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# Role of Personality and Work Behaviour on the Relationship between Background Music and Performance of Tailoring Workers

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## Abstract

*The general objective of this study was to determine the role individual differences on the relationship between background music and employee performance of tailoring workers at the EPZ in Athi River. The specific objectives were to establish the effect of personality on the relationship between background music and employee performance and to establish the influence of work behavior on the relationship between background music. The study population were the 22 garment factories at the EPZ, Athi River. The researcher wrote to all the 22 garment factories at the EPZ explaining the study and asking for permission to conduct the study there. The study used systematic sampling design to come up with a representative sample. 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 12$^{th}$. In factory one, music was played throughout the day, while in the second factory music was played on and off and in the third factory music was not played at all. The study found that individually, personality and work behaviour had a positive and significant effect on employee performance of tailoring workers at the EPZ in Athi River. Personality was found to have no significant effect on the relationship between background music and employee performance. Further, work behaviour was found to significantly influence the relationship between background music and employee performance. The study recommended that the management of EPZ to continuously monitor personality of their employees. Monitoring and evaluating work behaviour will be important in ensuring that background music achieves optimal performance results.*

**Key Words:** Personality, Work Behaviour, Tailoring Workers Performance, Athi River Export Processing Zone

## 1. INTRODUCTION

### 1.1 Employee Personality

Personality is the dynamic trait within the individual psychological systems that determine one's unique adjustment to the environment. The most widely used measures of personality are based on the Five Factor Model (McCrae and Allik, 2002). This model considers individuals to vary on five broad personality dimensions. (McCrae and John, 1992; Matthews et. al., 2009). These dimensions include Openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. Personality is the result of both heredity and environment (Ivancevich, Konospake, and Matteson, 2011). Heredity involves all those physiological and psychological peculiarities, which a person inherits from his parents. These peculiarities are transmitted to us through genes. Heredity determines the difference of sex which determines personality of men and women. The ways individuals respond to the environment also define their personality. Environment has a very significant effect on man. Its effect starts from his birth and continues almost till his death.

Eysenck (1958) conceptualized personality as two biologically-based categories of temperament: introvert/extravert and neuroticism/stability. Extraversion, according to Eysenck is characterized by being outgoing, talkative, high on positive affect (feeling good), and in need of external stimulation. He says that there is an optimal level of cortical arousal for every person, and performance deteriorates as one becomes more or less aroused below this optimal level. At very low and very high levels of arousal, performance is low, but at a better mid-level of arousal, performance is maximized. Extraverts, according to Eysenck's theory, are chronically under-aroused and bored and are therefore in need of external stimulation to bring them up to an optimal level of performance. Introverts, on the other hand, are chronically over-aroused and jittery and are therefore in need of peace and quiet to bring them up to an optimal level of performance.

Neuroticism or emotional stability on the other hand is characterized by high levels of negative affect such as depression and anxiety. Neuroticism, according to Eysenck's theory, is based on activation thresholds in the sympathetic nervous system or visceral brain. This is the part of the brain that is responsible for the fight-or-flight response in the face of danger. Neurotic people, who have low activation thresholds, and unable to inhibit or control their emotional reactions, experience negative affect (fight-or-flight) in the face of very minor stressors - they are easily nervous or upset. Emotionally stable people, who have high activation thresholds and good emotional control, experience negative affect only in the face of very major stressors. This means they are calm and collected under pressure. The four quadrant temperamental axis by Eysenck has two dimensions of the temperaments axes (extraversion-introversion and emotional stability-instability). The four quadrants are made up of stable extraverts, unstable extraverts, stable introverts, and unstable introverts. This study will use Eysenck's two biologically-based categories of temperament: Extravert/Introvert and Neuroticism/stability. Eysenck's developed an Eysenck's Personality Inventory (EPI) that assesses the personality traits of a person. EPI measure the two independent dimensions of personality, introversion/extraversion and Neuroticism/Stability.

