Title: The link between management practices, health professional performance and patient outcomes.

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ABSTRACT

Introduction: Management practices in hospitals influence health professionals' performance, quality of health services and patient outcomes. However, scant attention was given to show the link between these practices and patient outcomes. The study aimed at examining the link between specific management practices, employee performance and patient outcomes in hospitals.

Methodology: This study was conducted between June 2014 and July 2015. We reviewed Western literature to benchmark Western experiences and informing researchers and decision-makers in the healthcare industry.

Results: The study identified hospitals as human capital intensive healthcare sector that needs effective management practice to enhance quality of health care outcomes. It also identified variations of management practices, particularly operations management and HR practices. It has shown that bundles of HR practices are pivotal in enhancing the attitudes, skills and behaviors of health professionals for better performance in rendering quality health services to meet expectations of patients. The study identified that patient outcomes are the results of employee performance which in turn is influenced by management practices.

Conclusions: Modern management practices are crucial for maintaining and sustaining health professionals' performance and improving quality of patient outcomes in hospitals. Thus, hospital managers should design and implement operations and HR management practices to improve health professionals' performance, resulting in improved quality of care that satisfies patients.

1. Introduction

Human Resources(HR), Operations Management(OM) and Health Service Research literature show that healthcare systems have been facing with problems of ineffectiveness and quality of patient care in Europe and America (Koppmans,2014; Aiken, Sermeus, Van den Heede,2012;Radnor, Holweg &Waring,2011). HR is among the key dimensions of management practices that deals with the process of managing work and people in organizations. Whilst OM is mainly concerned with the management of processes and direct resources as well as making decisions that are required to deliver values to customers (Van de Klundert,2009) via the organization's services.

Some scholars (e.g. Bloom et al.,2014) examined the link between 20 managerial practices in healthcare that fall under three dimensions(operations, goal setting with targets and human resources).Their study shows effects of these practices on healthcare outcomes in hospitals of nine Western countries. In addition, Leggat et al. (2010) identified the positive effects of management practices(e.g. high performance work systems) on quality of care in Australian hospitals. McConnell et al.(2014) on the other hand researched 18 management practices with four dimensions (operations management , target setting, performance monitoring and employee incentives) in the US hospitals and shown that these practices affect performance of employees and quality of patient care.

Other researchers (e.g. West, Guthrie,Dawson,Borrill, Carol & Carter, 2006; Van de Klundert, 2009& Van den Broek, 2014) shown that healthcare organizations of Western countries are under pressure to deliver high quality of care to the clients. Such organizations are also confronted with challenges of rendering quality of care and achieving higher patient satisfaction (West et al.,2006; Neumann& Jan, 2010 and Foropan& Prentice, 2008). Poor operations and HR practices as well as poor performance of employees are among the major causes for low quality of healthcare (Bloom, Sandun, & Van Reenen,2014; McConnell,Chang, Maddox, Wholey & Lindrooth, 2014; Leggat, Bartram,Casimir&Stanton,2010). Some studies have suggested the need for more investment in improving OM and HR practices (Neumann & Jan, 2010) and health professionals' performance for enhancing quality of care (Radnor et al., 2012; West,Borris, Dawson, Scully, Carter, Anelay & Waring , 2002 & McConnell et al., 2014) . However, these studies didn't clearly show how HR and OM practices affect employee performance and patient outcomes.

Prior empirical studies on operations management practices didn't focus on healthcare sector and non-western countries(Foropan& Prentice,2008;Zineldin, 2006; Jacobsson,2012;Koopmans, 2014 & Bloom et al., 2014) . The same authors depicted that poor OM and dysfunctional HR practices (e.g. poor training, poor teamwork, weak incentives) can be the root causes of poor performance of employees and organizations. Earlier studies lack clarity on how specific management practices like people management and OM are linked to health professionals' performance and patient outcomes. Even those few studies(e.g. McConnel et al, 2014;Bloom et al,2014&West et al, 2002) that attempted to examine the interaction between management practices in healthcare gave inadequate attention on how these practices affect employee performance and how employee performance in turn influence healthcare outcomes. The studies suggested future research to consider integration of managerial practices aligned to the organizational goals of improving employee performance and healthcare outcomes.

The overall aim of our research is to examine the link between specific management practices, employee performance and patient outcomes in hospitals. Our focus is on the two main dimensions of management practices, namely operations management and HR practices. The major reasons for such a focus is that the previous studies were very fragmented and lack clarity on the effects of these practices on employee outcomes with some exceptions of HR practices in healthcare (e.g. Boselie 2010b;Veld,2012;West et al., 2002). The general research question of this study is *how and to what extent do management practices (MPs) affect employee performance and patient outcomes in the western hospitals?*

2. Methods

This study was conducted between June 2014 and July 2015. In order to achieve the aim of the study and address the research questions, we developed a conceptual model (see figure 1) and conducted a rigorous and comprehensive review of international literature benchmarking developed countries' experiences .

From scientific relevance point of view, the paper provides an overview of literature on the link between specific management practices (OM and HRM), employee performance and outcomes in hospital sector. It will act as a spring board to researchers in the field of healthcare organizations and management practices, health services research and inform them to delve into empirical examination of the link between the practices and patient outcomes

(Veld,2012& Foropan& Prentice,2008) . Moreover, the study is supposed to contribute to the literature in HRM, OM and health care management (Kaplan et al., 2010& McConnell et al., 2014). It can also raise awareness of healthcare managers on OM and HR practices and their influence on the outcomes of employees and patient care. It is supposed to enhance the effectiveness of management body in paying more attention for evidence based interventions to improve quality of management practices and patient outcomes (West et al., 2002&Bloom et al., 2014). It will also enlighten decision makers on aspects of modern management practices and employee performance to be focused to enhance their competitiveness in ensuring quality of care and patient satisfaction (Leggat et al., 2010; Garman et al., 2011& Graban, 2012).

