Hospital Managers' Ability to Engage in Self-Development and Acting Independently: Exploring the Influence of Socio Demographics, Institutional and Management Characteristics.

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Abstract
Competitive global market requirements have brought about changes that have affected individual hospital managers to be more proactive in taking charge of their individual career development rather than leaving it to their respective organisations because employment is longer guaranteed. Also, hospital manager are opting to acting independently which is the degree to which a manager makes important decisions with or without the consent of others. How these managerial actions could be influenced by the managers' socio demographics, institutional and organizational arrangements are the bases of this work. Data for this project came from a cross-sectional survey of twenty five (25) hospitals that were purposively selected. One hundred and twenty (125) questionnaires were distributed to the designated administrators and managers out of which one hundred and four (104) were answered and returned giving a response rate of 83.2%. The collected data were subjected to both descriptive and inferential statistics. Socio-demographically, age (p = .031) had significant influence on the managers' ability to act independently though inversely. The managers' hospital characteristics show that hospital type (p = .020), had significant influence on the managers' ability to act independently and is associated most with private hospital managers (70.5%) than government hospital managers (56.1%). The managers' ability to act independently is associated more with managers with no formal training (82.8%) than those with formal training (52.0%). All the managers' socio demographic characteristics examined had significant influences on their self-development skill: age (p = .109), gender (p = .148) and academic qualification (p = .308). Managers' ability to act independently is significantly related to the managers' age and managers with no formal training. Also, the managers' socio demographic characteristics examined had significant influence on their ability to self-develop.

Keywords: *Ability to act independently, self-development, socio-demographics, hospital and health management characteristics, Abuja, Nigeria*

Background

Changes in economic, social and technological spheres are affecting organisational flexibility and responsiveness in meeting competitive global market requirements (Wong et al; 2014). These changes have affected reforms in employment psychological contract and career landscape prompting individuals to be more proactive in taking charge of their individual career development rather than leaving it to their respective organisations (Wong et al; 2014). This phenomenon in essence is being described as protean career where the individual is experiencing greater responsibility for his career choices and career opportunities which results in self-development (Wong et al; 2014). Wide range of terms are often used to explain protean career such as career self-management, proactive career behaviour, individual career management of which self-development is inclusive (Wong et al., 2014; De Vos et al., 2008; Spurges et al., 2005; King, 2003). Self-development is defined relative to individual's self-directedness, core values of freedom and growth as well as subjective career success (Wong et al; 2014; Brock, 2003). Personal or self-development is also defined as the conscious pursuit of personal growth by expanding self-awareness and knowledge and improving personal skills (Wong et al; 2014; Brock, 2003). It allows individuals to modify their skill or veer into a different skill entirely to remain relevant in the job market.

On the other hand, acting independently or more simply put autonomy, signifies the extent to which one may make own decisions with or without the involvement of others. Autonomy level in terms of decision making is actually dependent on the type of decision to be made, the governance structure of the organisation, and the ability of the managers to engage in decision making (Ochonma et al., 2018; Nursing Management, 2010). Relatively speaking, autonomy in nursing management for instance is the independent freedom and the authority to engage in decision making. It entails one's control over his/her practice, and will involve both decision makings and actions (Ochonma et al., 2018; Nursing Management, 2010). Many individuals mostly in management positions engage routinely in acts of self-development and acting independently in decision making. These actions are influenced by myriads of factors of which socio demographics, institutional and organizational characteristics may be among.

Many factors are believed to influence hospital management staff in their decisions in the process of institutional governance. Self-development and acting independently are just but two of such decisions that managers make. Factors that may influence managers in decision process have rarely been researched according to our literature search. This study hence seeks to find answers to this question: Do hospital managers' (clinical and nonclinical) ability to self-develop and act independently influenced by their socio-demographics for instance age, gender and academic qualifications or institutional characteristics for instance hospital type, number of staff in the hospital and number of hospital beds and are they also influenced by the managers' management characteristics like current designation, experience in hospital management and formal training obtained in healthcare management.

The hypotheses as posed above is very much connected to social cognitive career theory (SCCT) which recognises the influence of self-efficacy, outcome expectations, and goal orientation as the three socio-mechanisms that influence career choice action (Wong et al; 2014). Managers who are expectant of good future career path are likely to self-develop in their present position or veer into a different career to remain relevant in the job market. So also, managers who are self-efficacious are more likely to engage in acting independently.

There is no doubt that management staff in the hospitals are going through issues on job insecurity due to changes in the corporate world brought on by globalization and as such are self-developing to adapt to job modifications/changes and veering into different skills in the extreme of circumstances to remain relevant to changes pertaining to job/skill demands in the hospital industry and beyond. Managers are also believed to be influenced by myriads of factors in their decision making process including socio demographics, institutional arrangements and management characteristics.

There is paucity of researched information on the subject but the followings were revealed from the literature search. In an effort to trim cost and improve efficiency, organizations are now downsizing, restructuring and de-layering their workforce (Wong et al; 2014; Hall, 2003). As such, employment insecurity and career discontinuity are increasingly being felt by employees at all levels (Wong et al; 2014; Rousseau, 1995). These changes have led to the gradual transformation of the employment contract from being long term relational understanding to short term transactional relationships (Wong et al; 2014; Hall et al., 2005; Briscoe et al., 2006). Due to dynamics on both external and internal business environments, new forms of career management and career progression are increasingly being adopted at the individual level to maximize career success (Wong et al; 2014). Employees are now more inclined to setup their own career agendas and establish benchmarks in measuring career success in a new trend as emphasized in protean career (Wong et al; 2014). The protean individuals value individual freedom and self-growth; and define career success in term of psychological factors, such as the degree of job satisfaction, self-actualization, personal accomplishment and sense of self-fulfilment (Wong et al; 2014; Lent et al., 1994). The notion of protean career is to emphasize that individuals take charge to manage their career. In addition, the protean career individual is continuously learning and anticipates work challenges in pursuing career paths (Wong et al., 2014; Lent el., 2006).

