Evaluating the challenges of open book management in university teaching hospitals in Nigeria

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Abstract: Technological advancement, globalization and competition are changing the economic and social environment rapidly. As a result of this, organizations that are unable to urgently cope and adapt to these changes are underperforming because the factors for success in the past no longer holds. The paper examines challenges posed by the practice of open book management in Nigeria and provides ways the organization could brace with them for greater performance. The instrument used for gathering data from five hundred and thirty-three (533) employees in the selected university teaching hospitals in south east Nigeria is a structured questionnaire. Factor analysis was applied to determine the most common challenges of open book management in studied institutions. The study found that prominent challenges imposed by management to open book management are corruption, greed and selfishness and lack of transparency in financial/operational information. The study concludes that certain challenges are responsible for the skeptical attitude towards open book management system from the institutions.

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PUBLIC INTEREST STATEMENT

Delivery quality health services have been moving to elusive resources, innovative abilities, and human capital on the grounds that of revolutionary advances in technology. Organizations practicing OBM allowing employees to make better-informed business decisions which affect performance. These organizations must allow employees to share in the success of the organization through the information-sharing program. Thus, OBM goes beyond affecting the bottom line of business and supports building trust, teamwork, and generally improves employee performance. Organizations are focusing their attention on building their human capital for high performance, Nigeria still lags behind; Teaching Hospitals in Nigeria are bedeviled with maladministration. Little information is given to the lower-level employees; non-adherence to the formal channel of communication. However, there are limited studies on the challenges of OBM in Nigeria. This study investigated the challenges posed by the practice of open-book management and provides ways the health organizations could brace with them for greater performance.
studied. Even when OBM is advocated, its effective implementation is hindered as a result of the challenges. However, the study recommends a deliberate, conscious and steady effort towards the practice of OBM. Management and employees are to show serious and ongoing commitment to OBM system, since OBM is an all-inclusive tool for full engagement of employees for greater performance.

**Subjects:** Business, Management and Accounting; Corporate Social Responsibility & Business Ethics; Human Resource Management;

**Keywords:** Open book management; lack of transparency; information sharing; distrust

1. **Introduction**

For several decades, management of organizations have adopted and practiced several methods of management in a bid to attain greater height in performance. Taking a look at the performance of different organizations, one could deduce that management is faced with many challenges, these may include—lack of funding, unskilled labour, trust, motivation, etc. The health sector is also faced with daunting challenges that hamper their performance. Uzochukwu et al. (2018) reported that the health system faces several challenges which include distrust, lack of transparency, corruption, to mention a few. These and many other challenges result in low performance of the employees which is tantamount to low performance of the organization as a whole. To curb these challenges, organizations have employed several policies and programs. The focus of so many organizations had been on corporate sustainability until the introduction of the virtues of open book management by Case and Stack (Broughton & Thomas, 2012), which is an innovative management philosophy that presents an approach of managing an organization whereby employees are empowered with the ability to make the right decision. Stack was a savvy manager in Springfield Re-Manufacturing Corporation (SRC) under International Harvester in southwestern Missouri city. The department became ailing and management decided to join forces with the employees. The reorganization of their efforts around the goal enabled them to meet their target and even exceed it. The outcome was overwhelming which resulted in tremendous growth in the company’s sales. Other companies that heard about their success drew closer to learn better ways of doing business (the stamping journal, 2004, greatgame.com). Most of these companies credited much of their success to using OBM approach in their operations (Broughton & Thomas, 2012). Clark (2010) also demonstrated the practice of Open Book Management in a woodland west animal hospital.

Open-book management (OBM) is the business routine of entrusting money related data to workers with the aim of being open. This incorporates monetary education for workers and demonstrating to them how their production affects the financial records of the organization. Halima (2013) expressed that open Book management plans to discover regular vision in every employee, and afford everyone the opportunity to try and investigate the new, while discharging the representatives who execute the works and prevent blunder or disappointment, in order to properly utilize their inventive energies and creative capacities. Open Book management helps in formulating the relative atmosphere for innovations and development and structure the jargon of future language (Al-Mekhalfi, 2008). The premise of Open Book Management is that the data and information gained by staff ought to help them carry out their responsibilities as well as fully understand the general performance of the companies.

Consequently, the prologue and execution of open book management among medical clinic in Nigeria will improve performance and services conveyance to the general society. It is a key responsibility instrument for individual workers that accentuate the significance of cooperation, proprietorship and openness by including employees in destinations setting, executing, observing and performance of the investigating process. Along these lines, there is incessant correspondence among supervisors and workers; and comprehension on the linkage between organizational aim
and that of individuals (Mutahaba, 2011). The government of Nigeria focuses on actualizing open book management (OBM) so as to improve the performance and responsibility of its workers.

Regardless of its benefit, studies on the challenges of open book management in Nigeria are still few, especially in south east Nigeria and in the health sector. In any case, the execution of OBM in Nigerian clinics and the entire health sector give off an impression of being crumbling, whereby representatives and partners have not prevailed with regard to building up their own goals on their strategic planning procedure and organization’s respective conveyance targets. Moreover, in spite of the Government’s effort to introduce OBM, little or no success has been achieved in building up a genuine and viable Open book management System.

