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MANAGEMENT | RESEARCH ARTICLE

Bolstering human capital management and engagement in the health sectors

Adewale Osibanjo¹, Anthonia Adeniji¹, Odunayo Salau¹, Tolulope Atolagbe¹, Abisola Osoko¹, Ogheneofejiro Edewor^{1*} and Julia Olowu¹

Abstract: The health sector is one of the cornerstones and most viable tool for sustainable development. The quest for improved performance has developed momentum over the past years, and this has increased the demand for excellent service. Still, surprisingly the process and array of complexities in employees' selection, education, as well as their career development in the health sector is worrisome with heightened attrition rate. Hence, this paper examines how holistic human capital management is nurtured, implemented and practiced in Nigeria's health sector. The human capital and social exchange theories were also used to explain the issues. The study adopts a cross-sectional approach and descriptive research design to establish trends related to the objectives of this study. A quantitative approach was employed using a modified survey questionnaire in purposively sampling 408 selected health workers in the south-west, Nigeria. The use of measurement model and structural equation modelling (SEM_PLS) was



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PUBLIC INTEREST STATEMENT

Human capital is the most crucial factor of production in a business. This involves the combination of skill, knowledge, competencies, technical know-how, behaviour, attitude, talents, intelligence and abilities inhabited by individuals or in-groups, owned as assets for organizations to utilize at will. Human capital is the aggregate or totality of human competences that add value to the organization. Not many have identified how investments in human capital engage employees or increase their involvements in organizational activities. Hence, this paper explored the relationship between how human capital management dimensions influence the way health workers in the teaching hospitals engage themselves through their thoughts, feelings, and actions. The study opined that the level of relationship, cooperation, and communication between the employee and employer has a positive or negative influence on the employee work environment, thereby resulting in low or high engagement levels.

adopted to establish the convergent reliability, model-fit and degree of association. The results established that human capital management dimensions (training and development, mentoring, employee relations, coaching, job design and career development) are significant predictors of employee engagement. Surprisingly, career development and mentoring had the least values. The study concluded by providing a quite detailed analysis of the assumptions underpinning holistic human capital management in Nigeria's health sector and also putting forth viable and pragmatic recommendations.

Subjects: Strategic Management; Human Resource Management; Human Resource Development; Organizational Change

Keywords: human capital; management; health sector; engagement

1. Introduction

Human capital is the most crucial factor of production in a business and it involves the combination of skill, knowledge, competencies, technical know-how, behaviour, and attitude, talents, intelligence, abilities and so on, inhibited by individuals or in-groups, owned as assets for organizations to utilize at will. Human capital is the aggregate or totality of human competences that add value to the organization (Adeniji et al., 2018; Choudhury & Nayak, 2011). In other words, human capital requires a high level of maintenance (Jena & Pradhan, 2017), development (Halidu, 2015) and control (Ehnert et al., 2014), since it can be highly dynamic and complex to deal with and this sets a pace for the term "Human capital development". Human capital development (HCD) involves the application of new ideas (competencies), identification of new potentials and improving the performance of already existing personnel in the workplace. This HCD also involves effective utilization and engagement of personnel, including the process of mentoring, internships, training, coaching (Kucharcikova & Miciak, 2018), and other educational programmes to improve skills, motivate resourcefulness (Longoni & Cagliano, 2016) and stimulate employees' engagement (Tomislav et al., 2019).

Extant literature has shown that employees find engagement as an opportunity to have reasonable input in the organization. When employees are engaged, it gives them a sense of value and challenge. Tomislav et al. (2019) argued that employees can be engaged in workplace development activities using mental acts of acquiring knowledge, using thoughts emotions, experiences and senses (cognitive engagement), feelings and emotions (affective/emotional engagement) and through their actions (behavioural/physical engagement). There are three main categories of employee existent in organizations include; engaged, not engaged and actively disengaged. Engaged employees are the roots and foundations of the organization they work with, and they try as much as possible to direct their energy, talents and strengths to their work. They move their organization towards high performance with passionate drive and innovation (Kucharcikova & Miciak, 2018; Uzzal, 2016). Not engaged employees only focus not more or less on work and nothing else. They are not energetic and happy towards work (Reilly, 2014; Salau et al., 2018). They have little or no contribution to the accomplishment of organizational aims and objectives. Actively disengaged employees, on the other hand, neither have the interest to work or effectively do their work. They have negative orientations to their work and put no input at all for the betterment of the organization.

Empowering, improving, training and developing employees are ways in which to engage employees in the workplace. When employees are selected for development programmes, they feel a need to want to repay the organization for generating interests in them and increasing their value. Employees feel indebted and generate a natural bond that ensures they are more committed and relatively responsible for the organization. In subsequent years, theories have identified that there is a correlation between investing in human capital and the intentions of employee

turnover as well as organizational commitment (Verhees, 2012). On the human resources, health personnel are still over-stressed, as Nigeria's health sector is yet to meet the WHO template ratio, 1 doctor to 500 patients (Fajana et al., 2011). In some cases, the patients have to be on sitting down queueing for hours, and if there is a severe case among them, the patient may die. Furthermore, the staff of hospitals are not adequately motivated like their counterparts in more civilized and civil countries. Related to the poor motivation of health workers is the problem of brain drain, which is a by-product or consequential effects of frustration and poor motivation. Training and retraining of staff are poorly addressed in the health sector, perhaps owing to the lean budgetary allocation to the health sector by the Federal Government year in year out, with little or no improvement. This leads us to another severe problem being experienced in present-day Nigeria, and that is gross underfunding.

