflation factor (VIF). VIF measure how much the variance of the estimated regression coefficients are inflated as compared to when the predictor variables are not linearly

related. If the VIF value lies between 1-10 then there is no multicollinearity, but if the value is <1 or >10 then there is multicollinearity.

3.7.4 Test of Heteroscedasticity

This refers to a phenomenon where data violates a statistical assumption (Rosopa *et, al.*, 2013). Heteroscedasticity is the violation of homoscedasticity. Ordinary Least-Squares (OLS) seek to reduce residuals and produce the smallest possible standard errors. OLS assumes that the variance of the error term in the independent variables is constant (homoscedastic). The Breusch-Pagan/Cook-Weisberg test method of detecting heteroscedasticity in linear models was used. This test is designed to detect any linear form of heteroscedasticity.

3.7.5 Test of Linearity

Linearity test aims to determine if the relationship between independent variable and dependent variable is linear or not. If the value of the relationship deviates > 0.05 then the relationship between the independent variable and dependent variable will be linear, and if the value is < 0.05 then the relationship between the independent variable and the dependent variable is not linear. Linearity was fixed by removing outliers (Mason and Perreault, 1991).

3.7.6 Test of Normality

Normality test was intended to determine the distribution of the data for each variable that were used in the research. The Kolmogorov-Smirnov test (KS-test) determines if two datasets differ significantly. To determine whether data for each variable was normally

distributed, the Kurtosis and Skewness and Kolmogorov-Smirnov and Shapiro-Wilk test (KS-WS) was carried out.

3.8 Measures of Variables

Operationalisation is the measurement of phenomena that is not directly measurable but whose existence is indicated by other phenomena. Table 3.1 shows the operationalisation of variables in this study.

Table 3.1: Operationalisation of Variables

No	Variable	Operational def.	Indicators	Measurement tool
1	**Independent** Background Music	Type of music/ time of day Background Music Intermittent background music No background music	Rhythm/Motion/Calmness	**Appendix 1:** Rentfrow and Gosling Preferred Music Checklist **Appendix 3:** Observation Data Sheet
2	**Intervening** Mood	Arousal Distraction	Expression/Emotions **Arousal** (alertness, happiness, excitement, elation, calmness and relaxation) **Distraction** (stress, sadness, fatigue, upset, tense)	**Appendix 5:** Observation Data Sheet **Appendix 4:** Researcher Administered Questionnaire
3	**Moderating** Personality	Extraversion/ Introversion	Sociable, fun-loving, affectionate, outgoing, assertive, seeks excitement **(opposite is introversion)**	**Appendix 2**: Eysenck's Personality Inventory
		Neuroticism/Stability	Nervous/Upset **(Opposite is stability)**	
4	**Moderating** Work Behaviour	Positive attitude	• Readily available • Willing to get the job done • Goes beyond normal duty to have work done	**Appendix 3:** Observation Data Sheet
		Meets deadlines	• Organised • Responsible • Maintains clean organised workplace	
5	**Dependent** Work Performance	Quantity of work	No. of units produced	**Appendix 3:** Observation Data Sheet **Appendix 5**: Researcher Administered Questionnaire
		Quality of work	No. of units accepted No. of units rejected	

Source: Author, Current study

The sampled factories have a population of 1500 tailors each. They produce garments on mass production basis. In those factories, work is divided into; assembly section, cutting section, distribution section, stitching section, quality checking section, pressing area, printing area and packaging area. At the assembly area, materials are assembled and

arranged, then moved to the cutting section. Here, materials are only cut according to what is to be made/sewn, and then moved to stitching, then to the quality check, where the quality of the garment is assessed before it goes to pressing area and packaging, ready for shipment to the US market.

3.9 Data Analysis

Descriptive statistics such as means, standard deviations, frequencies and percentages were used to summarise the data and show preliminary indication of what to expect in test of hypotheses. Comparative analysis were done to compare and establish whether there was a significant difference in performance in the three factories.

After establishing that there was a difference in performance in the three factories, linear regression analysis was used to now establish the effect of background music on employee performance. Then the four step regression analysis suggested by Kenny and Baron (1986) was used to determine the role of employees mood in the relationship between background music and employee performance, three steps Stepwise Regression Analysis by Kenny and Baron (1986) was used to establish the role of personality in the relationship between background music and employee performance, three steps stepwise regression analysis by Kenny and Baron (1986) was used again to establish the role of work behaviour in the relationship between background music and employee performance, and lastly multiple regression analysis was used to establish the joint effect of background music, mood, work behaviour and personality on employee performance. The details are presented in table 3.2.

Table 3.2: Data Statistical Analysis Specification

OBJECTIVE	HYPOTHESIS	STATISTICAL ANALYSIS MODEL SPECIFICATION	INTEPRETATIONS OF OUTPUT OF STATISTICAL TESTS
Objective one To establish the effect of background music on employee performance.	**H_1:** There is a relationship Between background music and employee Performance.	1. T-Test 2. Simple Linear Regression $Y = \beta_0 + \beta_1 X_1$ Where Y=Employee Performance, X =Background Music, β_0 = constant β_1=Coefficient of X_1	R^2 was used to assess how much of the variation in employee performance is due to background music. F-test to assess overall significance of the model and its fit for the analysis. Beta (β) was used to explain the level of change in employee performance to determine the effect of background music on employee performance attributable to unit change in the predictor variable. T-test was used to assess significance of (β) of individual variable at P<0.05
Objective two To determine the role of employees' mood in the relationship between background music and employee performance.	H_2: The relationship between background music and employee performance is mediated by mood.	Four step Regression Analysis suggested by Baron and Kenny and Baron (1986) **Step 1**: $Y=\beta_0 + \beta_1 X_1$ **Step 2**: $M=\beta_0 + \beta_1 X_1$ **Step 3**: $Y=\beta_0 + \beta_1 M_1$ **Step 4**: $Y=\beta_0 + \beta_1 X_1 + \beta_1 M_1$ Where Y=Employee Performance, X = Background Music, M= Mood, β_0=Constant, B_1= Regression Coefficient	R^2 was used to assess how much of the variation in employee performance is due to background music. F-test to assess overall significance of the model and its fit for the analysis. Beta (β) was used to explain the level of change in employee performance to determine the effect of background music on employee performance attributable to unit change in the predictor variable. T-test was used to assess significance of (β) of individual variable at P<0.05

Objective three To establish the role of personality in the relationship between background music and employee performance	H_3: The relationship between background music and employee performance is moderated by personality	Three steps Stepwise Regression Analysis by Baron and Kenny (1986) Step 1: $Y=\beta_0 + \beta_1 X_1$ Step 2: $Y=\beta_0 + \beta_1 X_1 + \beta_3 P_3$ Step 3:$Y= \beta_0 + \beta_1 X_1 + \beta_3 P_3 + \beta_3 P_3 * \beta_3 P_3$ Where Y=Employee Performance, X = Background Music, M = Mood, P= Personality ,β_0=Constant, B_1= Regression Coefficient	R^2 was used to assess how much of the variation in employee performance is due to background music. F-test to assess overall significance of the model and its fit for the analysis. Beta (β) was used to explain the level of change in employee performance to determine the effect of background music on employee performance attributable to unit change in the predictor variable. T-test was used to assess significance of (β) of individual variable at P<0.05
Objective four To establish the role of work behaviour in the relationship between background music and employee performance.	H_4 The relationship between background music and employee performance is moderated by work behaviour.	Three steps Stepwise Regression Analysis by Kenny and Baron (1986). **Step 1**: $Y=\beta_0 + \beta_1 X_1$ **Step 2**: $Y=\beta_0 + \beta_1 X_1 + \beta_2 WB_2$ **Step 3:** **Y=** $\beta_{0+}\beta_1 X_1 + \beta_2 WB_2 + \beta_2 WB_2 * \beta_2 WB_2$ Where Y=Employee Performance, X = Background Music, M = Mood, WB= Work Behaviour β_0=Constant, $B_1 B_2$= Regression Coefficient	R^2 was used to assess how much of the variation in employee performance is due to background music. F-test to assess overall significance of the model and its fit for the analysis. Beta (β) was used to explain the level of change in employee performance to determine the effect of background music on employee performance attributable to unit change in the predictor variable. T-test was used to assess significance of (β) of individual variable at P<0.05

Objective five To establish the Joint effect of background music, mood, work behavior personality, on employee performance	H_5: The joint effect of background music, mood, work behaviour and personality is greater than their individual effects on employee performance	Multiple Regression Analysis Y=f(BM,M,WB,P) Y=$\beta_0 + \beta_1 X_1 + \beta_1 M_1 + \beta_2 WB_1 + \beta_3 P_1$	$R^2$was used to assess how much of the variation in employee performance is due to background music. F-test to assess overall significance of the model and its fit for the analysis. Beta (β) was used to explain the level of change in employee performance to determine the effect of background music on employee performance attributable to unit change in the predictor variable. T-test was used to assess significance of (β) of individual variable at P<0.05

CHAPTER FOUR
PRELIMINARY DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents research descriptive analysis, findings and discussions. The chapter consists of descriptive statistics and diagnostic tests on study variables.

4.2 Descriptive Statistics

Descriptive statistics comprise survey response rate, demographic profiles of the EPZ tailoring workers and the respondents who took part in the study. Percentages, means, standard deviations and Cronbach's Alpha coefficient correlations are computed and presented. These descriptive statistics formed the basis for hypothesis testing and conclusion.

4.2.1 Response Rate

The study targeted 357 respondents of which 119 were from each of the three factories. The findings are presented in Table 4.1. The overall response rate was 82%. Preferred music checklist had a 100% response rate for factory one, 81.5% for factory two and 100% for factory three. Eysenck Personality Inventory had a response rate of 81.5% for factory one, 67% for factory two and 63% for factory three. Observation checklist had a response rate of 100% for all the three factories. Researcher administered questionnaire had a response rate of 92.4% for factory one, 84% for factory two and 78% for factory three. The response rate was considered satisfactory for all the factories.

To enable assessment of the effect of background music on performance of tailoring employees' performance, preferred music checklist per respondent was coded as follows:

1 = reflective and complex music, 2 = intense and rebellious music, 3 = upbeat and conventional music and 4 = energetic and rhythmic music. Under each of the four categories of preferred music checklist, there were various subcategories. Reflective and Complex Music (1) had the following subcategories which were coded as in the brackets: Folks (1.1), Classical (1.2), Blues (1.3) and Jazz (1.4). Intense and Rebellious Music (2) had the categories: Reggae (2.1), Hip hop (2.2), Heavy Metal (2.3), Ragga (2.4) and Rock (2.5). Upbeat and Conventional Music (3) had categories: Religious (3.1), Country (3.2) and Pop (3.3). Energetic and Rhythmic Music (4) had categories Salsa (4.1), Soul (4.2), Dance Hall (4.3), Calypso (4.4), Rhumba (4.5) and Rap (4.6).

Table 4.1: Response Rate

Factory	**Research Instrument**	**Population**	**Response**	**Response Percentage**
Factory One	Preferred Music Checklist	119	119	100%
	Eysenck's Personality Inventory	119	97	81.5%
	Observation Checklist	119	119	100%
	Researcher Administered Questionnaire	119	110	92.4%
Factory Two	Preferred Music Checklist	119	83	81.5%
	Eysenck Personality Inventory	119	97	67%
	Observation Checklist	119	119	100%
	Researcher Administered Questionnaire	119	100	84%
Factory Three	Preferred Music Checklist	119	119	100%
	Eysenck Personality Inventory	119	75	63%
	Observation Checklist	119	119	100%
	Researcher Administered Questionnaire	119	93	78%
Overall Average Response Rate				**82%**

Source: Author, Current study

4.2.2 Preferred Background Music Survey

The study sought to determine the type of background music that the respondents preferred. Here, respondents identified the music they love to listen to using Rentfrow and Gosling (2003). Respondents filled a form/checklist showing their preferred music. Results from the checklist were used to compile preferred music by the participants that were later used in the study. The categories included; Reflective and complex (comprising classical, jazz, folk and blues*)*, intense and rebellious (rock, alternative, heavy metal), upbeat and conventional (country, pop, soundtracks, religious) and energetic and rhythmic (rap, soul, electronica).

The findings for the reflective and complex music are presented in Table 4.2.

Table 4.2: Reflective and Complex Music

Reflective and Complex Music	**Expected no. of respondents**	**Frequency**	**Percent**	**Average Response Rate**
Classical		100	28%	
Jazz		168	47%	
Blues		1	0.3%	
No preferred music under this category		88	25%	
Total	**357**	**357**	**100**	**100%**

Source: Author, Current study

The findings presented in Table 4.2 indicate that majority of the respondents at 47% preferred jazz, 28% classical, 25% preferred no music under reflective and complex

music category while 0.3% preferred blues. The findings implied that tailors at the EPZ preferred jazz music in the reflective and complex category.

The respondents were also required to indicate the type of music they preferred under intense and rebellious music. The category of intense and rebellious music contained rock, hip hop, reggae, ragga and heavy metal. The findings obtained are presented in Table 4.3.

Table 4.3: Intense and Rebellious Music

Intense and Rebellious Music	Expected no. of respondents	Frequency	Percent	Average Response Rate
Rock		1	0%	
Reggae		41	15%	
Ragga		10	4%	
Hip hop and rock		26	10%	
Hip hop and reggae		39	14%	
Hip hop and ragga		1	0%	
Rock, hip hop and reggae		31	12%	
Reggae, ragga and heavy metal		1	0%	
Rock, hip hop, reggae and ragga		1	0%	
Hip hop, reggae, ragga and heavy metal		1	0%	
Prefer no music under this category		117	43%	
Total	**357**	**269**	**100%**	**75.4%**

Source: Author, Current study

Majority of the respondents at 43% did not prefer any type of intense and rebellious music, 15% preferred reggae music, 14% preferred hip-hop and reggae music, 12% preferred rock, hip-hop and reggae. Less than one percent of the respondents preferred a combination of hip-hop and ragga, reggae; ragga and heavy metal; rock, hip hop, reggae and ragga and hip-hop; reggae, ragga and heavy metal. The findings imply that tailors at the EPZ preferred less of intense and rebellious music. A substantial percentage of the respondents also preferred a combination of various types of intense and rebellious music.

The respondents were also required to indicate the type of music they prefer under the category of upbeat and conventional music. This category contained religious, country and pop music. The findings obtained are presented in Table 4.4.

Table 4.4: Upbeat and Conventional Music

Upbeat and Conventional Music	Expected no. of respondents	Frequency	Percent	Average Response Rate
None		18	7%	
Religious		80	30%	
Country and religious		60	22%	
Religious and pop		38	14%	
Country, religious and pop		73	27%	
Total	**357**	**269**	**100%**	**75.4%**

Source: Author, Current study

The findings presented in Table 4.4 indicated that most of the respondent at 30% preferred religious music, 27% preferred country, religious and pop music, 22% preferred

country and religious, 14% preferred religious and pop and 7% preferred none of the upbeat and conventional music. The findings implied that the EPZ tailors preferred more of religious music since up to 93% preferred religious music combined with other types of music. While probing them further on which type of religious music they preferred, respondents said they preferred East African gospel music. East African gospel music relates to their needs, it is mostly in the language they understand hence it speaks directly to their needs.

Language preferred in music was Kiswahili and other East African local languages. This study to some extent supports Dorrell's (2005) definition of music which says music is a sound that we enjoy hearing. From Dorrell's definition it is evident that there are sounds that some people enjoy hearing while there are other sounds that are not enjoyed by other people. What will sound as music to one person may be noise to another because there are different types of music and people perceive music in differing forms. This study also supports Jäncke and Sandmann (2010) who suggest that if background music is positively related to employee performance, then playing upbeat and conventional music would have better results than all the other categories. This category was the most preferred by the tailors at the EPZ. Religious gospel music was then played most of the time during the study.

In the study, participants were also required to indicate whether they preferred energetic and rhythmic music. The category of energetic and rhythmic music included rap, soul, salsa, calypso, rhumba and dance hall. The findings are presented in Table 4.5.

Table 4.5: Energetic and Rhythmic Music

Energetic and Rhythmic Music	Expected no. of respondents	Frequency	Percent	Average Response Rate
None		152	57%	
Rap		1	0%	
Rhumba		76	28%	
Rap and soul		1	0%	
Rap and rhumba		18	7%	
Soul and rhumba		21	8%	
Total	**357**	**269**	**100%**	**75.4%**

Source: Author, Current study

The findings presented in Table 4.5 indicated that majority of the respondents at 57% did not prefer any music under energetic and rhythmic music category, 28% rhumba, 0% preferred rap music, rap and soul, 8% soul and rhumba while 7% preferred rap and rhumba. The findings implied that employees did not prefer energetic and rhythmic music.

Majority of the respondents preferred upbeat and conventional music, mostly religious music. According to Rentfrow and Gosling, people who prefer upbeat and conventional music are extraverted, emotional stable and have high self-esteem (Rentfrow and Gosling, 2003). This was followed by reflective and complex music where most respondents preferred jazz music. However, in the interview guide where they were to list music they love listening to, none of the participants listed jazz. This was also evident when participants showed displeasure when jazz was played in the background saying it interfered with their movement at work. The least preferred music was energetic and rhythmic music which included rap, soul, salsa, calypso, rhumba and dance hall.

Music and life are inseparable. Scheirer (2000) posits that music is one of the most striking activities that separate humans from animals. Music plays a role in rituals of birth and puberty, at marriage and death, in initiations, and in rituals of livelihood for example hunting, farming, gathering, etc. Notably, music play a significant role in work productivity, from the above findings, it is important to consider that people's music or folk music plays an important role in their activities. Music that is understood in language, in context, and content speaks to the inner feelings or state of a person and aids productivity. This study confidently posits that Familiar background music aids an employee's performance.

4.2.3 Mood of the Respondents

The mood of the respondents was gauged through observation. The measurement of mood was based on the level of the EPZ worker's arousal or distraction shown by the expressions and emotions portrayed by the respondents. Mood was then categorised into positive (arousal) or negative (distracter) mood. The following indicators were used to measure positive mood: happiness, elation, excitement, alertness, calmness and being relaxed. For negative mood, the researcher looked out for visible signs of sadness, fatigue, stress, being tense and upset. Positive mood (happiness, elation, excitement, alertness, calmness and being relaxed) was coded as 2, while negative mood (sadness, fatigue, stress, being tense and upset) was coded as 1. Participants' mood was observed as per the above categorisation and recorded *(See appendix 8)*. From the data, an analysis of each factory was done as presented in tables 4.6, 4.7, and 4.8.

4.2.3.1 Factory One

In factory one, where music was played throughout employee's mood was observed and recorded. The results are presented in Table 4.6

Table 4.6: Participants' Mood in Factory One

FACTORY 1: Music Played											
	Day 1 Frequency	**%**	**Day 2 Frequency**	**%**	**Day 3 Frequency**	**%**	**Day 4 Frequency**	**%**	**Day 5 Frequency**	**%**	**Mean %**
Morning: negative mood	43	39	30	25.2	33	27.7	32	26.9	25	21	**27.97**
Morning: positive mood	76	63.9	89	74.8	86	78.2	87	73.1	94	78.99	**73.79**
Afternoon: negative mood	50	42	41	34.5	30	25.2	18	15.13	19	15.97	**26.9**
Afternoon: positive mood	69	57.98	78	65.6	89	74.8	101	84.9	100	84.03	**73.44**

Source: Author, Current study

In factory one where music was played throughout the study, on day one of the study, the mood of the tailors involved in the study did not have huge disparity compared to day five of the study as shown in Table 4.6. In day one for example, the difference between positive and negative mood was not so elaborate. There were 43 recordings of negative mood in the morning and 50 of the same in the afternoon and 76 recordings of positive mood in the morning on the same day and 69 of the same in the afternoon. In day two, three and four negative mood declined (30, 33 and 32 in the morning and 41, 30 and 18 in the afternoon).