On the other hand, previous studies have dealt with the concept of open book management as a composite variable. Manteghi and Golkari (2012) expressed that the most significant component for organizations disappointment is that they do not have the correct indicators to determine open book management and performance accomplishment of the organizations. This is a good indicator that OBM could also be practiced in university teaching hospitals. In spite of this, OBM is faced with some hindrances. With the rise of such theories as OBM, organizations in Nigeria are skeptical about the issue of Open Book Management. The study, therefore, aims to investigate the OBM challenges which are the reasons for the skeptical attitude towards OBM. Reviews related to previous literature on open book management, and lessons from encounters with OBM practices by organizations in different nations are highly recommended.

2. Literature review
Several authors have different point of view about OBM. OBM involves a range of activities in the organization. This could be in the form of disseminating more information above the statutory requirement to opening organizational books Tonkin (2015). Barton, Shenkir, and Tyson (1999) stated that it is a new management philosophy that requires those in the management level to share financial operations and any other requisite knowledge with everyone, train and empower them on how to make important decisions using the information at their disposal; and reward them with bonuses when the organization is successful. In the same vein, Charles and Negron (1997) posited that OBM ensures that management and employees are equipped with the necessary information needed to make right and sensible decisions which guarantees the achievement of the objectives of the organization at the moment and in the future. They further contend that if employees are given adequate information in the organization, the resultant effect will be an enhanced decision making ability and greater performance. Thus, dispensing crucial operational information with all stakeholders is necessary for ensuring that everyone is pursuing the same goal; both the organization and the employees who are responsible for the daily tasks that effectively turn visions into reality.

2.1. Challenges
However, this information sharing poses a major challenge to the operations of open book management. Charles and Negron (1997) stated that open book management is often associated with an unwillingness and a feeling of anxiety to information sharing. Fears and resistance to sharing information are often associated with open book management. Dispensing information may seem uneasy for managers (Aggarwal & Simkins, 2001). On the other hand, OBM is often associated with the inability to assume responsibility and reluctance by employees. It was observed that the concern many have with operationalising OBM is that employees would discover how much money the organization makes and a common fear that competitors would have access to information that can be used against the company (Metzger, 2008). A lot of people have raised alarm on the issue of sharing information regarding remuneration with employees; this may irritate some employees if they sense unfairness in the reward system (Broughton & Thomas, 2012). In furtherance, another concern observed about information sharing may be on the part of the managers who might fear the loss of control, others might fear to lose their role, while some others might be frightened with the loss of power or influence in the organization (Katier, 2013).
Nevertheless, University Teaching Hospitals are not profit oriented organizations, created to maximize shareholders’ wealth. Rather, they are charged with promoting health care delivery to the public and educating future professionals and research in the health sector (Association of UK University Hospitals, 2012); hence, adequate and necessary information is highly needed for efficient and effective execution of their mission. Unfortunately, there is a high level of secrecy and hoarding of adequate and relevant information in teaching hospitals in Nigeria; this connotes lack of transparency in the system (Anyaoku & Nwosu, 2017).

The care of patients in University teaching hospitals is a collaboration of both medical and non-medical professionals, who require the exchange of information pertaining to the management of patients. This gave rise to high concern for discharging health care services using adequate and necessary information (Colera, 2006). An indispensable factor in adequate healthcare delivery and making informed decisions is the accessibility to appropriate information regarding patients’ care (Anyaoku & Nwosu, 2017). Osain (2011) observed that an indispensable function of the health sector is the dispensing of relevant information as and when due for fighting against possible risks associated with healthcare delivery (Osain, 2011). Relevant and timely information pertaining to health is required from so many sources; this will ensure proper planning, management, and training of the workforce as well as combat possible health hazards and communication failures (Osain, 2011). Likewise, Conrad, 2014 posited that management is expected to share organizational information to enable employees recognize deeply the major goals of the organization as it relates to their current position and where they intend to be in the future. This instills in them a common goal and responsibility; stimulating employees to put in greater effort towards achieving a common goal.

Therefore, to mitigate this fear and concern in practicing open book management, Katier (2013) asserted that from experience, the practice of OBM is not an implication that management should share all information with everyone. Broughton and Thomas (2012) argued with proponents of OBM advocate that management should not share information pertaining to personal remuneration. Katier suggested that organizations should not share information about individual salaries (Katier, 2013). Proponents of OBM equally advised that employers are to present all remuneration in one statement for employees’ consumption (Broughton & Thomas, 2012). From this, they will understand what it takes management to compensate and reward everyone without disclosing any individual compensation. In agreement with others, Aggarwal and Simkins (2001) argued that organizations are not to share individual salary with others but the outcomes of financial and operations. The hallmark of open book management is clearly communicated and understood goals. This is done through a planned, organized and regular system of disseminating the relevant and adequate information to the appropriate recipients for optimum performance (Broughton & Thomas, 2012).