Gross underfunding is a serious social cankerworm devouring the fabrics of the Nigerian health institutions. Because of the lean budgetary allocation to the health sector, the Nigerian health system is below the World Health Organisation Standard of 15% of the total budget. This gross underfunding of the health sector has been an issue for years. The most medical exchange programmes that often assist health-care delivery services were not forthcoming, thus creating problems in Nigeria. Not many have identified how investments in human capital engage employees or increase their involvements in organizational activities. Some employers have various problems associated with the conduct of human capital development. Even where funds are available, some employers feel very reluctant to utilize the fund for this purpose since it is highly cost-effective (Ajisafe et al., 2015; Choudhury & Nayak, 2011). Nevertheless, they (employers) often see investment more as cost than investment. Hence, this paper explored the relationship between how human capital management dimensions influence the way health workers in the teaching hospitals engage themselves through their thoughts, feelings, and actions.

2. Literature review

2.1. Human capital

Human capital is the totality of skills, abilities, competencies, behaviours, attitude, values, principles, attributes, personalities, etc., that an organization controls and is accessible to. In the present changing business environment, human capital is very scarce since organizations require the right people for the right job (Halidu, 2015). This has created a very high competition in search of highly qualified and talented employees in the labour market. Getting the right amount and type of human capital gives the firm a competitive advantage over other firms. In the explanation for Resource-Based View, Barney (1991) claimed that unrelenting, continuous competitive advantage is derived beginning with the procurement and utilization of parcels of unique assets that other contenders are unable to copy. Therefore, when an organization has a human capital base that cannot be duplicated, reproduced or easily created, then they have acquired a competitive advantage.

2.2. Human capital management

The contemporary place of work is a dynamic and competitive environment that calls for perpetual improvement and achievement objectives by the employees and managers at all levels, which in turn necessitates organizations repetitively invest in the management of human capital. Human capital development entails how much an organization is willing to provide a resource for acquiring potential human capital/resources and training, developing, facilitating, coaching, mentoring and improving already existing ones. Human capital, which is said to be intangible, is capable of producing economic value and increased work performance when it is efficiently developed. Importantly, employees have a measure to control the type of, and amount of investment on human capital (Roos et al., 1997; Imran & Tanveer, 2015). The attraction, of whether or not an employee will be invested in, is to his level of potentials; therefore, exceeding the limit of investment can cost the organization a fortune (Snell & Dean, 1992).

Human capital development is a branch of human resource management that provides a learning platform for enhanced growth, productivity and effective performance (Kadiresan et al., 2015; Longoni & Cagliano, 2016). Most employers tend to see human capital development as a variable cost rather than an asset. Therefore, it should be brought to the understanding that human capital is the primary reason for competitive advantage in all organizations since they are the ones that operate the other factors of production for production to take place, which helps firms surpass their rivals. In other words, when employers efficiently and effectively develop employees with specific degree commitment, employees reciprocate and with a high level of commitment performs their jobs. When employee human resources are being developed, they are capable of increasing their positions status and economic rewards. Employees that have undergone human capital development are likely to be easily retained in firms. Human capital development can be attained in the following ways: career development, coaching and mentoring, and training (Kucharcikova & Miciak, 2018; Ogujiuba, 2013).

2.3. Employee engagement

Employee engagement differs across national boundaries and organizations locally or globally, as a result of the socio-cultural, technological, economic and political differences. Engagement is the degree to which individuals are concentrate and engross in work while carrying out their roles (Jena & Pradhan, 2017). According to Kahn (1990), workers are more engaged when they feel work to be done safe and meaningful, and they are readily available to do the job. He defined engagement as the level to which individuals are dedicated and involved in work. According to Kahn (1990), employees exhibit traits of engagement in other to repay the organization for emotional, social and economic rewards they receive from the organization. Therefore, the engagement of each employee is said to vary depending on the rewards they each get from the institution. Engagement is evidence that employees in the organization are liable to be reciprocal as long as there is a standing give and take the relationship between them and the organization that is financially, emotionally and physically visible (Saks, 2016; Stankeviciute & Savaneviciene, 2018). With relation to social-exchange theory, a slight change in behaviour or breach of each party's rules, who share co-dependent give-and-take relations, can affect engagement employees (Swarnalatha & Prasanna, 2012). Given the Kahn's model, employee engagement is acquired in three different levels, i.e. the physical, cognitive and emotional, which are deeply affected by the level of psychological meaningfulness, wellbeing and accessibility. He disclosed that meaningfulness alludes to the positive expectations' employees have, after performing tasks properly, concerning acquiring outcome or reward that is valuable to them.