Social cognitive career theory (SCCT) highlights that self-efficacy, outcome expectations, and goal orientation are three socio-mechanisms that influence career choice action (Wong et al., 2014). Both self-efficacy and outcome expectation affect the formation of career interest. Individuals who are efficacious and able to expect positive outcomes are more likely to develop career interest (Wong et al., 2014). Outcome expectation is viewed as an important element in SCCT. The model outlines the relationships between outcome expectations and action due to the belief that choice action is dependent on the expected outcomes (Wong et al., 2014; Cumming, 2008). Individuals would involve themselves proactively in protean career if they anticipate positive outcomes from a given course of action (Wong et al., 2014). Similarly, goal orientation is explained as another important socio-cognitive mechanism in self-regulatory behaviour (Wong et al., 2014; Cumming, 2008). Goals are developed through individual's self-evaluation on their behaviour which relates to internal standard of performance.

Lent et al. (Wong et al., 2014; Lent, 2006) also identified that contextual factors may exert direct or potential impact on career action; for instance organizational environment that influence task and role model exposure. They further emphasized that organisational contextual serve to facilitate, restrict and shape individual's career path. It is important they opined to highlight that individuals are more likely to take actions to achieve their goals if they have access to organizational support and resources to pursue the goals (Wong et al., 2014; Wiley Handbooks, 2002; Herriot, 1995). Orpen's (Wong et al., 2014; Orpen, 1994) study indicates that employees' career success is more significant in organisations with formal policies for managing careers than in those without any policies or merely informal policies. For instance, employees felt that they

have better careers in organisation which provided comprehensive career information. Employees are more likely to be successful in career when organisations provide the necessary "infrastructure" which is typically beyond their control such as providing appropriate career opportunities and designing the relevant training and development programmes to the employees (Wong et al., 2014; Orpen, 1994). Further explanations (Wong et al., 2014; Wiley Handbooks, 2002) extended SCCT model by including work conditions (e.g., job characteristics) element in the existing model by noting that work conditions are more likely to affect individual's participation in/progress at goal-directed activity (i.e., protean career), and to promote job satisfaction.

One symptom of the changes in the world of work in the last few decades has been manifested in changing concepts of careers, and the nature of the psychological contract between employer and employed (Wong et al., 2014; Park et al., 2009), and they (Wong et al., 2014; Park et al., 2009) have further examined the implications of leadership and followership in the post-modern organisations with new concepts of authority relying less and less on command and control and more and more on cooperation, shared interests and psychological identity as individuals. There is a sense in which individual development is always occurring, in that to varying degrees learning and developing is continuous to adapt to organisational employment contract and strategy (Wong et al., 2014; Park et al., 2009). Individual development, from an organisational perspective, is the planned and unplanned activities, which can be the conscious and unconscious basis for changes in individuals that result in them being better equipped to perform current and future roles within the organisation, and more prepared and ready preface for effective execution of future roles (Wong et al., 2014; Park et al., 2009). By contrast, individual development from the person's point of view could be anything that leads to an increased sense of well-being, satisfaction and fulfilment, which may or may not overlap with the organisation's needs (Wong et al., 2014; Park et al., 2009).

On the other hand, the ability to engage in decision making mostly independently as acknowledged by the management and leadership communities shows that a person engulfed within self-doubt may never be able to take the steps necessary for independent decision making and may also not be respected by others (Ejimabo, 2015). So, the first factor that enables an individual take the first step in independent decision making is self-confidence as individuals in doubt of themselves would be unable to take decisions on their own. Many studies by different professions have shown that there are several important factors that may influence leadership and individual decision making in organizations which include: past experience (Ejimabo, 2015; Juliusson et al., 2005), cognitive biases (Ejimabo, 2015; Stanovich et al., 2008), age and belief in personal relevance (Ejimabo, 2015), level of commitment in one's endeavor and the influence of the choices other people make. It is also recognized that education, knowledge, quality, and leadership styles are as well associated with sound decision making in organizations and by individuals (Ejimabo, 2015). Decision in an organisation, it has been shown is much facilitated when a leader has the power to make decision; when a decision is made with no time limitation; when the subordinates are equipped with the right knowledge to debate and actualize the decision; when also a leader has the competency in the use of participative techniques to get followership from the subordinates (Wong et al; 2014; Acevedo et al., 2004; Kerr et al., 1987).

In the same vein, the other likely factors that can facilitate decision making in an organisation or by individual will include: leadership influence, cognitive biases, change, technology, politics, communication, economic status, market cost, and social responsibility among other factors. The above mentioned factors can affect any organisation in one way or the other (Ejimabo, 2015).

Dietrich in discussing leadership decision making, strongly agrees that age, environment, socioeconomic status, biases, past experiences are among the relevant factors that influence decision making among organisational leaders and managers (Wong et al; 2014; Dietrich, 2010). In the medical profession and nursing precisely, autonomy or acting independently in decision making, refers to the power to act according to one's education and training that enables him provide nursing care as stipulated within the profession and as defined by existing regulatory and organizational rules (Weston, 2010; Almuhsen et al., 2016). Nurses in Magnet facilities do describe their experience as encouraging individual practice that enables them to their best potential in patient care (Weston, 2010; Almuhsen et al., 2016; Kramer et al., 2003). They do believe that the facilities do support their care process and clinical tactics when they act independently in matters about the wellbeing of patients. Nurse Managers are in particular credited to providing the right environment within the facilities that are supportive of autonomy and control over nursing practice (CONP). Although leadership role could come from any of the nurses, but those elected to perform in this capacity are to a large extent credited to enabling both autonomy and CONP. It has remained traditional that strong visible nursing leadership is created in the nursing department and at the unit levels to increase autonomy and CONP (Weston, 2010; Hinshaw, 2002). Nurse Managers are very much credited to enhancing the conditions for autonomy and CONP both at the departmental and unit levels. Manager leadership behaviours are seen to influence staff decision-making patterns at the department and unit levels (Weston, 2010; Taunton et al., 1997). In the same vein, critical thinking in medical practice provides for the engagement of due process and procedure that allows individual practitioners to be involved in quick actions which could be equated to acting independently especially in matters of emergency to save lives (Ochonma et al., 2018; Nursing Management, 2010). Qualified individual medical officers/managers could engage in critical thinking that enables them actualize independent actions to save lives in emergencies but with due considerations to cognitive tools such as interpretation, analysis, evaluation, inference, and explanation of the evidential, conceptual and methodological considerations (Ochonma et al., 2018; Nursing Management, 2010). Nurses' high-performance expectation practices in medical practice for example, is dependent upon their continual learning and development which informs their independent and interdependent decision making and creative problem-solving abilities (Ochonma et al., 2018; Nursing Management, 2010).