Consequently, Metzger (2008) stated that sharing critical information with employees has several benefits which include: ensuring that everyone is singing from the same page, the very process of sharing information offers management an opportunity to train people on how to think (why certain decisions are made and how to generally make good decisions). Sharing vital information gives the employees a sense of importance by sending a powerful message that you value and trust your key people enough to share vital information. Employees responded to the idea that management is sharing information because they seek transparency (O’Connor, 2013). This transparency connects the OBM purpose to human values such as honesty and trustworthiness. This encourages teamwork in return and leads to job satisfaction and reduced turnover. Similarly, Miroslaw (2012) inferred that the numerous merits of information sharing were given by people who practiced OBM and management, science theorists. This could be done through face to face meeting or joint team work. The essence of such gathering is to ensure that policy makers view the same subject from another perspective by relating with the exclusive ideas of different individuals; this ensures that better decisions are reached rather than usurping only an individual knowledge. From the foregoing, the ultimate goal of OBM approach is to get all and sundry pursuing the same goal. This face to face meeting helps organizations to harness the unique stores of knowledge and competence of members (Miroslaw, 2012). Therefore, the base for information sharing in OBM is that employees are enabled to carry out their functions.
adequately; they will equally be able to grasp the performances of the organization in its entirety (Kidwell Jr. & Scherer, 2001).

Another challenge of OBM is the reluctance of most organizations to accept change and a shift from the practice of the traditional management approach to the modern management style which is collaborative in nature. Enterprises in this present age are constantly under transformation; they are seeking more advanced ways of bringing a positive result to a daunting socio-economic situation that will engage workers, increase performance and encourage growth (Jartese, 2013). As a result of this, the conventional system in organizations whereby information flows from management to the subordinates is gradually giving way for a participatory system of management that empowers organizational members and closes the wide gap that existed between the management and staff. This conventional models of management focus on motivating employees using management power and influence (Nikzad & Maryann, 2011). OBM connotes an advancement from the conventional management approach which is firmly ingrained in most organizations. OBM creates an atmosphere of transparency and responsibility by concealing the gap that exists between the management and the staff (the stamping journal, 2004, greatgame.com). However, Richmond (2017) lamented that modern management practices can easily be seen in new organizations as against older larger organizations, in which change is difficult, slow, and often discouraged, traditional practices still dominate. The characteristics of the traditional system of management include; power from singular authority, bureaucracy, practice of centralized command and control, ownership of information by leaders, strict adherence to rules, regulations and hierarchy, decisions mainly by top executives, solutions are given down to team, resource allocation is generally reactive; amongst others (Jartese, 2013). To be out of these archaic traditional management practices, attain a competitive edge and be able to compete both nationally and globally, OBM presents an innovative management philosophy which presents an approach of running an organization that equips staff members with the opportunity and power to make right and timely decisions (Aggarwal and Simkins (2001)). Case (1997) argued that for practicing OBM in organizations, every member of the organization is required to participate in making the organization productive and profitable by improving their unit's number. Managers may still issue instructions. Hierarchies are not abolished in OBM, but the instructions derive their authority from a logic that is understandable by all. As Oyervaar in Corporate Rebels Corporate (2016) put it, “Open-Book Management is a mode of operation, a mind-shift, where everyone, at all levels within the organization, gets relevant operational and financial information. Every employee knows how he/she can make a contribution to improving the chosen goal, operational or financial; when the selected goal is achieved, it will be celebrated and everyone is rewarded”.

Case laments that the idea of teaching hundreds or even thousands of people as is the case in teaching hospitals to understand and contribute to the realization of the organizational goals seems to be unrealistic (Case, 1997). Management and employees practicing OBM are expected to constantly put in significant effort and dedication towards the training and education of members (Aggarwal & Simkins, 2001). For OBM to succeed in any organization, there is need for a substantial investment in organizational systems and the individuals involved; hence, it is not a quick fix. Education in OBM requires time and resources on the part of management; this is an added cost to the cost of production or cost of rendering services as the case may be. Practitioners observed that education was the first hurdle to jump in his practice of OBM (Dunville, 2004). Education in OBM has nothing to do with the education level of the workforce—no matter the profession because the focus is to let everyone know the bottom line and understand how to get to it. To fix this, organizations should include the cost of educating their employees in their annual budget and seriously engage all and sundry in establishing the tenets of OBM in their organization (Dunville, 2004).