Sequel to this line of thoughts, this study examined the following variables:

2.3.1. Career development

Career development examines how individuals in organizations move up their career ladders within and among organizations. It looks at how organizations enhance the progress of employee careers using succession planning as a tool (Tomislav et al., 2019). Career success in the 21st century is now seen to be what is distinctive to each person (psychological success), not only reaching the top of the corporate ladder (Stankeviciute & Savaneviciene, 2018). A person is said to have objective career success when they attain work performance, pay, positions, promotions, etc., and subjective career success when they have measured up to the self-referent career goals and aspirations (Reilly, 2014; Wright & McMahan, 2011). Therefore, when employees in organizations experience progress in their line of work, they become committed and want to stay in the organization since they perceive that their personal career goals and aspirations are likely to be achieved in that firm, they stay when they feel that their future can blossom in the organization without being stagnated in life. It can therefore be hypothesized that:

H₁: Career development has positive effect on workers' engagement

2.3.2. Coaching

Coaching communicates predominantly to address performance gaps and performance development (regularly, interim) in a specific skill range. In most cases, coaching involves the coach reports direct extrinsic observations to the coached using direct feedback while the mentor uses question process (Salau et al., 2018; Sanghamitra & Rajashi, 2011). A coach works with the protégé on specified goals and objectives while the mentor is in the same vocation that the understudy is beginning or passing. To the organization coaching allows for flexibility and skilful workforce, reduced cost in terms of time and resources compared formal training, increased adaptability to change. To a learner, it allows for; increased confidence in skills as well as self-reliance, developed platform for more experience, growth and broadened insight to work (CIPM, 2018; Reilly, 2014). The coach benefits from coaching as it helps reinforce their skills, developed staff makes work and relationship smooth, effective control and adaptability to change. All these are benefits of coaching to an organization, employee and coach. Employees in need of coaching are often those below-performing standards, frustrated at work, those introduced to new technology, those that encounter new jobs or tasks. Learners who require the development of new skills, employees on career program pathways, anyone is developing a new career path, employees returning work after the break, staff working with stressful situations. We therefore hypothesized.

H₂: Coaching has influence on workers' engagement

2.3.3. Mentoring

Mentoring is the sole responsibility of realising and cultivating impending talents of individuals. The learner often sets goals under this programme even though a change of goals may occur. It is usually a long-term relationship. The mentor helps the mentee to develop their understanding and foresight using intrinsic observation, which is coherent with becoming more attentive to their mentee's experiences. The sole learner responsibility is the determination of goal as well as the method of actualization. Feedback comes back from within the mentee (Salau, 2017; Sanghamitra & Rajashi, 2011). Mentoring is an HCD practice that requires that employees select expert managers and supervisors who are not necessarily ace workers in the organization but have what it takes to guide, inspire and support others to grow. It is hypothesized that:

H₃: Mentoring has positive effect on workers' engagement

2.3.4. Training and development

Training is an organized practice to which the human resources of an organization attain knowledge and cultivate skills by instruction and real-world activities that metamorphose into better-quality corporate performance. Training is the regular use of proper procedures to disclose information, knowledge and facts that help people to procure the skills indispensable for the performance of jobs adequately (CIPM, 2018; Falola et al., 2018). The goal of training is for employees to imbibe the attitude, knowledge, behaviours and skill accentuated in training programs and to apply them to their real-life routine events. Training is the planned efforts of a corporation to assist an employee's knowledge of job-related proficiencies (Fajana et al., 2011). These capabilities include knowledge, skills or behaviours that are needed for job performance. Training is done by most companies to refreshes the memory of old employees. It enables the new employees to learn new improvement or upgrades of products/service delivery, technology, job methods, etc., thereby reducing errors and curtailing expenses, improving efficiency and effectiveness at work. Training helps maintain qualified products/services. It is also a platform for achieving high service standards as well as provide information for newcomers. It may also serve

as an avenue for employees to engage in a feedback mechanism that can progress communication & relations at work.

With training, employees new or old can obtain knowledge and skills to convey jobs accurately. This increases the level of engagement as they can indulge in work activities that they formerly did not pay attention to before. Employees can engage in new areas of interest as a result of new skills acquired. Employees are more engaged because they are satisfied with performing a new task with their new skills after the training process (Swarnalatha & Prasanna, 2012). Also, training managers to be more effective at building employee engagement helps the organization in significant ways related to engagement. When an employee is recruited, he must be adequately trained in relations to the job this reduces the risk of attrition, turnover and job mismatch, dissatisfaction and disengagement. As a result, the importance of training, retraining and multi-skill training cannot be over-emphasised, therefore, we hypothesize that:

H₄: Training and development have positive effect on workers' engagement

2.3.5. *Employer-employee relations*

Kahn (1990) explained that employees are psychologically safe when they can do things without fear of loss, punishment or consequences. He posited that this safety is, however, influenced by the interpersonal relationships, leadership style, in and out-group dynamics. Kahn (1990) explained that supportive and trustworthy relationships towards superiors and co-workers are more likely to increase employee's engagement. Extant literature empirically supported the claim that social support from co-workers and superior has an impact on engagement. This is a basis for the argument that relationships built-in team's increases the enthusiasm, energy of each member regardless of tasks, and resources obtained. It can therefore be hypothesised that:

H₅: Equity has positive effect on job satisfaction and performance

2.3.6. *Job design*

This entails the kind of job the employees are recruited to carry out. When employees are into their desired jobs with the desired level of autonomy, flexibility, challenge, provide adequate feedback and are actively involved in their jobs, jobs become meaningful and attractive to the employees, enhancing the level of engagement to work (Swathi, 2013). When jobs are challenging and require the use of a variety of skills, helping employees show more of themselves, it increases the engagement level of workers (Kahn, 1992). It can therefore be hypothesised that:

H₆: Equity has positive effect on job satisfaction and performance

2.4. *Link between human capital management and employee engagement*

Human capital Management influences the engagement of staffs in the organization directly or even indirectly (Halidu, 2015). Employees can get, acquire and improve their skills that help them perform well at work when they are trained and developed and which gives them the confidence to participate and involve themselves in the organization's decision-making processes in various levels (Ajisafe et al., 2015). In previous studies, components of human capital development (specifically training and development and career development) are used as antecedents of employee engagement (Anitha, 2014; Denis, Wilson, & Biteman, 2014). When employers develop employees with a degree of commitment efficiently and effectively, employees reciprocate and performs their jobs with a high level of commitment. Employees can enhance their positions status and economic rewards when human resources are being developed.

3. Theoretical framework

The dominant theoretical findings are gotten from different related pieces of literature, and the theories explained in this section are Human Capital theory and Social Exchange Theory.

The source of Human Capital Theory (HCT) is found in the work of Mincer (1958), Schultz (1961), Becker (1964), and Robert (1991). Mincer (1958) premised the theory on investing in education as a way to add value to human beings. This was subsequently built on by Schultz (1961) and Becker (1964) as they advocated for education or training as a useful tool for transiting knowledge and skills to employees. The human capital model of Robert (1991) perceived education as an instrument for enriching human capital, stimulating employees' performance, and boosting the levels of performance across the world. The provision of formal education is found to be a productive investment in human capital, which the advocates of the theory have perceived to be valuable than investment in physical capital.

Social exchange theory explains the give and take the relationship between parties involved who strengthen their relationship based on perceived fairness. Employee engagement is a psychological and emotional bond; employees have with the firms that affect performance at work (AbuKhalifeh & Som, 2013). In a state of reciprocal interdependence, the parties become obliged to one another after continuous successful dealings. With time and as each party comply to rules guiding their relationship, each of the parties involved begins to emit a sense of loyalty, trust and understanding towards the other (AbuKhalifeh & Som, 2013). According to Saks (2006), employee engagement is highly influenced by the availability, consistency, perceived fairness and just allocation of resources and outcome the organizations provide. When employees receive from the organisation, they feel indebted to the firm. In return, employees carry out their jobs more effectively and efficiently repaying the firm with increased engagement at work. On the other hand, when the resources necessary to motivate employees are not steadily and somewhat dispersed employees tend to withdraw and disengage themselves from work. Therefore, all physical, emotional and cognitive input of employees can only be gained with rewards provided by the organisation (Kahn, 1990).

4. Methods and analysis

This study adopted a descriptive design and quantitative approach to elicit information from selected 510 health workers across the five (5) selected teaching hospitals in Southwest, Nigeria, namely: the teaching hospitals at Lagos, Ibadan, Ife, Sagamu and Osogbo. This region (south-west) was selected based on heightened visibility (in terms of research, international outlook, reputation) and because the majority of the teaching hospitals were concentrated in the region. The use of a structured questionnaire was adopted to elicit information from a cross-section of health workers who were conveniently and purposively selected in Southwest, Nigeria. The items in the survey were adapted from prior studies. The questionnaire comprised forty (40) questions with the aid of five (5) point Likert's scale. The Likert's scale ranges from strongly agree (5), Agree (4), undecided (3), disagree (2) and strongly disagree (1).

The human capital management was measured using training and development, mentoring, job design, career development, coaching, and employee relations (Ajisafe et al., 2015; Ogujiuba, 2013; Salau, 2017; Tomislay et al., 2019). While items for employee engagement were adapted from the works of Hauck et al. (2011), Swarnalatha and Prasanna (2012), Reilly (2014), and Falola et al. (2018). Out of the five hundred and ten (510) copies of the questionnaire distributed, only four hundred and eight (408) copies were duly filled, representing 80% response rate. The researcher achieved a high response rate due to frequent visitation and familiarisation with the target respondents at their various duty points. The data collected were analysed using measurement and structural modelling (Fornell & Larcker, 1981). The measurement model was supported by convergent and reliability tests. Details of the convergent reliability using the Confirmatory Factor Analysis are presented in Table 1.