### 1.2 Work Behavior

Work behavior is a person's behavior in employment. It is normally more formal than other types of human behavior (Alexa, 2010). Job situations require that people behave in certain ways at work to be able to achieve the objectives of the organization. This work behavior varies from profession to profession, as some professions are far more casual than others. Some of the behaviors 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, courteous and friendly, and displaying good use and care of materials and equipment.

This study focused on two observable work behavior traits based on Melissa Cooper's article in the Houston Chronicle on examples on employees' good behavior. These behaviors included participant's ability to have a positive attitude, and their ability to meet deadlines. 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 organized, responsible and maintain a clean, organized work space.In the early1980s textile was the leading 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 labor force in the manufacturing sector (EPZA, 2005). The industry started declining in the mid-1980s due to dumping of foreign second hand clothes popularly 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 firms in the country have produced a large variety of textile products for export and local market.

### 1.3Tailoring Firms at the Athi River Export Processing Zone

In Kenya, there are six EPZ centers located in strategic locations. They comprise of Nairobi, (Athi River Zone), Mombasa, Kilifi, Malindi, Voi and Kimwarerin Rift Valley region (EPZA, 2013).All these factories are managed by the EPZ Authority (EPZA). The study population is composed of the tailoring workers at the EPZ, Athi River. EPZ, Athi River 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 United States of America (US) under AGOA. The AGOA programme allows Kenya and other Sub-Saharan African countries to export identified goods at preferential terms to the US, exempting them from paying tax.

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 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 quality of the garments 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 employee performance.

## 2. RESEARCH PROBLEM

Background music is increasingly becoming an important phenomenon to improving employee performance. However, the effect of behavioral characteristics that include personality and employee work behavior on the relationship between background music and employee performance has hardly been examined in literature. 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, available

empirical literature not 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 work performance of workers doing repetitive tasks in a factory. People working at a factory set up have different work behaviors and different personality traits. All these diverse traits culminate into a normal work environment. Human beings behave differently even under similar circumstances.

A factory work environment is a diverse one with people of different gender, academic background, culture, age and preference. Although music is said to enhance work performance (Watson, 2014) it is not clear which type of music appeals people with differing personalities doing tailoring work. Padmasiri and Dhammika (2014) did a study on the effect of music listening on work Performance in a garment factory and found a significant effect. They used what they called relaxation music which negatively impacted on the performance of the workers and they concluded that relaxation music is not good for work. There is minimal studies so far done to investigate the effect employee personality and work behaviour on the relationship between background music and factory workers performance in Kenya. This research sought to examine how employee personality and work behavior affected the relationship between background music and performance of the tailoring workers at the Export Processing Zone in Athi, Kenya?

## 3. RESEARCH OBJECTIVES

i. To determine the influence of employee Personality on the relationship between background music and employee performance of tailoring workers performance at Athi River Export Processing Zone, Kenya

ii. To examine the influence of employee work behaviour on the relationship between background music and employee performance of tailoring workers at Athi River Export Processing Zone, Kenya

## 4. LITERATURE REVIEW

There 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). A study conducted by Daoussis (1986) surveyed the study habits and music preferences between introverts and extraverts. The results of this study found extraverts generally listened to music more often than introverts (MacDonald, 2013). According to Eysenck's personality theory, the cortical arousal threshold of introverts (individuals scoring low on extraversion) and extraverts (individuals scoring high on extraversion) is vastly different from each other (Furnham and Bradley, 1997). Introverts have been shown to have a lower optimum arousal threshold, requiring minimum amounts of stimulation. Persistent or intense forms of stimulation overwhelm this arousal threshold, inhibiting excitation (Furnham, Strew, and Sneade, 1999). Therefore, Eysenck's theory predicts detrimental effects of music on task performance. In contrast, highly extraverted individuals seek out stimulation because their optimum arousal threshold is higher.