The absence of trust in some Organizations in Nigeria poses yet another big challenge to the practicability of OBM. Low trust existing between management and employees is one of the management problems in the health sector (Oleribe, 2009). This is because some managements and employees are not true to their profession. Employees/employers have individual concerns together with
other benefits they expect from the organization, such as promotion, recognition and power, which may not be in consonance with organizational plans; employers do not keep to their words, employees do not perform their duties creditably, perceived incompetence on the part of management or employee; organization known for weak performance, complicated circumstances, non-flexible and irregular processes and principles of the organization among others (Starnes, Truhon, & McCarthy, 2010). With the prevalence of distrust between management and employees in the organization, OBM becomes the appropriate means of turning the tide. One of the keystones in a successful organization is trust. It is a two way street. Organizations must believe that employees will carry out their responsibilities with every sense of dignity and alertness; likewise the employees (the stamping journal, 2004, greatgame.com). Organizations practicing OBM embrace an atmosphere of openness, information sharing, knowledge acquisition, development and mutual trust which is an antidote to operating a dysfunctional organization. Mutual trust will bring dependency on both the management and the employee and this will shield both from the fear of the unknown.

Another daunting challenge is the perceived poor remuneration system among the Nigerian health sector. Greater importance is ascribed to medical professionalism than other professions in the health sector (Ojo & Akinwumi, 2015). Excellence in individual performance and character are rarely recognized and rewarded, despite the fact that health institutions are equipped with the most dedicated and hardworking individuals (Ratnapalan & Uleryk, 2014). The delivery of quality patient care, research, and teaching in teaching hospitals require appropriate remuneration for employees. The inadequate reward system and unfairness in the reward system especially in hospitals is the major cause of agitations and an incessant strike by hospital personnel Ratnapalan & Uleryk, 2014. This was the case prior to the time of conducting this survey when the Joint Health Sector Union and Assembly of Health Care Professionals embarked on a nationwide strike over the demand for the upward review of their salary scale. Incorporating a fair and equitable reward system is one of the major aspects of OBM. Through this, employees are given extra benefits for achieving specific goals; and it is an incredible tool for boosting employee morale, increased motivation and obtaining highly engaged employees O’Connor (2013).

2.2. Open book management in advanced countries
The developed world where the system is more advanced in using or implementing the open book management system in organizations have enjoyed tremendous benefits from OBM. Take for example; According to Todd Pihl, the general manager of Web Industries in Tonkin (n.d) opined that “Open book management has been helpful in creating and retaining jobs. Our employees are better educated and well informed about the issues our business faces, enabling them to impact positively on our performance.” He also gave account on how every member of staff has access or are better educated and well informed about the issues facing the business, enabling them to make a more positive impact on the business performance.

“A committee including operations management, accounting, quality, sales and other managers facilitates this open-book program. ‘I believe it helps us to grow a whole group of business people,’ he said. For example, employees were informed about the $500 cost for a pressure transducer on an extruder. We related the cost of a pressure transducer to the cost of a big screen TV. If we are not all aware of the costs of the equipment and supplies we use, how can we make a positive impact on our financials? We also look at initial equipment cost, depreciation, preventive maintenance and other factors in their decisions about operating and maintaining the equipment.”

The adoption of OBM will likely improve the performance of the web industries and other organizations in the advanced world through the introduction of fresh thinker, less politics, Staff retention etc.

2.3. Lessons from the experiences of organizations practicing OBM in other countries
Organizations in Nigeria can learn and adopt the following best practices from organizations practicing OBM in other developed countries:
(1) Full commitment of everyone for the overall success of the organization.
(2) In place of bureaucratic hierarchy, set up teams.
(3) Being consistent with the practice of servant—leadership approach to management.
(4) Share necessary, adequate and useful information needed to make an informed decision.
(5) Transparency and openness in operations and finances is the key.
(6) Create a culture of mutual trust.
(7) Develop a regular program for educating the employees.
(8) Fair disposal of the stake in the outcome.
(9) Create an accountability mechanism where everyone is responsible for action taken.
(10) OBM system is not a fast and easy solution to a management problem, therefore, be patient.

2.4. Review of related empirical literature
Several scholars carried out empirical studies relating to open book management. Oleribe (2009) conducted a study on the management of Nigerian health care institutions: a cross sectional survey of selected health institutions in Abuja Nigeria. The paper blamed poor management in the health institutions for the lack of productivity and the weakening fate of the Nigerian Healthcare sector. He tested the assumption that poor management is a direct consequence of poor management training and skills using an exploratory cross sectional survey. The Analysis with standard statistical techniques found a significant relationship between unidentifiable leadership styles/administrative training and poor management of Nigerian health institutions. The study recommended a contingent management technique for an effective and efficient health care industry among others. Saray, Nikolova, and Ceran (201xxx) studied open book application as a strategi-c management tool and identified some benefits that may accrue from OBM. Speed growth, employees’ satisfaction, increased sales, effective communication, job security and a feeling of self-confidence by the employee, amongst others. However, they revealed that OBM is criticized for a number of reasons which include: the risk of leaking managerial secrets to competitors, the problems of education, time and cost, the problems of fair salary system, relationship matters and problems of financing and accounting. Another related study by Barinua, Nuka, and Aseinimieyefori (2012) focused on the challenges of managing in Nigeria work environment. The study identified the external and internal challenges of the workplace. Among the internal challenges are the challenge of employee perception, organizational culture, job design and effective utilization of resources. These studies address some salient issues on the philosophy of open book management, but the study on the challenges or factors inhibiting open book management is relatively scarce.