Positive mood recordings increased and stabilised at 89, 86 and 87 in the morning and 78, 89 and 101 in the afternoon for day two, three and four. In day two and three, positive

mood of the participants was enhanced, while negative mood started declining. In day four and five, there was a sharp decline in negative mood especially in the afternoon and an increase in positive mood since only 25 participants had a negative mood in the morning and 21 participants in the afternoon. On day five, 94 participants in the morning and 100 participants in the afternoon had positive mood. This was surprising because being a Friday, their energy levels were expected to be low yet in this case, their energy levels were still high; they were elated and portrayed feelings of happiness.

On the average, positive mood of participants increased from 63.9% in day one to 78.99% in day five in the morning, and from 57.98% in day one to 84% in day five in the afternoon. Generally, in factory one, talking was less among workers and respondents mostly talked when enquiring about something; the tailors were more relaxed and happy and were willing to take up new assignments. Majority of the tailors were calm and alert.

4.2.3.2 Factory Two

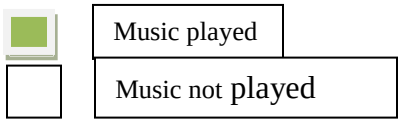
Music was played intermittently in factory two. Tailors' mood was observed and recorded whether or not there was music. The results are presented in Table 4.7.

Table 4.7: Participant's Mood in Factory Two

FACTORY 2: Intermittent Music											
	Day 1 No. of respond.	**%**	**Day 2 No. of respond.**	**%**	**Day 3 No. of respond.**	**%**	**Day 4 No. of respond.**	**%**	**Day 5 No. of respond.**	**%**	**Mean %**
Morning: negative mood	36	**30.2**	43	36.13	30	**25.2**	49	41.18	30	**25.2**	**31.59**
Morning: positive mood	83	**69.8**	76	63.9	89	**74.8**	79	66.4	89	**74.8**	**69.9**
Afternoon: negative mood	44	36.97	29	**24.37**	43	36.1	33	**27.73**	40	33.6	**31.8**
Afternoon: positive mood	75	63	90	**75.6**	76	63.9	86	**72.26**	79	66.4	**68.24**

Source: Author, Current study

Key



Disparity of mood was observed in factory two where music was played intermittently. On day one, for example, when music was played in the morning, 83 participants had positive mood while 36 participants had negative mood. On the last day, which is day 5, when music was played in the morning, 89 participants had positive mood and 30 participants portrayed negative mood. When music was off on day one, 44 participants portrayed negative mood and 75 of them portrayed a declining positive mood. Negative mood increased from 36 in the morning when music was on to 44 when music was not played in the afternoon while positive mood declined from 83 in the morning when music was played to 75 in the afternoon when music was not played.

A similar trend was recorded throughout the study as shown in Table 4.7. Thus, the difference in mood among tailors can be explained by both the occasional presence and absence of background music in their work environment. On average, the number of

employees in factory two who had positive mood when music was playing was higher than the number of those who had negative mood in the same period. On the other hand, the number of those who had negative mood was higher in the period when there was no music than when there was music.

In factory two, tailors were noisy when music was not played, but when music was on, feelings of happiness were recorded. Movement in and out and within the factory was also recorded, feelings of happiness and stress were observed especially when music was on and immediately went off. When music was put off one day, they asked their supervisors why there was no music. This indicates that music had something to do with their mood.

4.2.3.3 Factory Three

No music was played in this factory throughout the period of the study. Data on mood was collected, analysed and results presented in Table 4.8.

Table 4.8: Participant's Mood in Factory Three

FACTORY 3: No Music played											
	Frequency Day 1	**%**	**Frequency Day 2**	**%**	**Frequency Day 3**	**%**	**Frequency Day 4**	**%**	**Frequency Day 5**	**%**	**Mean %**
Morning: negative mood	46	38.7	42	35.3	46	38.66	49	41.2	48	40.3	**38.8**
Morning: positive mood	73	61.34	77	64.7	73	61.34	70	58.8	71	59.7	**61.2**
Afternoon: negative mood	43	36.1	44	36.97	47	39.5	51	42.9	55	46.2	**40.34**
Afternoon: positive mood	76	63.9	75	63	72	60.5	68	57.14	64	53.8	**59.66**

Source: Author, Current study

In factory three where music was not played at all, change in the mood of the participants for morning and afternoon did not have a huge disparity. Positive mood observed ranged between 64 participants and 77 participants across all the days while negative mood ranged from 42 participants to 55 participants for all the 5 days. Tailors, especially in the afternoon, looked bored, stressed, tired and noisy, and there was too much movement in and out of the factory and within. Positive mood recorded in this factory was alertness; majority of the tailors were alert while doing their assignments. From the study findings, it is evident that background music played a key role in boosting the mood of the respondent. Overall, positive mood had a mean of 61.2% in the morning and 59.66% in the afternoon, while negative mood had a mean of 38.8% in the morning and 40.34% in the afternoon.

4.2.4 Personality of the Respondents

To determine personality types of the tailors, Eysenck's Personality Inventory (EPI) was administered to the participants. The results were used to classify the respondents into unstable extravert, unstable introvert, stable extravert and stable introvert. The results of the personality test are presented in Table 4.9.

Table 4.9: Distribution of The Respondents by Personality Types

Personality	Expected no. of respondents	Frequency	Percent	Average Response Rate
Unstable Extravert		62	23%	
Unstable Introvert		22	8%	
Stable Extravert		138	51%	
Stable Introvert		47	17%	
Total	**357**	**269**	**100%**	**75.35%**

Source: Author, Current study

The findings presented in Table 4.9 indicate that majority of the respondents at 51% were stable extraverts, 23% were unstable extraverts, and 17% were stable introverts while 8% were unstable introverts. Majority of tailors at 74% were extraverts, this means they need external stimulation to bring them up to an optimal level of performance. Thus background music acted as an external stimulant that enabled them to reach a higher level of performance. Most of them were stable extraverts (51%), implying that they had low activation thresholds and needed external stimulation.

4.2.5 Work Behaviour

Respondents were observed for a period of three weeks to ascertain their actual behavior when their preferred music is played and when it is not played. Observation data sheet was used to record the participants work behaviour. Recording was done daily (*see appendix 9)* and later a summary of behaviour was undertaken to come up with information on how the tailors generally behaved. In factory one, music was on throughout while in factory two, music was played at regular intervals i.e. on and off. For example, music was played in factory 2 in the morning, and off in the afternoon, and off in the morning and on in the afternoon for a period of three weeks at intervals to ascertain the tailor's response to music and their resultant work behavior and performance.

Music was not played in the third factory. The third factory acted as a control group where data collected was compared with the data from the other two factories so as to ascertain whether there was any difference in performance that could be attributed to background music. Information on the tailor's work behavior was recorded by the researcher and two assistants in a daily log for the 3 week period during which data was collected. The summaries are in Tables 4.10, 4.11, and 4.12

Table 4.10: Work Behaviour in Factory One

FACTORY 1: WEEK 1											
Work Behaviour	**Day 1** No. of respond.	**%**	**Day 2** No. of respond.	**%**	**Day 3** No. of respond.	**%**	**Day 4** No. of respond.	**%**	**Day 5** No. of respond.	**%**	**Mean %**
Morning: negative behaviour	36	30.3	25	21	22	18.49	26	21.9	22	18.5	**22**
Morning: positive behaviour	83	69.8	94	78.99	97	81.5	92	77.3	97	81.5	**77.8**
Afternoon: negative behaviour	33	27.7	41	35.45	33	27.73	21	17.7	19	15.97	**25**
Afternoon: positive behaviour	86	72.3	78	65.6	86	72.3	98	82.4	100	84.03	**75.3**
FACTORY 1: WEEK 2											
	Day 1 No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	25	21	23	19.3	33	27.7	38	31.9	25	21	**24.2**
Morning: positive behaviour	94	78.99	96	80.7	85	72.3	80	67.2	94	78.99	**75.6**
Afternoon: negative behaviour	20	16.8	38	31.93	30	25.2	18	15.13	19	15.97	**21.3**
Afternoon: positive behaviour	99	83.2	81	68.1	89	74.8	101	84.9	100	84.03	**78.99**
FACTORY 1: WEEK 3											
	Day 1 No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	28	23.5	27	22.7	27	22.7	35	29.4	13	10.9	**21.8**
Morning: positive behaviour	91	76.5	91	76.5	92	77.3	83	69.7	106	89	**77.8**
Afternoon: negative behaviour	37	31	36	30	30	25.2	19	15.97	19	15.97	**23.3**
Afternoon: positive behaviour	82	68.9	83	69.7	89	74.8	100	84	100	84.03	**76.96**

Source: Author, Current Study

In this factory, negative behaviour dropped from 30.3% in week one, day one in the morning to 10.9% in week three, day five, in the morning while positive behaviour increased from 69% on day one, week one in the morning to 89% on week three day five in the morning. For factory one, work behaviour of the tailors kept improving. There was less of negative work behaviour and positive work behaviour improved. Movement was reduced and talking was less. There was improved concentration and resilience among the tailors. The tailors were more relaxed and energized, were more flexible and focused than before, and were cheerful, swift, and agile. This positive work behaviour led to improved employee performance.

In factory one for example, where music was played all through employee performance increased. This shows that background music contributed to positive behaviour of the tailors in the factory which eventually led to an increase in performance of the tailors at the factory.

Table 4.11 Work Behaviour in Factory Two

FACTORY 2: WEEK 1											
Work Behaviour	**Day 1** No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	30	25.2	40	33.6	34	28.6	40	33.6	35	29.4	**29.4**
Morning: negative behaviour	89	74.8	79	66.4	85	71.4	79	66.4	84	70.6	**69.92**
Afternoon: negative behaviour	41	34.5	40	33.6	54	45.4	41	34.5	37	31	**35.8**
Afternoon: negative behaviour	78	65.5	79	66.4	65	54.6	5978	65.5	82	68.9	**64.2**
FACTORY 2: WEEK 2											
	Day 1 No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	42	37.8	43	36	50	42	43	36	43	36	**37.6**
Morning: positive behavior	77	64.7	76	63.9	69	57.98	76	63.9	76	63.9	**62.8**
Afternoon: negative behaviour	63	52.9	47	39.5	52	43.7	21	17.6	56	47.1	**40.2**
Afternoon: positive behaviour	56	47	72	60.5	67	56.3	40	33.6	63	52.9	**50.1**
FACTORY 2: WEEK 3											
	Day 1 No. of respond	%	**Day 2** No. of respond	%	**Day 3** No. of respond	%	**Day 4** No. of respond	%	**Day 5** No. of respond	%	**Mean %**
Morning: negative behaviour	37	31	49	41.2	37	31	52	43.7	42	35.3	**36.4**
Morning: positive behaviour	82	68.9	70	58.2	82	68.9	67	56.3	77	64.7	**63.4**
Afternoon: negative behaviour	51	42.9	47	39.5	45	37.8	50	42	51	42.9	**41**
Afternoon: positive behaviour	68	57.2	72	60.5	74	62	69	57.98	68	57	**58.9**

Source: Author, Current Study

Data on employee's work behaviour in factory two where music was played intermittently is presented in Table 4.11. In this factory, majority of workers took time to finish a task, were very tired at the end of the day, were ready and willing to work thus meeting daily targets, noise was recorded, movement in and out of the factory was observed, organised work spaces were recorded, tailors were punctual, and when music was put off one day, they asked their supervisors why there was no music. When music was off, there were mixed feelings and behaviours elicited from the tailors. In some instances, there were cases of indiscipline reported such as quarrelling.

In factory three where there was no background music played, there were organised tailoring tables, noise was recorded, cases of indiscipline were reported, most were punctual to work, a few cases of lateness also reported, too much movement in and out of the factory and within, were ready for new tasks, high levels of concentration on task at hand and met deadlines/targets set. Results of factory three are presented in Table 4.12. In factory three, the mean of positive behaviour was between 58.8% and 51.7% while negative behaviour was between 48.7% and 41.2%. Table 4.13 shows a summary of the participant's positive and negative behaviour as observed during the research period. There was no major difference in work behaviour observed for tailors in factory three.

Table 4.12: Work Behaviour in Factory Three

FACTORY 3: Week 1											
Work Behaviour	**Day 1** No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	52	43.7	53	44.5	51	42.9	45	37.8	45	37.8	**41.3**
Morning: positive behaviour	67	56.3	66	55.5	68	57.1	74	62.2	74	62.2	**58.7**
Afternoon: negative behaviour	53	44.5	53	44.5	61	51.3	56	47	57	47.9	**47**
Afternoon: positive behaviour	66	55.5	66	55.5	58	48.7	63	52.9	62	52.1	**52.9**
FACTORY 3: Week 2											
	Day 1 No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	55	46.2	45	37.8	55	46.2	45	37.8	45	37.8	**41.2**
Morning: positive behaviour	64	53.8	74	62.2	64	53.8	74	62.2	74	62.2	**58.8**
Afternoon: negative behaviour	62	52	53	44.5	61	51.3	56	47.6	57	47.9	**48.7**
Afternoon: positive behaviour	57	47.9	66	55.5	58	48.7	63	52.9	62	52	**51.4**
FACTORY 3: Week 3											
	Day 1 No. of respond	**%**	**Day 2** No. of respond	**%**	**Day 3** No. of respond	**%**	**Day 4** No. of respond	**%**	**Day 5** No. of respond	**%**	**Mean %**
Morning: negative behaviour	61	51.3	57	47.9	55	46.2	56	47	58	48.7	**48.2**
Morning: positive behaviour	58	48.7	62	52	64	53.8	63	52.9	61	51.3	**51.7**
Afternoon: negative behaviour	55	46.2	53	44.5	59	49.6	51	42.9	67	56.3	**47.8**
Afternoon: positive behaviour	64	53.8	66	55.5	60	50.4	68	57	52	43.7	**52.1**

Source: Author, Current Study

Table 4:13 shows the general positive and negative work behaviour recorded during the study period in all the three factories.

Table 4.13: Work Behaviour of Participants in Each Factory

Factory	General work behaviour		
	Week 1	**Week 2**	**Week 3**
Factory 1 Music played throughout	**Positive work** behaviour Cheerful, swift, and agile They finished their work on time/ met their daily targets, meaning they were better organized. Organised work spaces.	**Positive work behaviour** A decline in movement in and out of the factory and within was recorded. Less talking and more concentration on the task at hand. Swift and agile. Met set targets. Organised work spaces Punctuality both in the morning and after breaks	**Positive work behaviour** Reduced movement and less talking. This meant increased concentration and less supervision. Improved concentration and resilience (They said music made them busy thus concentrating on work at hand). More flexible and focused than before (this could be seen in the body movement- cutting was quicker, sewing to the rhythm Met set targets Organised work spaces Observed punctuality
	Negative work behaviour Movement in and out of the factory and within Talking	**Negative work behaviour** Leaving work before time	**Negative work behaviour** Leaving work before time
Factory 2 Intermittent music	**Positive work behaviour** Met targets Clean and organised work spaces Punctuality observed	**Positive work behaviour** Met targets Clean and organised work spaces	**Positive work behaviour** Majority of tailors were ready and willing to work, thus meeting daily targets Organised work spaces
	Negative work behaviour Noise Movement in and out of the factory and within	**Negative work behaviour** Noise Movement in and out of the factory and within	**Negative work behaviour** Unusual noise was recorded Movement in and out of the factory and within

Factory 3 No music	**Positive work behaviour** Organised employees tailoring tables Punctual to work (cases of lateness reported) Met set deadlines	**Positive work behaviour** Met set deadlines Organised employees tailoring tables Ready for new tasks	**Positive work behaviour** Organised tailoring tables Met set targets
	Negative work behaviour Unusual level of noise recorded Cases of indiscipline reported	**Negative work behaviour** Higher levels of noise recorded Cases of indiscipline reported A few cases of lateness also reported	**Negative work behavior** A few cases of lateness also reported Higher levels of noise recorded Cases of indiscipline reported

Source: Author, Current study

In measuring work behaviour, the researcher looked out for the following attributes; positive attitude and meeting deadline. For positive attitude, indicators included; being readily available, willing to get the job done and going beyond the normal duty to have work done well. For meeting deadlines, the indicators included; being organised, responsible and being able to maintain a clean work space.

Table 4.14 shows that in factory one, where music was played throughout, there was an improvement in work behaviour. This means that background music played a key role in tailors' work behaviour and eventually their work performance. In factory two, where music was on and off, there was no steady predictable work behaviour. Though the tailor's behaviour at work was not alarming, it could not be predicted. This could be explained by the fact that tailors did not have a stable supply of background music throughout. Generally, there was mixed behaviour fluctuations in factory two. In factory three, participants exhibited their normal work behaviour which was steady throughout the three weeks. Table 4.14 shows behaviour of participants per week.

Table 4.14: Work Behaviour of Participants Per Factory

WK	**A. Positive Attitude** 1. Readily Available			
	F1 (%)	**F2 (%)**	**F3 (%)**	**Work behaviour observed**
1	80	82	80	Here, behaviour included being available when required by either colleagues or supervisors *(Agility/swiftness/punctuality.*
2	86	86	81	
3	93	84	82	
	2. Willing to get job done			
1	91	82	84	Here, attributes observed included concentration and focus on work at hand *(Concentration/resilience/focus).*
2	91	86	83	
3	93	86	82	
	3. Going beyond normal duty to have work done			
1	87	78	78	Here, researcher looked out for sportsmanship/teamwork and initiatives e.g. being able to help one another in case of slowed process*(Flexibility/teamwork).*
2	90	86	79	
3	93	84	77	
	B. Meets Deadlines 1. Organised			
1	93	87	86	Here, the researcher looked out for organised tools of trade, orderliness, preparedness and how controlled participants were.
2	94	89	84	
3	97	87	86	
	2. Responsible			
1	90	89	86	Here, the researcher looked out for participants ability to be accountable, liable/answerable
2	91	87	88	
3	94	90	86	
	3. Clean Workspace			
1	91	90	83	Here, the researcher looked out for clean work space. Tailors generally have a lot of things on their working area (Scissors, tape measure, blade, chalk, pieces of cloth, thread etc.) The tailors were expected to have clean work space, materials and equipment were arranged and only used when required.
2	92	89	82	
3	93	88	84	

Source: Author, Current study

4.2.6 Employee Performance

Respondents were observed for a period of four weeks. In factory one, music was played throughout while in factory two music was on and off (e.g. Music was played in the morning, and off in the afternoon, and off in the morning and on in the afternoon for a

period of four weeks) at intervals to ascertain their response to music and their resultant performance in terms of number of units produced. In the third factory, the work behavior of respondents and their performance was observed and no music was played. Observation data sheet was used to collect required data on music played, time of day, and performance. Each factory observed had 119 workers. The findings are presented in Table 4.15.