Chamorro-Premuzic (2014) found that, although extravert subjects reported working with music twice as much as introverts (50% versus 25% of the time), both groups reported playing background music very 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 significantly poorer in the presence than in the absence of music. These results supported the arousal and performance hypothesis of Eysenck (1967). This study also supports Zuckerman's theory which says that a person with a low optimum level of arousal works best with reduced stimulation from the environment, whereas someone with a high optimum level of arousal requires more stimulation from the environment (Zuckerman, 1991).

Several studies have suggested that background music causes larger interference with other cognitive processes in the case of introverts than in extraverts (Furnham and Bradley, 1997; Furnham and Strbac, 2002). Studies have shown that introverts are less able to store information for later recall than extraverts. Furnham and Bradley (1997) indicate that although the level of immediate recall is not different between the introverts and the extraverts, performance is lowered among the introverts. Some studies have focused more in detail on individual differences in music listening in everyday life. For example, a study by Juslin and Laukka (2003) suggested that certain personality traits can mediate the way listeners use music.

Furnham and Bradley (1997) conducted an experiment examining whether level of extraversion moderates cognitive task performance under background auditory stimuli, and found significant results. In this study, 10 extraverts and 10 introverts completed three cognitive tasks: reading comprehension, memory, and delayed memory. Introverts performed significantly worse than extraverts with background music in the delayed recall task. While not statistically significant, introverts also generally performed worse in the other two tasks. The facilitative nature of music is not supported by these findings, suggesting that specific personality types predispose individuals to perform differently under certain music conditions. Despite a small sample size and an insufficient amount of waiting time used for the delayed memory task, this study inspired future experiments to control for the effects of personality. In a later study, Cassidy & MacDonald (2007) discovered that introverts performed significantly worse under any noise condition compared to extraverts. Participants scoring high on the trait of neuroticism were more likely to use music in emotional ways e.g., listening to music for nostalgic reasons, or to regulate mood, and those who scored high on the trait of openness to experience used music in more cognitive ways e.g., enjoying analyzing music compositions and performance techniques.

A study was done by Kniffin (2016) on how background music influences behavior 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 out that happy music was linked to increased cooperation whether or not it boosted participants' mood. The research revealed to employers that background music effects to employees plays a similar role like the off-site teambuilding exercises which are supposed to build cooperation among employees.

## 5. RESEARCH METHODOLOGY

### 5.1 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. This design was considered appropriate

because it did not change a study subject's behavior. The study included a control group and two treatment groups. The two treatment groups were included to assess the effect of music on employee performance at different times of the day so as to obtain information on what time of day performance was enhanced or reduced when music was listened to. The factory set up at the EPZ, Athi River was a convenient site for investigating the effects of background music on work performance of factory workers doing repetitive tasks. This was borne out by a visit to the factory which revealed that the design of the buildings at the factory allows for music pipes, wires and speakers for output and control room for playing music. Offices/rooms are upstairs, from which observation of the respondents was done without them realizing that someone was watching their activities. This greatly reduced the impact of the researcher's presence in the immediate environment.

### 5.2 Population of the Study

There are 22 garment factories at the EPZ, Athi River. 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. Therefore the study was done in the three factories. However, during the study, the company went through several processes of management and business overhauls which saw the researcher seek for alternative factory which would allow playing of music and as a result Mega Garment Ltd in Mombasa was equally sampled. Mega Garment LTD allowed the researcher to carry out the study to the end. This study required cooperation from the management of the factory to be able to get desired data. All the factories sampled had 1500 tailors working from 8am- 4:30pm with lunch break between 1:00PM and 2:00PM. The population of study is therefore 4500 tailors. Preliminary interview with the General Manager of the factories revealed that the tailors are between the ages of 20-40 years; the factories have similar set up of work stations, communication channels, hiring procedures, wages payment, safety measures, disciplinary procedures and other human resources related aspects. The three factories are: New Wide Garment EPZ (K) LTD 1, Mega Garment (A) LTD and Mega Garment (B) LTD.