2.5. Literature gap
To improve health quality, competitiveness, and performance through innovation, many hospital in Nigeria are now engaging Open Book Management as a strategy to facilitate innovative management and delivery quality health to the citizen. From the management perspective, Open Book management helps in formulating the relative atmosphere for innovations and development and structure the jargon of future language (Al-Mekhalfi, 2008). The reason for Open Book Management is that the health and other related information and data collected by staff should assist them with completing their duties just as completely comprehends the general performance of the organizations. The management of hospitals and other industries has embraced and polished a few strategies for the management in an offer to accomplish more prominent tallness in performance. Investigating the presence of the various organizations, one could reason that the administration is looked at with numerous difficulties. Manteghi and Golkari (2012) study the connection between open-book management and trust with association monetary performance. Agbaeze and Nnaji (2017) study the connection between OBM and workers’ performance utilizing 125 members in Nigeria. Tonkin (2015) gives more consideration to the difficulties OBM includes a scope of exercises in the association. Hamzeh Al-Sha’ar (2016) study open Book management and separation in the private own banks in Jordan. Regardless of open-book management being known as another change in outlook and basic to organizational advancement and performance, the
difficulties of not actualizing open-book management have not been completely explored inside the health sectors in Nigeria. Faisal (2018) concentrated on the effect of open-book management (OBM) on consumer loyalty and worker work performance as an interceding variable. Therefore, it is important to assess the challenges of open-book management in order to contribute to the discourse on challenges on open-book management and the performance of organizations. This study, therefore, seeks to identify the main challenges of open-book management, challenges imposed by employees that affect open-book management and management and employees’ challenges that affect open-book management.

3. Methodology

3.1. Settings and sample
This study on Open Book Management was investigated in University teaching hospitals in Nigeria. The analytic descriptive survey was used to draw data from a sample of the medical and non-medical workforce of three federal University teaching hospitals in south east, Nigeria. These were selected out of other teaching hospitals in South East Nigeria because of their prominence in the healthcare sector. The population of the study was 14,130, which comprised 4735 from the University of Nigeria Teaching Hospital (UNTH), Enugu State, 4802 from the Nnamdi Azikiwe University Teaching Hospital (NAUTH), Anambra State and 4593 from the Federal Teaching Hospital, (FETHA) Abakaliki, Ebonyi State. A sample size of 533 was established using the modified propounded sample size determination formula (StaTrek.com, 2013) which was employed based on the responses obtained from the pilot survey.

3.2. Measurement tool
A structured questionnaire was developed to measure the challenges of OBM. The questionnaire is made up of 15 items on a five point likert type scale. The validity was confirmed by 3 experts from academia and a cronbach's alpha of 90% ensured its internal consistency. The measurement instruments for each of the attitudinal variables were developed and designed on a 5-point Likert Scale of Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D) and Strongly Disagree (SD) with their corresponding weights of 5, 4, 3, 2 and 1, respectively. This is suitable for studies of social attitude (Kothari, 2004).

The structured questionnaire was self-administered to the potential respondents during the months of December 2018 and March 2019 and they were passionately requested to participate in the study. Five hundred and thirty-three (533) questionnaires were personally administered and collected upon completion. Out of 533 copies of questionnaire that were administered, 500 copies were correctly filled and thus found usable. An effective response rate of 93.8 percent was achieved. Non-response bias was not considered as a problem to the study, given the high response rate.

3.3. Data analyses
Data was summarized and presented descriptively, using frequency and percentage tables, mean and standard deviation. Mean response of 3.5 indicates that the respondents are in agreement. Factor analysis was used to determine the predominant challenges of open book management in the studied institutions. The test was done with a confidence interval of 95% and the test result is deemed significant at p < 0.05. This analysis was done with the aid of the SPSS 20.0 statistical software.

4. Findings
From the five hundred and thirty-three (533) copies of the questionnaire that were administered, five hundred (500) copies were deemed fit for use in the study. This was so because thirty-three (33) copies were neither correctly filled nor returned. The five hundred (500) correctly filled and returned copies gave a high success return rate of 93.8%. The responses captured from these copies are presented subsequently (Table 1 and Table 2).

Most (63.8%) of the respondents that participated in the study were female. Majority (61.4%) of the respondents were married followed by those that are single (22.6%). Higher percentages of the respondents had M.Pharm/MSc/MBA (38%) as their highest educational qualifications followed by
those that had HND/BSc/BMLS/BPharm (35.2%). The majority (53.4%) of the sampled respondents had worked for at least 11 years in their respective teaching hospitals. About 44.6% of the respondents that participated in the study were senior staffs and 41.2% of the respondents were junior staffs, while 14.2% of the respondents were top management staffs. Also, 44.8% of respondents were in the group of paramedics (pharmacists, nurses, laboratory technologists, etc) while 35.4% respondents were in the group of administrative and accounting staff as well as other support staff.
Hypothesis

H$_{1}$: Management challenges significantly affect open book management

H$_{2}$: Challenges imposed by employees significantly affects open book management

H$_{3}$: Management and employees challenge significantly affect open book management

H$_{4}$: Hypothesis

Management challenges significantly affect open book management

With reference to the presentation in Table 3, with mean values greater than 3.5, it can be observed that the identified challenges imposed by management to open book management are an inequitable and unfair reward system ($\bar{x} = 4.12$), lack of transparency in financial/operation information ($\bar{x} = 4.25$), corruption, greed and selfishness ($\bar{x} = 4.13$) and managements’ unreliability in keeping their promises ($\bar{x} = 4.06$).