Table 4.15: Employee Performance

	Units Produced		
Day	**Factory One (Continuous music)**	**Factory Two (Intermittent music)**	**Factory Three (No Music)**
One	721	692	690
Two	727	699	700
Three	716	714	700
Four	713	711	700
Five	710	691	700
Mean	**717**	**701**	**698**

Source: Author, Current study

The findings in table 4.15 indicate that the average units produced over a period of 5 days were 717 in factory one, where music was played continuously. In factory 2, where music was played intermittently, the average number of units produced is 701 and in factory three where no music was played, average numbers of units produced were 698. This is a clear indication that background music played an important role in increasing the performance of tailors.

In factory one, day one for example, tailors produced 717 garments that were packaged for shipment to the US market compared to 692 in factory two and 690 in factory three. The difference could be attributed to preferred background music being played in factory one, while in factory two, the tailors did not meet the target and this could be due to the confusion brought about by music being on and off. As much as this study cannot authoritatively explain the results in factory three reasons could range from anticipation to lack of external stimulation.

4.3 General Information on the Respondents

An analysis of the researcher administered questionnaire was also done by the researcher for a period of two weeks. The researcher administered questionnaire consisted of background information on the respondents and study variables. After it was administered, an interview was done to debrief the respondents and detect those among the participants that had guessed the research hypotheses in order to exclude them from final data analysis.

4.3.1 Age of the Respondents

The study sought to determine the age of the respondents. It was important to determine the age of respondents because research has shown that different groups prefer different types of music. According to Lamere (2014), music is distinctive for a particular demographic. The findings are presented in Table 4.16.

Table 4.16: Age of the Respondents

Age	Expected no. of respondents	Frequency	Percent	Average Response Rate
Below 30 years		186	61.39%	
30 years and above		117	39.61%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

The findings in Table 4.16 indicate that majority of the respondents at 61.39% were aged below 30 years while 38.61% were aged above 30 years. The findings indicate that EPZ Athi River has a young workforce because most (61.39%) of the tailors are below 30 years of age. Age of the respondents was expected to be related to the type of background music preferred by the employee.

People who enjoy a certain genre of music always have other attributes in common: either they are of the same gender, same age group, similar level of academic qualification or background socialisation. The current study concludes that the reason for liking a similar genre of music could be due to participants being in a similar age bracket. Participants are between the ages of 30 and 40 and so their level of exposure to music is largely similar. Thus the choice of preferred music was affected to a considerable extent by age.

4.3.2 Gender of the Respondents

The study also sought to determine the gender of the respondents. The findings are presented in Table 4.17.

Table 4.17: Distribution of Respondents by Gender

Gender	Expected no. of respondents	Frequency	Percent	Average Response Rate
Female		189	62.4%	
Male		114	37.6%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

Majority of the respondents at 62.38% were female while 37.6% were male. Previous studies have found that women tend to prefer different types of background music have different exposure to different types of music and therefore process music differently from men (Christenson and Peterson, 1988).

Dees and Vera (1978) found that music for an all-male or an all-female gathering differed. They found that for males, music had less interference from the outside and was more of a common source of unity and participation, while females were more likely to use music as secondary gratification, for example to improve mood, and feel less alone and as a general background activity. Furthermore, females generally indicate liking music more than male. For males, especially young males, music is often personal and of central importance in their lives. This could explain why a certain type of music was preferred more than other types because the number of female tailors in the study was higher (62.38%) than that of male tailors (37.6%).

4.3.3 Number of Years Worked at EPZ Factory

The study sought to determine the number of years the respondents had worked at the EPZ factories. This was important in assessing the level of experience of the respondents. The findings are presented in Table 4.18.

Table 4.18: Number of Years Worked at the EPZ Factory

Duration	Expected no. of respondents	Frequency	Percent	Average Response Rate
Less than 10 years		167	49%	
More than 10 years		174	51%	
Total	**357**	**341**	**100%**	**95.5%**

Source: Author, Current study

The findings in Table 4.18 indicate that majority of the respondents at 51% had worked at the EPZ factory for more than 10 years. 49% of the respondents had worked at the EPZ factory for less than 10 years. Since majority of the respondents had worked for more than 10 years, they were well experienced in their duties.

4.3.4 Enjoyment of Work

The study sought to determine whether the tailors enjoyed working at their respective factories. Determining this was important for evaluating the respondent's attitude depicted at their work place. The findings are presented in Table 4.19.

Table 4.19: Work Enjoyment

Enjoying work	Expected no. of respondents	Frequency	Percent	Average Response Rate
Enjoy		288	95%	
Don't enjoy		15	5%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

The findings presented in Table 4.19 indicate that 95% of the respondents enjoyed work while 5% did not enjoy work. This implied that the staff at EPZ had the right attitude for the job and therefore it would be possible to achieve higher productivity by adoption of work related incentives like background music.

4.3.5 Health Breaks at Work

The study sought to determine whether the respondents had health breaks. The findings are presented in Table 4.20.

Table 4.20: Having Health Breaks at Work

Status	Expected no. of respondents	Frequency	Percent	Average Response Rate
Have health breaks		276	91%	
Don't have health breaks		27	9%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

The findings in Table 4.20 indicate that most of the respondents, at 91% had health breaks and 9% did not have health breaks. The fact that majority of the respondents had health breaks means that the productivity of the respondents was not hindered by lack of rest. Tailoring, being a repetitive and tedious work required a break. The tailors had enough time to eat, drink and rest hence fewer mistakes in their work would be expected.

4.3.6 Relationship with Colleagues

The study sought to determine how well the tailors at EPZ were relating to fellow tailors. The respondents were required to indicate whether the relationship was well or poor. The findings are presented in Table 4.21.

Table 4.21: Relationship with Colleagues

Status	Expected no. of respondents	Frequency	Percent	Average Response Rate
Relate well		303	97%	
Relate poorly		9	3%	
Total	**357**	**312**	**100%**	**87.4%**

Source: Author, Current study

The findings in Table 4.21 indicate that majority of the respondents at 97% related well with the fellow staff. Only 3% of the respondents related poorly. The findings imply that the relationship between the tailors was good and they worked well together. Productivity of the tailors depended on each other. In case they didn't have a good relationship with each other, then the entire production line would be affected negatively.

4.3.7 Relationship with Supervisor

The study also sought to determine how well the respondents related with the supervisors. The findings are presented in Table 4.22.

Table 4.22: Relationship with Supervisor

Status	Expected no. of respondents	Frequency	Percent	Average Response Rate
Relate well		288	95%	
Relate poorly		15	5%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

As shown in Table 4.22 majority of the respondents at 95% relate well with the supervisors while 5% related poorly. The fact that majority of the respondents related well implied that the supervisors and tailors had a good working relationship. Good supervisor-tailor relationship is crucial in ensuring productivity.

4.3.8 Productivity of the Respondents

To determine the staff perception of their productivity, the respondents were required to rate their productivity as excellent, good, fair or bad. The findings are presented in Table 4.23.

Table 4.23: Productivity of the Respondents

Status	Expected no. of respondents	Frequency	Percent	Average Response Rate
Excellent		174	57%	
Good		111	37%	
Fair		18	6%	
Bad		0	0%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

The findings in Table 4.23 indicate that majority of the respondents at 57% rated their productivity as excellent, 37% as good, 6% fair and 0% as bad. The respondents perceived their performance positively. Positive attitude is necessary in achieving higher productivity.

4.3.9 Listening to Music

The study sought to determine whether the respondents loved listening to music by responding yes or no. The findings are presented in Table 4.24.

Table 4.24: Love Listening to Music

Status	Expected no of respondents	Frequency	Percent	Average Response Rate
Love listening to music		300	99%	
Don't love listening to music		3	1%	
Total	357	303	100%	84.9%

Source: Author, Current study

The findings in Table 4.24 indicate that majority of the respondents (99%) loved listening to music while 1% did not love listening to music. Since the majority of the respondents preferred listening to music, it was expected that background music would have a positive effect on their work performance. Background music improves work performance by either reducing feelings of fatigue or increasing work capacity (North and Hargreaves, 1998). This could explain why majority of respondents love to listen to music at work and why their music preference was upbeat and conventional music.

4.3.10 Type of Music Preferred

The study required those who had indicated that they loved listening to music to indicate the type of music they preferred. The findings are presented in Table 4.25.

Table 4.25: Type of Music Preferred

Music Preferred	Expected no. of respondents	Frequency	Percent	Average Response Rate
Any		6	2%	
Cool music		3	1%	
E.A. Music		9	3%	
Gospel music		168	58%	
Old school		9	3%	
Reggae		30	10%	
Rhumba		18	6%	
Rhumba and benga		12	4%	
RnB		3	1%	
Rock		12	4%	
Roots		3	1%	
Soul, dancehall, bongo, gospel		3	1%	
Trap		18	6%	
Grand Total	**357**	**297**	**100%**	**83.2%**

Source: Author, Current study

As shown in Table 4.25, majority of the respondents (58%) loved gospel music, 10% reggae, 6% rhumba, 6% trap, 4% rhumba and benga, 4% rock, 3% East African music, 3% old school, 2% any and 1% cool music, RnB, roots and a combination of soul, dancehall, bongo and gospel. The preference of gospel music by respondents indicated that gospel background music was the most preferred music for tailors. This was in line with the results of the preferred music checklist which had indicated that most tailors preferred gospel music.

4.3.11 Reason for Listening to Music

The study also sought to establish the reason why the respondents liked listening to music. Three options were provided namely, to be happy, to be energized or any other. The findings are presented in Table 4.26.

Table 4.26: Reason for Listening to Music

Status	Expected no. of respondents	Frequency	Percent	Average Response Rate
To be happy		210	69%	
To be energized		93	31%	
Any other		0	0%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

Table 4.26 shows that majority of the respondents at 69% indicated that they listened to music to be happy, 31% to be energized and 0% indicated any other. Thus, the main motive for the respondents to listen to music was to be happy. Ciotti (2012) says music has a way of expressing that which cannot be put into words. He continues to say that,

with so much of our work now being done on computers, music has become an important way to optimize the boring. Being happy meant having a positive mood.

Sloboda (2005) argues that people listen to music precisely because of its emotion-inducing and mood-regulating properties. This could explain why majority of the respondents cited being happy as the main reasons why they listen to music. Again, other studies have indicated that listeners in a laboratory set-up tend to like happy music more than sad sounding music (North and Hargreaves, 2008; Dibben and Williamson, 2007).

It is noteworthy that tailors in this study indicated that they listen to music to be happy. Fast tempo and major mode types of music are linked with happiness, whereas slow tempo and minor mode are linked with sadness. In this study, participants' choice of music was music in major mode with a fast tempo.

4.3.12 Listening to Music at Work

The study asked the respondents to evaluate whether they listened to music at their work place. The findings are presented in Table 4.27.

Table 4.27: Listening to Music at Work

Status	Expected no of respondents	Frequency	Percent	Average Response Rate
Listen to music at work		261	86%	
Do not listen to music at work		42	14%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

As indicated in Table 4.27, majority of the respondents (86%) listened to music at work while 14% did not listen to music while at work. Individuals are able to choose or select music on their own and listen to the music without distracting others using headphones. Technological advances in digital music systems have made listening to music available and affordable. Good music, agood listening device and good work environment will cumulatively contribute to an enjoyable experience at work. This digital music can cause danger if the music selected is not appropriate for the task at hand.

4.3.13 Advice to Management on Listening to Music

The respondents were also asked to advise the management of the factory on whether to play or not to play background music. The findings are presented in Table 4.28.

Table 4.28: Advice to Management on Listening to Music

Advice to Management on Listening to Music	Expected no. of respondents	Frequency	Percent	Average Response Rate
Don't play music		0	0%	
Play music		303	100%	
Total	**357**	**303**	**100%**	**84.9%**

Source: Author, Current study

The findings in Table 4.28 indicate that 100% of the respondents would advise the management to play background music while at work. Work at the EPZ is repetitive and tedious, majority of tailors at 74% were extraverts, and this shows why they would advise management to play background music. They are generally under-aroused and would need external stimulation to bring them to an optimal level of arousal.

4.4 Test of Validity

The data collection tools were subjected to face and content validity tests. For face validity, experienced researchers were requested by the researcher to confirm that the study items would obtain data that would meet researcher's objectives. Their comments were used to adjust data collection instruments. To test for content validity of the data collection instruments, the data collection instruments were pretested on a pilot study sample of tailoring workers and thereafter modification made on the questionnaire to ensure clarity and relevance of various measurement variables.

4.5 Test of Reliability

To ensure stable and consistent results, the researcher carried out a pilot study to make sure that the tools for data collection were reliable and thus would obtain information that was accurate. This study considered 0.7 as an acceptable lower limit using Cronbach's Alpha coefficient. The findings are presented in Table 4.29.

Table 4.29: Test of Reliability

Variable	Cronbach Alpha	Number of items
Background Music	0.793	4
Mood	0.881	4
Work Behaviour	0.848	5
Personality	0.792	57
Work Performance	0.937	10

Source: Author, Current study

Findings in Table 4:29 indicate that background Music had a Cronbach Alpha coefficient of 0.793, mood 0.881, work behaviour 0.848, personality 0.792 and work performance 0.937. All the variables had measures with Cronbach Alpha coefficient greater than 0.7, which indicate that all measures were reliable.

4.6 Diagnostic Tests on the Study Variables

Diagnostic tests done were multicollinearity, heteroscedasticity, linearity and normality. This was important in testing whether the assumptions of the least of squares method using linear regression were not violated and that the findings of regression model were accurate.

4.6.1 Test of Multicollinearity

Multicollinearity was detected by variance inflation factor (VIF) and degree of tolerance. The findings are presented in Table 4.30.

Table 4.30: Test of Multicollinearity

Variable	Tolerance	VIF
Background Music	0.94	1.064
Mood	0.896	1.117
Work behaviour	0.926	1.08
Personality	0.994	1.006

Source: Author, Current study

Background music had a tolerance degree of 0.94 and VIF of 1.064. Mood had a tolerance degree of 0.896 and VIF of 1.117. Work behaviour had a tolerance of 0.926 and VIF of 1.08 while personality had a tolerance of 0.994 and VIF of 1.006. Notably, all

variables had VIF less than 10 and tolerance degree of greater than 0.1 and hence multicollinearity did not exist.

4.6.2 Test of Heteroscedasticity

When the variance of the dependent variable varies across the data, then heteroscedasticity is said to exist. Heteroscedasticity complicates analysis because many methods in regression analysis are based on an assumption of equal variances. On the other hand, homoscedasticity implies a situation in which the variance of the dependent variable is the same across the data. The Breusch-Pagan/Cook-Weisberg test method of detecting heteroscedasticity in linear models was used. The findings are presented in Table 4.31.

Table 4.31: Test of Heteroscedasticity

H0	Variables	Chi square	Prop>Chi square
Constant variance	Background music, mood, Personality, work behaviour	0.721	0.8291

The study obtained a Chi square of 0.721 and probability of 0.8291 which has greater than > 0.05. These results imply constant variance and hence, heteroscedasticity problem did not exist.

4.6.3 Test of Linearity

This test is intended to determine if the relationship between independent variable and dependent variable is linear or not. If the value of the relationship is greater than 0.05 then the relationship between the independent variable and the dependent variable is linear and if the value is less than 0.05 then the relationship between independent variable

and the dependent variable is not linear. Linearity was tested by plotting scatter diagrams to identify outliers. However, no outliers were identified.

4.6.4 Test of Normality

To determine whether data for each variable was normally distributed, the Kurtosis and Skewness and Kolmogorov-Smirnov and Shapiro-Wilk test (KS-WS) was carried out. The findings are presented in Table 4.32.

Table 4.32: Results of the Test of Normality of the data in respect of each Variable

Factory	Variable	N	Min	Max	Mean	Std. Dev	Skewness	Kurtosis
Factory One	Background music	119	3	5	4	0.31	0.15	-0.94
	Mood	119	1	2	2	0.25	-1.50	1.43
	Personality	119	1	4	3	1.04	-0.51	-0.96
	Work behaviour	119	1	2	2	0.40	-1.57	0.48
	Employee performance	119	680	727	717	12.07	0.48	-1.02
Factory Two	Intermittent background Music	119	2	3	2	0.17	0.12	-1.56
	Mood	119	1	2	2	0.43	-1.21	-0.55
	Personality	119	1	4	3	1.04	-0.42	-1.05
	Work behavior	119	1	2	2	0.42	-1.32	-0.26
	Employee performance	119	660	715	701	7.41	-1.26	4.70
Factory Three	No background Music	119	1	2	1	0.16	0.54	0.11
	Mood	119	1	2	1	0.38	1.75	1.07
	Personality	119	1	4	3	1.03	-0.63	-0.77
	Work behaviour	119	1	2	1	0.39	1.61	0.64
	Employee performance	119	660	706	698	13.61	-1.22	0.75

Source: Author, Current study

For factory one, background music had a skewness statistic of 0.15 and kurtosis of -0.94. Mood had a skewness of -1.5 and kurtosis of 1.43. Personality had a skewness statistic of -0.51 and kurtosis of 0.96. Work behaviour had a skewness of -1.57 and kurtosis of 0.48. Employee performance had a skewness of 0.48 and kurtosis of -1.02. For factory two, background music had a skewness statistic of 0.12 and kurtosis of -1.56. Mood had a skewness of -1.21 and kurtosis of -0.55. Personality had a skewness statistic of -0.42 and kurtosis of -1.05. Work behaviour had a skewness of -1.32 and kurtosis of -0.26. Employee performance had a skewness of -1.26 and kurtosis of 4.70.

For factory three, where there was no background music, background music had a skewness statistic of 0.54 and kurtosis of 0.11. Mood had a skewness of 1.75 and kurtosis of 1.07. Personality had a skewness statistic of -0.63 and kurtosis of -0.77. Work behaviour had a skewness of 1.61 and kurtosis of 0.64. Employee performance had a skewness of -1.22 and kurtosis of 0.75. Notably, for all the variables, skewness degree and kurtosis were with -2 and +2 range and hence the data for all the variables were normally distributed. Further, normality of the variables was also confirmed by use of Kolmogorov-Smirnov Shapiro-Wilk test (KS-WS). The findings are presented in Table 4.33.

Table 4.33: Results of KS-SW Test for Normality

Test	Personality	Mood	Background Music	Employee performance	Work behaviour
Kolmogorov-Smirnov[a]	0.326	0.263	0.455	0.41	0.423
Sig.	0.000	0.000	0.000	0.000	0.000
Shapiro-Wilk	0.802	0.823	0.559	0.614	0.435
Sig.	0.000	0.000	0.000	0.000	0.000
Df	225	225	225	225	225
a. Lilliefors Significance Correction					

Source: Author, Current study

P value for Kolmogorov-Smirnov test for data on personality was 0.000 which was less than 0.05, suggesting that data on personality was normally distributed. The same applied to mood and background music. Personality was 0.000<0.05, mood was 0.000<0.05, background music was 0.000<0.05, employee performance was 0.000<0.05, and work behaviour was 0.000<0.05. The Shapiro-Wilk test for personality was P = 0.000<0.05, mood was 0.000<0.05, background music was 0.000<0.05, employee performance was 0.000<0.05, and work behaviour was 0.000<0.05.

CHAPTER FIVE
TEST OF HYPOTHESES, RESULTS AND DISCUSSION

5.1 Introduction

This chapter presents tests of hypotheses, results and discussions. Results were obtained for each hypothesis from T-tests and regression analyses. Discussion of research findings and summary of hypothesis and findings are also presented.