3. Results

3.1 Linkage between management practices, employee performance and patient outcomes

Management in general is about "getting things done effectively through people and operations" (Luke, 2011 and Young &Jordan, 2008). Extant literature (e.g. West, 2001; Luke, 2011; Michie &West, 2011; Veld et al., 2010 & West et al., 2002) suggests that abilities and skills of managing people and operations are key for better performance and ensuring quality of healthcare. Furthermore, management practices(i.e. HRM and OM practices in our case) in health service organizations of developed countries in general (Flood,1994;Michie &West, 2004) and hospital sector in particular (Bloom, Propper, Seiler & Van Reenen, 2009) are closely linked to employee and patient outcomes. As indicated in our research model (see figure 1) , HR practices and OM are linked with employee performance(EP) and patient outcomes, EP in turn is linked to patient outcomes. However, researchers (McConnell et al., 2014 & Bloom et al., 2009) argue that the link between management practices, health professionals' performance and patient outcomes remains elusive. Such elusiveness is the result of managerial factors including behavioral operations (which explore the interaction of human behaviors and operational processes), HRM, characteristics of hospitals (public or private, general or specialized hospitals), that of employees (attitude and behaviors) and patient characteristics (Jacobsson, 2012; Graban, 2012&Bloom et al., 2014).

HRM practices deal with managing employees focused on acquisition, building their capacities for empowerment or enhancing their ability, attitudes, behaviors, performance appraisal, motivation geared towards enhancing individual and organizational performance

(Boselie et al 2002; West et al 2006; Veld,2012). Operations management is guided by organizational principles (which will be explained in detail in section 2.2.1 of this paper). It deals with process management including quality improvement (Jacobsson, 2012). OM also requires proper managerial decision making (Goldstein et al., 2002), for instance to improve management and healthcare production processes.

OM and HRM have often been considered separately and not in combination (e.g. Neumann&Jan, 2010). In practice, they have interface on managerial issues of making decisions on employees, financial and other operational processes. The two subjects were studied by separate academic communities and publishing in disjoint sets of journals. Yet, OM and HRM practices are intimately related at a fundamental level. In practice, OM practices often moderate the effects of HRM activities such as pay, training, communications and staffing(Boudreau et al., 2002 and Boselie et al., 2005) . Thus the OM and HRM cannot exist without one another (Boudreau et al., 2002). In order to fill these gaps of separate consideration of HRM and OM, the present study found combining them is relevant for practical context of inseparable nature of these two dimensions of management practices.

Previous researchers (e.g.Bloom&Van Reenen,2010&2006 and Bloom et al.,2009) identified 18 management practices executed in the various Western manufacturing firms and hospitals. These and related studies(e.g. Osho,2014 & Gilbert et al, 2010) identified introduction of modern HR practices including attracting, managing and retaining human capital, performance review, rewarding high performers and removing poor performers, OM techniques (e.g. target(goal) setting, monitoring(process tracking) as key management practices. But the studies lack clarity on the importance of OM practices and how these are linked to HRM as well as how they influence employee and patient outcomes.

McConnell et al.(2014) and Bloom et al.(2006&2014) for example shown that management practices vary considerably among hospitals in the developed countries due to variations in context of organizations. The scholars added that these practices in turn affect employee outcomes and quality of healthcare service. Moreover, researchers (West et al.2002&2006) acknowledge the link between managerial practices, employee and patient outcomes, yet they gave emphasis to clinical and financial outcomes than functional and service outcomes. For example, Bloom et al.(2014) declared that management practices are strongly associated with better clinical and financial outcomes of hospitals . Furthermore, Bloom et al.(2014) &Bloom et al.(2009) shown that better management practices are strongly correlated with better

employee performance which is measured by both non-financial and financial outcomes including quality of health care . In conclusion, there are different dimensions of management practices, and effective execution of these practices should consider contexts of the organization or companies for better enhancement of employee performance. When all the dimensions of management practices, particularly those related to operations management and HRM are effectively executed, they ply pivotal role in improving the outcomes of employees and that of hospitals for enhancing quality healthcare and patient outcomes.

This study is guided by the theoretical model designed as a conceptual framework of the research. As can be seen from the conceptual model (Figure 1) , almost all operations systems involve people, the list of specific OM results that might be affected by human behavior is virtually unlimited-a comprehensive list is not feasible and not expected from this review as well. Scholars (e.g. Foropan&Prentice, 2008; Jaspers et al., 2011 & Boundreau et al., 2002) viewed that dealing with the interface between OM and HR by examining how human factors affect OM results. This in turn helps understanding how operational considerations affect HRM outcomes (e.g. employee attitudes, behaviors, motivation and job satisfaction) and performance.

3.2 Operations management practices and patient outcomes

As depicted in Figure 2, operations management and HRM practices are interconnected, study of such interconnection between these two practices is very important in health care. Previous research shows that the health care sector is using operations management practices that were developed in manufacturing sector to reduce waste, improve employee performance, and ultimately enhances patient outcomes (Graban, 2009&2012 and Li, et al, 2002). Jacobsson (2012) and Subramanian and Ramanathan(2012) defined the concept as a recent reincarnation of earlier fields of scientific, industrial and production management, concerned with management of organizational activities that produces goods and/ or delivery of services required by its customers. It also encompasses decision-making, the design and management of the transformation process in service organizations (such as hospitals) and quality improvement that create value for customers (Goldstein, Ward, Leong & Bulter, 2002; Van de Klundert, 2009 and Loch & Wu,2007) .

Extant literature (e.g. Goldstein et al., 2002; Jacobsson, 2012) identified the most important principles of operational management and they added that these principles can be transferred to health service organizations so as to improve healthcare production processes, i.e., to

ensure swift even flow of patient and enhance quality of patient care. Enactment of these principles would help addressing challenges that healthcare providers are facing with high demand for healthcare and economic constraints. Jacobsson (2002) and Spear (2005) suggested the following principles of operations management to be implemented for better outcomes of employees and health service organizations (hospitals).