The results on the principal component analysis to determine the core challenges imposed by management are presented in Table 4a–c.

From Table 4a, all factors had initial communalities of 1.000 but upon extraction, “lack of transparency in financial/operation information” had the highest extraction communalities (0.807), followed by corruption, greed and selfishness (0.785). In Table 4b, two of the factors (challenges) had initial eigen values that are greater than 1.000. The two factors account for the highest percentage variation of 67.155. This indicated that these factors are the principal challenges imposed by management to open book management. The two factors that were extracted, where those that had the highest component matrix values (Table 4c). Component 1 is corruption, greed and selfishness (0.881), while component two is lack of transparency in financial/operation information (0.855).

Thus, corruption, greed and selfishness, as well as lack of transparency in financial/operation information, were the major challenges imposed by management to open book management.

Table 5 presents the challenges imposed by employees to open book management. It shows that the nonchalant attitude of workers to their duties ($\bar{x} = 3.90$), unwillingness and lack of desire to learn ($\bar{x} = 3.74$), lack of interest and willingness to assume ownership/responsibility ($\bar{x} = 3.58$), low morale as a result of unfair treatment of some employees by management ($\bar{x} = 3.76$) and lack of trust in management ($\bar{x} = 4.00$) are some of the challenges imposed by employees to open book management.

The results of the factor analysis presented in Table 6a to c showed the prominent challenges imposed by employees to open book management.

From Table 6a, all factors had initial communalities of 1.000 but upon extraction, “unwillingness and lack of desire to learn” had the highest extraction communalities (0.674), followed by “lack of interest and willingness to assume ownership/responsibility” (0.619). However, only one component had initial eigenvalue that is greater than 1.000 and also accounts for the highest percentage variation of 56.756 (Table 6b). Hence, the only factor is the main challenge imposed by employees to open book management. The extracted factor is the one that had the highest component matrix value (Table 6c). Based on this, “unwillingness and lack of desire to learn” (0.821) is the principal component (factor) that is extracted. Thus, “unwillingness and lack of desire to learn” are the major challenges imposed by employees to open book management.
| Challenges                                      | SA (%) | A (%) | Un (%) | D (%)   | SD (%) | Mean | Std. Dev. |
|------------------------------------------------|--------|-------|--------|---------|--------|------|-----------|
| High level of secrecy/hoarding of relevant information | 129 (25.8) | 93 (18.6) | 150 (30.0) | 114 (22.8) | 14 (2.8) | 3.42 | 1.18      |
| Inequitable and unfair reward system           | 190 (38.0) | 226 (45.2) | 37 (7.4) | 47 (9.4) | 0 (0.0) | 4.12 | 0.90      |
| Lack of transparency in financial/operation information | 185 (37.0) | 255 (51.0) | 60 (12.0) | 0 (0.0) | 0 (0.0) | 4.25 | 0.65      |
| Corruption, greed and selfishness              | 150 (30.0) | 289 (57.8) | 37 (7.4) | 24 (4.8) | 0 (0.0) | 4.13 | 0.74      |
| Unreliable in keeping their promises           | 164 (32.8) | 227 (45.4) | 86 (17.2) | 23 (4.6) | 0 (0.0) | 4.06 | 0.83      |

Source: Field Study, 2018/2019
Table 4a. Communalities

| Factor                                      | Initial | Extraction |
|---------------------------------------------|---------|------------|
| High level of secrecy/hoarding of relevant information | 1.000   | .337       |
| Inequitable and unfair reward system        | 1.000   | .695       |
| Lack of transparency in financial/ operation information | 1.000   | .807       |
| Corruption, greed, and selfishness          | 1.000   | .785       |
| Unreliable in keeping their promises        | 1.000   | .734       |

Extraction Method: Principal Component Analysis.

Table 4b. Total variance explained

| Component | Initial Eigenvalues | Extraction Sums of Squared Loadings |
|-----------|---------------------|-------------------------------------|
|           | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1         | 2.310 | 46.193       | 46.193       | 2.310 | 46.193       | 46.193       |
| 2         | 1.048 | 20.962       | 67.155       | 1.048 | 20.962       | 67.155       |
| 3         | .905  | 18.104       | 85.259       |        |              |              |
| 4         | .530  | 10.594       | 95.853       |        |              |              |
| 5         | .207  | 4.147        | 100.000      |        |              |              |

Extraction Method: Principal Component Analysis.