5.2 Comparative Analysis of Performance of the Three Factories

The preliminary discussion with the factories management revealed that, on average, there had been minimal difference in the performance of the three factories both in terms of quality and quantity of the garments produced. The researcher also learnt that the factories were similar in terms of management (same management policies, procedures, regulations, physical space, work layout, number of tailors and their age distribution, average length of service, level of education and the general work climate).

With the foregoing background information, the researcher was confident that background music would be the only major difference in the work environment of the three factories during the study. Thus, any significant difference between the performance of the factories would be attributed to differences in the work environment due to music which varied from continuous in factory one, intermittent in factory two to nil in factory three. In light of the above, it was important to ascertain if the average performance in the three factories differed significantly in line with the status of background in each of the three factories.

Based on prior studies, performance was expected to be highest in factory one, followed by factory two and three in that order. The difference between mean performance of factory one and factory three and between factory two and three were tested using t – statistics. Performance mean for each factory was computed by adding output for each of the five days and dividing the sum by 5. This gave the mean performance per day for each factory. T test was used to determine if mean performance for factory one was significantly different from mean performance for factory three. The same procedure was used to test for the difference between average performance in factory two and three. Table 5.1 presents the results of the T test for the difference between mean performance in factory one and factory three.

Table 5.1: T-test Results for Mean Performance Differences Between Factories

Factory	**Average Performance**	**t**	**df**	**p-value**
Factory one	717.4	5.37	4	.000
Factory three	698.0			
Factory two	701.4	0.66	4	.269
Factory three	698.0			

Source: Author, Current study

As shown in the table, t-test for the difference between mean performance for the factory one and two was significant ($t=5.37$, $P \leq 0.05$), suggesting that tailors in factory one outperformed their counterparts in factory three by a significant margin. Since, as explained earlier, the only notable difference in the work environment of the two factories was background music, the only plausible cause of the performance difference is background music (played continuously in factory one and not at all in factory three)

From table 5.1 the t-test results for performance of factory two relative to factory three shows a much wider margin of difference ($t = 0.66$, $P \leq 0.05$). This result is insignificant, implying that intermittent music played in factory two was not as effective as continuous music played in factory one. It would appear that the gains from intermittent background music were undone by rather dismal performance in the period when the music was not played. This is confirmed by the detailed daily analysis of performance throughout the duration of the study.

After establishing that there was a difference in employee performance in the three factories, factory three where music was not played was not included in the regression analysis because background music, which is the independent variable in the study was absent.

5.3 Test of Hypotheses

Regression analysis was used to achieve the study objectives. The general objective of this study was to determine the role of background music, mood, personality and work behaviour in the relationship between background music and performance of tailoring workers at the EPZ in Athi River.

Five hypotheses corresponding to the five objectives were developed. The hypotheses comprised: there is a relationship between background music and employee performance; the relationship between background music and employee performance is mediated by mood; the relationship between background music and employee performance is moderated by personality; the relationship between background music and employee

performance is moderated by work behaviour and that there is a joint effect of background music, mood, work behaviour and personality on employee performance.

5.3.1 Background Music and Employee Performance

Objective one was intended to establish the effect of background music on employee performance. The following hypothesis was developed to address this objective:

H_1: There is a relationship between background music and employee performance

The hypothesis was tested using simple linear regression analysis with employee performance as the dependent variable and background music as the independent variable. The results are presented in Table 5.2.

As shown in Table 5.2, relationship between background music and employee performance in factory one where music was played continuously is moderately strong (r = 0. 530). The positive correlation coefficient implies that background music has a positive effect on employee performance. In factory two, where music was played intermittently, the relationship between background music and employee performance is weak (r = 0. 146). These results indicate a relationship between background music and employee performance.

Table 5.2: Findings on the Effect of Background Music on Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
Factory One	.530	0.281	0.275	10.281		
Factory Two	.146	0.021	0.013	7.36249		
ANOVA						
Factory		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Factory One	Regression	4826.37	1	4826.37	45.662	.000
	Residual	12366.554	117	105.697		
	Total	17192.924	118			
Factory Two	Regression	138.664	1	138.664	2.558	.112
	Residual	6342.125	117	54.206		
	Total	6480.79	118			
Coefficients						
Factory	**Unstandardised Coefficients**			**Standardised Coefficients**		
		B	Std. Error	Beta	T	Sig.
Factory One	(Constant)	622.107	11.864		52.435	0.000
	Background Music	20.371	3.015	0.53	6.757	0.000
Factory Two	(Constant)	709.671	9.758		72.725	0.000
	Intermittent Background Music	-6.51	4.07	-0.146	-1.599	0.112

Source: Author, Current study

Results presented in Table 5.2, indicate that background music has a significant effect on employee performance ($R = 0.53$, $R^2 = 0.281$, $F = 45.662$ $P<0.05$) for factory one and insignificant effect for factory two ($R = -0.146$, $R^2 = 0.021$, $F = 2.558$, $P>.05$). This implied goodness of fit between the regression model and the data it was used to analyse

for factory one. The results also indicate that for factory one, 28.1% of variance in employee performance was caused by background music, while in factory two only 2.1% of variance in employee performance was caused by background music. Therefore, background music had a positive effect on work performance in factory one where music was played continuously. The goodness of fit of the model reduced from factory one to factory two (intermittent music).

The beta coefficients for the effect of background music on employee performance are also shown in Table 5.2. Background music had a significant beta coefficient of 20.371 ($t=6.757$, $P<0.05$) for factory one and -6.51 ($t=-1.599$, $P>0.05$) for factory two. Based on these findings, the hypothesis that there is a relationship between background music and performance of tailors at the EPZ was confirmed for factory one. Based on this finding, regression equations for the two factories can be fitted as follows:

Factory one: $Y= 622.107 + 20.371X_1 + \varepsilon$ where Y is employee performance, X_1 is the background music and ε is the error term.

Factory two: $Y= 709.671 + -6.51X_1 + \varepsilon$ where Y is employee performance, X_1 is the background music and ε is the error term.

5.3.2 Employee's Mood Mediates the Relationship between Background Music and Employee Performance

The second objective was to establish whether employees' mood mediates the relationship between background music and employee performance. The following hypothesis was developed to address this objective:

H_2 Relationship between background music and employee performance is mediated by employee's mood

The hypothesis was tested by using path analysis proposed by Baron and Kenny (2016). Simple linear regression was used in step one, two and three. In step one, the criterion and predictor variables were employee performance and background music respectively. In step two, the criterion variable was employee mood while the predictor variable was background music. In step three, employee performance and employee mood constituted the criterion and predictor variable respectively.

Multiple linear regression analysis was used in step four where employee performance was regressed on background music and employee mood. Mediation by employee mood in the relationship between background music and employee performance can either be full, partial or none (zero). Full mediation occurs when the statistical tests in all the first three steps are significant and in addition, results in step four show a main significant effect for employee mood (a mediator) and insignificant main effect for background music (independent variable).

Partial mediation is inferred when all or any of the results in the first three steps are significant or when in step four, the effect of background music (independent variable) on employee performance is not significant in the presence of employees' mood (mediator) but the value of the effect is above zero. The results of hypothesis two are presented in Table 5.3, 5.4 and 5.5.

Step 1: $Y=\beta_0 + \beta_1 X_1 + \varepsilon$ **Where X_1 is background music, Y is employee performance and β_0 is constant and β_1 is the coefficient of X_1, ε is error term**

The results of step one are presented in Table 5.4. The findings for factory one, where music was played, show that background music and employee performance have a moderately strong relationship (r = 0.530). The positive correlation coefficient implies that background music has a positive relationship with employee performance. In factory two, where music was played intermittently, the relationship between background music and employee performance is weak (r = 0.146).

The ANOVA results indicate a significant F ratio of 45.662 (P<0.05) in factory one, insignificant F-ratio 2.558 (P>0.05) in factory two and 0.096 (P>0.05) in factory three, suggesting that goodness of fit for factory one. Results presented in Table 5.3, indicate that background music has a significant effect on employee performance (R^2 = 0.281, F = 45.662, P<0.05) for factory one and insignificant effect (R^2 = 0.021, F=2.558, P<0.05) for factory two, implying lack of goodness of fit between the regression model and the data used to analyse in factory two. The results for factory two also indicate that background music has no effect on employee performance if it is played intermittently.

Table 5.3: Regression Results for the Effect of Background Music on Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
Factory One	.530	0.281	0.275	10.281		
Factory Two	.146	0.021	0.013	7.36249		
ANOVA						
Factory		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Factory One	Regression	4826.37	1	4826.37	45.662	.000
	Residual	12366.554	117	105.697		

	Total	17192.924	118			
	Regression	138.664	1	138.664	2.558	.112
	Residual	6342.125	117	54.206		
Factory Two	Total	6480.79	118			
Coefficients						
	Unstandardised Coefficients			**Standardised Coefficients**		
		B	Std. Error	Beta	T	Sig.
	(Constant)	622.107	11.864		52.435	0.000
Factory One	Background Music	20.371	3.015	0.53	6.757	0.000
	(Constant)	709.671	9.758		72.725	0.000
Factory Two	Intermittent Background Music	-6.51	4.07	-0.146	-1.599	0.112

Source: Author, Current study

The results also indicate that for factory one 28.1% of variance in employee performance was caused by background music. Therefore, background music had a positive effect on work performance in factory one. Results presented in Table 5.3, indicate that background music has a significant effect on employee performance (R^2 = 0.281, F= 45.662, P<0.05) for factory one and insignificant effect (R^2 = 0.021, F=2.558, P<0.05) for factory two, implying lack of goodness of fit between the regression model and the data it was used to analyse in factory two. Further, background music had a beta coefficient of 20.371 for factory one which was statistically significant (t = 6.757, P<0.05), and -6.51 for factory two (t = -1.599, P>0.05). These findings imply that one unit of positive change in background music resulted in 28.1% change in employee output in factory one and 2.1% in factory two.

Using these results, the predictive model for the two factories can be constituted as follows:

Factory one: $Y = 622.107 + 20.371X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Factory two: $Y = 709.671 + -6.51X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Step 2: $M=\beta_0 + \beta_1 X_1 + \varepsilon$ where M is mood (Criterion variable) and X_1 is background music (Independent variable) and β_0 is constant and β_1 is the coefficient of X_1 and ε is error term

The second step of the regression path analysis involved determining the effect of background music on mood. This was done by regressing mood on background music. The research findings in Table 5.4 show that relationship between background music and employee mood is weak (r = 0. 149 in factory one and r = 0.094 in factory two).

Table 5.4: Results of Regression Analysis for the Effect of Background Music on Employee Mood

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
One	.149	0.022	0.014	0.4892		
Two	.094	0.009	0.00	0.47128		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	0.636	1	0.636	2.656	.106
	Residual	28.003	117	0.239		
	Total	28.639	118			
Two	Regression	0.233	1	0.233	1.047	.308
	Residual	25.986	117	0.222		
	Total	26.218	118			

Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	0.679	0.565		1.203	0.231
	Background Music	0.234	0.143	0.149	1.63	0.106
Two	(Constant)	1.035	0.625		1.656	0.1
	Intermittent Background Music	0.267	0.261	0.094	1.023	0.308

Source: Author, Current study

ANOVA results shown in the same table indicate an insignificant F- ratio of 2.656 (P>0.05) in factory one and F- ratio of 1.047 (P>0.05) in factory two suggesting that the regression model did not attain a statistical goodness of fit. Further, coefficient of determination was weak, positive and insignificant for factory one and two (R^2 = 0.022, P>0.05) and (R^2 = 0.009, P>0.05) respectively. Further, as shown in Table 5.4, background music had a beta coefficient of 0.234 which was statistically insignificant (t = 1.63 P>0.05) in factory one, and 0.267 in factory two which was equally statistically insignificant (t=1.023, P>0.05).

Using these results, the predictive regression model for the two factories can be constituted as follows:

Factory one: $M = 0.679 + 0.234X_1 + \varepsilon$, where M is employee mood, X_1 is background music and ε is error term

Factory two: $M = -1.035 + 0.26X_1 + \varepsilon$, where M is employee mood, X_1 is background music and ε is error term

Step 3: Y=$\beta_0 + \beta_1 M_1$+ ε, where Y is employee performance and M_1 is mood and β_0 is constant $\beta_1$is the coefficient of M_1 and ε is error term

The third step involved determining the effect of employee mood on employee performance. The regression model shown in step three above was used. The research findings presented in Table 5.5 indicate that the effect of employee mood on employee performance for factory one was strong (r = 0.603) and weak for factory two (r = 0.279).

Table 5.5: Results of Regression Analysis for the effect of Mood on Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
One	.603	0.364	0.358	9.669		
Two	.279	0.078	0.07	7.14739		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	6254.022	1	6254.022	66.892	.000
	Residual	10938.903	117	93.495		
	Total	17192.924	118			
Two	Regression	503.825	1	503.825	9.862	.002
	Residual	5976.964	117	51.085		
	Total	6480.79	118			
Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	678.431	3.018		224.798	0.000
	Mood	13.135	1.523	0.536	8.624	0.000
Two	(Constant)	686.77	2.424		283.266	0.000
	Mood	4.641	1.385	0.295	3.351	0.001

Source: Author, Current study

ANOVA results presented in Table 5.5 indicate a significant F-ratio of 66.892 ($P<0.05$) for factory one and 9.862 ($P<0.05$) for factory two suggesting that the regression model used attained a statistical goodness of fit. Thus the use of the regression model was justified. Further, employee mood had a significant beta coefficient of 14.778 ($t = 8.179$, $P<0.05$) and 4.384 ($t = 3.14$, $P<0.05$) in factory one and two respectively. These findings indicate that increase in employee performance differed in the two factories apparently due to the difference in the level of employee positive mood.

Using these results, the predictive model is constituted as follows:

Factory 1: $Y = 678.431 + 14.778X_1 + \varepsilon$, where Y is employee performance, X_1 is background music and ε is error term

Factory 2: $Y = 686.77 + 4.384X_1 + \varepsilon$, where Y is employee performance, X_1 is background music and ε is error term

Step 4: $Y=\beta_0 + \beta_1 X_1 + \beta_1 M_1 + \varepsilon$ where Y is employee performance, X_1 is background Music, M_1 is mood β_0 is constant, β_1 is the coefficient of M_1 and ε is error term

Multiple regression analysis was used in step four as shown above, where employee performance was regressed on background music and employee mood. The research findings in Table 5.6 indicate that the relationship between mood and background music and employee performance was positive and strong ($r=0.749$) and ($r=0.328$) in respect of factory one and two respectively.

Table 5.6: Results of Multiple Regression Analysis for the Effect of Background Music and Mood on Employee Performance

Model Summary						
Factory	R	R Square	Adjusted R Square	Std. Error of the Estimate		
One	.749	0.562	0.554	8.06		
Two	.328	0.108	0.092	7.06028		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	9657.603	2	4828.801	74.335	.000
	Residual	7535.321	116	64.96		
	Total	17192.924	118			
Two	Regression	698.473	2	349.236	7.006	.001
	Residual	5782.317	116	49.848		
	Total	6480.79	118			
Coefficients(a)						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	613.183	9.358		65.522	0.000
	Background Music	17.3	2.39	0.45	7.238	0.000
	Mood	13.135	1.523	0.536	8.624	0.000
Two	(Constant)	704.869	9.467		74.457	0.000
	Intermittent Background Music	-7.748	3.921	-0.174	-1.976	0.051
	Mood	4.641	1.385	0.295	3.351	0.001

Source: Author, Current study

In factory one where music was played (r = 0.749) and in factory two where music was intermittently played (r = 0.328). The positive correlation coefficients imply that employee performance increased in tandem with background music.

ANOVA results presented in Table 5.6 above show a significant F-ratio of 74.335 ($P<0.05$) for factory one and 7.006, ($P<0.05$) for factory two. This is evidence that the regression model attained a statistical goodness of fit. Thus, use of regression model was justified. Further, background music and employee mood have a significant effect on employee performance ($r = 0.749$, $R^2= 0.562$) for factory one and ($r = 0.328$, $R^2 = 0.108$) for factory two. The R^2 value of 0.562 implies that background music and employee mood jointly explain 56.2% of variation in employee performance in factory one where music was played throughout the time. The positive correlation coefficient and significant R^2 imply that both background music and employee mood had a strong positive relationship with employee performance. The fact that background music and employee mood accounted for only 56.2% of variation in employee performance suggests that the remaining 43.8% of change in employee performance is accounted for by unknown factors not included in the study.

Further, results show that employee mood and background music had a beta coefficient of 13.135 and 17.3 in factory one and 4.641 and -7.748 in factory two. These findings imply that preferred background music enhanced the mood of participants which impacted positively in the performance of the tailors. From these results the predictive model is constituted as follows:

Factory 1: $Y = 613.183 + 17.3X_1 + 13.135M + \varepsilon$, where Y is employee performance, X_1 is background music, M is employee mood, and ε is error term

Factory 2: $Y = 704.869 + -7.748X_1 + 4.641M + \varepsilon$, where Y is employee performance, X_1 is background music, M is employee mood, and ε is error term

5.3.3 The Effect of Personality on the Relationship between Background Music and Employee Performance

To establish the effect of personality on the relationship between background music and employee performance, the following hypothesis was formulated and tested using stepwise regression analysis.

H_3 Relationship between background music and employee performance is moderated by employee's personality

This hypothesis was tested in three steps. In step one, the criterion and predictor variables were employee performance and background music respectively. In step two, the criterion variable was employee performance while the predictor variables were background music and employee's personality. In step three, multiple regression analysis was used. Employee performance was regressed on background music, employee personality and the interaction term (background music*employee personality).

Step 1: $Y=\beta_0 + \beta_1 X_1 + \varepsilon$, where Y is employee performance, X_1 is background music and β_0 is constant and β_1 is the coefficient of X_1, ε is error term

This model produced the results presented in Table 5.7. As shown, the relationship between background music and employee performance is moderately strong in factory

one (r = 0.530) and weak in factory two (r = 0.146). The positive correlation coefficient implies that background music has a positive effect on employee performance. The R^2 value of 0.281 in factory one implies that background music explains 28.1% of the variation in employee performance, and in factory two 2.1% increase in employee performance is explained by background music.

Table 5.7: Results of Regression Analysis of the effect of Background Music on Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
Factory One	.530	0.281	0.275	10.281		
Factory Two	.146	0.021	0.013	7.36249		
ANOVA						
Factory		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Factory One	Regression	4826.37	1	4826.37	45.662	.000
	Residual	12366.554	117	105.697		
	Total	17192.924	118			
Factory Two	Regression	138.664	1	138.664	2.558	.112
	Residual	6342.125	117	54.206		
	Total	6480.79	118			
	Total	22025.933	118			
Coefficients						
	Unstandardised Coefficients			**Standardised Coefficients**		
		B	Std. Error	Beta	T	Sig.
Factory One	(Constant)	622.107	11.864		52.435	0.000
	Background Music	20.371	3.015	0.53	6.757	0.000
Factory Two	(Constant)	709.671	9.758		72.725	0.000
	Intermittent Background Music	-6.51	4.07	-0.146	-1.599	0.112

Source: Author, Current study

ANOVA results indicate a significant F- ratio of 45.662 (P<0.05) in factory one and 2.558 (P>0.05) in factory two, suggesting that the regression model attained a statistical goodness of fit for factory one. Thus the use of the regression model was appropriate. Further, background music had a beta coefficient of 20.371 which was statistically significant (t = 6.757, P<0.05) in factory one and -6.51, (t = -1.599 P>0.05) in factory two, which was not significant (P<0.05) suggesting that a unit change in background music led to increase in employee performance by 28.1% in factory one. Regression coefficient for factory two was not significant.

