

Association between Formal Continuous Professional Development and Perception towards Job Characteristics among Clinical Officers in Nairobi County

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Abstract

This study aimed at establishing the relationship between participation in Formal Continuous Professional Development (CPD) and perception of job characteristics among clinical officers in Nairobi County. A descriptive study involving 113 was conducted clinical officers. A self-administered structured questionnaire measured on Likert scale measure perception. T-test was tested statistical significance in perceptions between those who had attended formal CPD and their counterparts. There was a strong association between attendance of formal CPD with various aspects of job characteristics: autonomy, $\chi^2=15.1822$, $p=.010$, $t=-22.5148$, $p=.0000$; Task identity, $\chi^2=9.6700$, $p=.085$, $t=-9.7655$, $p=.0000$. Task significance, $\chi^2=11.7011$, $p=.039$, $t=-9.0327$, $p=.0000$. Statistically insignificant results for association were posted with regard to skill variety, $\chi^2=.7405$, $p=.389$, $t=-.2726$, $p=.7856$; feedback $\chi^2=5.4698$, $p=.361$, but the means were significant, $t=-12.3438$, $p=.0000$. Factor analysis indicated that skill variety with eigenvalue of 1.60298 and task significance with 1.0792 the aspects of job characteristics that influenced how clinical officers perceived their job.

Key words: Job characteristics, Perception, Continuous Professional Development, Clinical officers

1. Background

Health is a fundamental human right as entrenched in The Constitution of Kenya- 2010 and universally recognized. It is therefore imperative that the government, stakeholders in health (both non-governmental and faith based institutions) and the health professionals make an effort to make sure that this right is available in good quality and extended to all Kenyan. Quality care is the degree to which health services an individual receives increase their likelihood of achieving the desired outcomes and are within the best and current professional practices (Institute of Medicine [IOM], 1990).

In order to achieve quality care, the Kenyan health care system has created different hierarchical cadres of healthcare professionals. At the top are surgeons and physicians who diagnose and perform major surgeries. In the middle are the clinical officers who diagnose, perform minor surgeries and refer patients with complex medical problems to surgeons and physicians. These are supported by the nurses who implement instructions from surgeons, physicians and clinical officers. Clinical Officers are referred to as the “backbone” of healthcare and frontline patient managers in both rural and urban settings (Ministry of Medical Services [MoMs], 2009) coming in to bridge the gap between the nurse and the surgeon/physician.

In the recent past, the healthcare system has experienced numerous challenges that have posed a challenge to the provision of quality care to clients in the healthcare system.

The challenges are due to advancement in diagnosis and treatment technology, epidemiologic shift from communicable to non-communicable diseases, demographic transition characterized by an ageing population due to increased life expectancy, an enlightened society continuously demand for better services and an increase in medico-legal litigation especially in dispensation of the new constitution of Kenya. This therefore, necessitates that all health professionals to provide quality care that is safe, timely, effective, efficient, patient-oriented and equitable in order to meet their communities changing health needs (World Health Organization [WHO], 2006). In light of these challenges, it is expected that healthcare professionals become lifelong learners. This enables them to update, maintain, develop and enhance their professional skills, knowledge and attitudes. In response to this demand, professional development training has been adopted by the Government of Kenya as a strategy.

Professional development training is part of a lifelong, systematic process of educational activities that aim to maintain, update, develop and advance knowledge, skills, attitudes and competences to new responsibilities or changing roles (World Federation for Medical Education [WFME], 2013). This ensures delivery of quality services while having the interest of the patient. For health professionals, it mainly focuses on enhancing roles and competences, communication, medical ethics, research and administration (WFME, 2013).

The field of clinical medicine is one of the professions in Kenya which requires one to have a practicing license by law and one of the prerequisite for renew is attaining 60 professional development points (Clinical Officers Act, 2017). This means that for a clinician to retain his/her practicing license, it is mandatory they undergo continuous professional development training. Within the health profession, CPD it is mostly referred to as Continuous medical education (CME). Scholars have argued that for healthcare workers to continue offering safe, quality and evidence based services, it is paramount that they continuously develop their professional skills, knowledge and attitudes (Giri, Frankel, Tolenku, Punkett, Bailey, & Rose. (2012); Ndege, 2006). However, the debate on whether mandatory CPD for licensure improves performance and professional growth is still inconclusive (Giri et. al. 2012; Ndege, 2006).