Critical thinking as well stimulates and in most cases the basis of independent and interdependent decision making and action in medical practice. Critical thinking ordinarily will include things like questioning, analysis, synthesis, interpretation, inference, inductive and deductive reasoning, intuition, application, and creativity in decision making (Patricia et al., 2008; American Association of Colleges of Nursing, 1998). Critical thinking which has remained part of nursing curricula for some stretched period of time endows individual nurses with the ability to act independently especially in emergencies when time may not permit for due clinical consultation (Patricia et al., 2008). So, one of the socio-demographic factors that enables acting independently is that an individual be endowed in the act of critical thinking. Thinking critically implies that one has a knowledge base from which to reason and the ability to analyze and evaluate evidence to enable decision making (Patricia et al., 2008; Olson et al., 200). Knowledge and experience are also known to play critical role in independent decision making in medical practice. Of these two, experience has been shown to enable nurses' abilities more to make quick decisions in medical practice (Patricia et al., 2008; Baumann et al., 1982) and fewer decision errors as well (Patricia et al., 2008; del Bueno, 1983), support the identification of salient cues that enable the recognition

of patterns of information in medical decision making and action (Patricia et al., 2008; Aitken, 2000; Benner et al., 1982). Individual experience on the job, judging from the above evidence enhances quick decision making and acting independently to save life and provides for appropriate treatment for patients in need.

Our review of the literature revealed limited number of works on factors influencing hospital managers' willingness and ability to take on self-development and acting independently while still employed especially within the African context and the Nigerian experience in particular. This gap in literature informed this work. We hope the results of this work will enable us provide evidence based information on the cues that may influence individual hospital manager's ability to self-develop and act independently while still employed. The results we believe will aid in policy developments bordering on employment contract agreements and staff training and welfare packages in the hospitals and beyond to foster staff loyalty and development.

Methods

Data for this study came from a cross-sectional survey using self-administered questionnaire distributed among management staff in twenty five (25) hospitals that were purposively selected. The criteria for selection were that each of the hospitals must be at least twenty (20) bedded and employs at least twenty five (25) persons. A pre-tested structured self-administered questionnaire was used during the period January to April 2015 to collect the preliminary data from each respective respondent. Emphasis on data collected included respondents' socio-demographics, intention to self-develop within the system or beyond and acting independently. Hospitals in the federal capital territory (FCT) Abuja, Nigeria were used for the study with the surveyed staff being designated as Hospital Director, Hospital Manager, Hospital Administrator, Hospital Chief Executive Officer (CEO) or Chief Medical Director (CMD). Those provided with the questionnaire were also heads of units responsible for the day to day administration and operation of hospital amenities with a minimum of diploma or bachelor's degree (or equivalent) obtained in any academic discipline. Questionnaires were distributed directly to the respondents. One hundred and twenty (125) questionnaires were distributed, out of which one hundred and four (104) were answered and returned giving a response rate of 83.2%.

Ethics approval and consent to participate

A local ethics committee (University of Nigeria ethical review committee) ruled that no formal ethics approval was required in this particular case and study. Permissions were eventually gotten from the various (25) hospitals' Chief Medical Directors (CMDs) offices to conduct the research in each of the hospitals. Consent to participate in the study was verbal. We used this method of consent participation because it was convenient and immediate as opposed to written consent. The respondents were assured of their confidentiality and were provided with the choice of not partaking in the study if they so wished. The research was conducted according to Helsinki declaration and local legislations.

Method of Data Analysis

The collected data was subjected to both descriptive and inferential statistics. Descriptive statistics--frequency and percentage were used to summarize the items of the questionnaire. Inferential statistics--Chi-Square Test of Association was used to determine the influence of managers' socio-demographics, hospital and health management characteristics on ability to act independently and

self-development. Decision on inferential statistics was made at 5% level of significance. A logistic regression was performed on the data to predict the logit of a manager having an excellent self-development skill, and also to predict the logit of having an excellent ability to act independently. The socio-demographics, hospital and health management characteristics served as the predictors while the self-development status and ability to act independently status (that is, whether excellent or not) served as the predicted variable. These statistical techniques were done using the IBM SPSS version 20.