Based on these results, the predictive model can be constituted as follows:

Factory 1: $Y = 622.107 + 20.371X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Factory 2: $Y = 709.671 + -6.51X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Step 2: $Y=\beta_0 + \beta_1 X_1 + \beta_3 P_3 + \varepsilon$ Where P_3 is personality and X_1 background music and β_0 is constant and $\beta_1$is the coefficient of X_1 and β_3 is the coefficient of P_3, ε is error term

Step two of the regression analysis tested the effect of employee personality and background music on employee performance. Thus, employee performance was regressed on background music and employee personality. From the findings presented in Table 5.8, background music and employee personality had a moderately strong relationship in factory one (r = 0.542) and (r = 0.204) for factory two. Together, background music and employee personality accounted for 29.4% (R^2= 0.294) of

variance in employee performance for factory one, where music was played throughout. In factory two, background music and personality accounted for less than 0.5% in employee performance. Therefore, employee personality moderated the effect of background music on employee performance.

Table 5.8: Result of Regression Analysis for the Effect of Background Music and Employee Personality on Employee Performance

Model Summary						
Factory	R	R Square	Adjusted R Square	Std. Error of the Estimate		
One	.542	0.294	0.282	10.231		
Two	.204	0.042	0.025	7.31694		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	5050.128	2	2525.064	24.122	.000
	Residual	12142.796	116	104.679		
	Total	17192.924	118			
Two	Regression	270.431	2	135.215	2.526	.084
	Residual	6210.359	116	53.538		
	Total	6480.79	118			
Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	619.515	11.939		51.888	0.000
	Background Music	20.147	3.004	0.524	6.707	0.000
	Personality	1.324	0.906	0.114	1.462	0.146
Two	(Constant)	706.748	9.875		71.568	0.000
	Intermittent Background Music	-6.383	4.046	-0.143	-1.578	0.117
	Personality	1.012	0.645	0.143	1.569	0.119

Source: Author, Current study

The ANOVA results indicate an F-ratio of 24.122 (P<0.05) in factory one and insignificant F-ratio of 2.526 (P>0.05) in factory two, suggesting that the regression model attained a statistical goodness of fit. Thus the use of the regression model was appropriate.

As shown in Table 5.8, personality had a beta coefficient of 1.324 (t = -1.462, P>0.05) in factory one and 1.012 (t = -1.569, P>0.05) in factory two, suggesting that employee's personality does not affect the relationship between background music and employee performance. Using these results, the predictive model can be substituted as follows:

Factory 1: $Y = 619.515 + 20.147X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Factory 2: $Y = 706.748 + -6.383X_1 + \varepsilon$, where Y is employee performance, X_1 is the background music and ε is error term

Step 3: Y=$\beta_0 + \beta_1 X_1 + \beta_2 P_2 + \beta_3 X_3 * \beta_3 X_3$+ ε where P is personality and X is background music, $\beta_3 X_3 * \beta_3 X_3$ is the interaction term between background music and personality, β_0 is the constant and $\beta_1$is the coefficient of X_1 and β_3 is the coefficient of the interaction term, ε is error term

The third step of the regression analysis involved incorporating the interaction term in the regression equation presented above. The research findings in Table 5.9 show that relationship among background music, employee personality and employee performance is strong (r = 0.759) in factory one and weak in factory two (r =0.346).

ANOVA results presented in Table 5.9 indicate a significant F-ratio of 52.082 (P<0.05) for factory one and significant F-ratio of 5.2 (P>0.05) for factory two. This suggested that the regression model attained a statistical goodness of fit for factory one. Thus, use of the regression model was appropriate. With the introduction of the interaction term, the F-ratio increased from 45.662 to 52.082, and 2.558 to 5.2 for factory one and two respectively. With the introduction of interaction variable, F-ratio increased. This implies increased power of the predictor variable following inclusion of the interaction term. Table 5.9 shows the results of regression analysis for moderating effect of personality on the relationship between background music and employee performance.

Table 5.9 Results of Regression Analysis for Moderating Effect of Personality on the Relationship Between Background Music and Employee Performance

Model Summary						
Factory	R	R Square	Adjusted R Square	Std. Error of the Estimate		
One	.759	0.576	0.565	7.961		
Two	.346	0.119	0.096	7.04437		
ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
One	Regression	9903.664	3	3301.221	52.082	.000
	Residual	7289.26	115	63.385		
	Total	17192.924	118			
Two	Regression	774.129	3	258.043	5.2	.002
	Residual	5706.661	115	49.623		
	Total	6480.79	118			

Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	634.227	9.442		67.174	0.000
	Background Music	11.37	2.544	0.296	4.47	0.000
	Personality	0.723	0.708	0.062	1.021	0.310
	Interaction (Music*Personality)	3.388	0.387	0.582	8.751	0.000
Two	(Constant)	710.773	9.591		74.109	0.000
	Intermittent Background Music	-10.91	4.146	-0.245	-2.631	0.010
	Personality	0.753	0.626	0.106	1.204	0.231
	Interaction (Music*Personality)	1.865	0.585	0.299	3.186	0.002

Source: Author, Current study

Further, Table 5.9 indicates that background music for factory one had $R^2 = 0.576$ and $R^2 = 0.119$ for factory two and a beta coefficient of 11.37 which was statistically significant ($t = 4.47$, $p<0.05$), personality had an insignificant coefficient 0.723 ($t = 1.021$, $p> 0.05$) while the interaction term had a significant beta coefficient (beta = 3.388, $t = 8.751$, $p<0.05$). Factory two had a significant coefficient for background music, personality and the interaction term. These findings imply that employee personality does moderate the relationship between background music and employee performance. Thus the hypothesis (H_3) that relationship between background music and employee performance is moderated by employee personality is therefore supported.

5.3.4 The Influence of Work Behaviour on the Relationship between Background Music and Employee Performance

A three stage stepwise regression analysis by Baron and Kenny (1986) was used to establish the effect of work behaviour on the relationship between background music and employee performance. The following hypothesis was developed to address this objective:

H_4: The relationship between background music and employee performance is moderated by employee work behaviour

This hypothesis was tested in three steps: In step one, the criterion and predictor variables were employee performance and background music respectively. In step two, the criterion variable was employee performance while employees work behaviour and background music were predictor variables. In step three, multiple regression analysis was used where employee performance was regressed on background music, employee work behaviour and the interaction term.

Step 1: Y = $\beta_0 + \beta_1 X_1$ + ε where Y is employee performance X_1 is background music, and ε is error term

The research findings in Table 5.10 indicate that the relationship between background music and employee performance was moderately strong in factory one (r = 0.530) and weak in factory two (r = 0.146). The positive correlation coefficient in factory one and two imply that background music has a positive relationship with employee performance.

Table 5.10: Results of Regression Analysis for the Effect of Background Music on Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
Factory One	.530	0.281	0.275	10.281		
Factory Two	.146	0.021	0.013	7.36249		
ANOVA						
Factory		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Factory One	Regression	4826.37	1	4826.37	45.662	.000
	Residual	12366.554	117	105.697		
	Total	17192.924	118			
Factory Two	Regression	138.664	1	138.664	2.558	.112
	Residual	6342.125	117	54.206		
	Total	6480.79	118			
Coefficients						
	Unstandardised Coefficients			**Standardised Coefficients**		
		B	Std. Error	Beta	T	Sig.
Factory One	(Constant)	622.107	11.864		52.435	0.000
	Background Music	20.371	3.015	0.53	6.757	0.000
Factory Two	(Constant)	709.671	9.758		72.725	0.000
	Intermittent Background Music	-6.51	4.07	-0.146	-1.599	0.112

Source: Author, Current study

ANOVA results presented in Table 5.10 indicate a significant F-ratio of 45.662 ($p<0.05$) for factory one and 2.558 for factory two, suggesting that the regression model attained a statistical goodness of fit. Thus, use of regression model was justified.

Step 2: Y = $\beta_0 + \beta_1 X_1 + \beta_3 WB_3$ + ε, where WB_3 is work behavior X_1 background music, Y is employee performance and ε is error term

Step two of the stepwise regression analysis was meant to determine the effect of work behaviour and background music as independent variables on employee performance. Thus, employee performance was regressed on background music and work behaviour simultaneously. Table 5.11 presents results of regression analysis for the effect of background music and work behaviour on employee performance.

From the findings in Table 5.11, background music and employee work behaviour had a moderately strong relationship with employee performance for factory one (r = 0.548) and a weak relationship for factory two (r = 0.307). This is a marginal increase in prediction power with the introduction of the work behaviour from r = 0.530 (factory one) and r = 0.146 (factory two). Together background music and employee work behaviour accounted for 30% (R^2 = 0.3) of variance in employee performance in factory one where music was played throughout. Therefore, employee work behaviour did not moderate the relationship between background music on employee performance.

Table 5.11: Results of the Regression Analysis for the Effect of Employee Work Behaviour on the Relationship between Background Music and Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
One	.548	0.3	0.288	10.185		
Two	.307	0.094	0.079	7.11267		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	5159.02	2	2579.51	24.865	.000
	Residual	12033.904	116	103.741		
	Total	17192.924	118			
Two	Regression	612.335	2	306.167	6.052	.003
	Residual	5868.455	116	50.59		
	Total	6480.79	118			
Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	616.069	12.228		50.381	0.000
	Background Music	19.954	2.996	0.519	6.661	0.000
	Work behaviour	4.247	2.372	0.14	1.791	0.076
Two	(Constant)	703.548	9.637		73.003	0.000
	Intermittent Background Music	-7.494	3.945	-0.168	-1.899	0.060
	Work behaviour	4.779	1.562	0.271	3.06	0.003

Source: Author, Current study

Step 3: $Y=\beta_0+\beta_1X_1+\beta_2WB_2+\beta_3X_3*\beta_3WB_3$ + ε, Where WB is work behaviour, X is background music, $\beta_3X_3*\beta_3WB_3$ is the interaction term between background music and work behaviour, β_0 is the constant $\beta_1$is the coefficient of X_1, β_3 is the coefficient of the interaction term, and ε is error term

The third step of the regression analysis involved incorporating the interaction term in the regression equation. The research findings in Table 5.12 show the effect of background music, employee work behaviour and interaction term on employee performance.

Table 5.12 further indicate that 31.4% (R^2 = 0.314, $p<0.05$) of change in employee performance is caused by the predictor variables namely; background music and employee work behaviour. The results presented in Table 5.12 show correlation coefficients for the effect of work behaviour on the relationship between background music on employee performance were 0.561 and 0.317 for factory one and factory two respectively.

Table 5.12: Results of Regression Analysis for Moderating Effect of Work Behaviour on the Relationship between Background Music and Employee Performance

Model Summary						
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
One	.561	0.314	0.297	10.124		
Two	.317	0.1	0.077	7.1198		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	5406.78	3	1802.26	17.585	.000
	Residual	11786.144	115	102.488		
	Total	17192.924	118			
Two	Regression	651.265	3	217.088	4.283	.007
	Residual	5829.525	115	50.692		
	Total	6480.79	118			
Coefficients						
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	t	Sig.
One	(Constant)	617.113	12.173		50.697	0.000
	Background Music	18.883	3.056	0.491	6.178	0.000
	Work behaviour	3.973	2.364	0.131	1.681	0.096
	Interaction (Music*Work Behaviour)	0.355	0.228	0.124	1.555	0.123
Two	(Constant)	703.891	9.655		72.906	0.000
	Intermittent Background Music	-7.948	3.983	-0.179	-1.995	0.048
	Work behaviour	4.369	1.632	0.248	2.676	0.009
	Interaction (Music*Work Behaviour)	0.238	0.271	0.082	0.876	0.383

Source: Author, Current study

With the introduction of the interaction term, the strength of relationship between background music and work behaviour changes to 0.561 for factory one and 0.317 for factory two from r = 0.530 and r = 0.146 respectively. This implies that the relationship increased. In factory one, background music had a significant coefficient ($\beta = 0.491$ $p<.05$), work behaviour had insignificant beta coefficient ($\beta = 0.131$, $p>.05$) and interaction term ($\beta = 0.124$, $p>.05$). For factory two, the coefficient was not significant. Thus, work behaviour did not have a moderating effect on the relationship between background music and employee performance. Based on this finding, the hypothesis (H_4) that the relationship between background music and employee performance is moderated by employee behaviour was not supported.

5.3.5 The Joint Effect of Background Music, Employee Mood, Work Behaviour and Personality on Employee Performance

The general objective of this study was to determine the effect of background music, mood, personality and work behaviour on the performance of tailoring workers at the EPZ in Athi River. To achieve this objective, the following hypothesis was developed: The joint effect of background music, mood, employee personality and work behaviour is greater than the effect of background music on employee performance. Multiple linear regression model was used to test this hypothesis. The results are presented in Table 5.13.

Table 5.13: Multiple Regression Results Depicting Joint Effect of Background Music, Mood, Work Behaviour and Personality on Employee Performance

		Model Summary				
Factory	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**		
One	.753	0.567	0.552	8.079		
Two	.384	0.148	0.118	6.96095		
ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
One	Regression	9752.234	4	2438.058	37.354	.000
	Residual	7440.691	114	65.269		
	Total	17192.924	118			
Two	Regression	956.942	4	239.235	4.937	.001
	Residual	5523.848	114	48.455		
	Total	6480.79	118			
			Coefficients			
		Unstandardised Coefficients		Standardised Coefficients		
		B	Std. Error	Beta	T	Sig.
One	(Constant)	610.459	9.786		62.379	0.000
	Background Music	17.144	2.4	0.446	7.143	0.000
	Mood	12.827	1.562	0.524	8.213	0.000
	Personality	0.758	0.719	0.065	1.054	0.294
	Work behaviour	1.02	1.921	0.034	0.531	0.596
Two	(Constant)	700.486	9.55		73.347	0.000
	Intermittent Background Music	-8.096	3.876	-0.182	-2.089	0.039
	Mood	3.655	1.433	0.232	2.551	0.012
	Personality	0.435	0.641	0.061	0.679	0.499
	Work behaviour	3.236	1.663	0.184	1.946	0.054

a. Predictors: (Constant), work behaviour, mood, personality, background music

b. Dependent Variable: Employee performance

Source: Author, Current study

As shown in Table 5.13, the joint effect of background music, employee personality, employee mood and work behaviour on employee performance is strong for factory one (r = 0.753) and weak for factory two (r = 0.384). The positive correlation coefficient of correlation implies that background music has a positive effect on employee performance. Jointly, background music, employee personality, employee mood and work behaviour account for 56.7% of variation in employee performance ($R^2 = 0.567$) for factory one and 14.8% factory two ($R^2 = 0.148$).

Jointly, background music, employee personality, employee mood and work behaviour have significant effect on employee performance ($F = 37.354$, $P<0.05$) for factory one, and ($F = 4.937$, $P<0.05$) for factory two, implying goodness of fit between the regression model and data it was used to analyse. Background music had a significant coefficient for factory one and two. Employee mood also has a significant coefficient for factories one and two. Work behaviour had insignificant coefficient in all factories. Personality had insignificant coefficient in the two factories. Hence in predicting employee performance, the most important variables to consider are background music and employee's mood. Employee personality and work behaviour play an important role as moderators of the relationship between background music and employee performance.

5.4 Discussion of the Research Findings

This study had five objectives and five hypotheses. The discussion revolves around the research findings, particularly from the tests of the hypotheses. Various statistical techniques were used to test the hypotheses. They comprise simple linear regression, path

analysis proposed by Baron and Kenny (1986), stepwise regression analysis and multiple regression analysis. The discussion is structured along the research objectives.

5.4.1 The Effect of Background Music on Employee Performance

T-test was done to compare if the mean of employee's performance for the three factories in the study were statistically different from each other. Mean performance of factory three, where music was not played, was compared to that of factory one, where music was continuously played. The mean performance of factory one is recorded at 717 garments while that of factory three is 698 garments. This means that background music has a significant impact on the performance of employees in factory one compared to those in factory three where music was not played.

Similarly, the study compared the mean performance of factory two and factory three. The mean performance for factory 2 is 701 garments while that of factory three is 698 garments. This means that intermittent background music had a positive relationship with employee performance though not significant. This means that intermittent background music does not have a significance effect on employee performance. Compared with factory one, where background music was played throughout and performance increased significantly, background music in factory two had a positive relationship which was not significant with employee performance.

To establish the effect of background music on employee performance, simple linear regression was used. The study obtained a correlation coefficient of 0.530 in factory one and 0.146 in factory two. The positive correlation coefficient implies that background

music has a positive relationship with employee performance. The relationship between background music and employee performance in factory one where music was played continuously is moderately strong (r = 0. 530). The positive correlation coefficient implies that background music has a positive effect on employee performance. In factory two, where music was played intermittently, the relationship between background music and employee performance is weak (r = 0.146). These results indicate that there is a relationship between background music and employee performance.

Background music had a significant effect on employee performance (R = 0.53, R^2 = 0.281, F = 45.662 P<0.05) for factory one and insignificant effect for factory two (R = -0.146, R^2 = 0.021, F = 2.558, P>.05). Background music had a significant beta coefficient of 20.371 (t = 6.757, P<0.05) for factory one and -6.51 (t = -1.599, P>0.05) for factory two. Based on these findings the study can confirm that there is a relationship between background music and performance of tailors at the EPZ in Athi River. In factory one where preferred background music was played continuously, tailors spent more time working, they experienced less fatigue, they were cheerful, swift, and agile. All this contributed to positive work performance in terms of quality and quantity of garments they produced.

During the study, the weather in the afternoon was generally hot thus draining energy levels of tailors. This might have affected concentration and focus. When interviewed, participants in this study agreed that background music helped them focus on the task at hand, were more alert and experienced less fatigue which helped them work more hours

beyond their normal duty, finished their scheduled work on time and had more time left to organise their work space for the next task. They were always ready for the next assignment regardless of the hot weather.

Another study by Watson (2014) on how listening to music improves accuracy at work concluded that there are specific genres that people love to listen to while doing certain tasks. A study by Oldham et al. (1995) on headset use by employees in a retail organisation-office and its effects on mood, performance, turnover intentions, job satisfaction and other work responses and another one by Lesiuk (2005) on music listening via personal stereo or headset use in computer programmers and the effects on quality of work, time on task and affect suggest that self-selected music listening generally increases work performance as well as positive affect in office-based environment. This study also supports a study by Pasick (2014) which showed that factory workers performed at a higher level when upbeat happy tunes were played in the background and also supports another one by North and Hargreaves (2008) who also found that listeners in a laboratory set-up loved happy music.

Kiger (1989) considers music in fast tempo, major mode and with lyrics to be high information load music and says that this kind of music may negatively affect performance. This study found that music with lyrics did not affect tailoring workers negatively, and that the more familiar they were with a particular type of music, the more they enjoyed it thus increasing their performance. Familiar music which they love communicates to their emotions, giving meaning to their thoughts and feelings.

The findings compared with those of Anyanwu (2014) who did a study in a dissection laboratory among dental and medical students to measure the impact of stress associated with dissection experience. Over 90% of participants expressed the desire to incorporate background music because it is a useful tool that could be used to enhance learning conditions. He noted that background music relaxes and improves alertness, reduces noise levels, creates a calm and enabling environment, optimizes time and keeps energy levels high.