Table 1. Result of convergent reliability using confirmatory factor analysis

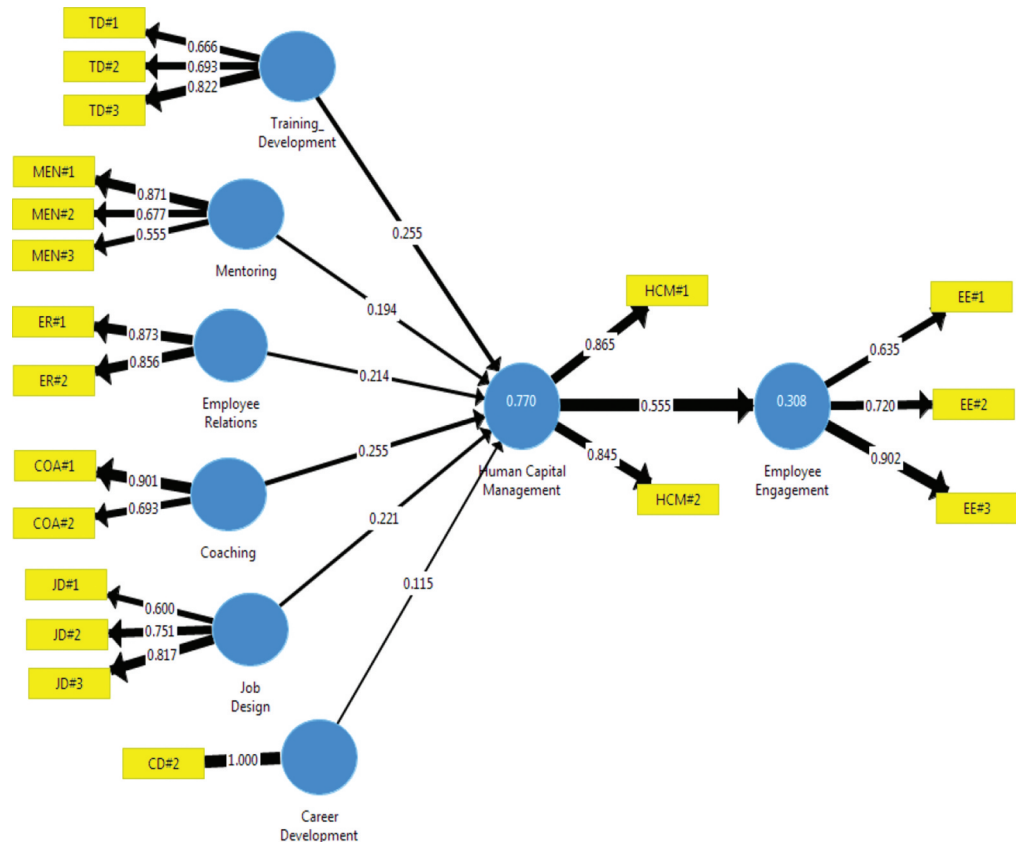
Variables	Items	Cronbach's Alpha	rho_A	Composite reliability	Ave. variance estimated	No. of items
Threshold		≥ 0.7	≥ 0.7	≥ 0.7	≥ 0.5	
Human capital management	Career Development	0.823	0.851	0.882	0.654	5
	Coaching	0.743	0.755	0.837	0.564	5
	Employee Relations	0.784	0.801	0.861	0.608	5
	Mentoring	0.830	0.934	0.895	0.743	5
	Job design	0.836	0.841	0.902	0.754	5
	Training & Devpt	0.895	0.919	0.920	0.697	5
Employee engagement		0.774	0.780	0.821	0.605	10

The results depicted that the factor loadings of CFA and the significant conditions used to examine the convergent validity as suggested and recommended by Fornell and Larcker (1981) and Bagozzi and Yi (1988) were met. In contrast, the structural model was used as recommended by Fornell and Larcker (1981) to examine the degree of association among the observed and latent variables. The use of Partial Least Square—Structural Equation Modelling (PLS-SEM) technique was adopted for the data analysis. This hypothesis was tested through smart PLS and Structural Equation Modeling (PLS-SEM). The structural path co-efficient (R^2) through PLS Algorithm Model, PLS Bootstrapping Model with β and P values and PLS Bootstrapping Model with β and T values show the level of the significant influence of human capital management on employee engagement. The algorithm helps to determine the path co-efficient and the significant values while the bootstrapping helps in determining the significant testing of the coefficient.

For the measurement model, all items are reflective, and the minimum acceptable value for a factor loading is 0.60 (Fornell & Larcker, 1981), and remarkably, all the constructs have values higher than 0.60. Few items that have a factor loading less than 0.6 were removed, and the results are presented in Figures 1, 2 and 3 respectively. The structural model is the inner model in structural equation modelling. It measures path coefficients (R^2) values and significant values. Boots strapping method finds the significance (Vinzi, Chin, Henseler, and Wang, 2010). The default bootstrapping in PLS is 5000 subsamples to gain significant results (Wetzels, Odekerken-Schroder, and van Oppen, 2009). This study calculated 5000 subsamples in bootstrapping gains more precise results and path coefficient values to show the relationship between human capital management and employee engagement.

The hypothesis has one exogenous variable (human capital management) and one endogenous variable (employee engagement). The coefficient of determination/ r -squared, path coefficient (β value) and T-statistic value, effect size (f^2), the predictive relevance of the model, and Goodness-of-Fit (GOF) index were the core standards for evaluating the structural model as presented in Figures 1, 2 and 3 respectively. Path estimates were calculated by using Maximum Likelihood Estimation (MLE), which was considered to be tolerant to violations of normality assumptions in most of the psycho-behavioural studies (Fornell & Larcker, 1981). Results of structural models and path analysis for human capital management and employee engagement are depicted in Figure 1-3.

Figure 1. Predictive relevance (path co-efficient) of human capital management on employee engagement.