Results

Table 1: Managers' Socio Demographics and Hospital Characteristics n = 104

		Frequency	Percent
Age			
25-35 years		14	13.5
35-45 years		55	52.9
45-60 years		35	33.7
Gender			
Male		66	63.5
Female		38	36.5
+Academic Qualification			
Bachelor's degree	*(First degree)*	36	34.6
Post graduate diploma	*(Higher degree)*	29	27.9
Master's degree & higher	*(Higher degree)*	35	33.7
*Others		4	3.8
Hospital type			
Private		44	42.3
Government		41	39.4
*Non-governmental		5	4.8
Faith based		14	13.5
No. of staff in the hospital			
Below 25 staff		20	19.2
25-50 staff		35	33.7
50-100 staff		36	34.6
100 and above staff		13	12.5
No. of hospital beds			
25-50 beds		26	25.0
50-100 beds		52	50.0
> 100 beds		26	25.0

+ implies variables in which some groups were merged to enhance further analysis; * implies groups excluded in further analysis due small frequency

Table 1 displays the socio demographics and hospital characteristics of the managers. Majority of them were aged between 35-45 years (52.9%). There were more males (63.5%) than females (36.5%) amongst them. 34.6% had bachelor's degree, 27.9% had post graduate degree while 33.7% had master's degree. Most of them were either in the private hospitals (42.3%) or government hospitals (39.4%). In number of staff, those who had 50-100 staff (34.6%) were more

followed by those who had 25-50 staff (33.7%) while in the number of beds, it was those who had 50-100 beds in their hospital (50.0%) were in majority.

Table 2: Managers' Characteristics in Healthcare Management **n = 104**

	Frequency	Percent
Current designation		
Administrative officer	25	24.0
Hospital administrator	19	18.3
CEO/Hospital director	19	18.3
Medical director	41	39.4
Experience in hospital management		
Less than 3 years	24	23.1
3-10 years	49	47.1
> 10 years	31	29.8
+Formal training obtained in healthcare management		
Certificate *(Formal)*	19	18.3
Diploma *(Formal)*	24	23.1
Degree *(Formal)*	32	30.8
None *(No formal)*	29	27.9

+ implies variables in which some groups were merged to enhance further analysis

Table 2 displays the managers' characteristics with regards to health management. 24.0% of them were administrative officers, 18.3% were hospital administrators and as well CEO/hospital directors while 39.4% were medical directors. Majority of them had 3-10 years hospital management experience (47.1%). In formal health management training, only few had no training (27.9%).

Table 3: Managers' Assessment in Ability to Act Independently and Self Development Skill

		Frequency	Percent
Ability to act independently	Poor (Not excellent)	4	3.8
	Good (Not excellent)	37	35.6
	Excellent	63	60.6
Self-development	Poor (Not excellent)	2	1.9
	Good (Not excellent)	46	44.2
	Excellent	56	53.8

Poor and Good were merged as not excellent

Table 3 displays the managers' assessment of their ability to act independently and their self-development skill. In ability to act independently, majority of the managers had excellent ability (60.6%) while in self-development skill; about an average were excellent (53.8%).

Table 4: Influence of Managers' Socio Demographics, Hospital and Health Management Characteristics on their Ability to Act Independently

	Ability to Act Independently	Chi-	df	p-value

		Not excellent	Excellent	Square		
Age	25-35 years	4(28.6)	10(71.4)	6.962	2	.031
	35-45 years	17(30.9)	38(69.1)			
	45-60 years	20(57.1)	15(42.9)			
Gender	Male	29(43.9)	37(56.1)	1.543	1	.214
	Female	12(31.6)	26(68.4)			
Academic qualification	1st Degree	14(38.9)	22(61.1)	.000	1	.986
	Higher Degree	25(39.1)	39(60.9)			
Hospital type	Private	13(29.5)	31(70.5)	7.857	2	.020
	Government	18(43.9)	23(56.1)			
	Faith based	10(71.4)	4(28.6)			
No. of staff	Below 25 staff	4(20.0)	16(80.0)	4.856	3	.183
	25-50 staff	14(40.0)	21(60.0)			
	50-100 staff	18(50.0)	18(50.0)			
	100 and above	5(38.5)	8(61.5)			
No. of beds	25-50 beds	6(23.1)	20(76.9)	5.597	2	.061
	50-100 beds	26(50.0)	26(50.0)			
	> 100 beds	9(34.6)	17(65.4)			
Current designation	Administrative officer	8(32.0)	17(68.0)	4.386	3	.223
	Hospital administrator	5(26.3)	14(73.7)			
	CEO/Hospital director	7(36.8)	12(63.2)			
	Medical director	21(51.2)	20(48.8)			
Experience in hospital mgt	Less than 3 years	10(41.7)	14(58.3)	3.572	2	.168
	3-10 years	15(30.6)	34(69.4)			
	> 10 years	16(51.6)	15(48.4)			
Training in health mgt	Formal	36(48.0)	39(52.0)	8.285	1	.004
	Non formal	5(17.2)	24(82.8)			

Table 4 displays the influence of managers' socio demographics, hospital and health management characteristics on their ability to act independently. For managers' socio demographic characteristics, their age (p = .031) had significant influence on their ability to act independently while their gender (p = .214) and academic qualification (p = .986) had no significant influence. In their age, age increase consistently decreased the ability to act independently; hence, the ability to act independently is associated more to younger managers: 25-35 years (71.4%), 35-45 years (69.1%) than older managers: 45-65 years (42.9%).

For managers' hospital characteristics, their hospital type (p = .020) had significant influence on

their ability to act independently while their number of staff (p = .183) and number of beds (p = .061) had no significant influence. In their hospital type, the ability to act independently is associated most to private hospital managers (70.5%) and least to faith-based hospital managers (28.6%); government hospital managers were middling (56.1%).

For managers' health management characteristics; their training status in health management (p = .004) had significant influence on their ability to act independently while their current designation (p = .223) and experience in hospital management (p = .168) had no significant influence. In their training status, the ability to act independently is associated more to managers with no formal training (82.8%) than those with formal training (52.0%) in health management.