- Elimination of everything that doesn't add value to customers
- Elimination of unnecessary steps in the process
- Standardization of work practice(work practice is defined as how work is organized , Boxall & Macky,2009, P.7)
- Separation of patient flows, i.e. addressing the question of why performance of similar healthcare activities differ
- Synchronization of patient flow
- Multi-disciplinary teamwork with health professionals(physicians and nurses)
- Capacity planning, i.e. matching resources to demand
- Visualization of the patient flow(seeing the whole or complete picture and allowing employees to see their activities and performances as vital parts)
- Focus on the patient process

Effective operations management is not a "one time" task; it requires proper managerial decision making (Goldstein et al., 2002). Capturing and documenting data is the first step down the pathway of successful operations management (D`Souza&Sequeira, 2011). If a hospital is tasked with a agoal of improving quality of care and maximizing patient outcomes, sound operation management practice should be in place (Jacobsson, 2012). These researchers shown that modern operations management promotes developments in technology which allow the redesign of medical processes in healthcare chain, i.e. changing 'traditional' operations management with long waiting time and long duration of treatment. Furthermore such a practice reduces discomfort and complaints of patients, enhances the cooperation of staff from various disciplines, improves healthcare procedures well planned and enhances accomplishment of quality interventions (Spear, 2005). If OM in healthcare is properly executed, it can support business processes to manage medical supply chains and simplifies the role of employee performance aspects in process execution (Kaplan et al, 2010;DeVaries&Huijsman,2011& Subramanian&Ramanathan,2012). It also promotes the improvement of the utilization of scarce resources (Jacobsson, 2012). Health operations management also examines the patient experiences from start to finish, continuously making

changes to improve everything from the management of supplies and scheduling diagnosis or admissions to the flow of patients and the design of facilities (Goldstein et al., 2002).

Jaspers,Smeulers,Vermeulen&Peute(2011) and others (Randor,Holweg&Waring,2011;Radnor, 2011; Kaplan, et al., 2010) suggest that modern management techniques (e.g. Kaizen, Balanced Scorecard) which were rooted in the manufacturing industry of developed countries can be adopted to hospital settings to improve quality of management practices and better performances (Graban, 2012 & Griffith et al., 2009). Though these techniques require the underlying condition of readiness of management and employees, they can reduce waste, satisfy customers and increase value-adding activities without increasing cost of the service (Randor et al., 2011& Jaspers et al., 2011).

Li et al. (2002) identified that OM decisions could fall under long term structural decisions (e.g. service expansion, facility management, patient admission, patient length of stay), intermediate operation decisions(e.g., work force management, continuous improvement, outpatient demand management including flow of patients) . Better OM practice is key for enhancing employee and hospital performance because it deals with setting the strategic direction in managing customer-focused services (D`Souza&Sequeira, 2011) such as healthcare delivery.

In sum, the practice of operations management in hospitals can improve efficiency of decision making processes and operations as well as increase employee performance. This in turn can improve quality of patient outcomes and satisfaction. The next section will be on the second aspect of management practice, i.e., HR practices linked to employee performance and patient as well as organizational outcomes.

3.3 The link between HR practices, employee performance and patient outcomes

Though there is no consensus on the concept and aspects of HRM), researchers in the field (Boselie, 2010a&b; Veld, 2012; Van den Broek, 2014; Guest1997,2001&2002) defined it as "involving all management decisions related to policies and practices aimed at achieving individual, organizational and/or societal goals." While Boxall(2012), Boxall&Purcell(2008) and Boxall & Macky (2009) described HRM as managing both work and employees in an organization, hence HRM practices are is essentially concerned with the management of people at work, work practices(i.e. the way work is organized) and employment practices (i.e. how people are employed to do the work, i.e all the practices used to recruit, deploy,

motivate, consult, negotiate with, develop and retain employees, and to terminate the employment relationship. They added that the work and employment practices embedded in an HR practices affect performance at different levels. On one level, they influence the abilities (A), motivations (M) and opportunities (O) to perform of individual employees, i.e., the 'AMO' model of individual performance (Boselie, 2012; Guest, 2002& Huselid, 1995). On the other level, the work and employment practices influence performance of organizations.

According to Paauwe (2004&2009), Arthur (1994) and Huselid (1995), bundles of HR practices include acquisition, training, empowerment, deployment and motivation activities that are intended to enable employees perform better and contribute to organizational goals. Townsend&Wilkinson,2010&Townsend,Wilkinson&Allen,2011(cited in Van den Broek ,2014) and Veld(2012) also shown that employees are of crucial importance for the performance of healthcare organizations like hospitals .

Scholars (e.g., Boselie, 2012; Guest, 2002&2011 &Veld, 2012) contend that for a full of the contribution of HR practices we need theory: the resource based view (RBV) and human capital theory(for example in terms of employee knowledge and skills) help to structure our understanding of HRM and performance. Moreover, meta analysis of 104 articles with a list of 26 different HR practices by previous researchers (e.g. Boselie et al., 2005) further identified the three dominant theoretical frameworks that can be distinguished within the HR practice, namely the contingency framework, the resource based view (RBV) and the 'AMO' theory. These theoretical frameworks add values in providing relevant information on the epistemological and ontological assumptions the researchers have about the subject that they bring with them to their research (Jiang et al., 2012b & Veld et al. 2010).

AMO framework is the most influential model in the study of the link between HRM and performance (Guest,2002;Boselie et al., 2005 and Boxall,2012) and it shows the right combination of abilities (A), motivation (M) and opportunities (O) of and for employees that is essential to achieve good performance (Appelbaum et al., 2000). In addition, Buchan (2004) highlighted on the principle of AMO a so-called "prime building block" of HRM. He added that there must be sufficient employees with the necessary ability (skills, knowledge and experience) to do the job; there must be adequate motivation for them to apply their abilities; there must be the opportunity for them to engage in "discretionary behavior"- to make choices about how their job.

AMO model is thus focused on individual level factors, and can be seen as complementary to both the Contingency theory and the RBV which are briefly discussed above. According to Veld(2012) AMO model suggests that employees perform well when:

- they are able to do so (they can do the job because they possess the necessary knowledge and skills);
- they have the motivation to do so (they will do the job because they want to and are adequately incentivized);
- their work environment provides the necessary support and avenues for expression (e.g. the opportunity to be heard when problems occur).