5.4.2 Background Music, Employees Mood and Employee Performance

To establish whether employees' mood mediates the relationship between background music and employee performance, path analysis proposed by Baron and Kenny (1986) which involved use of simple and multiple linear regression was used. With the introduction of the mood, the coefficient of correlation changes from 0.530 in factory one and , 0.146 in factory two to 0.749 and 0.328 respectively. Further, with introduction of mood in the regression equation relationship between background music and employee performance, F-statistic increased from 45.662 to 74.335 for factory one and 2.558 to 7.006 for factory two.

The research findings indicate that the relationship between mood and background music and employee performance was positive and strong ($r = 0.749$) and ($r = 0.328$) in respect of factory one and two respectively. Background music and employee mood have a significant effect on employee performance ($r = 0.749$, $R^2 = 0.562$) for factory one and ($r = 0.328$, $R^2 = 0.108$) for factory two. The R^2 value of 0.562 implies that, background

music and employee mood jointly explain 56.2% of variation in employee performance in factory one where music was played throughout. The positive correlation coefficient and significant R^2 imply that both background music and employee mood had a strong positive relationship with employee performance. The fact that background music and employee mood accounted for only 56.2% of variation in employee performance suggests that the remaining 43.8% of change in employee performance is accounted for by unknown factors not included in the study.

The increase in F-statistic indicated the importance of the contribution of mood to the strength of the relationship between background music and employee performance which improved tremendously with introduction of mood. In factory one and two, employee mood had a beta coefficient of 13.135 and 4.641 respectively. The positive coefficient indicates that background music and mood had a positive effect on employee performance. The p-values for the coefficients relating to factory one and two were less than 0.05, indicating that the coefficients are significant and can be used to predict performance using the assessed levels of employee mood and background music.

Other empirical studies conducted have revealed that the most important purpose of music listening could be that of mood regulating (DeNora, 2010; North and Hargreaves, 1999). Haake (2011) observes that background music has two main roles as pertains to work activities. This includes managing disruptions as a way of managing work-related stress and having control over the environment. Sonos, who is a speaker manufacturer, conducted a study on the relationship between music and mood (Titlow, 2016). The study

revealed an improvement in positive feelings and activity upon playing the background music. The study further found that background music made the daily activities and routines more enjoyable. Majority of the people in the study indicated that music helped them accomplish their tasks easily, while some stated that the food tasted well with music in the background. This study confirms that background music enhances mood which eventually affects work performance positively.

5.4.3 Background Music, Personality, and Employee Performance

To establish the effect of personality on the relationship between background music and employee performance, stepwise regression analysis was used. With introduction of personality in the relationship between background music and employee performance, the correlation coefficient for the relationship between background music and performance changed marginally. F ratio was insignificant indicating an insignificant contribution of personality to the relationship between background music and employee performance.

Background music for factory one had a beta coefficient of 11.37 which was statistically significant ($t = 4.47$, $p<0.05$), personality had an insignificant coefficient 0.723 ($t = 1.021$, $p> 0.05$) while the interaction term had a significant beta coefficient (beta = 3.388, $t = 8.751$, $p<0.05$). Factory two had a significant coefficient for background music, personality and the interaction term. These findings imply that employee personality does moderate the relationship between background music and employee performance. Thus the hypothesis (H_3) that relationship between background music and employee performance is moderated by employee personality is therefore supported.

When personality was included in the regression equation, the model was still significant as shown by the p-value of $P < 0.05$. However, F-statistic declined, implying a reduction in predictive power of the model as a result of introduction of the personality as a mediating variable. The effect of personality on employee performance had an insignificant coefficient across all factories.

With introduction of the interaction term, the relationship between background music and employee performance strengthened with F-ratio increasing from 45.662 to 52.082 in factory one where there was background music, and 2.558 to 5.2 in factory two where background music was intermittently played. With the introduction of the interaction term, the strength of the relationship increased suggesting that personality has moderating effect on the relationship between background music and employee performance. These findings imply that personality has significant moderating effect on the relationship between background music and employee performance. This could be due to the fact that most of the tailors were extraverts and that they responded positively to the introduction of background music as an external stimulus in their work environment.

Rentfrow and Gosling, (2003) observed that extraverts use music to increase their arousal, especially when doing monotonous tasks. From this study, it is evident that most tailors at the EPZ Athi River are extraverts; this means that background music played during the study in factory one and intermittently in factory two may have played a key role in increasing their arousal at work.

5.4.4 Background Music, Work Behaviour and Employee Performance

The study also sought to establish the moderating effect of work behaviour on the relationship between background music and employee performance. Thus, employee performance was regressed on background music and work behaviour. From the findings, background music and employee work behaviour had a strong relationship in factory one and moderate relationship in factory two.

With the introduction of interaction term, the strength of relationship between background music and work behaviour changed to 0.561 for factory one and 0.317 for factory two from r = 0 .530 and r = 0.146 respectively. This implies that the relationship increased. In factory one, background music had a significant coefficient ($\beta = 0.491$ $p<.05$), work behaviour had an insignificant beta coefficient ($\beta =0.131$, $p>.05$) and interaction term ($\beta = 0.124$, $p>.05$). For factory two, the coefficient was not significant. Thus, work behaviour had moderating effect on the relationship between background music and employee performance in factory one only.

Work behaviour had positive coefficients which was also statistically significant for factory one only. For factory two, work behaviour had no significant effect. Findings of this study indicate that the relationship between background music and employee performance as moderated by work behaviour was weak. With the introduction of the interaction term, the strength of the relationship reduced marginally in both factories. The interaction term also had insignificant beta coefficient. These findings implied that work behaviour had an insignificant moderating effect on the relationship between background music and employee performance.

5.4.5 Joint Effect of Background Music, Mood, Work Behaviour and Personality on Employee Performance

This study was to determine the role of background music, employee mood, personality and work behaviour in employee performance of tailoring workers at the EPZ in Athi River. It found that the joint effect of background music, employee personality, employee mood and work behaviour on employee performance is strong for factory one ($r = 0.753$) and weak for factory two ($r = 0.384$). The positive correlation coefficient of correlation implies that background music has positive effect on employee performance. Jointly, background music, employee personality, employee mood and work behaviour account for 56.7% of variation in employee performance ($R^2 = 0.567$) for factory one and 14.8% in factory two ($R^2 = 0.148$).

Jointly, background music, employee personality, employee mood and work behaviour have significant effect on employee performance ($F = 37.354$, $P<0.05$) for factory one, and ($F = 4.937$, $P<0.05$) for factory two. ANOVA results indicated a p-value of 0.000 ($p<0.05$) for factory one and two which implied that background music, mood, personality and work behaviour had significant strong effect on employee performance in those factories. The positive impact resulting from background music, mood, personality and work behaviour are statistically significant for factories one and two.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter summarises the research findings, gives a conclusion and highlights its contribution of the study to knowledge, practice and policy, the implications of the findings, limitations of the study and makes recommendations for further studies.

6.2 Summary of the Findings

This section gives a summary of the research findings. The summaries are anchored on the research objectives.

6.2.1 Background Music and Employee Performance

The study sought to establish the effect of background music on employee performance. It was found that background music had a significant positive effect on employee performance. The test achieved a correlation coefficient of .530 in factory one and .146 in factory two. The difference in the strength of the correlation coefficients between factory one (strong) and factory two (the weak) can be explained by the degree to which background music is present in the work environment, which is either played throughout the working time or played intermittently.

In factory one where preferred background music was played continuously, workers reported spending more time working. From their submissions, the respondents experienced less fatigue; they were cheerful, swift and agile. All these behaviours at work contributed to positive work performance in terms of quality and quantity of garments

they produced. Participants in this study agreed that background music helped them to focus on their task at hand, were more alert and experienced less fatigue which helped them to work for more hours beyond their normal duty, finished their scheduled work on time and had time left to organise their work space for the next task. They were always ready for the next assignment regardless of the hot weather.

In factory two where music was played intermittently, the tailors exhibited confusing behaviours. One afternoon when music was not played, they paused and asked for music to be played, portraying feelings of confusion. When music was played, tailors were agile, happy and focused in the activities they were undertaking. But when music stopped, silence could be felt immediately followed by murmuring, talking and movement. This was a clear indication that the absence of background music had an effect on their work environment. T-test results showed significant differences between performance of factory one and three and factory two and three. In both cases, the mean score for factory one and factory two are higher than the mean performance of factory three.

Background music had a significant effect on employee performance ($R = 0.53$, $R^2 = 0.281$, $F = 45.662$ $P<0.05$) for factory one and insignificant effect for factory two ($R = -0.146$, $R^2 = 0.021$, $F = 2.558$, $P>.05$). Further, background music had a significant beta coefficient of 20.371 ($t = 6.757$, $P<0.05$) for factory one and -6.51 ($t = -1.599$, $P>0.05$) for factory two. These findings confirm that there is a positive relationship between background music and performance of tailors at the EPZ.

6.2.2 Background Music, Employee Mood, and Employee Performance

As explained in chapter five, in the absence of employee mood (mediator), background music had a significant effect on employee performance. Similarly, employee mood had a significant effect of employee performance in the absence of background music. As expected, the effect of background music on employee performance was not significant in the presence of employee mood. This is a confirmation that employee mood fully mediated relationship between background music and employee performance in both factory one (where music was played throughout) and factory two (where music was played intermittently). Mediation is inferred when the effect of independent variable on the dependent variable is significant in the absence of mediator but is insignificant in the presence of a mediator

6.2.3 Background Music, Personality, and Employee Performance

This current study found that personality had a significant effect on the relationship between background music and employee performance. With introduction of personality in the regression equation containing background music, the correlation coefficient for the relationship between background music and performance changed marginally.

To determine the moderating effect of personality on the relationship between background music and employee performance, interaction between background music and personality was tested. The values of R, R^2 and Beta showed that the moderation effect was significant at $P < 0.05$ in factory one and two.

6.2.4 Background Music, Work Behaviour and Employee Performance

It was found that work behaviour had insignificant influence on the relationship between background music and employee performance. That is, when employee performance was regressed on the interaction between background music and work behaviour simultaneously, the results were insignificant in both factory one and two with (R^2= 0.314) for factory one and (R^2 = 0.1) for factory two.

6.2.5 Joint Effect of Background Music, Mood, Personality and Work Behaviour on Employee Performance

The general objective of this study was to determine the role of background music, mood, personality and work behaviour in performance of tailoring workers at the EPZ in Athi River, Kenya. The study found that background music, mood, personality and work behaviour had a positive and significant effect on employee performance of tailoring workers at the EPZ in Athi River. The coefficients of correlation obtained by the study were .753 for factory one and .384 for factory two. R^2 and Beta were both significant for factories one (R^2= 0.567 and factory two (R^2 0.148)

6.2.6 Summary of Objectives, Hypotheses and the Findings

The summary of the study objectives, hypotheses and outcomes of the tests of hypotheses results are presented in Table 6.1

Table 6.1: Table Summary of Findings

OBJECTIVE	HYPOTHESIS	TEST OUTCOME
Objective one: To establish the effect of background music on employee performance.	H_1: There is a relationship between background music and employee performance.	Confirmed
Objective two: To determine the effect of employees' mood on the relationship between background music and employee performance.	H_2: The relationship between background music and employee performance is mediated by employee mood.	Confirmed
Objective three: To establish the effect of personality on the relationship between background music and employee performance.	H_3: The relationship between background music and employee performance is moderated by personality.	Confirmed
Objective four: To establish the effect of work behaviour on the relationship between background music and employee performance.	H_4: The relationship between background music and employee performance is moderated by work behaviour.	Not Confirmed
Objective five: To establish the Joint effect of background music, mood, personality, work behaviour on employee performance	H_5: The joint effect of background music, mood, personality and work behaviour is greater than their individual effects on employee performance	Confirmed

Source: Author, Current study

6.3 Conclusion

This section highlights the conclusions drawn from the research findings. The conclusions are anchored on the objectives.

6.3.1 Effect of Background Music on Employee Performance

The study concludes that background music has a positive effect on employee performance. Background music plays the role of companionship or accompaniment to tailoring workers who do repetitive tasks. It is also evident that background music locks out other noises at work and helps them to concentrate on their work especially in an open work environment; talking and movement are tremendously reduced with background music playing in the work environment. More specifically, this research concludes that for music to be effective, it should match the listener's socio-cultural background and age group, i.e. background music should reflect familiarity and preferences, it should be functional for the activity in that the rhythm should approximate motor patterns involved, the volume should not be loud that is, it should be controlled.

In the current study, a conclusion made is that if tailors are given a chance to determine what music should be played based on their preferences and familiarity, then background music becomes a powerful management tool not only for increasing efficiency of the workforce but also for boosting their mental and emotional state.

6.3.2 The Role of Employees' Mood In the Relationship between Background Music and Employee Performance

It was found that employee mood significantly mediates the relationship between background music and employee performance. It is apparent from the current research that background music at work raises the listener's mood, which in turn impacts employee's performance positively. It can therefore be concluded that employees who listened to music experienced positive change in mood and hence change in performance.

In factory two where background music was played intermittently, it was found that participant's mood depended on presence or absence of background music which in turn caused fluctuation in employee performance. In conclusion therefore background music impacts employees by influencing their mood.

6.3.3 Effect of Personality on the Relationship between Background Music and Employee Performance

It is concluded in this study that the influence of background music on employee performance is either enhanced or decreased by the personality of employees. Specifically, the relationship depends on whether the employee is an introvert or extravert. Extraverts perform better in work environment with background music than do introverts.

6.3.4 Influence of Work Behaviour on the Relationship between Background Music and Employee Performance

This study concludes that the influence of background music on employee performance is either enhanced or decreased by employee work behaviour. Employees who listened to background music had a positive attitude towards work and strived to meet deadlines, which increased their performance in terms of garments made. In factory two where background music was played intermittently, the influence of work behaviour on the relationship between background music and employee performance fluctuated depending on whether music was played or not. It is therefore concluded that continuous background music is necessary for consistent positive effect of work behaviour on the relationship between background music and employee performance.

6.3.5 Joint Effect of Background Music, Mood, Work Behaviour and Personality on Employee Performance

It is concluded that background music, employee mood, employee work behaviour and personality together produce greater positive change in employee performance than when they are considered individually. This therefore means that the combined force of the four predictor variables has a greater effect on employee performance than each predictor variable alone.

6.4 Recommendations

The following recommendations are made based on the results of the study.

6.4.1 Installation of Background Music Infrastructure in Factories

Based on the findings of hypothesis one, it is recommended that management of factories at the EPZ considers installing popular employees preferred and familiar background music at the places of work to enhance productivity. The management should however, note that background music should not be so loud to invade the auditory space of the employees but should be controlled and only play the accompaniment part in their working and auditory space.

It was further found that background music, mood, personality and work behaviour have a positive and significant effect on employee performance of tailoring workers at the EPZ in Athi River. It is therefore recommended that the management of the factories consider adoption of background music in work places as a tool for improving employee performance.

6.4.2 Familiarity With and Preference of Background Music

Based on the findings of hypothesis two of the study that mood mediated the relationship between background music and employee performance, it is recommended that employees be given a chance to decide the kind of background music to listen to. This will enable them to identify with the music, which will have positive effect on their mood and consequently their performance.

6.5 Contribution to Knowledge, Theory, Practice and Policy

This section outlines the major contributions of the current study to knowledge, theory practice and policy.

6.5.1 Contribution to Knowledge and Theory

This study was based on structural evocation theory, Eysenck's personality theory, theory of planned behavior and the James-Lange's theory of emotions. The structural evocation theory asserts that if the structural dynamics of the music affecting the sensorium is similar to the prevalent psychodynamic emotional structure, the two will unite and this fusion will allow music to affect emotions directly. Participants in the study elicited behaviour and emotions depending on whether there was presence or absence of background music. Their choice of religious music also played a key role in determining their behaviour, emotions and probable work performance. This study therefore supports the theory of structural evocation.

Eysenck personality theory proposes that the arousal thresholds of introverts and that of extraverts are different from each other and that optimum thresholds for both extraverts and introverts are also different. Extraverts require external stimulation to reach optimum arousal because their optimum arousal threshold is higher. They are carefree, easy going, aggressive, lose their temper easily, enjoy excitement, and are impulsive and spontaneous. Most of the participants in the extant study were extraverts. Extraverts need external stimulation to perform to their optimum, when preferred and familiar background music was introduced in factory one and two, performance increased largely

because of the presence of a fairly large contingent of extraverts. This study therefore confirms the validity of the proposition of the Eysenck personality theory that extraverts work well in the presence of an external stimulation which in this case was the background music. This study therefore supports Eysenck Personality Theory.

Theory of planned behaviour (TPB) predicts intentional behaviour; it states that behaviour depends on both motivation and ability. Participant's behaviour when background music was played changed tremendously. This was evident especially in factory two where music was played intermittently. When music was not played in the said factory, tailors asked for music but also when music was played they were calm and relaxed, but when music was not played they were jittery. This study supports prediction by TPB that behaviour depends on motivation and ability.

The study also supports arguments of James-Lange's theory of emotions which states that emotions are results of physiological reactions to external events. Employees at EPZ that participated in the study were aroused by background music (external factor) which affected their emotions. It was observed that these emotional changes, which in this study were represented by mood, led to an increase in employee performance. The participants in factory one, for example, where music was played throughout, were calm and relaxed all the time. The findings of the study indicate that 67% of the observed tailors had a positive mood. In this factory, talking was minimised compared to the other factories; they mostly talked when enquiring about something. In addition they were more relaxed and happy and were willing to take up new assignments. These findings support the

assumptions of TPB that individuals have the ability to exert self-control. This behaviour control is possible when behavioural intentions are influenced by the attitude about the likelihood that the behaviour will have the expected outcome.

6.5.2 Contribution to Practice

This study contributes immensely to work environment practices. Although it is common practice to find people listening to music in their places of work using their portable equipment, there was no known empirical research done to show which type of background music is best suited for tailors in a garment factory, particularly in Kenya.

6.5.3 Contribution to Policy

This study shows that background music is not frivolous, but rather is a strong managerial tool that can be used to yield high performance and improve productivity of the workers. Thus, makers of policy on work environment, should realise that there are varied types of music and not all types of music are good for work. In this study for example, tailors who were majorly extraverts preferred upbeat and conventional music and reflective and complex background music. Upbeat and conventional music and reflective and complex background music, according to Rentfrow and Gosling (2003), is mostly preferred by extraverts. This music may not be preferred by introverts and may therefore cause them to perform dismally.

6.6 Limitation of the Study

The method used to collect data on mood and work behaviour of the participants largely depended on the rater's skill and experience in dealing with the tailors. Both mood and

work behaviour are not easy to rate. Though the researcher requested two supervisors to assist in collection of data, there might have been issues of bias in the information gathered by the rater. Since they already knew the research objectives, they might have leaned towards achieving the objectives of the study, and hence might have introduced bias in the study unintentionally.

Also, since background music was manipoulated differently in the two treatment groups, the repondents may have unintentionally suspected the objective of the study and leaned towards achieving them

6.7 Areas for Further Research

This was a study of tailoring workers who are between the ages of 20-40 years. In factory one, background music was played throughout, and in factory two background music was intermittently played, while in the third factory there was no music played. Tailors were basically doing similar duties; they were of the same age group with almost similar academic qualifications and socioeconomic background. Future research could address the relationship between listening to music in a natural work context setting, testing listeners from varied age groups, with different musical background preferences, doing different tasks, at different times of the day to find out whether they have different impacts on performance.