Table 5: Influence of Managers' Socio Demographics, Hospital and Health Management Characteristics on their Self Development Skill

		Self-development		Chi-Square	df	p-value
		Not excellent	Excellent			
Age	25-35 years	10(71.4)	4(28.6)	4.439	2	.109
	35-45 years	22(40.0)	33(60.0)			
	45-60 years	16(45.7)	19(54.3)			
Gender	Male	34(51.5)	32(48.5)	2.089	1	.148
	Female	14(36.8)	24(63.2)			
Academic qualification	1st Degree	19(52.8)	17(47.2)	1.040	1	.308
	Higher Degree	27(42.2)	37(57.8)			
Hospital type	Private	21(47.7)	23(52.3)	.102	2	.950
	Government	19(46.3)	22(53.7)			
	Faith based	6(42.9)	8(57.1)			
Number of staff	Below 25 staff	9(45.0)	11(55.0)	2.134	3	.545
	25-50 staff	14(40.0)	21(60.0)			
	50-100 staff	20(55.6)	16(44.4)			
	100 and above staff	5(38.5)	8(61.5)			
Number of bed	25-50 beds	12(46.2)	14(53.8)	.929	2	.629
	50-100 beds	26(50.0)	26(50.0)			
	> 100 beds	10(38.5)	16(61.5)			
Current designation	Administrative officer	10(40.0)	15(60.0)	5.796	3	.122
	Hospital administrator	6(31.6)	13(68.4)			
	CEO/Hospital director	13(68.4)	6(31.6)			
	Medical director	19(46.3)	22(53.7)			
Experience in hospital mgt.	Less than 2 years	16(66.7)	8(33.3)	5.316	2	.070
	3-10 years	20(40.8)	29(59.2)			
	> 10 years	12(38.7)	19(61.3)			

Training in health mgt.	Formal	35(46.7)	40(53.3)	.028	1	.866
	Non formal	13(44.8)	16(55.2)			

Table 5 displays the influence of managers' socio demographics, hospital and health management characteristics on their self-development skill. For managers' socio demographic characteristics, none of the characteristics had significant influence on their self-development skill: age (p = .109), gender (p = .148) and academic qualification (p = .308). This implies that the managers' self-development skill was independent of their age group, gender and academic qualification.

For managers' hospital characteristics, none of the characteristics likewise had significant influence on their self-development skill: hospital type (p = .950), number of staff (p = .545) and number of beds (p = .629). This implies that the managers' self-development skill was independent of their hospital type, the number of staff and the number of beds in their hospital.

For managers' health management characteristics, none of the characteristics likewise had significant influence on their self-development skill: current designation (p = .122), experience in hospital management (p = .070) and training status in health management (p = .866). This likewise implies that the managers' self-development skill was independent of their current designation, experience in hospital management and their training status in health management.

Table 6: Logistic Regression on Managers' Ability to Act Independently

	Exp. (B)	95% C.I. for EXP(B) Lower	Upper	p-value
Constant	1.150			.950
Age				.085
35-45 years	19.114	1.393	262.262	.027
45-60 years	12.126	.429	342.687	.143
***Gender** (female)	13.555	2.522	72.845	.002
***Academic qual.** (Higher deg.)	23.174	1.218	440.884	.037
Hospital type				.737
Private	.587	.043	8.055	.690
Government	.394	.034	4.629	.459
No of hospital staff				.105
< 25 staff	.091	.005	1.634	.104
25-50 staff	.045	.003	.778	.033
50-100 staff	.025	.001	.473	.014
No. of hosp. beds				.426
50-100 beds	.108	.004	3.054	.192
> 100 beds	.146	.005	4.366	.267
Current designation				.095
Administrative officer	6.551	1.173	36.574	.032
Hospital administrator	1.228	.181	8.338	.834
CEO/Hospital director	.243	.023	2.617	.243
Experience in hosp. mgt.				.083
3-10 years	.439	.071	2.708	.375

> 10 years	.024	.001	.658	.027
***Train. in health mgt.** (No formal)	124.951	7.239	2156.786	.001

Predictors: Age, Gender, Academic qual., Hosp. type, No. of staff, No. of hosp. beds, Current designation, Experience in hosp. mgt, & Training in health management

Reference category: Age (25-35 yrs), Gender (male), Academic qualification (1st degree), hospital type (faith-based), no. of staff (> 100), no. of beds (25-50), Current Designation (medical director), Experience in hospital management (< 3 yrs), Training status in health management. (formal)

Omnibus test of Model Coefficients: $\chi^2 = 48.66$, $p < .001$; Model Summary: -2 Log likelihood = 79.98, Cox & Snell $R^2 = .401$, Nagelkerke $R^2 = .540$; Ability status of managers predicted = 78.9%

Table 6 presents a logistic regression on managers' ability to act independently. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant, $p < .001$. The Wald statistic further indicated that the model coefficient of gender ($p = .002$), academic qualification ($p = .037$) and training status in health management ($p = .001$) was significant.

Hence in predicting a manager with excellent ability to act independently, holding other predictors constant; for gender, female managers had odds approximately 13.6 times higher the odds of male managers [95% C.I of 2.522-72.845]; for academic qualification, managers with higher degree had odds 23.2 times higher the odds of managers with first degree; and for training status in health management, managers with no formal training had odds approximately 125 times the odds of those with formal training.

For the coefficients of age ($p = .085$), hospital type ($p = .737$), number of hospital staff ($p = .105$), number of hospital beds ($0 = .426$), current designation ($p = .095$) and experience in hospital management ($p = .083$), the Wald statistic revealed no significance. This implies that holding other predictors constant, the managers grouped by their different ages had the same odds of having excellent ability to act independently; likewise when grouped by hospital type, number of hospital, number of beds, current designation and experience in hospital management.