In developing countries where resources are constrained, achieving and maintaining quality health services, high quality skills among health workers is a matter of not only the knowledge and skills attained but also motivational aspects related to the work environment (WHO, 2006; Rowe, Cannelle, Rankin & Gorman, 2005). Nairobi County, which is the capital of Kenya, has estimated population of 3,781,732 with 3.8% growth excluding net migration (Kenya National Bureau of Statistics [KNBS], 2009). According to Ministry of Health, there are 9,188 Clinical officers employed into the public service while the staffing need is 16,278 (MOH, 2014) with majority concentrated in major town where Nairobi have the greatest share. In Nairobi, The ratio of clinical officer to population served is at 1:23,000 (IntraHealth International, 2015). Their attitudes therefore, are of importance since it has an impact on quality of services they offer. In Kenya, previous studies indicate dissatisfaction among health workers. Some of the factors contribution to dissatisfaction is low pay, inadequate resources, staff shortage and long working hours (Mbindyo, 2012; Karanga, 2012; Mbindyo, Gilson, Blaauw & English, 2009).

Work plays a major role in life as it remains a major source of individual identity (Judge *et al.*, 2003) and we are privately and socially defined by what we do (Hulin, 2001). A large percent of non-retired adults spend most of their waking hours at their workplace. It is the ultimate goal of every employee to work in a conducive environment. To have a job that they love, one that provides them with opportunity for self-development, allows them flexibility, and has security among others (Redmond, 2009; Judge et al, 2003).

Previous studies have examined the performance, roles, quality of service and job satisfaction among clinical officers in Kenya (Mbindyo, Blaauw & English, 2013; Karanja 2012; Mbindyo et al. 2009). Yet the issue of interaction between job characteristics interact with previous formal CPD has however not been given prominence.

In a review of studies done on different organizations and types of jobs, Judge & Church (2000) noted that nature of work itself was evaluated as the most important facet of the job. This was in comparison to other facets like pay, promotions and relation with co-workers. Consequently, in another study, interesting work was listed as the most important job attribute while good pay was ranked fifth. Managers thought employees are desirous for pay and ranked it first and interesting work fifth (Kovach, 1995; as cited by Saari & Judge, 2004). A 'good job' may mean different things to different people since people tend to have varying perceptions about their work (Steyn & Vawda, 2014).

It is therefore in the interest of every organization to understand what would increase employee's job satisfaction and reduce dissatisfaction. Studies have demonstrated that these can be achieved through job enrichment. Job enrichment is an intervention undertaken by an organization to redesign jobs aiming at making them more satisfying challenging and motivating, to the employee's (Saari & Judge, 2004). Job attitudes have an impact on employee behavior such as intention to leave employment, lateness, tardiness, calling in sick, among others. A negative attitude would lead to low productivity and poor quality of services (Saari & Judge, 2004). A study by Hackman & Lawler (1971) demonstrated that job characteristics have a direct impact on employees' attitude and behavior at their workplace (Hackman & Oldham, 1995, 1976).

Job characteristics are those aspects of a job that leads to high levels of satisfaction, performance and motivation (Jex, 2002; Redmond, 2009). The Job Characteristics Model proposed by Hackman & Oldham (1980) identified five fundamental characteristics of a job that defines an inwardly motivating job. First is the Task identity, which is the extent to which one can see their work from start to completion. Second is task significance, which is the extent to which ones work is termed as important. Thirdly is the Skill variety, which is extent to which ones work allows one to perform different tasks. Fourth is Autonomy that is the extent to which ones work allows the incumbent to make decision pertaining their work and lastly is Feedback, which is extent to which an employee receives report on his or her performance. These core characteristics leads to three 'critical positive psychological state' namely; responsibility for outcomes, experienced meaningfulness and knowledge of results. When these three 'critical psychological state' are present in an individual, they lead to positive personal and work outcome which is; internal work motivation, high overall job satisfaction and effectiveness at work, low absenteeism and employee turnover (Judge *et al.*, 2000).