Thus Performance = f {employee's ability, motivation and opportunity to participate }

Van den Broek (2014) in her study shows that boosting our understanding of processes related to HR practices in health sector is very relevant. However, the critique here is the most common debate that the "black box through which HR practices are thought to impact performance remains insufficiently specified (Fauth, Bovan&Mills, 2009; Veld, 2012)**.** The black box is how HR practices affect employee and organizational performance, which is something that is addressed in this research. Earlier researchers specific HR practices, often termed as high performance work systems (HPWSs) or work practices (Boxall,2012;Paauwe,2004&2009;Guest 2002&2011;Combs et al.,2006; Etchegaraye et al.,2011; Veld et al.2010;Boxall&Macky,2009;Boselie et al.,2005&Messersmith et al.,2011), they explained HPWSs as :

…..a group of separate but interconnected HR practices designed to enhance employees' skills and efforts. Measurement of HPWSs include comprehensive approaches to recruiting and selection, pay for performance, and other incentive-based compensation plan, communication or information sharing, performance appraisal, and training in both generic and company specific skills. HPWSs operate by influencing employee skills, motivation, promotion and opportunities to contribute towards high performance.

HR practices can also enhance organizational citizenship behavior (OCB) that relates to contextual or extra-role behaviors of employees and attitudes closely linked employee commitment to organizational goals and job satisfaction (Boselie, 2010b;West et al, 2002 & Veld, 2012). This in turn adds significant value to increase employee performance and patient outcomes (Gilbert, De Winnie&Sels 2010;Hutchinson &Purcell,2008&Buchan,2004).According to Messersmith et al.(2011) OCB includes

altruism (helping co-worker), courtesy(alerting others about changes in their work) , sportsmanship (refraining from complaints about trivial matters), conscientiousness(carrying out duties beyond minimum requirements), and civic virtue(participating in the governance of the organization). Studies show that OCB is linked to AMO model, which focuses on employees' abilities, employees' competence and their opportunity to participate (Boselie et al,2005;Paauwe&Boselie,2005&Paauwe,2009).

Some writers contend that comprehensive knowledge is lacking on why HR practices contribute to performance in the complex healthcare settings (Boselie, 2010b&Boselie,2012) . One of the reasons for this is could be essentially due to complexity of health care services to the public (Petros 2014; Buchan,2004;Stepaniak,2010; Van den Broek,2014&Jiang et al.,2012a) and human capital intensive nature of hospitals (Veld et al., 2010).

HR practices are transmitted through the process and ways they influence employee attitudes, abilities, motivations, and opportunities(Boxall,2012 and Boxall & Macky, 2009). For instance, Nishi &Wright(2008) developed process model of HRM which shows the causal chain .The model proposes that (1) intended HR practices(i.e., HR policy and strategies), leading to (2) actual HR practices (i.e., really executed), leading to (3) perceived HR practices(attitude of employees), leading to (4) employee reactions (employee outcomes), and leading , finally, to (5) organizational performance . Managers can play important role in implementing the actual HR practices for better performance. Yet there can be major gaps between management intention and management action that are damaging to employee attitudes and behavior and ultimately to performance outcomes, a problem that can exist in any model of HRM (Boxall et al., 2011& Veld, 2012) .

Studies also show that variability in HRM exists not only between organizations, but also within organizations and it brings employees back into the equation between HRM and performance, which is according to Paauwe, a *'conditio sine qua non'* for advancing the field as a respected discipline (Veld et al., 2010&Paauwe, 2009). In this connection, Boselie et al 2005 identified (table 1) very important HRM activities and outcomes that show how employee performance is connected to HR activities and outcomes which are expected to positively (+ve) influence on organizational performance (Elise,Sophie&Luc, 2013 and Hutchinson &Purcell, 2008). As can be seen from the table, the scholars shown how these practices positively affect performance(e.g. productivity, service quality, customer satisfaction) in the western countries.

Buchan (2004) found that HR practices are important to the success or failure of health system including hospitals, though such importance has, until recently been overlooked. With regard to measures related to HR and performance in healthcare, Buchan further added that getting HR policy, practices and management "right" has to be at the core of any sustainable solution to health system performance. Many of the previous studies (e.g., Veld, 2012; Buchan, 2004; Bloom et al., 2014; Voorde, 2012& Baluch et al., 2013) have shown interesting linkage between HR practices (aspect of management practice) and employee performance. Yet, others (e.g. Baluch et al., 2013&Rademakers et al., 2011) didn't clearly show which dimension of management practices are linked to employee performance and patient outcomes (Koopmans, 2014&Aiken et al, 2012).

In the HRM field, different types of outcomes are identified by some scholars (e.g. Veld, 2012, Boselie et al. 2005) who made a distinction between three common typologies, i.e. financial outcomes (e.g. profits, sales, return on invested capital), organizational outcomes (e.g. product, service quality, innovation, effectiveness), and HRM outcomes (e.g. attitudinal, cognitive and behavioral outcomes among employees). Some other literature focused on healthcare field (e.g. Stepaniak,2010; Kunkel et al., 2007& Rademakers et al., 2011) applied Donabedian's model to analyze healthcare outcomes from the three perspectives of quality indicators. These indicators are structure (what do we need to have to be able to achieve quality patient care), process (what do we need to do to achieve quality) and outcome (what do we need to achieve) measures of quality of patient care (Stepaniak, 2010). Though such model offers concrete information, earlier studies often not well established complete relationship between the stated three indicators (Kunkel et al., 2007). This study attempted to diagnose what is going on in the hospitals using well established set of OM and HR practices and their linkages with employee performance and patient outcomes.

In addition, study on Goal setting theory and performance, researchers (e.g.Frank, et al.,2008 citing Locke & Latham,2002 and Scotti et al., 2007) shown that people with specific and challenging goals perform better than those with vague goals at all. Thus, goal theory assumes that there is a direct relation between the definition of measurable organizational goals and employee performance: if employees know what their goals are, they are motivated and committed to exert efforts, which increases their performance. This claim is now supported by a large pile of empirical evidence from developed nations (Guest 2002;Boselie, 2010b; Osho, 2014; Peccei, 2004; Boxall et al.,2011& Hyde et al., 2009) but

got scant attention in the developing nations.

In summary, HRM practices are among the most critical dimensions of management practices to boost employee ability, skills, opportunities and competence for high performance . From the above sub-section, we can conclude that effective and contextually innovative implementation of bundles of HR policies enhances employee outcomes. Consequently, this in turn has linkage with better performance of employees and ultimately linked to improved patient outcomes including patient satisfaction. The next section will be discussing on the link between Operations management and HRM practices and their association with employee performance and patient outcomes.