Research done in this area has attempted to examine the relationship between background music, employee performance and emotional responses that occur as a consequence of employees listening to background music. More studies recognising the effect of

personality or individual differences on diverse work environments for different personality types are required to further understand its importance in the work setting. In the current study, most of the tailors at the factories were extraverts, and from other studies, extraverts love external stimulation brought about by music listening. Another study looking at the effects on either extraverts or introverts alone doing similar jobs but in different work settings needs to be done to find out the response from the different personality types, besides extraverts.

Music genres have ill-defined categories, not all pieces of music fit into a single genre. Many artists and pieces of music are cross multiple genres, so genre categories do not apply equally well to every piece of music. This study categorised music into four major categories as suggested by Rentfrow and Gosling to try and get the best results, acknowledging the fact that there are different genres which are interrelated/interwoven in nature. Unlike western music which can easily be grouped into categories based on different genres, African music is difficult to categorise because most music combines different elements of different genres in one piece.

This study recommends that future studies should come up with defined categories of music that can be used in similar studies. In the current study for example, most of the participants preferred local East African gospel music. East African gospel music has similar elements of music, within that type of music are different types of gospel music that need further categorisation .

Future researchers could also test the effect of background music on employee performance in situations where the experimental group is treated to preferred music while the control group is treated to background music that they do not prefer.

In the current study, since majority of the respondents were extraverts, future research should consider an environment that has majority of respondents who are introverts to find out if they have a similar response to background music and how this affects work performance.

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APPENDICES

Appendix 1: Rentfrow and Gosling Preferred Music Checklist

Instruction: Kindly tick yes or no

Yes Preferred
No Not preferred

S/no	Music types	Yes	No
1.	**Reflective and Complex Music**		
	Folks		
	Classical		
	Blues		
	Jazz		
2.	**Intense and Rebellious Music**		
	Reggae		
	Hiphop		
	Heavy Metal		
	Ragga		
	Rock		
3.	**Upbeat and Conventional Music**		
	Religious		
	Country		
	Pop		
4.	**Energetic and Rhythmic Music**		
	Salsa		
	Soul		
	Dance Hall		
	Calypso		
	Rhumba		
	Rap		
	Any other (Please specify) …… …… ……		

Source: Rentfrow, P. J., & Gosling, S.D. (2003). The Do Re Mi's of Everyday Life: The Structure and Personality Correlates of Music Preferences. *University of Texas, Austin*

Appendix 2: Eysenck Personality Inventory (EPI)

Instructions: There is no right or wrong answers; this is simply to measure personality type of the participants

No.	Question	YES	NO
1	I long for excitement		
2	I need friends to cheer me up		
3	I am carefree?		
4	I find it very hard to take no for an answer		
5	I stop to think things over before doing anything		
6	I always keep my promise		
7	My moods fluctuate		
8	I say things quickly without stopping to think		
9	I feel just miserable for no good reason		
10	I can do anything for a dare		
11	I do feel shy when talking to an attractive stranger		
12	I do things on the spur of the moment		
13	Once in a while I lose my temper and get angry		
14	I often worry about things I should have done or said		
15	I prefer reading to meeting people		
16	My feelings are easily hurt		
17	I like going out a lot		
18	I occasionally have thoughts and ideas I would not like other people to know about		

19	I am sometimes bubbling over with energy and sometimes very sluggish		
20	I prefer to have few but special friends		
21	I daydream a lot		
22	When people shout at me I shout back		
23	I am often troubled about feelings of guilt		
24	I have good and desirable habits		
25	I usually let myself go and enjoy a lot at a lively party		
26	I am tense		
27	Other people think of me as being very lively		
28	After doing something important, I feel I could have done better		
29	I am always quiet when with other people		
30	I sometimes gossip		
31	Ideas run through my head before I sleep		
32	I would you rather look for something upin a book than talk to someone about it		
33	I get palpitations or thumping in my ear		
34	I like being attentive at work		
35	I often shake or tremble		
36	I always declare everything at customs		
37	I hate being with a crowd who play jokes on one another		
38	I am an irritable person		
39	I like acting quickly		

40	I worry a lot about awful things		
41	I am slow		
42	I have never been late to work or appointment		
43	I have many nightmares		
44	I like talking to people so much including strangers		
45	I am troubled by aches and pains		
46	I don't like seeing people most of the time		
47	I am nervous		
48	There are people I don't like		
49	I am fairly self-confident		
50	I am easily hurt when people find fault with me or my work		
51	I find it hard to really enjoy myself at a lively party		
52	I am troubled by inferiority		
53	I can bring life in a dull party		
54	I sometimes talk about things I know nothing about		
55	I worry about my health		
56	I like playing pranks on others		
57	I suffer from sleeplessness		

Source: Eysenck, H. J., & Eysenck, S. B. G. (1975). Manual of the Eysenck Personality Questionnaire (Junior and Adult). Kent, UK: Hodder & Stoughton

Appendix 3: Observation Data Sheet

Factory Name: …… Date ……. Time of Day : ……. No. of respondents being observed……					Music ☐ No music ☐ Genre played ……		
WORK BEHAVIOR					**EMPLOYEE PERFORMANCE**		
Start time	**End time**	**Positive attitude**	**Meets deadline**	**Mood**	**No of units produced**	**No of units Accepted**	**No of units rejected**
9am	10am						
10am	11am						
1am	12noon						
2pm	3pm						
3pm	4pm						
	General Remarks…… ……..…… Other behavior noted that may have affected performance…… …… ……						

Source: Author, Current study

Appendix 4: Research Administered Questionnaire

To note: This is a voluntary exercise. Respondents can choose to withdraw at `any time of the exercise. However, for the sake of completeness it is desirable that all respondents stay on to the end.

---

1. How old are you? **Below 30 years** [ ] **Above 30 years**[ ]

2. What is your gender? **Female**[ ] **Male** [ ]

3. How long have you worked in this factory? **Less than 10 years** [ ]**More than 10** [ ]

4. Do you enjoy your work? **Yes** [ ] **No**[ ]

5. Do you have breaks at work (Health break) **Yes** [ ] **No**[ ]

6. How do you relate with your colleagues? **Well** [ ] **Poorly**[ ]

7. How do you relate with your supervisor? **Well** [ ] **Poorly** [ ]

8. How would you rate your productivity? **Excellent** [ ] **Good** [ ] **Fair** [ ] **Bad** [ ]

9. Do you love listening to music? **Yes** [ ] **No** [ ]

10. If yes above, which type of music do you prefer most *(You can list more than one types of music)*

a. ……

b. ……

c. ……

d. ……

e. ……

11. Why do you listen to music? **To be happy** [ ] **To be energized** [ ] **Any other** [ ]

12. Do you listen to music at work? **Yes** [ ]**No** [ ]

13. If yes above, why?

……

……

……

……

……

14. If you were to advice the management of this factory on background music listening at work what will you advise them to do

Don't play music [ ] Play music [ ]

15. If music was to be part of your day to day work, which music type will you play more?

……

……

……

……

……

……

……

Thank you for your response

Factory Name ……

Date ……

Enumerator ……

Designation in the factory ……

Appendix 5: List of EPZ Garment factories

	Company Name	Contacts	Location	Activity
1.	Africa Apparel EPZ Ltd.	P. O. Box 1443 - 00100 Nairobi	Sunflag Runyenjes Rd, Nairobi	Manufacturing – Garments
2.	Alltex EPZ Ltd.	P. O. Box 30500 - 00100 , Nairobi	Athi River EPZ	Manufacturing –Woven & Knitted Garments
3.	Ashton Apparel EPZ Ltd,	P. O. Box 43371 - 80100, Mombasa	Mombasa	Manufacturing – Garments
4.	Balaji EPZ Ltd	P.O.Box1716 – 00621, Village Market, Nairobi	Balaji EPZ Ruaraka	Manufacturing - Garments
5.	Brilliant Garments EPZ Ltd	P.O. Box 87337 - 08100, Mombasa	Talab EPZ - Mtwapa	Manufacturing- Garments
6. \	Global Apparels (K) EPZ Ltd	P. O. Box 322 00204 Athi River	Athi River EPZ -	Manufacturing – Garments
7.	Hantex Garments EPZ Ltd	P.O. Box 87789 - 80100, Mazeras	Mazeras EPZ - Mombasa	Manufacturing- Garments
8.	Kapric Apparels EPZ Ltd	P. O. Box 81579, Mombasa	Changamwe-Mombasa	Manufacturing – Garments
9.	Kikoy Mall EPZ Ltd.,	P.O. Box 57892-00200,Nairobi	Athi River EPZ	Manufacturing- Kikoy towels, Bags, and bath robes
10.	Longyun Garments Kenya EPZ Ltd	P.O.Box 93351 – 80100, Nairobi	Talab - Mombasa	Manufacturing- Garments
11.	Mahalakshimi Garments Kenya (EPZ) Ltd	P.O.Box 504 - 00204 , Athi River	Athi River EPZ	Manufacturing – Garments / apparel
12.	Mega Apparels EPZ Ltd	P.O.Box 81034 –	Mombasa	Manufacturing - Garments

		80100, Mombasa		
13.	Mega Garments EPZ Ltd	P.O.Box81034 – 80100, Mombasa	MJP EPZ - Mombasa	Manufacturing -Garments
14.	Mombasa Apparels EPZ Ltd	P.O.Box 92348 (80102), Mombasa	Emirates EPZ - Mombasa	Manufacturing- Garments
15.	New Wide Garments (K) EPZ Ltd	P.O. Box 504 - 00204, Athi River	Transfleet – Athi River Zone	Manufacturing–Knit Garments
16.	Royal Garments EPZ Ltd	P.O. Box 1409 – 00606,Sarit Centre Nairobi	Athi River EPZ	Manufacturing - Garments
17.	Simba Apparels (EPZ) Ltd	P. O. Box 81579, Mombasa	Mombasa	Manufacturing – Garments/ Apparel
18.	Soko EPZ Ltd	P.O.Box 775 – 80300, Voi	Wild Life Works EPZ - Voi	Manufacturing – Woven and knitted women's Jackets, Dresses, Skirts and Trousers
19.	Suman Shakti EPZ Ltd	P.O.Box 126 – 00621, Village Market Nairobi	Balaji EPZ - Baba Dogo Ruaraka Nairobi	Manufacturing- Garments for Ladies, men and children
20.	Tailormade Jeanswear (EPZ) Ltd	P.O.Box 636 – 00242,Kitengela	Athi River EPZ	Manufacturing – Denim Jeans
21.	United Aryan EPZ Ltd	P.O. Box 126 - 00621 Village Market, Nairobi	Balaji EPZ - Ruaraka, Nairobi	Manufacturing – Garments; Men, boys, toddlers denim pants
22.	Wild Life Works EPZ Ltd	P. O. Box 310 - 80300, Voi	Wildlife Works EPZ – Maungu, Voi	Manufacturing – Garments

Source: EPZA March 2016

Appendix 6: Communication with EPZA

Export Processing Zones Authority

Administration Building
Viwanda Road,
Off Nairobi - Namanga Highway
Athi River, Kenya.
E-mail: info@epzakenya.com
Website: www.epzakenya.com

P.O. Box 50563 - 00200
Nairobi, Kenya.
Tel: +254-45-6626421/2
Saf: 0713051172/3
Airtel: 0733683222
ISDN line: +254-45-6621000

EPZA/ADMIN/2236/RPP

1st February, 2016

TO: ALL EPZ GARMENT/TEXTILE ENTERPRISES

Dear Sir/Madam,

RE: PERMISSION TO CARRY OUT A STUDY AT THE ATHI RIVER EPZ – VIRGINIA N. ONYARA

Virginia N. Onyara is a student at the School of Business, University of Nairobi pursuing a Doctor of Philosophy studies in Business Administration. She is carrying out a study aimed at determining the influence of background music, personality and work behavior and their relationship with work. The case of tailoring workers in Athi River Export Processing Zones in Kenya.

The outcome of the research will be used for academic purposes at the University of Nairobi, School of Business.

She is therefore seeking for your participation in the study by filling in the attached questionnaire.

All the information gathered will be treated with confidentiality and in aggregated form without revealing identity of the respondent.

The purpose of this letter is to request you to accord her the necessary facilitation.

Thank you for your co-operation.

Yours faithfully,

B. CHESANG,
for: CHIEF EXECUTIVE
BC/nk

Encls.

Appendix 7: Sample Size Table

Required Sample Size								
Population Size	Confidence = 95%				Confidence = 99%			
	Margin of error				Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	146	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1,000	278	440	606	906	399	575	727	943
1,200	291	474	674	1,067	427	636	827	1,119
1,500	306	515	759	1,297	460	712	959	1,376
2,000	322	563	869	1,655	498	808	1,141	1,785
2,500	333	597	952	1,984	524	879	1,288	2,173
3,500	346	641	1,068	2,565	558	977	1,510	2,890
5,000	357	678	1,176	3,288	586	1,066	1,734	3,842
7,500	365	710	1,275	4,211	610	1,147	1,960	5,165
10,000	370	727	1,332	4,899	622	1,193	2,098	6,239
25,000	378	760	1,448	6,939	646	1,285	2,399	9,972
50,000	381	772	1,491	8,056	655	1,318	2,520	12,455
75,000	382	776	1,506	8,514	658	1,330	2,563	13,583
100,000	383	778	1,513	8,762	659	1,336	2,585	14,227
250,000	384	782	1,527	9,248	662	1,347	2,626	15,555
500,000	384	783	1,532	9,423	663	1,350	2,640	16,055
1,000,000	384	783	1,534	9,512	663	1,352	2,647	16,317
2,500,000	384	783	1,536	9,567	663	1,353	2,651	16,478
10,000,000	384	784	1,536	9,594	663	1,354	2,653	16,560
100,000,000	384	784	1,537	9,603	663	1,354	2,654	16,584
300,000,000	384	784	1,537	9,603	663	1,354	2,654	16,586

Source: Xu, Gang (1999) Estimating Sample Size for a Descriptive Study in Quantitative Research. Quirk's Marketing Research Review

Sample Size Calculation

4500 (Population)/3 (No. of factories) = 1500 (No of workers per factory)

357 (Estimated sample size)/3=119 (Number of participants per factory)

1500 (No. of workers per factory)/119 (sample per factory) = **12.6**

Every 12th tailor was be picked for the study

Source: Author, Current study

Appendix 8: Data on mood per respondent per day

Factory	Resp	Mood/ Emotions elicited									
		Day 1		Day 2		Day 3		Day 4		Day 5	
		Morn.	A/noon	Morn.	A/noon	Morn.	A/noon	Morn.	A/noon	Morn.	A/noon
Factory 1	1	1	1	2	1	2	2	2	2	2	2
	2	1	2	2	2	2	2	2	2	2	2
	3	2	1	1	2	2	2	2	2	2	2
	4	2	1	2	2	2	2	1	2	1	2
	5	2	1	2	1	2	2	2	2	2	2
	6	1	2	2	1	1	2	2	2	2	1
	7	2	2	2	1	2	2	2	2	2	2
	8	2	1	1	2	2	1	1	2	2	2
	9	2	2	2	2	2	2	1	2	2	2
	10	1	2	2	1	1	2	2	2	2	1
	11	1	2	2	2	2	2	2	2	2	2
	12	1	1	1	2	2	2	2	2	2	2
	13	2	1	2	2	2	2	1	2	2	2
	14	1	1	2	1	2	1	2	2	2	2
	15	2	1	2	1	1	2	2	1	2	1
	16	1	1	2	1	2	2	2	2	2	2
	17	2	1	1	2	2	1	1	2	2	2
	18	2	1	2	2	2	2	1	2	1	2
	19	2	1	2	1	1	2	2	2	2	2
	20	2	2	2	2	1	2	2	1	2	2
	21	2	2	1	2	2	2	2	2	2	1
	22	2	1	1	2	2	2	1	2	1	2
	23	2	2	2	2	2	1	2	2	2	2
	24	1	2	2	2	1	2	2	2	2	1
	25	1	2	2	1	2	2	2	2	2	2
	26	2	2	1	2	2	1	1	2	2	2
	27	2	2	2	2	2	2	1	2	2	2
	28	2	1	2	1	1	2	2	1	2	2
	29	1	2	2	2	1	2	2	2	2	2
	30	1	1	2	2	2	1	2	2	2	2
	31	2	2	1	2	2	2	1	2	1	2
	32	2	1	2	1	2	2	2	2	2	2
	33	2	1	1	2	1	2	2	2	2	2
	34	1	2	2	2	2	2	2	2	2	2
	35	2	2	1	2	2	1	1	2	2	2
	36	2	1	2	2	2	2	1	2	2	2

	37	2	2	2	1	2	2	2	2	2	2
	38	1	2	2	2	2	2	2	2	2	2
	39	1	2	1	2	2	1	2	2	2	2
	40	2	1	1	2	2	2	1	2	1	2
	41	2	1	2	2	2	2	2	2	2	2
	42	2	1	2	2	1	2	2	2	2	2
	43	1	2	2	1	2	2	2	2	2	2
	44	2	2	2	2	2	1	1	2	1	2
	45	2	1	2	2	2	2	1	2	2	2
	46	2	2	2	1	1	2	2	2	2	2
	47	1	2	2	2	2	2	2	1	2	2
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	92	2	1	2	2	1	2	2	2	2	1
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	81	1	1	2	1	1	1	2	1	2	1
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	95	2	2	2	2	2	2	2	2	2	1
	96	2	2	2	2	2	2	1	1	2	2
	97	2	1	1	2	2	1	1	2	1	2
	98	2	1	2	2	2	1	2	1	2	1
	99	1	2	2	1	1	2	2	1	2	1
	100	2	2	2	2	2	2	2	2	2	2

Source: Author, Current study

Appendix 9: Data on Work Behaviour

Factory	Respo.	Work Behaviour: Week 1									
		Day 1		Day 2		Day 3		Day 4		Day 5	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning,	Afternoon	Morning,	Afternoon
Factory 1	1	1	2	1	1	2	2	2	2	2	2
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	4	2	2	1	2	2	2	2	2	1	2
	5	2	1	2	1	2	2	2	2	2	2
	6	1	2	1	1	2	2	2	2	2	1
	7	2	2	2	1	2	2	2	2	2	2
	8	2	1	2	2	2	1	2	2	2	2
	9	2	2	2	2	2	2	1	2	2	2
	10	1	2	2	1	1	2	2	1	2	1
	11	2	2	2	2	2	2	2	2	2	2
	12	1	2	1	2	2	2	2	2	2	2
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	14	2	2	2	1	2	1	2	2	2	2
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	26	2	2	1	2	2	1	2	2	2	2
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Factory	Respo.	Work Behaviour: Week 2									
		Day 1		Day 2		Day 3		Day 4		Day 5	
		Morning	Afternoon	Morning,	Afternoon	Morning	Afternoon	Morning,	Afternoon	Morning,	Afternoon
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Factory 2	1	1	1	2	2	1	1	2	2	2	1

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	100	2	2	2	2	2	2	2	2	2	2

Week three

Factory	Respo.	Work Behaviour									
0		Day 1		Day 2		Day 3		Day 4		Day 5	
		Morning	Afternoon	Morning,	Afternoon	Morning	Afternoon	Morning,	Afternoon	Morning,	Afternoon
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Appendix 10: Factory Data Study Variables