When task identity, task significance and skill variety is enriched, the employees experience an enhanced meaningfulness for their work. A job that poses high autonomy increases experienced responsibility for the work outcomes and finally, a job that gives feedback increases knowledge of work results by the employee. A job may however, meet the above described core characteristics but the employee(s) are not motivated or satisfied as would be expected. This may be due to individual perception of different job characteristics. As stated by Hackman & Lawler (1971), "it's not the objective characteristics of the job that affects employee's job attitude and behavior but how the individual perceives his/her job is the important determinant of the influence of the job on the individuals satisfaction" (Sims Szilagyi, & Keller, 1976). Therefore, employees' perception of job characteristics plays a key role in determining personal and work outcome.

While numerous research work has been done on job characteristics and its effect on job satisfaction, few have explored the specific attributes and to the best of my knowledge of any that relates the influence of professional development training with each aspect of job characteristic. More so, most studies investigate the objective perspective of job characteristic while this study explores the subjective aspect. The literature reviewed below is on relationship between professional training and perception towards: skill identity, skill variety, task significance and Feedback. Also the effect of age, gender, education level and job grade on perception towards job characteristics. Due to the few studies the researcher will not look at the above relations in isolation.

Studies on job characteristic have been conducted but in the context of relation with job satisfaction and in a macroscopic way. One of such study is by Khan and colleagues who reported a positive correlation between work itself and job satisfaction (Khan *et al.*, 2011). Researchers indicated that job satisfaction was adversely influenced by factors like low autonomy, promotion opportunity and lack of security (Guest, 2004: Silla *et al.*, 2005: [as cited by Khan *et al.*, 2011]).

A job characteristic model proposed by Hackman and Oldham (1980) defined job characteristic as those aspects of a job that leads to high levels of satisfaction, performance and motivation (Jex, 2002 p. 117; Redmond, 2009). The model identifies five fundamental job characteristics that define an inwardly motivating job. Task identity – extent to which one can see their work from start to completion; Task significance – extent to which ones work is termed as important; Skill variety – extent to which ones work allows one to perform different tasks; Autonomy – extent to which ones work allow task discretion; Feedback – extent to which an employee receives report on his or her performance. These core characteristics leads to three 'critical positive psychological state' namely; responsibility for outcomes, experienced meaningfulness and knowledge of results.

When these three ‘critical psychological state’ are present in an individual, they lead to positive personal and work outcome which is; internal work motivation, high overall job satisfaction and effectiveness at work, low absenteeism and employee turnover (Steyn & Vawda, 2014; Judge, Joyce & Bono, 2000).

When task identity, task significance and skill variety is enriched, the employees experience an enhanced meaningfulness for their work. A job that poses high autonomy increases experienced responsibility for the work outcomes and finally, a job that gives feedback increases knowledge of work results by the employee. A job may meet the above described core characteristics but the employee(s) are not motivated or satisfied as would be expected. This may be due to individual perception of different job characteristics. It has been not that employees attitude towards a job is affect by how they perceive the characteristics of their job and not its objective properties (Hackman & Oldham, 1975/1976; World Federation for Medical Education [WFME], 2003; Hackman & Lawler, 1971; Sims, Szilagyi, & Keller, 1976). Employees’ perception of job characteristics therefore plays a key role in determining personal and work outcome (Sims et al, 1976).