### 5.3 Sample Design

The study used systematic sampling design to come up with a representative sample. Each of the 3 factories has 1500 tailors. 357 estimated sample size was used for the study. 357 was divided by 3 (The number of factories) to get a total of 119 tailors per factory. A systematic sampling procedure was be used to obtain 119 tailors from each factory. This was done by listing all the 119 respondents for each factory and selecting every $12^{th}$.

### 5.4 Data Collection

In factory one**,** music was played throughout the day, while in the second factory music was played on and off and in the third factory music 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. The research instruments included; Rentfrow and Gosling (2003) preferred music checklist, Eysenck's Personality Inventory, work behavior checklist and the observation checklist.The Rentfrow and Gosling preferred music checklist was used to determine the type of music that participant prefer and that is the music that was played during the study. Eysenck's Personality

Inventory (EPI) was used to assess the personality traits of 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. 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.

## 6. DATA ANALYSIS RESULTS

### 6.1 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, three stepwise regression analysis by Baron and Kenny was used. The following hypothesis was developed to address this objective: The relationship between background music and employee performance is moderated by personality.

In step one, the criterion and predictor variables were employee performance and background music respectively. In step two, the criterion variable was employee personality while the predictor variable was background music. In step three, multiple regression analysis was used where employee performance was regressed on background music and employee personality. Moderation effect of employee personality was to occur where personality was strongly related with employee performance in the second step and in the third step; background had insignificant or weak effect on employee performance.

**Step 1: Y=$\boldsymbol{\beta_0 + \beta_1 X_1}$ where Y is employee performance and $X_1$ is background music**

The research findings in Table 1 show that relationship between background music and employee performance was moderately strong (r=0.454). The positive correlation coefficient implied that background music had positive effect on employee performance. Therefore, background music at work improved employee performance at the EPZ.

**Table 1: Regression Analysis Results on the Relationship between Background Music and Employee Performance**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0.454 | 0.206 | 0.203 | 1.879 |

**Model ANOVA**

| | Sum of | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|

| | Squares | | | | |
|---|---|---|---|---|---|
| Regression | 204.866 | 1 | 204.866 | 58.015 | 0.000 |
| Residual | 787.476 | 223 | 3.531 | | |
| Total | 992.342 | 224 | | | |

**Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 696.964 | 0.774 | | 900.33 | 0.000 |
| Music | 2.136 | 0.28 | 0.454 | 7.617 | 0.000 |

ANOVA results indicated a significant F-ratio of 58.915 ($p<0.05$) suggesting that the regression model attained a statistical goodness of fit. Thus, use of the regression model was justified. Background music had a beta coefficient of 2.136 which was statistically significant ($t=7.617$, $p<0.05$). This finding indicates that preferred background music led to increase in employee performance as measured by number of units produced. Using these results, the predictive model can be constituted as follows: $Y= 696.964 + 2.316X_1$ where Y is employee performance and $X_1$ is the background music.

**Step 2: P=$\boldsymbol{\beta_0 + \beta_1 X_1}$ Where P is personality and $X_1$ background music**

The second step of the regression analysis involved determining how employee personality was affected by background music. The research findings in Table 2 relationship between background music and employee personality was almost zero ($r=0.027$). Therefore, employee personality did not affect employee performance at EPZ.

**Table 2: Regression Analysis Results on the Relationship between Background Music and Employee Personality**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0.027 | 0.001 | 0.004 | 2.10666 |

**Model ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 0.717 | 1 | 0.717 | 0.162 | 0.688 |

| | | | |
|---|---|---|---|
| Residual | 994.119 | 224 | 4.438 |
| Total | 994.836 | 225 | |

**Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 702.919 | 0.384 | | 1,829 | 0.000 |
| Personality | -0.054 | 0.135 | -0.027 | -0.402 | 0.688 |

ANOVA results indicated an insignificant F-ratio of 0.162 ($p>0.05$) suggesting that the regression model did not attain a statistical goodness of fit. Thus, background music had insignificant effect on employee personality. Background music had a beta coefficient of -0.054which was statistically insignificant ($t= -0.402$, $p>0.05$). This finding indicates that playing preferred music when working did not lead to change in employee personality.