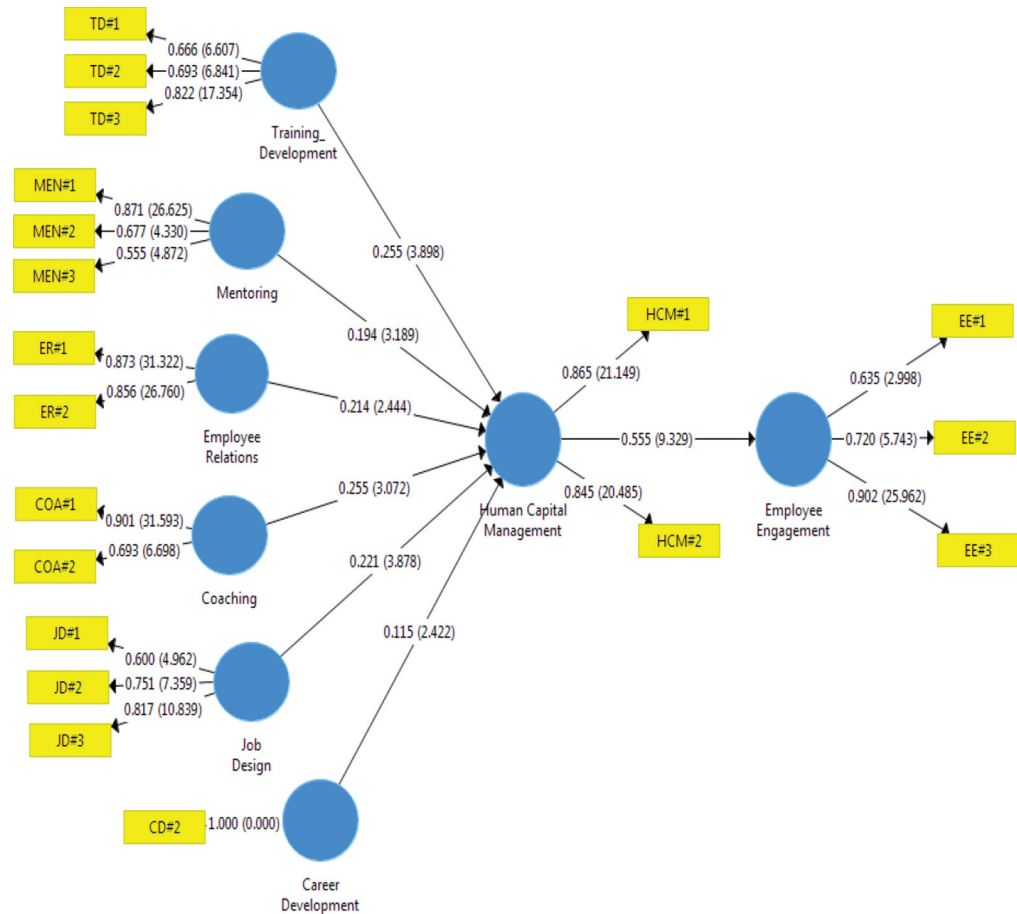
4.1. Estimation of path coefficients (θ) and T-statistics

The path coefficients in the PLS and the standardised β coefficient in the regression analysis were similar. Through the β value, the significance of the hypothesis was tested. The β denoted the expected variation in the dependent construct for a unit variation in the independent construct(s) (Astrachan, Patel and Wanzenried, 2014; Fornell & Larcker, 1981). The β values of every path in the hypothesis model were computed, the higher the β value, the more the substantial effect on the endogenous latent construct. However, the β value had to be verified for its significance level through the T-statistics test. The path co-efficient is presented in Table 2.

P-values <0.05 are desirable for reflective indicators.

This hypothesis predicted that human capital management which comprised training and development, mentoring, employee relations, coaching, job design and career development significantly and positively influence the engagement of health workers in the selected region. The **path co-efficient** affirmed training and development indirectly and significantly influenced engagement of health workers ($\beta = 0.255$, $f^2 = 0.152$, $p < 0.05$). The indirect influence of mentoring was observed on engagement of health workers ($\beta = 0.194$, $f^2 = 0.108$, $p < 0.05$). Employee relations also recorded a positive and significant impact on engagement of health workers ($\beta = 0.214$, $f^2 = 0.119$, $p < 0.05$). Coaching indirectly and significantly influenced engagement of health workers ($\beta = 0.255$, $f^2 = 0.151$, $p < 0.05$). The indirect influence of job design was observed on the engagement of health workers ($\beta = 0.221$, $f^2 = 0.122$, $p < 0.05$). Career development also recorded a positive and significant impact on the engagement of health workers ($\beta = 0.115$, $f^2 = 0.084$, $p < 0.05$). Overall, the relationship between human capital management and engagement of health workers is confirmed to be directly significant with a beta value of 0.555, which also indicates a strong degree of association.