Demographically, women continue to experienced obstacles in their working environment due to traditional gender ideologies. A man’s social status and achievement is determined by his education level and type of work while a woman’s rewards and achievement have been isolated in the family realm (Pleck 1977, 1985; Hochschild, 1989; Windle & Dumencil, 1997); as cited by Schieman, 2002. This could explain their low expectations from their jobs as a result of low positions they have traditionally held in the labour market (Nguyen *et al.*, 2003). In spite women occupying jobs that are low in autonomy and more routine, they still report more positive job attitudes [Hudson, 1989: as cited by Schieman, 2002]

In the recent past, education and occupation achievements have become expected and normative of women. More women are achieving higher education, holding lucrative positions in the labor market which translates to better socioeconomic status. While different studies give mixed findings on the same, gender influences on the socioeconomic status, work and wellbeing cannot be ignored. In the situation higher socioeconomic status and good working conditions may have a positive impact on the personal and social aspects of both men and women. Education and working conditions however, may have different structural implications and psychosocial meaning for men and women due to gender influences on work-family demand [Wiley 1991; Simon 1995:as cited by Schieman, 2002].

A study was conducted by Schieman (2002) on the socio-economic status, job conditions and well-being, i.e., self- concept explanation and gender- contingency in Toronto, Canada. The aim of the study was to examine what role mastery and self esteem play in relation to job conditions gender, socioeconomic status and well-being. He defined mastery as the ability to be in control of situations and the results in everyday events. He argued poised that self-esteem and sense of mastery have an impact on the physical and emotional well-being of an individual and can be used as resources to cope or avoid stressful situation.

The study involved 1,393 participants aged 18-55 who were employed in paid labor force. Data was collected through face-to-face interview over one year (1990-1991). Data was collected using five research instruments and analysed using ordinary least square regression, Pearson correlations and one-tailed test. The findings deduced from this study that is relevant to my work is; There is a positive correlation between gender and subjective job characteristics where jobs that offer greater autonomy help women manage demands from both work and out of work domains while jobs that are not routine and are interesting with a challenging aspects enhance a woman’s coping ability with home demands. Consequently, a man’s identity may be threatened if they engage in routinized and non-autonomous work especially when their education level is not taken into account.

2. Purpose

The purpose of the study is to find out the extent to which formal CPD training influences perceptions of job characteristics and among clinical officers in Nairobi County.

3. Methodology

3.1 Research design

The study adopted a descriptive design. Both quantitative and qualitative data was collected through a survey conducted among clinical officers in Nairobi County in Kenya.

3.2 Target population

The target population was 304 clinical officers working in Nairobi County's dispensaries and health Centres on permanent employment for duration of at least three years. The normal duration for promotions is three years, and thus the eligible population must have been promoted or due for promotions since this can impact on job satisfaction.

3.3. Sampling procedure

The approach used to determine the sample size for the hospitals and clinical officers in each subgroup/stratum which is proportionate stratification where the sample size of each subgroup/stratum is proportionate to the population size of the subgroup/stratum. Multi-stage sampling was applied to select the sample from target population of 304 clinical officers. Firstly, the sample was clustered into 10 Health Administrative Sub-counties and 60 level II and III health facilities within Nairobi County. Thereafter, the health facilities were selected using probability proportionate to size. Consequently, every clinical officer in the selected health facility had an equal chance of being selected.

3.4 Sample

A sample size of 113 clinical officers was used from a population of 304. Table 1 below shows the proportional distribution of the same as per the population

Table 1: Distribution of Clinical Officers in Nairobi County per sub-county and samples selected from each sub-county

Sub- Counties of Nairobi County	Number of health Facilities	Number of clinical officers	No. of clinical officers sampled
Makadara	5	44	20
Langata	4	26	10
Westland	5	30	17
Kasarani	5	40	16
Dagoreti	6	36	9
Kamukunji	3	15	5
Ruaraka	6	47	13
Embakasi West	4	25	7
Embakasi East	2	12	8
Starehe	8	29	8
TOTALS	48	301	113

3.5 Instruments

3.5.1 Quantitative data

A standardized questionnaire was used to collect data. Piloting was done at level III and IV health facilities to test the validity and reliability of the research instrument and those who participated were not involved in the actual study. A change on grammatical structuring of the questionnaire was done with the help of linguistic professional to make the questions communicate clearly to the participants. The questionnaire was divided into four (4) sections. Section A recorded demographic information. Section B captured information pertaining CPD such as; if one has attended CPD in the last one year, the type of training, the duration of training, if training was relevant to area of interest, what motivated one to attend the training and if attending training affected their levels of satisfaction with work. In this section, both open and closed questions were used. Section C had eighteen (18) questions that assessed perceptions of job characteristics.