**Step 3: $Y=\beta_0 + \beta_1 X_1 + \beta_3 P_3$ Where $P_3$ is personality and $X_1$ background music**

Step three of the regression analysis was meant to determine the relationship between personality, background music and employee performance. Thus, employee performance was regressed on background music and employee personality. From the findings in table 3, background music and employee personality had a moderately strong relationship ($r=0.455$). The model accounted for 20.7% ($R^2= 0.207$) of variations on employee performance.

**Table 3: Regression Analysis Results on the Relationship between Background Music and Employee Personality**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0.455 | 0.207 | 0.199 | 1.883 |

**Model Summary**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 204.991 | 2 | 102.496 | 28.899 | 0.000 |
| Residual | 787.351 | 222 | 3.547 | | |
| Total | 992.342 | 224 | | | |

**Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| Background Music | 2.134 | 0.281 | 0.454 | 7.593 | 0.000 |
| Personality | -0.023 | 0.122 | -0.011 | -0.188 | 0.851 |

The ANOVA results indicated a significant F-ratio of 28.899 which was significant ($p<0.05$). This is an indication that the regression model was appropriate and thus fit for the data. Background music had a beta coefficient of 2.134 which was statistically significant ($t=7.593$, $p<0.05$). This finding indicated that playing preferred music when working led to increase in employee performance as measured by number of units produced. Personality had a beta coefficient of -0.023 which was not significant ($t= -0.188$, $p>0.05$). Using these results, the predictive model can be substituted as follows: $Y= 697.028 + 2.134X_1$ where Y is employee performance and $X_1$ is the background music.

Notably, background music alone accounted for 20.6% of variation in employee performance. Background music explained 1% of variation in employee personality. Jointly, employee personality and background music accounted for 20.7% of the variation in employee performance. Thus, with introduction of personality on the relationship between background music and employee performance, the strength of the relationship improves with 1%. Thus, personality does not have significant moderating effect on the relationship between background music and employee performance.

### 6.2 The Influence of Work Behavior on the Relationship between Background Music and Employee Performance

To establish the effect of work behaviour on the relationship between background music and employee performance, threestepwise regression analysis by Baron and Kenny was used. The following hypothesis was developed to address this objective: The relationship between background music and employee performance is moderated by work behavior

In step one, the criterion and predictor variables were employee performance and background music respectively. In step two, the criterion variable was employee work behavior while the predictor variable was background music. In step three, multiple regression analysis was used where employee performance was regressed on background music and employee work behaviour.

**Step 1: $Y=\beta_0 + \beta_1 X_1$ where Y is employee performance and $X_1$ is background music**

The research findings in Table 4 indicate that the relationship between background music and employee performance was moderately strong ($r=0.454$). The positive correlation coefficient implied that background music had positive effect on employee performance. Therefore, background music improved employee performance of tailors at the EPZ. ANOVA results

presented in table 4indicated a significant F-ratio of 58.915 ($p<0.05$) suggesting that the regression model attained a statistical goodness of fit. Thus, use of the regression model was justified.

**Table 4: Regression Analysis Results on the Relationship between Background Music and Employee Personality**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0.454 | 0.206 | 0.203 | 1.879 |

**Model ANOVA**

| | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 204.866 | 1 | 204.866 | 58.015 | 0.000 |
| Residual | 787.476 | 223 | 3.531 | | |
| Total | 992.342 | 224 | | | |

**Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 696.964 | 0.774 | | 900.33 | 0.000 |
| Music | 2.136 | 0.28 | 0.454 | 7.617 | 0.000 |

As shown background music had a beta coefficient of 2.136 which was statistically significant ($t=7.617$, $p<0.05$). This finding indicates that playing preferred music when working led to increase in employee performance as measured by number of units produced. Using these results, the predictive model can be constituted as follows: $Y= 696.964 + 2.316X_1$ where Y is employee performance and $X_1$ is the background music.