Table 7: Logistic Regression on Managers' Self Development Skill

	Exp. (B)	95% C.I. for EXP(B) Lower	Upper	p-value
Constant	.018			.060
***Age**				.010
35-45 years	65.980	4.369	996.429	.002
45-60 years	31.667	1.561	642.590	.024
***Gender** (female)	8.488	1.711	42.110	.009
Academic qual. (Higher deg.)	3.145	.466	21.230	.240
Hospital type				.862
Government	.633	.120	3.335	.590
Faith-based	.765	.067	8.671	.829

***No. of hospital staff**				.047
< 25 staff	.125	.008	2.063	.146
25-50 staff	.189	.014	2.479	.205
50-100 staff	.036	.003	.479	.012
No. of hospital beds				.448
25-50 beds	2.503	.150	41.829	.523
50-100 beds	3.170	.523	19.230	.210
Current designation				.053
Administrative officer	1.636	.369	7.251	.517
Hospital administrator	1.845	.305	11.167	.505
CEO/hospital director	.082	.010	.696	.022
Experience in hosp. mgt.				.325
< 3 years	1.013	.094	10.867	.992
3-10 years	2.909	.367	23.031	.312
Train in health mgt. (No formal)	7.922	.843	74.444	.070

Predictors: Age, Gender, Academic qual., Hosp. type, No. of staff, No. of hosp. beds, Current designation, Experience in hosp. mgt, & Training in health management

Reference category: Age (25-35 yrs), Gender (male), Academic qualification (1st degree), hospital type (private), no. of staff (> 100), no. of beds (> 100), Current Designation (medical director), Experience in hosp. mgt (> 10 yrs), Training in health mgt. (formal)

Omnibus test of Model Coefficients: $\chi^2 = 35.45$, p = .005; Model Summary: -2 Log likelihood = 95.73, Cox & Snell $R^2 = .311$, Nagelkerke $R^2 = .416$; Self-development status of managers predicted = 78.9%

Table 7 presents a logistic regression on managers' self-development skill. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant, p = .005. The Wald statistic further indicated that the model coefficients of age (p = .010), gender (p = .009) and number of hospital staff (p = .047) were significant.

Hence in predicting a manager with excellent self-development skill, holding other predictors constant; for age; managers aged 35-45 years and those aged 45-60 years had odds approximately 66 times and 32 times higher the odds of those aged 25-35 years respectively [95% C.I of 4.369-996.429 and 1.561-642.590 respectively]; for gender, female managers had odds approximately 8.5 times higher the odds of male managers [95% C.I of 1.711-42.110]; and for number of staff, managers with 50-100 staff had 0.036 times the odds of managers with above 100 staff [95% C.I of .003-.479].

For the coefficients of academic qualification (p = .240), hospital type (p = .862), number of hospital beds (0 = .448), current designation (p = .053), experience in hospital management (p = .325) and training status in health management (p = .070), the Wald statistic revealed no significance. This implies that holding other predictors constant, the managers grouped by their different academic qualifications had the same odds of having excellent self-development skill; likewise when grouped by hospital type, number of hospital beds, current designation, experience in hospital management and training status in health management.

Discussions

Majority of the respondents were aged between 35-45 years. There were more males than females amongst them. Above thirty four percent (34.6%) had bachelor's degree, 27.9% had post graduate degree while 33.7% had master's degree. Most of the respondents were either in the private or government hospitals. In number of staff, those hospitals that had 50-100 staff were more followed by those who had 25-50 staff while in the number of beds, it was those hospitals that had 50-100 beds were in the majority. The managers' characteristics show that 24.0% of them were administrative officers, 18.3% were hospital administrators and as well CEOs/hospital directors while 39.4% were medical directors. Majority of them had 3-10 years hospital management experience and below thirty percent (30%) had no formal health management training. The managers' assessment of their ability to act independently and self-development skill revealed that majority of them had excellent ability to act independently (60.6%) while in self-development skill; about an average assessed themselves as excellent (53.8%). The influence of managers' socio demographics, hospital and health management characteristics on their ability to act independently revealed that in the managers' socio demographic characteristics, their age ($p = .031$) had significant influence on their ability to act independently while their gender ($p = .214$) and academic qualification ($p = .986$) had no significant influence. In their age, age increase consistently decreased the ability to act independently; hence, the ability to act independently is associated more to younger managers. The managers' hospital characteristics show that the hospital type ($p = .020$) had significant influence on their ability to act independently while their number of staff ($p = .183$) and number of beds ($p = .061$) had no significant influence. In their hospital type, the ability to act independently is associated most to private hospital managers (70.5%) and least to faith-based hospital managers (28.6%); government hospital managers were middling (56.1%). The managers' health management characteristics revealed that their training status in health management ($p = .004$) had significant influence on their ability to act independently while their current designation ($p = .223$) and experience in hospital management ($p = .168$) had no significant influence. In their training status, the ability to act independently is associated more to managers with no formal training (82.8%) than those with formal training (52.0%).

The influence of the managers' socio demographics, hospital and healthcare management characteristics on their self-development skill revealed that all the managers' socio demographic characteristics examined had no significant influence on their self-development skill: age ($p = .109$), gender ($p = .148$) and academic qualification ($p = .308$). This implies that the managers' self-development skill was independent of their age group, gender and academic qualification. None of the managers' hospital characteristics had significant influence on their self-development skill: hospital type ($p = .950$), number of staff ($p = .545$) and number of beds ($p = .629$). This implies that the managers' self-development skill was independent of their hospital type, the number of staff and the number of beds in their hospital. Likewise none of the managers' health management characteristics had significant influence on their self-development skill: current designation ($p = .122$), experience in hospital management ($p = .070$) and training status in health management ($p = .866$). This likewise implies that the managers' self-development skill was independent of their current designation, experience in hospital management and their training

status in health management.