3.5.2 Qualitative data

A Key Informant Interview (KII) guide was used to collect qualitative data. The key informants were drawn from the sub-county clinical officer in-charges and health administrators.

3.6 Data collection procedure

3.6.1 Quantitative data

The researcher, with the help of assistants administered the questionnaires to the sampled clinical officers in Nairobi County public health facilities (Dispensaries & Health Centers). The research assistants were taken through basic training on administration of questionnaire.

The clinical officers were first sensitized about the study through an electronic messaging platform 'WhatsApp' which they were all members. The researcher developed a list of all facilities to be sampled, the respective Clinical Officers working in there and their contacts. This helped the research assistants to administer the questionnaire in that those who were off-duty were contacted and those who still expressed interest to participate the questionnaire was left with their colleagues for them to fill and the assistants picked it later.

3.6.2 Qualitative data

The researcher interviewed the clinical officer's in-charge of sub-counties and administrators who in their day-to-day activities are in charge of the welfare of the clinical officers. The aim was to get an in-depth understanding of perception towards job characteristics of the clinical officers from an administrative perspective

3.7 Data analysis

Descriptive statistics such as the measures of central tendencies, dispersion and frequency distribution was used to summarize the data and to describe the distribution of the sample. From the Section C of the questionnaire, Skill variety was assessed by a set of four (4) questions No. 1, 3, 4 and 5 while task identity was evaluated by question No. 7. Task identity had 6 items (No. 6, 8, 9, 11, 12, 17). Autonomy was scored using four (4) items (No. 2, 13, 16 and 18). Finally, feedback had 3 items (No. 10, 14 and 15).

Pearson's correlation, multiple regression as well as t-test was used to infer the sample results to the population. Pearson's correlation co-efficiency was used to analyze the relationship of CPD and job characteristics. ANOVA analysis was done to determine the influence of gender, age, educational level and job group on perception of towards Skill variety, Task significance, Task identity, Autonomy and Feedback. T-test was used to test for independency of mean. Multiple linear regression was used to analyze association between professional training, confounding variables and the different attributes of job characteristics. Qualitative data was analyzed in relation to the themes that were emerging from the quantitative data regarding perception of job characteristics among the health workers.

4. Results

The findings covered the various aspects of job characteristics namely, task identity, task significance, skill variety, autonomy and feedback. The study was examining the extent to which clinical officers who had attended formal CPD training differed from those who had not undergone such training in how they perceived the characteristics of their job.

4.1 Skill Variety

For the clinical officers that attended the formal CPD trainings, 36.8% strongly agreed on the skill variety as is also seen by the mean and standard deviation of (4.98 ± 0.973) whereas 33.3% moderately agreed on skill variety with another 21.1% agreeing there was skill variety in their job. The remaining 8.8% disagreed that there was skill variety. Among the clinical officers who had not attended the formal CPD trainings, a greater proportions (41%) strongly agreed there was skill variety in their job as shown by the mean and standard deviation of (4.96 ± 1.061) , 26.8% moderately agreed on skill variety with 19.6% agreeing that there was skill variety with the remaining 12.5% moderately disagreeing on skill variety in their job.

With regard to the association between formal CPD and skill variety, the null hypothesis that was tested was that there is no association between participation in formal CPD training and the perception has regarding skill variety. The results as tested on Chi-square, $\chi^2 = .7405$, $p = .389$, indicate that the null hypothesis could not be rejected. The implication is that there was no association between formal CPD and skill variety. The two variables are independent. The Pearson correlation coefficient ($r = .1044$) was positive but close to zero, indicating positive but weak linear relationship between participation in formal CPD training and perception towards skill variety. Using t-test, results, $t = -.2726$, $p = .7856$, the null hypothesis was not rejected.