Table 4c. Component matrix

| Component                                      | 1          | 2          |
|-----------------------------------------------|------------|------------|
| High level of secrecy/hoarding of relevant information | .375       | -.443      |
| Inequitable and unfair reward system          | .795       | .251       |
| Lack of transparency in financial/ operation information | .276       | .855       |
| Corruption, greed, and selfishness            | .881       | -.097      |
| Unreliable in keeping their promises          | .828       | -.221      |

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Table 7 shows that the challenges imposed by both management and employees to open book management in the studied institutions are lack of trust between the management and employees ($x = 4.26$), unwillingness to accept change ($x = 4.20$), fear of information leakage to other institutions ($x = 3.90$), perceived inequality among employees ($x = 3.88$) and high cost of training employees ($x = 3.82$).
Table 5. Hypothesis challenges imposed by employees significantly affected open book management (n = 500)

| Challenges                                                                 | SA (%)  | UN (%) | D (%) | SD (%) | Mean | Std. Dev. |
|----------------------------------------------------------------------------|---------|--------|-------|--------|------|-----------|
| Nonchalant attitude of workers to their duties                             | 126 (25.2) | 275 (55.0) | 24 (4.8) | 75 (15.0) | 3.90 | 0.94      |
| Unwillingness and lack of desire to learn                                  | 111 (22.2) | 245 (49.0) | 47 (9.4) | 97 (19.4) | 3.74 | 1.01      |
| Lack of interest and willingness to assume ownership/responsibility        | 96 (19.2) | 168 (33.6) | 189 (37.8) | 24 (4.8) | 3.59 | 1.00      |
| Low morale as a result of unfair treatment of some employees by management | 42 (8.4) | 344 (68.8) | 91 (18.2) | 0 (0.0) | 3.76 | 0.79      |
| Lack of trust in the management                                           | 120 (24.0) | 758 (51.6) | 0 (0.0) | 122 (24.4) | 4.00 | 0.70      |

Source: Field Study, 2018/2019
The principal component analysis of the data presented in Table 7 shows that “fear of information leakage to other institutions” and “unwillingness to accept change” are the major challenges imposed by both management and employees to open book management (Table 8a–c).

4.1. Discussion of findings
The practice of open book management in Nigerian Federal University Teaching hospitals is not popular. This could be due to the fact that these institutions are perceived to be health service oriented, they have the misconception that focus should be on quality health delivery. However, the dynamics of effectively
Table 7. 
Hypothesis: management and employees challenge significantly affect open book management challenges imposed by both management and employees to open book management (n = 500)

| Challenges                              | SA (%) | A (%) | Un (%) | D (%) | SD (%) | Mean | Std. Dev. |
|-----------------------------------------|--------|-------|--------|-------|--------|------|-----------|
| Lack of trust between the management and employees | 262 (52.4) | 129 (25.8) | 85 (17.0) | 24 (4.8) | 0 (0.0) | 4.26 | 0.91 |
| Unwillingness to accept change          | 197 (39.4) | 232 (46.4) | 47 (9.4) | 24 (4.8) | 0 (0.0) | 4.20 | 0.80 |
| Fear of information leakage to other institutions | 139 (27.8) | 243 (48.6) | 72 (14.4) | 23 (4.6) | 23 (4.6) | 3.90 | 1.01 |
| Perceived inequality among employees    | 119 (23.8) | 248 (49.6) | 110 (22.0) | 0 (0.0) | 23 (4.6) | 3.88 | 0.93 |
| High cost of training employees        | 68 (13.6) | 287 (57.4) | 132 (26.4) | 13 (2.6) | 0 (0.0) | 3.82 | 0.69 |

Source: Field Study, 2018/2019
delivering these services, with respect to optimizing management and employee potentials is rarely considered. This being so, even when open book management is advocated, its effective implementation in these institutions are hindered. Certain challenges are responsible for these. Tables 3, 5 and 7 presented the various challenges being imposed on open book management. Out of these challenges, a total of five major challenges were extracted from the various challenges presented in the study that impacted on open book management. Two of these were management related, one was employee related, while another two were related to both employee and management. This is accepted in light of

| Table 8a. Communalities |
|-------------------------|
|                         | Initial | Extraction |
| Lack of trust between the management and employees | 1.000 | .820 |
| Unwillingness to accept change | 1.000 | .901 |
| Fear of information leakage to other institutions | 1.000 | .790 |
| Perceived inequality among employees | 1.000 | .886 |
| The high cost of training employees | 1.000 | .666 |

Extraction Method: Principal Component Analysis.

| Table 8b. Total variance explained |
|-----------------------------------|
| [23]                             |
| Component | Total | % of Variance | Cumulative % | Component | Total | % of Variance | Cumulative % |
|-----------|-------|---------------|--------------|-----------|-------|---------------|--------------|
| 1         | 3.045 | 60.908        | 60.908       | 3.045     | 60.908 | 60.908        |
| 2         | 1.018 | 20.360        | 81.268       | 1.018     | 20.360 | 81.268        |
| 3         | .487  | 9.744         | 91.012       |           |       |               |
| 4         | .292  | 5.847         | 96.859       |           |       |               |
| 5         | .157  | 3.141         | 100.000      |           |       |               |