**Step 2: WB=$\beta_0 + \beta_1 X_1$ Where WB is Work Behaviour and $X_1$ is Background Music**

The second step of the regression analysis involved determining how employee work behaviour was affected by background music. The research findings in Table 5relationship between

background music and employee personality was weak (r=0.132). Therefore, employee work behaviour was slightly affected by background music.

**Table 5: Regression Analysis Results on the Relationship between Work Behaviour and Background Music**

| **Model Summary** | | | | | |
|---|---|---|---|---|---|
| R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 0.132 | 0.017 | 0.013 | 0.17953 | | |
| **Model ANOVA** | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| Regression | 0.128 | 1 | 0.128 | 3.965 | 0.048 |
| Residual | 7.187 | 223 | 0.032 | | |
| Total | 7.315 | 224 | | | |
| **Model Coefficients** | | | | | |
| | Unstandardized Coefficients | | Standardized Coefficients | | |
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 1.443 | 0.074 | | 20 | 0.000 |
| Background Music | 0.053 | 0.027 | 0.132 | 1.991 | 0.048 |

ANOVA results indicated an insignificant F-ratio of 3.965 ($p<0.05$) suggesting that the regression model attained a statistical goodness of fit. Thus, background music had significant effect on employee work behaviour. Background music had a beta coefficient of 0.053which was statistically insignificant ($t= 1.991$, $p<0.05$). This finding indicated that playing preferred music when working led to change in employee work behaviour. Using these results, the predictive model can be substituted as follows: $WB= 1.443+ 0.053X_1$ where WB is employee work behaviour and $X_1$ is the background music.

**Step 3: $Y=\beta_0 + \beta_1 X_1 + \beta_3 WB_3$ where $WB_3$ is work behavior and $X_1$ background music and Y employee performance**

Step three of the regression analysis was meant to determine the relationship between work behaviour, background music and employee performance. Thus, employee performance was regressed on background music and work behaviour. From the findings in table 6, background music and employee work behaviour had a moderately strong relationship (r=0.486). The model accounted for 23.7% ($R^2$= 0.236) of variations on employee performance.

**Table 6: Regression Analysis Results on the Relationship between Background Music, Work Behaviour and Employee Performance**

**Model Summary**

| R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|
| 0.486 | 0.2362 | 0.2293 | 1.848 |

**Model ANOVA**

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 234.39 | 2 | 117.197 | 34.326 | 0.000 |
| Residual | 757.95 | 222 | 3.414 | | |
| Total | 992.34 | 224 | | | |

**Model Coefficients**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | t | Sig. |
| (Constant) | 694.039 | 1.253 | | 554.09 | 0.000 |
| Background Music | 2.028 | 0.278 | 0.431 | 7.29 | 0.000 |
| Work behaviour | 2.027 | 0.689 | 0.174 | 2.941 | 0.004 |

The ANOVA indicated an insignificant F-ratio of 34.326 which was significant ($p<0.05$). This is an indication that the regression model was appropriate and thus fit for the data. As shown in table 4.38, background music had a beta coefficient of 2.028 which was statistically significant ($t=7.29$, $p<0.05$). Work behaviour had a beta coefficient of 2.027 which was statistically significant ($t=2.941$, $p<0.05$). This finding indicated that playing preferred music when working led to increase in employee performance as measured by number of units produced. Further, background music improved employee work behaviour. Using these results, the predictive model can be substituted as follows: $Y= 694.039 + 2.028X_1 + 2.027WB_2$ where Y is employee

performance, $X_1$ is the background music and $WB_2$is work behaviour. Notably, background music had a significant effect on employee performance. Background music had a significant effect on employee work behaviour. Jointly, employee work behaviour and background music had a significant effect on employee performance. Thus, work behaviour has significant although weak influence on the relationship between background music and employee performance.