3.4 OM-HRM linkage

Previous empirical research (e.g., Boudreau, Hopp, McClain&Thomas, 2002 and Neumann&Jan,2010) on operations management (OM) and human resources management (HRM) have historically been very separate fields. In practice, OM and HR managers interact primarily on administrative issues regarding payroll and other matters. Yet, operations and HR are intimately related at a fundamental level (Boudreau et al., 2002). The same authors contend that operations are the context that often explains or moderates the effects of human resource activities such as pay, training, communications and staffing (Boselie et al., 2005). Human responses to operations management systems often explain variations or anomalies that would otherwise be treated as randomness or error variance in traditional operations research models.

At a fundamental level, the OM and HRM cannot exist without one another. OM policies can only be carried out by people and HRM policies are only effective if they foster people doing organization-critical tasks (i.e., operations). And the connection is not just theoretical. As many of our industry stories suggest, considering HRM in formulating OM policy, and vice versa, can be good management practice. But observing philosophical connections or implementation synergies is not the same as providing an integrated OM/HRM framework. Our review of the two fields indicates a great many gaps in our understanding of the links between them.

Boundreau et al.(2002) who studied the OM/HRM interface argue that effective management of the link between OM and HRM help us identify opportunities on this interface, understand the link (Figure 2) and they propose a framework of factors required by people to perform their jobs. The following framework is linked to the AMO model in HRM-

performance research (discussed somewhere in this article).

- Capability: The knowledge,skills and abilities necessary to execute an action associated with the objectives of the organization.
- Opportunity: When individuals are provided or encounter situations in which actions can be executed with the desired effect.
- Motivation: The drive to execute those actions, created by a perception that they are linked to desired outcomes and rewards.

4. Employee performance and patient outcomes

4.1 The definition of employee performance

Different scholars conceptualized and measured employee performance differently. In this regard, many researchers (e.g. Campbell et al., 2006; Janssen&Yperen, 2004& Koopmans et al., 2014) conceptualized employee performance as behaviors and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals. They classified performance into task performance (i.e.in-role job performance), innovative performance (intentional generation and realization of new ideas and actions) and contextual performance (i.e,OCB). Al-Hamayan,Shamrudin, Subramaniam &Islam (2013) on the other hand defined the concept employee performance in hospital sector as effectiveness of employees in accomplishing their tasks and responsibilities related to patient care . These writers further underscored that patient and hospital outcomes are directly related to employee outcomes.

It is well documented in the literature that employees (*health professionals in this study*) are the most important asset of any organization (Broek, 2014; Jaspers et al., 2011 and Guest, 1997&2001). Janssen&Yperen (2004) and Leggat et al.(2010) shown that employees perform well when they are committed to the organizational goal and satisfied with their jobs. Earlier studies show that when employees have positive attitudes towards their work and good behaviors as well as satisfied with their job, they show high work engagement, their performance has direct effect on the quality of patient outcomes (Leggat et al., 2010;Graban, 2009&2011; Zineldin,2006; Joosten et al., 2009;West et al, 2006 &Baluch et al., 2013) . In conclusion, employee performance, especially in healthcare, is more than just important; it can affect patient safety and quality of care.

4.2 The link between employee performance and patient outcomes

According to Frank, 2008 (citing Locke &Latham,2002) in Goal Setting theory and performance, if employees know what they are aiming for through operations management support and HR practices, they are motivated to exert more effort. Motivation in turn increases employees' performance (West et al 2006 &Veld,2012).The other theory could be that of Donabedian's triad framework(2005) which asserts that employees when well equipped with the required knowledge, ability and professional competence, their performance can enhance the quality of patient care and hospital outcomes. For many scholars (e.g. Mercer&Rynolds,2002;Aiken et al., 2012;Mainz, 2003;Koopmans et al., 2014;&Alhamayan et al., 2013) employee performance in hospital may include the number of patients treated, treating patients with smile, employee attitudes and interaction with patients, diagnosis and prescribing behavior, empathic communication, caring and follow up, accountability for treatment, responsiveness and efficient service delivery.

Many studies (e.g. Boselie, 2010b; Baluch et al., 2013; Frank, 2008; Boselie et al.,2002 & Aiken et al.,2012) identified that employee performance often plays a mediating role in the link between management practices and patient outcomes. The literatures added that employee performance plays a crucial role to a hospital performance because employees are strategic assets and hospitals with above average performance tend to have better quality performance (Jaafreh& Al-abedallat, 2013; Glickman et al., 2007&Li, et al. 2002). These studies suggest improved performance of employees lead to better quality healthcare services. This result could happen if the employee performance is improved through better management functions played through OM and HR practices with employee empowerment, motivation and incentive systems (Boundreau et al., 2002; Gunnarsdottir, 2009&Flood, 1994).

Previous empirical studies (e.g. Boselie et al,2002;West,2001;West et al,2002&2006) shown that health professionals' performance could be determined by various factors such as those related to employees themselves(e.g. knowledge, attitude towards the work and management practices, motivation, skills and job satisfaction), patient characteristics(e.g. disease conditions, socio-demographics and life styles). It can also be related to managerial and organizational factors(e.g. policy, management practices, characteristics of hospitals, complexity of the work, resource availability, etc).

Recently, the role of patients has been recast as the "customer" (West et al , 2002; Veld,2012& Van de Klundert, 2009), resulting in different expectations from health care

professionals. Given the fact in the developed world that patients nowadays are highly valued , better informed and expect more services, health professionals are expected to act as service providers. This implies that they should look from a different angle to their relationship with the patients, and that they need to rethink their long established positions. Some scholars (e.g. Veld, 2012) contend that the restructuring of healthcare (reform) not only has implications for the positions of health professionals, it also does have an impact on the design of work processes and operations. Moreover, the introduction of (integrated) care pathways does imply that professionals more often need to cooperate and collaborate with other disciplines, resulting in more multidisciplinary team work.

Studies also shown that health professionals are expected to be able and motivated to work together across organizational boundaries to improve performances and quality of outcomes in hospitals (Lusk&Fater, 2013& Mesadeghard, 2013). Furthermore, professionals working in health care setting highly value 'to help others' and 'to do some rewarding work'. These values should fit with a positive climate for quality of patient care. Employee attitude, knowledge, skills, norms and values associated with delivering high-quality patient centered care towards patients often results in enhanced employee outcomes (Jaspers et al., 2011&West, 2001). The major employee outcomes for some scholars like Veld (2012) include organizational and work unit commitment of professionals, job satisfaction, OCB, lower intention to leave and ability to make decisions. Hence, improved employee performances, resulting from better management practices are associated to improved patient outcomes and quality of healthcare.