The conclusion is that there is no statistically significant difference there is a highly statistically significant difference between the means of those who participated in formal CPD training and those who did not regarding how they perceived skill variety of in their work.

A regression analysis was undertaken with an aim of demonstrating the confounding variables that influence of how clinical officers perceive skill variety present in their job. Having attended a formal CPD was seen as a major predictor of how clinical officer evaluated skill variety present in their job ($\beta=0.119$, $t=0.119$, $p=0.246$), followed by age ($\beta=0.098$, $t=0.897$, $p=0.372$) while gender had the least influence ($\beta=-0.072$, $t=-0.704$, $p=0.483$).

4.2 Task Significance

For the clinical officers that attended the formal CPD trainings, 43.9% disagreed with the same proportion moderately agreeing on the significance of the tasks they handle at work as shown by the mean and standard deviation of (4.35 ± 0.834); whereas 42.1% strongly agreed on task significance with only 1.8% strongly disagreeing on task significance of their job. The clinical officers that had not attended the formal CPD trainings, a greater proportion (50%) moderately agreed on the task significance as is also seen by the mean and standard deviation of (4.39 ± 0.705), another 41.1% agreed on task significance with 1.8% who moderately disagreed on task significance.

Chi-square, $\chi^2=11.7011$, $p=.039$, indicate that the null hypothesis was rejected. The implication is that there is association between participation in formal CPD training and task significance. The Pearson correlation coefficient ($r=.0711$) was positive but close to zero, indicating positive but weak linear relationship between the two variables. When this association was tested on t-test the results, $t=-9.0327$, $p=.0000$, show that the null hypothesis was rejected. The conclusion is that there is statistically significant difference there is a highly statistically significant difference in the means of those who participated in formal CPD training and those who did not regarding how they perceived the task significance aspect of their work.

Analysis of findings examined the demographic factors that were significant predictors of how clinical officers who had attended formal CPD perceived Task Significance vis-à-vis- their counterparts who had not undergone similar training. The regression findings demonstrated that the job group and CPD were significant determinants of how clinical officers evaluated their job as being important ($\beta=.337$, $t=2.903$, $p=.005$, $\beta=.077$, $t=-.763$, $p=.447$). This was followed by age, education level and gender having the least influence ($\beta=-.152$, $t=-.411$, $p=.162$, $\beta=-.125$, $t=-1.144$, $p=.25$, $\beta=-.051$, $t=-.508$, $p=.613$).

4.3 Autonomy

For the clinical officers who attended the formal CPD training, a greater proportion (45.6%) moderately agreed on autonomy given to them at work as shown by the mean and standard deviation of (4.95 ± 0.875) whereas 28.1% strongly agreed on availability of autonomy. The remaining 7.0% disagreed on their job accorded the autonomy. As for those that had not attended the formal CPD trainings, a greater proportions (53.6%) moderately agreed they had autonomy as shown by the mean and standard deviation of (4.75 ± 0.919) whereas 23.2% only agreed that they had autonomy. The remaining 1.8% strongly disagreed that they had autonomy.

The analysis examined the which demographic factors significantly predicted of how participation in formal CPD training by clinical officers related to their perception of their ability to make decisions at work, i.e. autonomy.

Table 2: Regression for relationship between participation in formal CPD training and perception towards autonomy among clinical officers

Regression Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.172	.564		9.167	.000
1. Gender	-.075	.191	-.042	-.395	.694
2. Age	-.009	.155	-.007	-.060	.952
3. Education Level	-.092	.098	-.107	-.933	.353
4. Job Group	.041	.067	.075	.621	.536
5. Attending formal CPD training	-.093	.187	-.052	-.495	.621

The results of the regression analysis as presented in table 2 above showed that job group was a significant factor on how clinical officers perceived autonomy in their job, $\beta=.075$, $t=.621$, $p=.536$ with age having the least influence ($\beta=-.007$, $t=-.060$, $p=.952$).