The logistic regression model of (having excellent ability to act independently) explained 54.0% of the variation in the managers' status in ability to act independently (that is, whether a manager has excellent ability or not to act independently). The model correctly predicted 69.2% of the managers to have no excellent ability; correctly predicted 85.7% of the managers to have excellent ability and in general, correctly predicted the ability status of 78.9% of the managers. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant, $p < .001$. The Wald statistic further indicated that the model coefficient of gender ($p = .002$), academic qualification ($p = .037$) and training status in health management ($p = .001$) was significant. Hence in predicting a manager with excellent ability to act independently, holding other predictors constant; for gender, female managers had odds approximately 13.6 times higher the odds of male managers; for academic qualification, managers with higher degree had odds 23.2 times higher the odds of managers with first degree; and for training status in health management, managers with no formal training had odds approximately 125 times the odds of those with formal training. For the coefficients of age ($p = .085$), hospital type ($p = .737$), number of hospital staff ($p = .105$), number of hospital beds ($0 = .426$), current designation ($p = .095$) and experience in hospital management ($p = .083$), the Wald statistic revealed no significance. This implies that holding other predictors constant, the managers grouped by their different ages had the same odds of having excellent ability to act independently; likewise when grouped by hospital type, number of hospital staff, number of beds, current designation and experience in hospital management.

The logistic regression model of (having excellent self-development skill) explained 41.6% of the variation in the managers' status in self-development skill (that is, whether a manager is excellent or not). The model correctly predicted 72.7% of the managers to be non-excellent in self-development skill; correctly predicted 84.3% of the managers to be excellent and in general, correctly predicted the self-development skill status of 78.9% of the managers. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant, $p = .005$. The Wald statistic further indicated that the model coefficient of age ($p = .010$), gender ($p = .009$) and number of hospital staff ($p = .047$) was significant. Hence in predicting a manager with excellent self-development skill, holding other predictors constant; for age; managers aged 35-45 years and those aged 45-60 years had odds approximately 66 times and 32 times higher the odds of those aged 25-35 years respectively; for gender, female managers had odds approximately 8.5 times higher the odds of male managers; and for number of staff, managers with 50-100 staff had 0.036 times the odds of managers with above 100 staff. For the coefficients of academic qualification ($p = .240$), hospital type ($p = .862$), number of hospital beds ($0 = .448$), current designation ($p = .053$), experience in hospital management ($p = .325$) and training status in health management ($p = .070$), the Wald statistic revealed no significance. This implies that holding other predictors constant, the managers grouped by their different academic qualifications had the same odds of having excellent self-development skill; likewise when grouped by hospital type, number of hospital beds, current designation, experience in hospital management and training status in health management.

One of the managers' socio demographic characteristics precisely their age had significant influence on their ability to act independently while their gender and academic qualification had no significant influence on the ability to act independently. With consistent increase in age, the ability to act independently decreased; hence, the ability to act independently is associated more to younger managers than older managers. This result shows the growing technical abilities of the

younger managers who occupy the lower management cadre to make decisions on behalf of the upper management cadre who may not necessarily have all the opportunities in the world to be involved in the day to day activities of the hospital. The reasons we could use in explaining this is that these young crops of new managers are likely trained in formal hospital management and administration; being a new course introduced in the Nigerian universities and as such well equipped to act independently of the upper management class in the hospital daily activities. It could as well be as a result of the reforms that are sweeping through the hospital system in Nigeria that are making it possible for a decentralized system which sees managers at the lower level make decisions and act independently without necessarily seeking the immediate approval of the upper management class especially in cases of emergency. Their decisions are however reviewed by the upper management class to understand if they followed due process and procedure. It is our take that this is a welcomed development, since it intends to remove the bottlenecks that have hindered management and decision processes that characterized Nigerian hospitals of the past. We also believe that this liberal decision processes are mostly within the private hospitals that are noted to have less bottlenecks and bureaucracies when compared to public and government hospitals. A decentralized system though has its own problems but also has the ability to improve on quick decision making that may save lives in the end especially in reference to clinical units and reduce administrative blunders within administration units due to protracted period in decision makings of the past. A decentralized system also fosters employee loyalty since they are likely to believe they are part of the corporate body that employs them and also reduces instances of protean career where the individual is experiencing greater responsibility to change employment. So, acting independently within a corporate body is promoted by a decentralized system seen here as in both hospital and health management characteristics. It is our take that corporate and management policies that promote and enhance decentralized decision making down the line to include younger managers be encouraged for the likely benefits as enumerated. This finding is supported by (19, 20 21, 22) that state among other socio demographic variables: cognitive biases, individual differences belief in personal relevance, past experience that age is inclusive among the factors that could influence individual decision making. Dietrich (1, 24) in discussing leadership decision making strongly agrees that age, environment, socioeconomic status, biases, past experiences are among the relevant factors that influences decision making among organisational leaders and managers.

Institutional/hospital and administrative characteristics were also associated with the managers' independent decision making according to our study. The managers' hospital (institutional) characteristics show that the hospital type had significant influence on their ability to act independently and was mostly associated to private hospital managers and least to faith-based hospital managers while government hospital managers were middling. This result is very much in tandem with general working relationships across all the industries in Nigeria as private industries usually owned by an individual or few family members are usually more likely to undertaking decisions privately with fewer consultations compared to the public or religious-based establishments. This enhanced ability for managers in the private hospitals to make decisions when confronted with issues on management and clinical issues has improved working returns and made the hospitals places of choice when clinical services are in need by the public. These hospitals are perceived to be better in health services provision mostly supported by the notion that things are better organized. With fewer bottlenecks to arriving at decisions, more lives are saved and administrative blunders stalled. So, Institutional and administrative characteristics that see to the

reduction of bottlenecks and bureaucracies do aid faster decision making. The other hospital types have a leaf to borrow from this instance by reforming their characteristic administrative bottlenecks to reap the benefits associate with such exercise. This finding is supported by (1, 23) which state that decision in an organisation is facilitated when a leader has the authority to make decision; when a decision can be made without stringent time limitation; when the subordinates have the relevant knowledge to discuss and implement the decision; as well as when a leader is skilled in the use of participative techniques. So, leaders in the other hospital types should be provided with the authority to make decisions by reforming to remove the stringent measures that have made it impossible for the managers to decide on timely basis. Administratively as well, improving leaders' decision making could also be achieved through creating autonomous units within departments with extended authority to make decisions on their own be it administrative or clinical. This finding is supported by (25, 27) where it was stated that Nurses in Magnet facilities have described their culture (management) as supporting autonomous practice, expecting and encouraging Nurses to utilize their nursing expertise to deliver the best in patient care without having to be delayed unnecessarily.