Past studies identified employee performance as a multi-dimensional construct, consisting of distinct sets of behaviors, vary with sector and occupations (Rich, Zepine&Crowford,2010;Van Greunage,2012&Starfield,2011). In the healthcare industry, it is more than just important , it can affect patient outcomes and measured in terms of quality healthcare delivered by employees (McConnell et al., 2014; Buchan,2004&Donabedian,2005). These measures of performance are identified from relevant literature from the developed world (e.g. Koopmans et al., 2014;Hyde et al., 2009; Stepaniak, 2010; Kunkel et al., 2007; Veld, 2012; Salanova, Agut, & Peiro,2005; Mercer&Rynolds,2002; Fauth,Bevan&Mills,2009 & Van de Klundert, 2009 citing Bowers et al., 1994; Parasuraman et al., 1985 & Swer, 2008). They were curiously selected in this study with contextual and practical relevance to the present study because they were in the higher priority areas of health policies and performance measurement indicators of developing

nations but not well researched so far. Brief explanation of these performance indicators are depicted as follows:

- Empathy, often considered as HR outcome, is the employee's attitude and behavior of caring with courtesy to patients with professional interaction and commitment of willing "to go the extra mile" to achieve excellent performance (Mercer&Rynolds,2002& Van de Klundert,2009). It has moral, emotive, moral, cognitive and behavioral components. Clinical empathy, for example, involves an ability of employees to understand the patient's situation and feelings (and their attached meanings); to communicate accurately; to act or behave on that understanding with the in a helpful(therapeutic way) . Empathy as a key measure of employee performance can be improved through effective interventions including effective implementation of OM and HR practices (Mercer&Rynolds, 2002) and it can positively influence patient outcomes.
- Reliability is the ability of health professionals in providing quality health services accurately measured as per KPI or planed targets(services) of the hospitals , in the right number, at the time scheduled (right waiting time),make accurate diagnosis, care and treatment or meet patient needs, and behavior of maintaining error-free records of the patient.
- Effectiveness is providing quality healthcare based on scientific knowledge and professional manner to all patients who could benefit and refraining from underuse or overuse the service. It also deals with performing as per the set goals of meeting patient expectations.

The reason behind focusing on the above elements of employee performance is that many of the previous studies (e.g.Veld, 2012; Koopmans et al., 2014; Hyde et al., 2009; Stepaniak, 2010&Kunkel et al., 2007) didn't show how these outcomes result from and linked with the management practice and influence patient outcomes. In addition, documentation on these constructs is scant in the health care and developing nations.

Some of the earlier studies, added that employee performance is mainly concerned with professionals' civility virtue towards patients , treatment of patients with courtesy, empathy, delivery of quality healthcare as per the set standards, waiting time and number of patients treated (Fauth et al., 2009&West et al., 2002). While Salanova et al.(2005) who gave high emphasis on empathy and excellent performance, further identified the following outcomes as measures of employee performance reported by customers:

- Employees understanding of customers' specific needs (empathy).

- Employees' ability to "put themselves in the customers" place (empathy).
- Employees are able to "tune in" to each specific customer (empathy).
- Employees "surprise" customers with their excellent service (excellent performance).
- Employees diagnose more than usual for customers (excellent performance).
- Employees deliver an excellent service quality that is difficult to find in other organizations (excellent performance).

There is scant evidence on quality dimensions of healthcare outcomes, as an aspect of organizational outcome, which was a call for further research (Van de Klundert,2009&Bunchan,2004), the link between health professionals' performance and patient outcomes in hospitals(Kunkel et al., 2007;West 2001 &West et al., 2002).

Bloom et al. (2014) and McConnel et al.(2014) identified that effective management practices, through people management and operational practices, can positively influence job performances which in turn affect patient outcomes. Hence improved performances are key to enhance customer outcomes including reducing length of stay and mortality rates, improving job satisfaction and patient satisfaction towards patient outcomes (Rich, Zepine&Crawford, 2010).

In conclusion, there is lack of consensus on the concept, measures and indicators of employee performance, the major reason could be performances of employees vary according to the specific occupation, nature of job sector, industry, and essentially due to variations of contexts of the country and companies in which individuals are working. Despite these variations, there is common understanding that health professional' or employee performance is individual's efforts, behaviors and commitments of executing the designated roles, tasks and activities so as to contribute to the goals of organizations with customer values. Healthprofessionals' performance is influenced by management practices and it also directly affects or contributes to the improvement of patient outcomes in hospitals.

The next section will be presenting the review of theoretical and empirical evidences on patient outcomes.

5. Healthcare outcomes

5.1 An overview of quality of healthcare delivery system

Health service research literature (e.g.Jaspers et al., 2011; Stepaniak,2010& Kunkel et al.,2007) shown that, the goal of health service is to protect and improve the health of individuals and population. These studies in citing the Institute of Medicine (IoM) report "Crossing the Quality Chasm: A New Health System for the 21st Century" described many problems in the quality of United States health care delivery system. The report suggests that: "Health care services should be:

1. Safe: Avoiding injuries to patients from the care that is intended to help them.
2. Effective: providing services based on scientific knowledge to all who could benefit, and refraining from providing services to those not likely to benefit (avoiding underuse and overuse, respectively)
3. Patient-centered: providing care that is respectful of and responsive to individual customer or patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions.
4. Timely: reducing waits and sometimes harmful delays for both those who receive and those who give care.
5. Efficient: avoiding wastes, including waste of equipment, supplies, ideas, and energy
6. Equitable: providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status" of patients or customers.

According to Mitchell et al.(1998), Jaspers eta al.(2011) and Aiken et al.(2012) whatever the outcome of interest, be it clinical, technical, service or functional outcome of patient care, the goals of healthcare are the maximization of good outcomes(high quality healthcare) and the minimization of poor outcomes. This can be best accomplished within the framework that facilitates the assessment of the quality of healthcare (Luxford, 2011&Donabedian, 2005).