The null hypothesis that was tested for the association between formal CPD and Autonomy showed there is no association between formal CPD and Autonomy. The results as tested on Chi-square, $\chi^2=15.1822$, $p=.010$ led to the rejection of the null hypothesis, thereby implying that there is association between participation in formal CPD training and Autonomy. The strength of this association was tested on Pearson's correlation coefficient with the results $r=-.3312$, showing a negative and weak linear relationship between the two variables. When tested on the t-test, the results, $t=-22.5148$, $p=.0000$, showed that the null hypothesis was rejected. The conclusion is that there is a highly statistically significant difference in the means of those who participated in formal CPD training and those who did not regarding how they perceived Autonomy at work.

4.4 Task Identity

For the clinical officers that attended the formal CPD trainings, a greater proportion (66.7%) strongly disagreed on the task identity as it is also shown by the mean and standard deviation of (1.81 ± 1.517) whereas 15.8% moderately disagreed on task identity; 8.8% strongly agreed and the remaining 1.8% moderately disagreed on task identity. As for the clinical officers who had not attended the formal CPD trainings, 69.6% strongly disagreed on the task identity as shown by the mean and standard deviation of (1.70 ± 1.374) whereas 14.3% moderately disagreed on task identity. The remaining 6% moderately agreed on task identity.

The regression analysis investigates the key predictor of how task identity is perceived among clinical officers who attended Formal CPD training. Regression results show that job group had the greatest influence on how clinical officers perceived their ability to identify the roles in their job ($\beta=0.059$, $t=0.492$, $p=.624$) followed by the education level, ($\beta=.040$, $t=.356$, $p=.723$) while attending CPD was a weak determiner of how the clinician perceived the presence of task identity in their job ($\beta=-.046$, $t=-.441$, $p=.660$).

The Chi-square test for the association between participation in formal CPD training and perception towards task identity was $\chi^2=9.6700$, $p=.085$. This was an indication that the null hypothesis is not rejected. The implication is that there is no association between participation in formal CPD training and task identity. The two variables are independent of each other. The Pearson correlation coefficient ($r=-.1703$) was negative and close to zero, indicating negative and weak linear relationship between them. The t-test results, $t=-9.7655$, $p=.0000$, show that there is a highly significant difference in the means of those who participated in formal CPD training and those who did not regarding how they perceived task identity at work.

4.5 Feedback

For the clinical officers that attended the formal CPD trainings, a greater proportion (45.6%) agreed on importance of feedback as shown by the mean and standard deviation of (4.02 ± 0.935) whereas 29.8% moderately agreed on feedback. The remaining 1.8% strongly agreed on importance of feedback.

While for those that had not attended the formal CPD training, a greater proportion (44.6%) agreed on feedback as shown by the mean and standard deviation of (3.86 ± 0.980) whereas 26.8% moderately agreed on usefulness of feedback. The remaining 1.8% moderately agreed on value of feedback.

Finally, regression analysis examined the which factors were significant predictors of how clinical officers perceived feedback. In terms of how clinical officers perceived the way feedback is given on their work, education level was the most significant predictor of participation in formal CPD training related to perception towards feedback ($\beta=.101$, $t=.892$, $p=.375$). These were followed by job group and gender ($\beta=.057$, $t=.473$, $p=.638$; $\beta=.055$, $t=.529$, $p=.598$) while age was the least significant ($\beta=-.069$, $t=-.613$, $p=.541$).

Pertaining the association between participation in formal CPD training and perception towards feedback, the Chi-square results $\chi^2=5.4698$, $p=.361$, indicated that there was no association between two variables. The Pearson correlation coefficient ($r=.2193$) was positive but close to zero, indicating positive and weak linear relationship between participation in formal CPD training and perception towards Feedback. The t-test results, $t=-12.3438$, $p=.0000$, showed that that there was statistically significant difference in the means of those who participated in formal CPD training and those who did not regarding how they perceived the aspect of feedback at work.