### 9.3 Discussion of the Findings

To establish the effect of personality on the relationship between background music and employee performance, mediated linear regression was used. With introduction of personality on the relationship between background music and employee performance, the coefficient of correlation changed from 0.454 to 0.455, a 0.01 change. The coefficient of determination changes from 0.206 to 0.207, 0.001 change. Significance of F change was 0.851 which is greater than 0.05 indicating an insignificant contribution of personality on the relationship between background music and employee performance. Therefore, personality had no mediating effect on the relationship between background music and employee performance. With personality introduced as a mediating variable, the model was still significant as shown by the p-value of 0.000. However, F-statistic reduced from 58.015 to 28.899 implying a reduction in predicting power of the model as a result of introduction of the personality as a mediating variable. Personality had a coefficient of -0.023 and p-value of 0.851. The p-value which was greater than 0.05 implied that personality had no significant effect in predicting employee performance.

Lack of mediating effect of personality on employee performance could be explained by the fact that majority 74% of participants were extraverts. Studies have shown that extravert's listen and use music more than introverts. This can also be supported by the study on preferred music which showed that participants loved happy sounding music. Rentfrow and Gosling (2003) have shown that personality and intelligence partly determines the way individuals used music. Extraverts use music to increase their arousal when doing monotonous work; they always seek out external stimulation to balance their arousal while introverts tend to like music that evokes sadness which is characterized by seeking internal stimulation and avoiding social contexts (Rentfrow and Gosling, 2003).

The study also sought to establish the influence of work behaviour on the relationship between background music and employee performance. The coefficient of correlation increases from 0.454 to 0.486 with coefficient of determination changing from 0.203 to 0.229, a 0.03 change. The significance of F change was 0.004 which was less than 0.05 indicating that work behaviour had a significant mediating effect on the relationship between background music and employee performance; however, the effect is minimal. The model is still significant with introduction of work behaviour as the mediating variable. However, the F-statistic reduces from 58.015 to 34.326 implying that the significance of the model reduces with introduction of work behaviour. The finding was due to the minimal mediating effect of work behaviour on the relationship between background music and employee performance. The findings indicated that coefficient relating to work behaviour was 2.027 (p-value= 0.004). Therefore, both background music and work behaviour are important predictors of employee performance.

## 7. Conclusion

The study concluded that personality had no significant effect on the relationship between background music and employee performance. Different personality types use music differently.

Extraverts for example, seek out excitement and will use music precisely for that purpose. They are under aroused and require stimulation from the environment for them to reach the optimum cortical level of arousal. They are outgoing and talkative and when under aroused they are bored. Music not only helps in bringing them to the optimum arousal threshold it also helps them to focus and minimize unnecessary behavior like gossiping, bothering others and noise making. Introverts use music generally for emotional purposes. For Neurotics and emotionally stable people music helps in controlling their emotions.

The study concludes that work behaviour significantly influence the relationship between background music and employee performance. Background music relaxes and improves alertness, reduces noise levels, creates a calm and enabling environment, optimizes time, and keeps energy levels high. Job situations require that people behave in certain ways at work to be able to achieve the objectives of the organization. Some of the behaviors 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, courteous and friendly, and displaying good use and care of materials and equipment.

## 8. Recommendations

The study recommends that employers to pay attention to the individual personality with the aim of improved performance. Whereas the study found no significant effect of personality on the relationship between background music and employee performance, literature indicates that different personality types use music differently which consequently will affect employee performance. For extraverts, they are outgoing and talkative and when under aroused they are bored. If the assessment of personality identifies the employees as being extraverts, music not only helps in bringing them to the optimum arousal threshold but also helps them to focus and minimize unnecessary behavior like gossiping, bothering others and noise making.

The study also recommends human resource managers and organizations to incorporate positive work behavior in their culture with the aim of improving employee performance through music. This study revealed that background music significantly affects employee behavior, which positively impacts on the performance of employees. Therefore to improve the performance of employees, background music should be played.

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