Our study also revealed that managers' health management characteristics affected their decision making ability significantly. Managers' formal training status had significant influence on their ability to act independently our study revealed. Managers with no formal training in healthcare management were associated more with the ability to acting independently than those with formal training. This result actually reflects the probability index of independent decision making between private and the other types of hospitals. It shows and goes to confirm that the management and administrative characteristics of the hospitals influenced the managers' ability to act independently. The managers employed in the private hospitals were more likely to act independently since they have little or no bureaucratic bottlenecks when it comes to decision making and acting independently especially if owned by a single individual or family. This is so because most hospital managers associated with private hospitals in Nigeria are less likely to acquire formal training in healthcare management due to their small size and are usually managed by an individual or family member. This result is equally supported by (1, 23) that states that decisions are quickly and independently made in situations of less stringent institutional measures.

Confirming the above results and analysis, the logistic regression model of (having excellent ability to act independently) correctly predicted 85.7% of the managers to have excellent ability to act independently in general. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant. The Wald statistic further indicated that the model coefficient of gender, academic qualification and training status in health management was significant. Hence in predicting a manager with excellent ability to act independently, holding other predictors constant; for gender, female managers had odds approximately 13.6 times higher the odds of male managers; for academic qualification, managers with higher degree had odds 23.2 times higher the odds of managers with first degree; and for training status in health management, managers with no formal training had odds approximately 125 times the odds of those with formal training.

The influence of the managers' socio demographics, hospital and health management characteristics on the managers' self-development skill revealed that all the managers' socio demographic characteristics examined (age, gender, and academic qualification) had significant influence on the managers' self-development skill. This implies that the managers' self-development skill was independent of their age group, gender and academic qualification. None

of the managers' hospital characteristics (hospital type, number of staff, and number of beds) had significant influence on their self-development skill. This implies that the managers' self-development skill was independent of their hospital type, the number of staff and the number of beds in their various hospitals. Likewise none of the managers' health management characteristics (current designation, experience in hospital management, and training status in health management) had significant influence on their self-development skill. This likewise implies that the managers' self-development skill was independent of their current designation, experience in hospital management and their training status in health management. The results as presented indicate that managers' ability to self-develop were equally influenced by their socio demographics, hospital and health management characteristics. Confirming the results and analysis, the logistic regression model of (having excellent self-development skill) correctly predicted 72.7% of the managers to be non-excellent in self-development skill. The omnibus test of the model coefficients using the Chi-Square revealed that the model coefficients were significant. The Wald statistic further indicated that the model coefficient of age, gender and number of hospital staff was significant. Hence in predicting a manager with excellent self-development skill, holding other predictors constant; for age; managers aged 35-45 years and those aged 45-60 years had odds approximately 66 times and 32 times higher the odds of those aged 25-35 years respectively; for gender, female managers had odds approximately 8.5 times higher the odds of male managers; and for number of staff, managers with 50-100 staff had 0.036 times the odds of managers with above 100 staff. For the coefficients of academic qualification, hospital type, number of hospital beds, current designation, experience in hospital management and training status in health management, the Wald statistic revealed no significance. This implies that holding other predictors constant, the managers grouped by their different academic qualifications had the same odds of having excellent self-development skill; likewise when grouped by hospital type, number of hospital beds, current designation, experience in hospital management and training status in health management.

Conclusion

The ability to acting independently was inversely found to be influenced by one of the managers' socio-demographics (age) in that younger managers were more apt to acting independently compared to older managers. Acting independently was also associated more to private hospitals as against public hospitals and the other hospital types. The managers' health management characteristics was also found to be associated with the managers' ability to acting independently as the ability to acting independently is associated more to managers with no formal training than those with formal training. We believe that this phenomenon of acting independently was associated more to private hospitals due to the fewer bottlenecks in running private hospitals (usually one person or family ownership) as opposed to public hospitals with much more bureaucracies that slow down the act of independent decision. Younger managers we believe also are associated more to private hospitals due to non-tenure and unguaranteed job appointments that result in high personnel turnover unlike public establishments with outstanding job guarantee. Empowering managers to acting independently in public hospitals will mean a decentralized public system that allows individual units and departments to take on acting independently within stipulated guidelines.

All the managers' socio demographic characteristics examined had significant influence on their self-development skill which implies that the managers' self-development skill was independent

of their age group, gender and academic qualification. None of the managers' hospital characteristics had significant influence on their self-development skill which also implies that the managers' self-development skill was independent of their hospital type, the number of staff and the number of beds in their hospital. Likewise none of the managers' health management characteristics had significant influence on their self-development skill which likewise implies that the managers' self-development skill was independent of their current designation, experience in hospital management and their training status in health management.

Abbreviations

(SCCT) Social cognitive career theory
(CONP) Control over nursing practice
(FCT) Federal capital territory
(CEO) Chief Executive Officer
(CMD) Chief Medical Director

Declaration Section

Ethics approval and consent to participate

A local ethics committee (University of Nigeria ethical review committee) ruled that no formal ethics approval was required in this particular case and study. Permissions were eventually gotten from the various (25) hospitals' Chief Medical Directors (CMDs) offices to conduct the research in each of the hospitals. Consent to participate in the study was verbal. We used this method of consent participation because it was convenient and immediate as opposed to written consent. The respondents were assured of their confidentiality and were provided with the choice of not partaking in the study if they so wished. The research was conducted according to Helsinki declaration and local legislations.

Competing interest

The authors declare no competing interest

Funding

There was no funding for this study

Acknowledgements

We do acknowledge the assistance of the post graduate students who helped in the questionnaire administration and data gathering.

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