Extraction Method: Principal Component Analysis.

| Table 8c. Component matrix a |
|-----------------------------|
|                            |
| Component                  | 1     | 2     |
|----------------------------|-------|-------|
| Lack of trust between the management and employees | .813  | .400  |
| Unwillingness to accept change | .681  | .662  |
| Fear of information leakage to other institutions | .880  | -.126 |
| Perceived inequality among employees | .769  | -.543 |
| The high cost of training employees | .745  | -.332 |

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Amuche et al., Cogent Business & Management (2019), 6: 1707040
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the findings of proponents, who noted that the practice of open book management is faced with some challenges (Aggarwal & Simkins, 2001).

Prominent challenges imposed by management to open book management are corruption, greed and selfishness as well as lack of transparency in financial/operation information. The major challenge posed by employees to open book management is the unwillingness and lack of desire to learn. Also, both management and employees pose the main challenges of fear of information leakage to other institutions, and unwillingness to accept change (Charles & Negron, 1997). This, basically, is observed in older and larger organizations, where change is difficult, slow and often discouraged (Richmond, 2017). Rupp (2010) expressed that the difficulties in the usage of OBM include poor cooperation of workers, time and poor advertising. To Grote (2010), the difficulties in the execution of OBM are; monetary framework restrictions in the associations, budgetary detailing not adjusted to help operational examination. Data regularly do not bolster the linkage of money related and operational information in determining the expense per administration unit. Charles and Negron (1997) expressed that open book management is frequently associated with reluctance and sentiment of tension to data sharing. Fears and protection from sharing data are regularly connected with open book management. Administering data may appear uneasy for administrators (Aggarwal & Simkins, 2001).

5. Conclusion
The study has presented the challenges posed by the practice of open-book management in Nigeria and provides ways the health organisations could brace with them for greater performance. The influence of management challenges on open-book management, challenges imposed by employees that significantly affect open-book management and management and employees challenge that significantly affect open book management. Further, it has been noted from the literature that information sharing unwillingness and a feeling of anxiety to information sharing, fears, and resistance to sharing information, inability to assume responsibility and reluctance by employees poses a major challenge to the operations of open-book management that affect the performance of health system. It is essential to stress that something contrary to challenges frequently goes out to positively influence open-book management and performance of the hospital, for example, sharing data between representatives' readiness and sentiment of data sharing, non-protection from sharing data, capacity to accept responsibility and ability by workers. It is additionally noted from the literature that consideration must be given to every one of the difficulties of open-book management the performance for compelling administration of business enterprise in a powerful situation. It was noticed that business is no longer of course. The rivalry has become exceptional on account of technological progression and globalization that is changing the environment quickly. Subsequently, the components of achievement in the past may never again hold. Discoveries in the investigation show that specific difficulties are answerable for the incredulous demeanor towards the open-book management framework from the institutions' study. Even when OBM is advocated, its effective implementation is hindered due to the existing challenges. If no attention is given to the open book management they may turn into serious barriers and can stifle the performance organizations.

6. Limitations and recommendations of the study
Despite the fact that the examination presents agreeable outcomes from the review of literature; it has a few limitations that should be brought to the fore to provide guidance for future research. The fundamental requirement of the present investigation is related to the little sample size. We figured out how to gather just 500 reactions that reflected the point of view of three government University teaching clinics in the South East. The respondents also included medical Doctors, non-medical Doctors, and administrative staff who were the University of Nigeria Teaching Hospital (UNTH), Enugu State, Nnamdi Azikiwe University Teaching Hospital (NAUTH), Anambra State Federal Teaching Hospital, (FETHA) Abakaliki, Ebonyi State. Consequently, it is suggested that the sample size ought to be expanded for a superior quality portrayal of the populace in the locale. We contact most of the members fundamentally through the questionnaires. We disclosed the survey to the Doctors, non-medicinal Doctor and administration staff and responded to their inquiries
favourably. Nonetheless, we didn’t get the chance to talk about the survey with the remainder of most members. Therefore, we were unsure whether the remainder of the members finished the survey with a sufficient degree of comprehension and reality while barring any types of predisposition. The sample was limited to three Teaching Hospital thus it is highly recommended to apply the study and replicate it in a wider range of cities in different geographic areas. There should be a deliberate, conscious and steady effort towards the practice of OBM since it is not a quick fix.

Management and employees of organizations are to show a serious and ongoing commitment to open-book management system because it is an all-inclusive tool for full engagement of employees for greater performance. There should be a planned, organized and regular system of disseminating the relevant and adequate information to the appropriate recipients for optimum performance. Finding the right ways to introduce, adopt and operate the open-book management system will unleash the power of several people working in organizations to change the world.

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