Factory One							
No	**Background Music**	**Mood**	**Personality**	**Work behaviour**	**Employee performance**	**Interaction (Music*Personality)**	**Interaction (Music*Work Behaviour)**
1	4.06	2	3	2	717	8.12	12.18
2	4.06	2	4	2	717	8.12	16.24
3	4.32	2	1	2	716	8.64	4.32
4	4.27	2	4	2	717	8.54	17.08
5	3.68	2	3	2	690	7.36	11.04
6	4.32	2	3	2	716	8.64	12.96
7	4.27	2	3	2	710	8.54	12.81
8	3.68	1	4	1	690	3.68	14.72
9	4.32	2	1	2	716	8.64	4.32
10	4.27	1	1	1	690	4.27	4.27
11	3.90	1	3	1	695	3.9	11.7
12	3.90	1	3	1	695	3.9	11.7
13	3.63	2	3	1	715	7.26	10.89
14	3.63	2	1	2	717	7.26	3.63
15	4.21	1	2	1	700	4.21	8.42
16	4.21	2	2	1	705	8.42	8.42
17	3.90	1	3	1	690	3.9	11.7
18	4.16	2	3	2	708	8.32	12.48
19	3.90	1	3	2	690	3.9	11.7
20	4.21	2	4	2	724	8.42	16.84
21	3.58	2	1	2	715	7.16	3.58
22	3.58	1	1	2	690	3.58	3.58
23	4.06	1	3	2	680	4.06	12.18
24	3.68	1	3	2	690	3.68	11.04
25	3.58	1	3	2	690	3.58	10.74
26	4.21	2	3	2	724	8.42	12.63
27	3.58	2	4	2	700	7.16	14.32
28	3.58	2	1	2	700	7.16	3.58
29	4.06	1	1	1	690	4.06	4.06
30	3.58	2	3	2	700	7.16	10.74
31	3.58	2	3	1	700	7.16	10.74
32	4.53	2	4	2	725	9.06	18.12
33	4.53	2	1	2	715	9.06	4.53
34	4.00	2	4	2	710	8.00	16
35	4.00	1	3	2	695	4.00	12
36	4.00	1	4	2	695	4.00	16
37	3.84	2	1	2	705	7.68	3.84

38	3.84	2	4	2	705	7.68	15.36
39	3.31	1	3	2	685	3.31	9.93
40	3.95	1	4	2	699	3.95	15.8
41	3.31	1	1	2	685	3.31	3.31
42	3.79	2	4	2	717	7.58	15.16
43	3.84	2	3	2	700	7.68	11.52
44	3.68	1	3	2	690	3.68	11.04
45	3.58	2	3	2	700	7.16	10.74
46	4.21	2	4	2	716	8.42	16.84
47	3.58	2	1	2	700	7.16	3.58
48	3.58	1	1	2	700	3.58	3.58
49	4.06	2	3	2	716	8.12	12.18
50	3.58	2	3	2	700	7.16	10.74
51	3.58	2	3	2	700	7.16	10.74
52	4.53	2	1	2	717	9.06	4.53
53	4.53	2	2	2	720	9.06	9.06
54	4.00	2	2	2	710	8	8
55	4.00	2	3	2	695	8	12
56	4.00	1	3	2	690	4	12
57	3.84	1	3	2	705	3.84	11.52
58	3.90	2	3	2	695	7.8	11.7
59	3.63	1	3	2	690	3.63	10.89
60	3.63	1	3	2	700	3.63	10.89
61	4.21	2	4	2	690	8.42	16.84
62	4.21	1	1	2	700	4.21	4.21
63	3.68	1	1	2	690	3.68	3.68
64	4.32	1	3	2	690	4.32	12.96
65	4.27	2	3	2	727	8.54	12.81
66	3.68	2	3	2	690	7.36	11.04
67	4.32	2	1	2	700	8.64	4.32
68	4.27	2	2	2	715	8.54	8.54
69	3.90	2	2	2	717	7.8	7.8
70	4.32	2	3	2	716	8.64	12.96
71	4.27	1	3	2	690	4.27	12.81
72	3.68	1	3	2	690	3.68	11.04
73	4.32	2	3	2	721	8.64	12.96
74	4.27	1	1	2	690	4.27	4.27
75	3.68	1	3	2	690	3.68	11.04
76	4.32	2	3	2	716	8.64	12.96
77	4.27	1	3	2	690	4.27	12.81
78	3.90	2	4	2	715	7.8	15.6

79	3.90	1	1	2	695	3.9	3.9
80	3.63	1	3	2	690	3.63	10.89
81	3.63	2	3	2	715	7.26	10.89
82	4.21	2	3	2	705	8.42	12.63
83	4.21	2	4	1	705	8.42	16.84
84	3.90	2	1	2	700	7.8	3.9
85	4.16	1	1	1	690	4.16	4.16
86	3.90	1	3	1	700	3.9	11.7
87	4.21	1	3	1	724	4.21	12.63
88	3.58	2	3	1	700	7.16	10.74
89	3.58	2	1	2	700	7.16	3.58
90	4.06	1	2	1	690	4.06	8.12
91	3.68	1	2	1	690	3.68	7.36
92	3.58	1	3	1	690	3.58	10.74
93	4.21	2	3	2	724	8.42	12.63
94	3.58	1	3	2	690	3.58	10.74
95	3.58	1	4	2	690	3.58	14.32
96	4.06	1	1	2	690	4.06	4.06
97	3.58	1	1	2	690	3.58	3.58
98	3.58	1	3	2	690	3.58	10.74
99	4.53	2	3	2	727	9.06	13.59
100	4.53	2	3	2	727	9.06	13.59
101	4.00	1	3	2	695	4	12
102	4.00	1	4	2	695	4	16
103	4.00	1	1	2	695	4	4
104	3.84	2	1	1	695	7.68	3.84
105	3.84	2	3	2	695	7.68	11.52
106	3.31	2	3	1	685	6.62	9.93
107	3.95	2	4	2	699	7.9	15.8
108	3.31	2	1	2	705	6.62	3.31
109	3.79	2	4	2	717	7.58	15.16
110	3.84	2	3	2	701	7.68	11.52
111	3.68	2	4	2	690	7.36	14.72
112	3.58	2	1	2	700	7.16	3.58
113	4.21	2	4	2	721	8.42	16.84
114	3.58	2	3	2	700	7.16	10.74
115	3.58	2	1	1	690	7.16	3.58
116	4.06	1	3	1	716	4.06	12.18
117	3.58	2	3	1	700	7.16	10.74
118	3.58	2	3	2	690	7.16	10.74
119	4.53	2	3	2	716	9.06	13.59

Factory Two							
No	Background Music	Mood	Personality	Work behaviour	Employee performance	Interaction (Music*Personality)	Interaction (Music*Work Behaviour)
1	2.7	2	1	2	660	5.4	2.7
2	2.4	2	3	2	703	4.8	7.2
3	2.1	1	3	1	690	2.1	6.3
4	2.2	1	3	2	715	2.2	6.6
5	2.6	1	1	2	690	2.6	2.6
6	2.4	1	2	1	695	2.4	4.8
7	2.4	1	2	2	690	2.4	4.8
8	2.4	2	3	2	690	4.8	7.2
9	2.4	2	3	2	705	4.8	7.2
10	2.4	2	3	1	690	4.8	7.2
11	2.5	1	1	1	690	2.5	2.5
12	2.4	1	3	1	690	2.4	7.2
13	2.4	1	4	1	690	2.4	9.6
14	2.4	1	1	1	670	2.4	2.4
15	2.4	1	4	1	690	2.4	9.6
16	2.4	1	3	1	690	2.4	7.2
17	2.4	1	3	2	690	2.4	7.2
18	2.4	1	3	2	700	2.4	7.2
19	2.3	1	4	2	690	2.3	9.2
20	2.3	1	1	2	690	2.3	2.3
21	2.3	1	1	2	695	2.3	2.3
22	2.3	1	3	2	695	2.3	6.9
23	2.3	1	3	2	695	2.3	6.9
24	2.3	1	3	2	695	2.3	6.9
25	2.3	2	1	1	701	4.6	2.3
26	2.3	2	2	1	695	4.6	4.6
27	2.3	2	2	2	695	4.6	4.6
28	2.3	2	3	2	700	4.6	6.9
29	2.3	2	3	2	700	4.6	6.9
30	2.3	2	3	2	700	4.6	6.9
31	2.3	2	4	2	700	4.6	9.2
32	2.3	2	1	2	700	4.6	2.3
33	2.3	2	1	2	695	4.6	2.3
34	2.3	2	3	2	704	4.6	6.9
35	2.3	2	3	2	701	4.6	6.9
36	2.3	2	3	2	701	4.6	6.9
37	2.3	2	3	2	705	4.6	6.9
38	2.5	2	4	2	690	5	10

39	2.6	1	1	2	690	2.6	2.6
40	2.6	1	1	2	695	2.6	2.6
41	2.6	1	3	2	695	2.6	7.8
42	2.6	2	3	2	695	5.2	7.8
43	2.6	2	4	2	695	5.2	10.4
44	2.6	2	1	2	704	5.2	2.6
45	2.6	2	4	2	695	5.2	10.4
46	2.6	2	3	2	695	5.2	7.8
47	2.6	2	4	2	695	5.2	10.4
48	2.6	2	1	2	695	5.2	2.6
49	2.6	2	4	2	695	5.2	10.4
50	2.6	2	3	2	695	5.2	7.8
51	2.6	2	4	2	700	5.2	10.4
52	2.6	2	1	2	695	5.2	2.6
53	2.6	2	4	2	704	5.2	10.4
54	2.6	2	3	2	701	5.2	7.8
55	2.6	2	3	1	701	5.2	7.8
56	2.6	2	3	2	705	5.2	7.8
57	2.6	2	4	2	703	5.2	10.4
58	2.6	2	1	1	690	5.2	2.6
59	2.6	2	1	1	690	5.2	2.6
60	2.6	2	3	2	705	5.2	7.8
61	2.6	2	3	2	690	5.2	7.8
62	2.6	2	3	2	690	5.2	7.8
63	2.6	2	1	1	690	5.2	2.6
64	2.6	2	2	2	690	5.2	5.2
65	2.6	2	2	2	690	5.2	5.2
66	2.6	2	3	2	690	5.2	7.8
67	2.6	2	3	2	690	5.2	7.8
68	2.6	2	3	2	690	5.2	7.8
69	2.6	2	3	2	690	5.2	7.8
70	2.6	2	3	2	690	5.2	7.8
71	2.6	2	3	2	690	5.2	7.8
72	2.2	2	4	2	695	4.4	8.8
73	2.5	2	1	2	695	5	2.5
74	2.2	2	1	2	695	4.4	2.2
75	2.2	2	3	2	695	4.4	6.6
76	2.2	2	3	2	701	4.4	6.6
77	2.2	2	3	2	695	4.4	6.6
78	2.2	2	1	2	695	4.4	2.2
79	2.2	2	2	2	695	4.4	4.4

80	2.2	2	2	1	695	4.4	4.4
81	2.2	2	1	1	695	4.4	2.2
82	2.2	2	4	2	695	4.4	8.8
83	2.2	2	3	2	695	4.4	6.6
84	2.3	2	4	2	695	4.6	9.2
85	2.2	2	1	1	704	4.4	2.2
86	2.2	2	4	2	701	4.4	8.8
87	2.2	2	3	2	701	4.4	6.6
88	2.2	2	4	2	705	4.4	8.8
89	2.2	2	1	1	690	4.4	2.2
90	2.2	2	4	2	690	4.4	8.8
91	2.2	2	3	2	695	4.4	6.6
92	2.2	2	3	2	695	4.4	6.6
93	2.2	2	3	2	695	4.4	6.6
94	2.2	2	4	2	695	4.4	8.8
95	2.2	2	1	2	704	4.4	2.2
96	2.2	2	1	2	695	4.4	2.2
97	2.2	2	3	2	695	4.4	6.6
98	2.2	2	3	2	680	4.4	6.6
99	2.2	2	3	2	680	4.4	6.6
100	2.2	1	1	1	680	2.2	2.2
101	2.2	1	2	2	695	2.2	4.4
102	2.2	1	2	2	695	2.2	4.4
103	2.2	1	3	2	695	2.2	6.6
104	2.2	1	3	1	690	2.2	6.6
105	2.2	1	3	1	680	2.2	6.6
106	2.4	1	1	1	695	2.4	2.4
107	2.3	1	2	2	695	2.3	4.6
108	2.5	1	2	2	680	2.5	5
109	2.5	1	3	2	695	2.5	7.5
110	2.5	2	3	2	704	5	7.5
111	2.5	2	3	2	695	5	7.5
112	2.5	1	1	1	695	2.5	2.5
113	2.2	1	3	2	695	2.2	6.6
114	2.5	1	4	2	695	2.5	10
115	2.5	1	1	1	695	2.5	2.5
116	2.5	1	4	1	670	2.5	10
117	2.2	1	3	1	695	2.2	6.6
118	2.5	1	3	2	680	2.5	7.5
119	2.5	2	3	2	695	5	7.5

Factory Three							
No	Background Music	Mood	Personality	Work behaviour	Employee performance	Interaction (Music*Personality)	Interaction (Music*Work Behaviour)
1	1.9	2	3	1.3	690	3.8	5.7
2	1	2	3	1.6	660	2	3.0
3	1.4	2	3	2	700	2.8	4.2
4	1.1	2	4	2	695	2.2	4.4
5	1.5	2	3	2	704	3	4.5
6	1.3	1	3	2	685	1.3	3.9
7	1.4	1	3	2	690	1.4	4.2
8	1.1	2	3	1	660	2.2	3.3
9	1.5	1	4	1	706	1.5	6.0
10	1.3	1	1	1	695	1.3	1.3
11	1.4	2	1	1	704	2.8	1.4
12	1.1	1	3	1	685	1.1	3.3
13	1.2	1	3	2	695	1.2	3.6
14	1.3	2	3	2	660	2.6	3.9
15	1.4	1	3	2	700	1.4	4.2
16	1.1	1	3	2	695	1.1	3.3
17	1.4	1	4	2	704	1.4	5.6
18	1.4	1	3	1	685	1.4	4.2
19	1.1	1	3	1	690	1.1	3.3
20	1.1	1	3	1	690	1.1	3.3
21	1.1	1	3	1	706	1.1	3.3
22	1.1	1	4	1	695	1.1	4.4
23	1.1	1	1	1	704	1.1	1.1
24	1.4	1	1	1	685	1.4	1.4
25	1.1	1	3	1	685	1.1	3.3
26	1.5	1	4	1	660	1.5	6.0
27	1.3	1	2	1	700	1.3	2.6
28	1.4	1	3	1	695	1.4	4.2
29	1.1	1	4	1	704	1.1	4.4
30	1.5	1	1	1	685	1.5	1.5
31	1.3	1	4	1	685	1.3	5.2
32	1.4	1	3	1	660	1.4	4.2
33	1.1	1	3	2	706	1.1	3.3
34	1.2	1	3	2	695	1.2	3.6
35	1.3	1	4	1	704	1.3	5.2
36	1.4	1	1	1	685	1.4	1.4
37	1.1	1	1	1	695	1.1	1.1
38	1.4	2	3	1	660	2.8	4.2

39	1.4	1	3	1	700	1.4	4.2
40	1.1	1	3	1	695	1.1	3.3
41	1.1	1	1	1	704	1.1	1.1
42	1.1	1	2	1	685	1.1	2.2
43	1.1	1	2	1	685	1.1	2.2
44	1.1	1	3	1	685	1.1	3.3
45	1.4	1	3	1	706	1.4	4.2
46	1.1	1	3	1	695	1.1	3.3
47	1.5	1	4	2	704	1.5	6.0
48	1.3	1	1	2	685	1.3	1.3
49	1.4	1	1	1	690	1.4	1.4
50	1.1	1	3	1	660	1.1	3.3
51	1.5	1	3	1	700	1.5	4.5
52	1.3	1	3	1	695	1.3	3.9
53	1.4	1	3	1	704	1.4	4.2
54	1.1	1	4	1	685	1.1	4.4
55	1.2	1	1	1	690	1.2	1.2
56	1.3	1	1	2	660	1.3	1.3
57	1.4	1	3	1	706	1.4	4.2
58	1.1	1	3	1	695	1.1	3.3
59	1.4	1	4	1	701	1.4	5.6
60	1.4	1	1	1	685	1.4	1.4
61	1.1	2	4	1	695	2.2	4.4
62	1.1	2	3	1	660	2.2	3.3
63	1.1	1	4	1	700	1.1	4.4
64	1.1	1	1	1	695	1.1	1.1
65	1.1	1	4	1	704	1.1	4.4
66	1.4	1	3	1	685	1.4	4.2
67	1.1	1	3	2	690	1.1	3.3
68	1.5	1	3	1	690	1.5	4.5
69	1.3	2	3	1	706	2.6	3.9
70	1.4	1	4	1	695	1.4	5.6
71	1.1	2	1	1	704	2.2	1.1
72	1.5	2	1	1	685	3	1.5
73	1.3	1	3	1	690	1.3	3.9
74	1.4	1	3	1	660	1.4	4.2
75	1.1	2	3	1	700	2.2	3.3
76	1.2	1	3	1	695	1.2	3.6
77	1.3	1	3	1	704	1.3	3.9
78	1.4	1	4	1	685	1.4	5.6
79	1.1	1	3	1	690	1.1	3.3

80	1.4	1	3	2	660	1.4	4.2
81	1.4	1	3	1	706	1.4	4.2
82	1.1	1	3	1	695	1.1	3.3
83	1.1	1	4	1	704	1.1	4.4
84	1.1	1	1	1	685	1.1	1.1
85	1.4	1	1	1	695	1.4	1.4
86	1.4	1	3	1	660	1.4	4.2
87	1.1	1	4	1	700	1.1	4.4
88	1.1	1	2	1	695	1.1	2.2
89	1.1	1	3	1	704	1.1	3.3
90	1.1	1	4	1	685	1.1	4.4
91	1.1	1	1	1	690	1.1	1.1
92	1.4	1	4	2	690	1.4	5.6
93	1.1	1	3	2	706	1.1	3.3
94	1.5	1	3	1	695	1.5	4.5
95	1.3	1	3	2	704	1.3	3.9
96	1.1	1	4	1	685	1.1	4.4
97	1.5	1	1	1	690	1.5	1.5
98	1.3	1	1	1	660	1.3	1.3
99	1.4	1	3	1	700	1.4	4.2
100	1.1	1	3	1	695	1.1	3.3
101	1.5	1	3	1	704	1.5	4.5
102	1.3	2	1	1	685	2.6	1.3
103	1.4	2	2	1	690	2.8	2.8
104	1.1	2	2	1	660	2.2	2.2
105	1.2	2	3	1	706	2.4	3.6
106	1.3	1	3	1	695	1.3	3.9
107	1.4	1	3	1	704	1.4	4.2
108	1.1	1	4	1	685	1.1	4.4
109	1.4	1	1	1	695	1.4	1.4
110	1.4	1	1	1	660	1.4	1.4
111	1.1	1	3	1	700	1.1	3.3
112	1.1	1	3	1	695	1.1	3.3
113	1.1	1	3	1	704	1.1	3.3
114	1.1	1	3	1	685	1.1	3.3
115	1.1	2	4	1	690	2.2	4.4
116	1.4	1	1	1	690	1.4	1.4
117	1.1	1	1	2	706	1.1	1.1
118	1.5	1	3	1	695	1.5	4.5
119	1.3	1	3	1	704	1.3	3.9