Our focus on the most important dimensions of patient outcomes depicted in the conceptual model(vide figure 2.1) is due to the fact that many of the previous studies extensively assessed financial outcomes and organizational productivity(e.g.Boselie,2010b; Veld, 2012; Bloom et al., 2014) separately than combining clinical and functional outcomes . In addition, some studies separately focused only on clinical dimension of outcomes (e.g. West et al.,

2002 &2006) rather than considering service quality outcomes. As healthcare is a broad concept (Van den Broek,2014; Petros, 2014 & Veld,2012) that involves not only clinical outcomes(e.g., mortality, in-hospital complications, readmission) but also promoting functional status, patient wellbeing, service quality, quality of life and patient satisfaction, which are very important in measuring patient and hospital outcomes. In reality and as per the IoM's "Crossing the Quality Chasm" report(Stepaniak,2010& Kunkel et al.,2007), healthcare outcomes are inseparable our focus of combining clinical, functional and service quality outcomes in this study is an innovative approach and very important from practical contexts and concerns

Furthermore, some researchers in the developed countries (e.g. Donabedian,2005; Stepaniak,2010; West,2001 & Mitchell et al., 1998) have outlined three constructs from which inferences can be made regarding quality: structure(e.g. HRM practices, policy, resource allocation), operations management process of activities and outcomes. The researchers further suggest that information from these constructs can be used to assess quality if they are causally related: "structure leads to process and process leads to outcomes" However, emphasis on the management of healthcare quality has shifted over time from structure to process to outcomes. Hence outcomes are the results of structures and processes. For instance, for Mitchell et al. (1998) outcomes have been limited to what is termed as **"***5Ds***"**: death, disease, discomfort and dissatisfaction. Only recently has there been an impetus to include more positive patient outcomes such as improved health status, functional ability, and perceived health related quality of life.

The quality of health service is usually judged by outcomes and perceived by patients through patient satisfaction survey, specifically, the immediate and long - term effects on the health of the individual and communities they serve (Petros, 2014; Zineldin, 2006& Stepaniak,2010). The quality of health care services offered to patients often fails to meet or exceed expectations of customers and standard performance indicators in many countries (Frolich, 2012; Lusk&Fater, 2013). Although many causative factors can be mentioned, management practices, poor ability and motivation of employee could be among the major determinants of such a failure of meeting customer expectations.

A study conducted in three Greek hospitals (Karassavidou et al, 2011) identified the link between healthcare quality improvement and health professional performance, resource allocation and customer satisfaction towards quality of patient care. While accountability (responsibility for the delivery effective patient care); assurance of the quality of clinical

services (Stepaniak,2010&West et al, 2002) and innovation(Broek , 2014) are identified as core dimensions of the clinical governance cycle in health care organizations(Zafiropoulos,2010).

5.2 Dimensions of patient outcomes from hospitals context

Any hospital, by principle, strives to improve quality of healthcare system and patient outcomes including clinical-, functional- and service outcomes (Mainz, 2003& Baluch et al., 2013).

Clinical outcomes are highly linked with HR practices and efforts of health professionals (Baluch et al., 2013&West 2002&2006). These outcomes may include mortality, hospital length of stay, waiting time, quality of life, overall survival, patient satisfaction which are measurable changes in the quality of care that result from managing healthcare in hospital (West et al., 2006). Though variations in clinical outcomes may be observed, constant review of these outcomes establishes standards against which to continuously improve all aspects of management practices and quality of clinical care (Otte-Trojel,Bont et al, 2013& Van de Klundert,2009). Clinical outcomes can be measured by activity data on healthcare service such as hospital re-admission rates, or other forms of measurement. They can be recorded and reported by health professionals or administrators can also be reported by patients or their families (Baluch et al., 2013).

According to Salge &Vera(2009), patient's functional outcomes, which are also connected to the management techniques and employee performances, may vary by individual, depending on characteristics of the patient, illness and associated medical complications, quality of care and the patient's characteristics (age, life style, family and financial resources). These researchers identified the major functional outcomes, which are measured at both admission and discharge, include mental and physical functional state of a patient (e.g. talking, hearing, moving from bed to chair, walking, and bathing, sleeping, eating and smiling).

Service quality outcomes, which could result from (operational and HR) managerial practices and employee performance, include health care delivery related ones including quality diagnosis, treatment, patient-centered care by service providers (Zineldin, 2006 and Headley & Miller,1993) . The service providers are health professionals (e.g. physicians, nurses, midwives, etc) and healthcare organizations. Healthcare service quality has multidimensional properties. Thus such a service quality outcomes can be the results of individual employee and hospital performance (Stepaniak, 2010; Van Greunage et al, 2012&Zafirpoulos, 2010).

Service quality outcomes are commonly measured by feedbacks from customers, i.e., patient satisfaction survey using tools such as SERVQUAL scales which will be explained more in the subsequent chapters. SERVQUAL is a reliable and extensively tested method for measuring perceived quality of service offerings (Headley & Miller, 1993& Zineldin, 2006). The authors added that performance-based measures of service quality significantly affect patient satisfaction, which affects employee performance as well.

6. Discussion

With regard to the link between management practices, employee performance and patient outcomes, this section is the core of the paper which intends to discuss and analyze the whole conceptual model developed to guide this study. The study on the link between OM, HR practices and employee performance and organizational performance such as quality of health care outcomes is an important topic in the organizational sciences (Veld,2012, Spear,2005 &West et al., 2006). Yet, little research has been conducted examining this relationship in hospital settings.

The findings of a study conducted in Europe, i.e. UK hospitals (West et al., 2002), for instance, revealed strong associations between HR practices and individual performance as well as organizational outcomes including patient mortality generally. It has identified key measures of health outcomes. These were deaths following emergency surgery, deaths following non-emergency surgery, deaths following admissions for illness, re-admission rates and a mortality index.

Some research findings show that working in teams in health services is associated with lower levels of stress. It has also identified that the quality of team working processes is linked to ratings of effectiveness and innovation in quality of patient care , healthcare teams; and that of multidisciplinarity in teams is strongly associated with innovation in patient care(Van Greunage et al, 2012;West 2002&2006) .