Table 3: paired t-test results for relationship between participation in formal CPD training and perception towards job characteristics

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Group1 Group 2	.09000	.09899	.04427	-.03292	.21292	2.033	4	.112

The paired t-test statistics was calculated with 5% level of significance. The t- test value was 2.033 which lies on the rejection area which is outside the lower limit -.03292 and upper limit of 0.21292. The null hypotheses that there is no the association between perception towards job characteristics as a result of having gone through formal CPD among Clinical Officers within Nairobi County were therefore rejected. The alternative hypotheses that there is the association between the Independent and Dependent variable are accepted.

Factor analysis test was used to identify/determine the most important job attributes that motivate Clinical officers in Nairobi County to attend formal Continuous Professional Development (CPD). The factors considered are “Skill variety”, “Autonomy”, “Task significance”, “Task identity”, and “Feedback” as shown in Table 4.

Table 4: Factor Analysis to identify the most important job attribute influencing CPD’s perception of the characteristics of their job

Factor	Eigenvalue	Difference	Proportion	Cumulative
Skill variety	1.60298	.5238	0.3206	0.3206
Autonomy	.9654	.1610	0.1931	0.7295
Task significance	1.0792	.1138	0.2158	0.5364
Task identity	.8044	.2563	0.1609	0.8904
Feedback	.5481	.0000	0.1096	1.0000

Factors with eigenvalues of ≥ 1 are considered the most important. With eigenvalues of ≥ 1 in table 4 above, Skill variety and Task significance are the most important job attributes that influence the perception of Clinical Officers in Nairobi County.

5. Discussion

The analysis examined the influence of CPD on perception towards different attributes of job characteristics (skill variety, task identity, task significance, autonomy and feedback). Previous studies have investigated the relationship of job characteristics and job satisfaction. However, the influence of CPD on job characteristics has not been given prominence. Job characteristics have direct impact on employee's attitudes and behavior such as job satisfaction, absenteeism and turnover (Oldman & Hackman, 1995; 1996; Szilagyi & Keller, 1976). From the study, a job that offers opportunity to learn new things and enable personal growth and development were the most desired attributes of skill variety both for those who had attended CPD and for those who had not both scoring means of 5.47. These findings are supported by previous literature that proposes interesting work as the most important work attitude (Saari & Judge, 2004). On task significance, majority of COs perceived their job as being important with no major differences between the two groups.

For autonomy, those who had attended training desired for ability to make decisions about their work compared with those who had not attended training with means of 4.95 and 4.75 respectively. Previous studies indicated a relationship between autonomy and job satisfaction (Khan et al, 2011; Guest, 2004) with Nguyen stating that, the more autonomous a job is, the greater the satisfaction (Nguyen *et al.*, 2003). The same was observed with attending a professional training having an impact on perception towards feedback with means of 4.02, 3.86 between the group of those who had attended and those who had not attended a training respectively.

From regression analysis, CPD was a major predictor of how COs evaluated skill variety ($\beta=0.119$, $t=0.119$, $p=0.246$) and task significance in their job ($\beta=.337$, $t=2.903$, $p=.005$). This could be accounted for by the role of CPD to enhance skills, competences and knowledge (Giri et al., 2012) leading to COs being able to perform duties competently. Job group was indicated as having the major influence on perception towards task identity and autonomy ($\beta=0.059$, $t=0.492$, $p=.624$; ($\beta=.075$, $t=.621$, $p=.536$) while education level was a predictor of how they evaluated feedback in their job ($\beta=.101$, $t=.892$, $p=.375$). Interestingly, gender and age did not have significant influence on job characteristics. However, Scheiman writes of a relationship between gender and subjective job characteristics (Scheiman, 2002). Factor analysis results indicated that of all the job characteristics, skill variety and task significance are the two factors that can motivate clinical officers to attend formal CPDs.

6. Conclusion

Another conclusion is that there is a significant association between CPD and perception towards job characteristics. CPD was also a major predictor of how COs perceived skill variety and task significance. The employer should endeavor to ensure more attendance of formal CPD training as this has an influence of how COs perceive job characteristics.

7. References

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