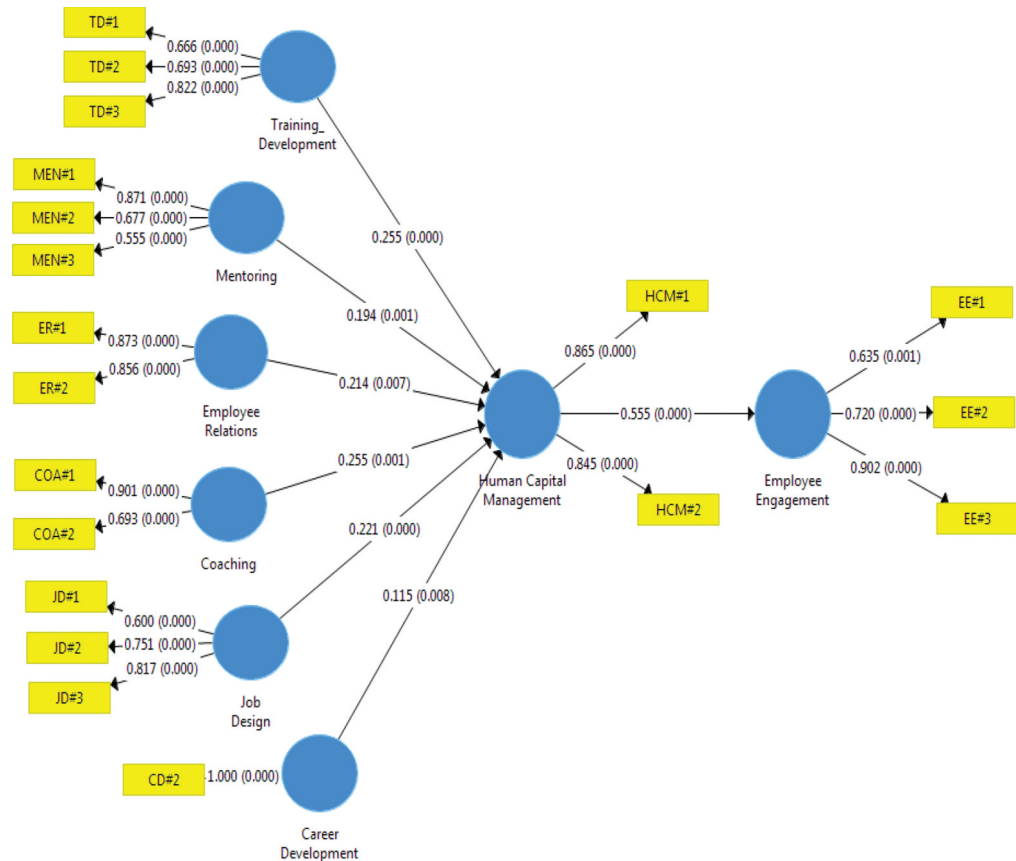
Figure 2. Path co-efficient and T-values for human capital management on employee engagement.



The indirect effect (IE) of the path co-efficient as highlighted in Table 2 is often used to indicate the effect size of each item of the exogenous (human capital management) variables on the endogenous (employee engagement) in a PLS-SEM model. The effect size (also known as f^2) indicates the substantive impact of all the items. f^2 measure the strength of each predictor variable in explaining endogenous variables. Cohen (1988) recommended a guiding principle for determining the effect size. The values of 0.02, 0.15, and 0.35, respectively, signify small, moderate, and large effects of an independent construct on dependent construct, while the f^2 values of less than 0.02 show that there was no effect. Basically, the effect size of training and development ($f^2 = .152$) was relatively moderate; mentoring ($f^2 = .108$) was relatively weak; employee relations ($f^2 = .119$) was relatively weak; coaching ($f^2 = .151$) is relatively moderate; job design ($f^2 = .122$) is relatively weak; and career development ($f^2 = .084$) was extremely weak. The result shows that the effect size of human capital management on the engagement of selected health workers is relatively weak.

The value of R^2 explains the variance between endogenous variables (Henseler et al., 2009; Hulland, 1999). According to Henseler, Ringle, and Sinkovics (2009) and Hair, Ringle and Sarstedt (2011), an R^2 value of 0.75 were considered substantial, an R^2 value of 0.50 was regarded as moderate, and an R^2 value of 0.26 was considered as weak. In this study, the value of 0.308 was observed. This implies that 30.8% variance of health workers' engagement is moderately explained by human capital management. However, R-squared value is low, but we have statistically significant predictors which have helped to draw meaningful conclusions about how changes in the predictor values are associated with changes in the response value. As a result, the analysis provided evidence that the hypothesis was supported. Hence, the R^2 value in this study was

Figure 3. Path co-efficient and P-values for human capital management on employee engagement.



moderate. By implication, the null hypothesis (H_0), which indicates that human capital management does not significantly have combined effects on the health workers' engagement is as a result of this rejected. Above all, the results established that human capital management is a significant predictor of health workers' engagement. In other words, teaching hospitals are prone to survival and sustainability when they indulge their employees in purposeful learning and adequate development programmes because the level of dynamics, complexity and mundanity of the present business environment requires a continual learning and development culture as well as an increased knowledgeable workforce.

4.2. Model fit and goodness of fit index

Model fit can be analysed through Standardised Root Mean Square Residual (SRMR), and Normed Fit Index (NFI) values in PLS under model fit, factor analysis in PLS algorithm. The minimum acceptable value for SRMR is less than 0.08 (Hu and Bentler, 1998). In this research, the SRMR value of strategic fit orientation is less than 0.8. The CMIN/DF indicates an acceptable fit when the hypothetical model is <3 (Ferron and Hess, 2007). The decision rule that is adopted to determine the acceptability of the model includes CMIN/df must be <3; RMSEA/SRMR <0.8; NFI, CFI must be >0.90 (Ferron and Hess, 2007; Fornell and Larcker, 1981). The relative Chi-square = 273.19; CFI = .944; NFI = .907; GFI = 0.910; SRMR = .043 as displayed in Table 3. The model fit indices satisfied the critical threshold, which indicated a fitting model.