Previous empirical research in the field suggest the need to continuously improve and innovate management practices(OM and HRM) so as to improve individual and organizational outcomes including quality of healthcare as well as patient satisfaction in hospitals. Moreover, some studies indicate that improving quality of health services leads to improve functional outcomes of patients (Van Greunage et al, 2012; Lusk&Fater,2013).

Though some scholars found that outcomes may not predict health service quality (Otte-Trojel et al, 2013; Van de Klundert , 2009;Starfield,2011&Van Greunage,2012) , patient outcomes are related within and between themselves while effective management practices and improved performance of health service providers determine patient outcomes (Kunkel et al.,2007) .

7. Conclusions

This is the first review of Western literature conducted between June 2014 and July 2015 to show the link between management practices, employee performance and patient outcomes in hospitals and to inform decision makers committed to improve health professionals' performance and patient outcomes.

From the findings of the present study, we have learnt that hospitals are complex and human capital intensive service organizations. Operations management and HR management practices should be designed and executed from the context of the competitive environment, complex expectations (e.g. opportunities of training, conducive work conditions, motivation, recognition, performance monitoring, promotion, incentives, and satisfaction) of health professionals and dynamic needs of patients or customer values.

The contribution of health professionals or employees is instrumental for improved performance of hospitals in achieving the goals of standardized quality health services as per the KPI and patient satisfaction. Without effective health operations management and execution of bundles of HR practices in hospitals, it would be hardly possible to achieve better performance of health professionals, high quality in healthcare and improved patient outcomes.

Modern management practices are crucial for maintaining and sustaining health professionals' performance, improving efficiency and effectiveness in delivery of quality health services and patient outcomes.

Finally, hospital managers and administrators should design evidence-based interventions for implementing integrated operations and HR management practices for better performance of health professionals, resulting in improved quality of health services and patient outcomes in hospitals.

Competing interest

The authors declare that they have no competing interests.

Authors' contributions

All authors contributed to the study design. PPG conducted the review, analysis and prepared the first draft. JVB read, commented and approved the final manuscript. JVK guided the overall study , commented and approved the manuscript.

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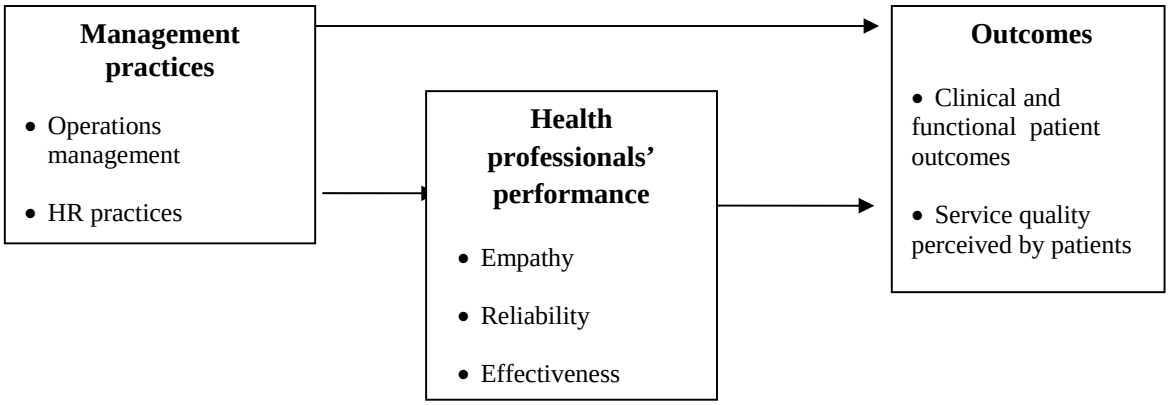

Figure 1: Conceptual model of the research (Adapted from different literature, March 2013)

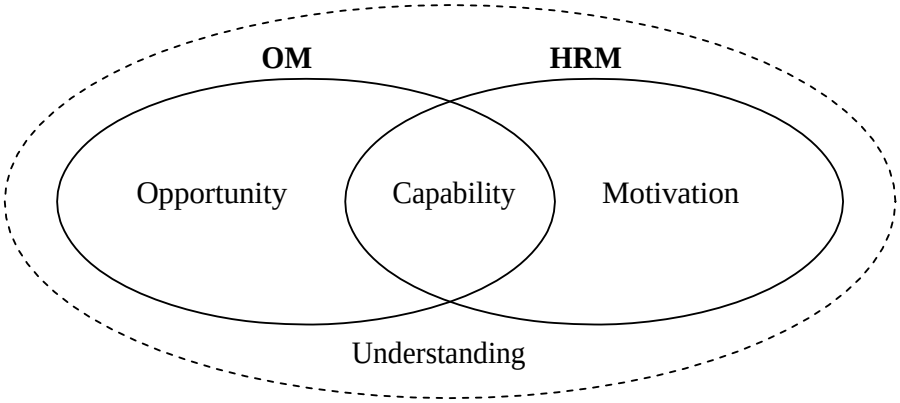

Figure 2. The OM/HR Interface adapted from Boundreau et al.(2002) .

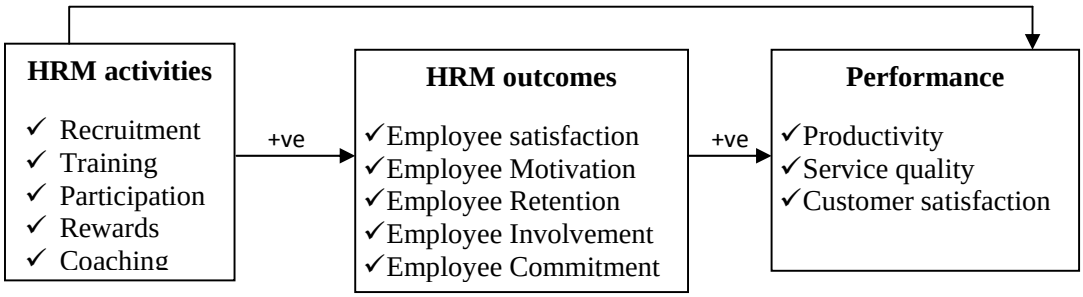

Table1.HRM activities in relation to HRM outcomes and performance (Boselie et al. 2005)