The measurement model indicated that all the model fit indices were found to be in an acceptable range and above the recommended cut-off level as suggested by Lackner and Fornell (2009). The SRMR is an index of the average of standardised residuals between the observed and the hypothesis covariance matrices (Chen, 2007). The SRMR is a measure of the

Table 2. Path coefficients

Variables and cross loading	Path co-efficient (O)	Indirect effect (IE)	Std. Dev. (STDEV)	T statistics (O/STDEV)	P values
Training/ Development → Human Capital Management	0.255		0.065	3.898	0.000
Training/ Development → Employee Engagement		0.152	0.040	3.614	0.000
Mentoring → Human Capital Management	0.194		0.061	3.189	0.001
Mentoring → Employee Engagement		0.108	0.036	3.019	0.001
Employee Relations → Human Capital Management	0.214		0.088	2.444	0.007
Employee Relations → Employee Engagement		0.119	0.055	2.148	0.016
Coaching → Human Capital Management	0.255		0.083	3.072	0.001
Coaching → Employee Engagement		0.151	0.049	2.907	0.002
Job Design → Human Capital Management	0.221		0.057	3.878	0.000
Job Design → Employee Engagement		0.122	0.034	3.628	0.000
Career Development → Human Capital Management	0.115		0.048	2.422	0.008
Career Development → Employee Engagement		0.084	0.029	2.236	0.013
Human Capital Management → Employee Engagement	0.555		0.059	9.329	0.000
	R Square (R ²)			R Square (R ²) Adjusted	
Human Capital Management → Employee Engagement	0.308			0.300	

estimated model fit. When SRMR = <0.08, then the study model has a good fit (Hu and Bentler, 1998). Table 3 shows that this study model's SRMR was 0.043, which revealed that this study model has a good fit. The goodness of fit was conducted to evaluate the appropriateness of the

Table 3. Goodness of fit and model fit index

The model fit index calculation		The goodness of fit (GoF) model			
Construct	AVE ≥0.50		Cut-Off Value	Results	Conclusion
Training and development	0.610	SRMR	≤ 0.08	0.056	Good Fit
Mentoring	0.581	RMSEA	≤ 0.08	0.070	Good Fit
Employee relations	0.720	Chi-Square		186.92	Good
Coaching	0.516	CMIN/DF	≤ 3.00	2.005	Fit
Job design	0.774	NFI	≥ 0.90	0.902	Fit
Career development	0.604	CFI	≥ 0.90	0.921	Good Fit
Health workers engagement	0.629	GFI	≥ 0.90	0.917	Fit

model. The Goodness of Fit (GOF) of a statistical model describes how well a model fits into a set of observations. The values of the CFI, TLI and GFI were uniformly high. By implication, this result suggests that all parts of the model fit equally well, and the overall or average fit of the model has reached an acceptable level.

5. Discussion and conclusion

The results established that human capital management is a significant predictor of employee engagement. By implication, the result shows that providing consistent training and development programmes that are related to the specification of contents, methods and relationship of jobs will assist in satisfying and retaining the health workers in the region. In line with these findings, several studies have shown a relationship between capacity development and performance, which is typically relatively strong and positive (Choudhury & Nayak, 2011; Fadel et al., 2015). The finding supports the work of Aagaard, 2016; Aleksic and Jelavic (2017) who reported that organisations who seek business sustainability must ensure that all the parties/actors must socialize and inter-dependently relate/interact with one another. The study by Camuffo and Wilhelm (2016) also affirmed that sustainable performance could be achieved when jobs are clearly defined, employees are promoted as at when due and training acquired create opportunity in the external environment that match the firm's overall objectives. Surprisingly, career development and mentoring had the least values. Hence, the Nigeria Health Sector can be improved if Nigeria politicians are less self-centred but much more committed to health policy formulation, implementation, monitoring and evaluation.

Significantly, the Nigeria Medical Association (NMA) must also insist that necessary facilities are put in place so that doctors can be encouraged to uphold professionalism as negligence is presumed until the contrary is proved. In recent and past literature, there have been traces of proof that human capital training and development affects directly or even indirectly, the engagement of employees in the organization. When employees are trained and developed, they can get, acquire and improve their skills that help them perform well at work and when they can do so they get the confidence they need to participate and involve themselves in decision-making processes in various levels of the organization. In studies before this, human capital development components (especially training and development and career development) are used as antecedents, drivers or factors of employee engagement.

6. Recommendations and suggestion for further studies

Based on these findings of the study, the government should view human capital as assets, not as variable costs. They should ensure that they treat the health workers more as an investment rather than cost and pay more attention to its delivery process as well as provide proper funding for it. It will also be of more benefit if government imbibe a more pronounced learning and development culture as it will help create a more knowledgeable and engaged workforce in an ever-changing environment. The management should give room for the views and initiatives of their employees, exceptionally low managers/staffs, to boost their morale. The level of relationship, cooperation, and communication between the employee and employer has a positive or negative influence on the employee work environment, thereby resulting in low or high engagement levels.

Also, the issue with job mismatch has a negative effect on the employees' engagement levels in the long run. Therefore, the recruitment and selection process in organizations should be conducted fairly and adequately to avoid employee's disengagement. The government should set up a participative system that includes mental and emotional involvement, acceptance of responsibility, motivation to contribute to help improve the engagement of workers in the health sector.

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