Making Healthcare Sustainable: the challenge of changing professionals' behaviors

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Abstract

Issues such as Corporate Social Responsibility and Sustainability are becoming urgent for hospitals. Hospital managers have implemented various initiatives with great fanfare but that have become failures in the next short time and then abandoned. Past research gathered evidence that these initiatives cannot be successful without a radical change in professionals' behaviors. In this view, research on Sustainability should engage also an individual perspective to complement our current understanding.
Our study agrees this background and aims at furthering the debate about Sustainability by adding new insights from an individual perspective of analysis. In particular, this study reviews the main bodies of literature from management, operations, organization science and organizational behavior to develop a conceptual framework–and relative hypotheses–that may be tested by future large-sample surveys.

The full paper will detail the research protocol applied by this study to identify and select the most relevant contributions in term of environmentally responsible behaviors that should be engaged to promote and achieve an improvement of sustainability-related performance.

Three main conceptualizations of individual pro-environmental behavior have been identified from the review as significant to improve the environmental performance: pro-social behavior, innovative behavior, organizational citizenship behavior. This behavior is possible when employees are motivated, capable and have the opportunity to engage these behaviors. Relevant leverages to promote these conditions are: the trust to an organizational commitment to sustainability, the adoption of appropriate Human Resources practices, the implementation of specific physical facilities.

This paper provides general literature-grounded recommendations on how sustainability-related performance may be improved by implementing those specific initiatives that create the organizational premises for the engagement of pro-environmental behavior by employees. It represents a starting point of which hospital managers can take advantage to design strategies to promote and facilitate the adoption of sustainability-oriented behavior by healthcare professionals**.**

Introduction

Healthcare is trying to reinvent itself in order to meet stakeholders' expectations in term of Corporate Social Responsibility (CSR) and Corporate Sustainability (CS), because Governments, media and public opinion show great concern on how healthcare organizations are making use of precious resources, such as tax revenue, human resources and the environment (Jamali et al., 2010). The raise of awareness is demonstrated by the widespread of initiatives developed in different areas, such as energy efficiency, recycling, water conservation, community engagement, green building design, transportation and procurement, with the aim of saving money whilst reducing the environmental impact and improving the health of communities (WHO, 2009). Despite these efforts, change often remains at the surface level and *improvement evaporation effect* or initiative decay are likely to occur (NHS, 2007). What happens is that when a change has been implemented, often with much effort and resources, things slip back over time to how they were before because of a decrease in the initial enthusiasm. Moreover, isolated changes may sustain in the area in which they are implemented but do not spread through the organization and, thus, fail to generate valuable results for the whole organization.

Focusing the attention to those strategies and initiatives that aim at preserving the environment and reducing the carbon-foot print, past research has clearly demonstrated that their success cannot be guaranteed only by environmental management system and/or technological innovation but depends significantly on employees' willingness to change their current practices and behaviors to engage in what the literature identifies as "pro-environmental behaviors" that preserve and or restore the quality of the natural environment (Boiral, 2009; Daily et al., 2009). Moreover, according to The Business of Sustainability survey published by The Boston Consulting Group and the MIT Sloan Management Review (2009), "outdated mental models" remain one of the main internal challenges within healthcare organizations that presents the most significant roadblock to addressing sustainability issues. Thus, although the importance of changing individual behaviors to improve the organizational sustainability performance has been widely recognized, there is still a lack of clear understanding on how behaviors toward sustainability can be effectively influenced in the work setting (Graves & Sarkis, 2011). By taking an organizational level perspective, previous research failed to clarify the interplay between organizational leverages and determinants of individual behaviors. The result is that hospital managers – such as managers from other industries – lack clear indications on how to promote and facilitate the engagement of sustainability-oriented behaviors by employees. This is why they still perceive that sustainability is a difficult issue to deploy in concrete plans of action, since the actual results of strategies and initiatives that are defined at the organizational level are not predicable. In fact, common experience tells that many initiatives that had been launched with great fanfare become rapidly failures since employees were found or indifferent or hostile to them.

This study aims at narrowing this limitation, by offering a conceptual framework and a list of related hypotheses that might unfold the complex interplays between organizational levers – such as the organizational commitment to sustainability – and determinants of employees' behavior. To our knowledge, this is the first study that looks at the organizational change needed to accomplish sustainability targets adopting a macro-to-micro approach that take into consideration the antecedents of employees' behavior. The connection between organizational levers and a sustainability oriented behavior is grounded into the Motivation–Opportunity–Ability (MOA) framework that has been largely adopted in past managerial research as valuable and parsimonious theory for predicting an individual behavior. The originality – and main contribution – of this study is connecting the antecedent of individual behavior (namely, motivation, opportunity and ability) to levers at the organizational level, showing thus as the strategies and initiatives that are designed by hospital managers might influence differently the determinants of individual behavior. The expected benefit is that hospital managers might be empowered in their capability to design effective and

efficient strategies and initiatives to promote and facilitate the engagement of sustainability-oriented by healthcare professionals.

Method

As anticipated, past research did not pay much attention to behaviors at the workplace that might contribute to make an organization more sustainable. This study aims at narrowing this limitation and offering new insights to the ongoing debate about employees' behavior and sustainability-related performance. With this regard, we performed a literature review aimed at collecting relevant studies that identified the most effective levers at the organizational level to improve sustainability and their interplay or effect on the determinants of employees' behavior. Our review was not intended to provide an exhaustive analysis, but it offers a survey of contributions that may help to improve our understanding of the most relevant interplays between factors to improve sustainability at the individual and at the organizational level of analysis. We carried out an electronic literature search from January 1990 onward covering Scopus, Ebsco, Proquest, Pubmed to collect the relevant contributions. The references of the selected contributions were also reviewed. Potential contributions were identified through the use of the combination of keywords related to three domains, namely sustainability (i.e. "sustainability", "sustainable", "green", "environment"), individual behavior (i.e. "behavior", "action", "human resource", "individual", "employee", "professional"), and organizational setting (i.e. "organization" "wok", "workplace", "work setting"). The identified contributions were reviewed for relevancy by the authors separately, on the basis of the title and abstract. If at least one reviewer identified a contribution as being potentially relevant, the full paper was obtained. The collected papers were then reviewed and selected if all the authors considered them to meet the selection criteria.

Findings from the literature review

Employees' pro-environmental behavior (PEBs) encompasses a broad set of environmentally conscious activities including: following established environmental rules, performing required environmental tasks, recycling, reusing, conserving energy, learning more about the environment, finding more environmentally friendly ways of working, developing and applying ideas for reducing the company's environmental impact, developing green processes and products, questioning practices that hurt the environment, and encouraging others to consider the environment (Graves & Sarkis, 2011). However, all of them have some features in common. They can be conceptualized as particular types of pro-social and "taking charge behaviors" (Ramus & Killmer, 2007), because they intended to benefit other people or society as a whole and to effect organizationally functional change, having a strong value creating component (Morrison & Phelps, 1999). Even though some authors (i.e. Cordano & Frieze, 2000; Flannery & May, 2000) have concentrated their attention on environmental managers' decision, in the vast majority of cases, behaviors toward the environment are extra-role behaviors, meaning that they are not formally required for an employee's job (Ramus & Killmer, 2007; Boiral, 2009).

Ramus & Killmer (2007) identified four motivational drivers that appear to be predominant in the context of employee performance of extra-role pro-social behaviors: (a) support from the direct supervisor; (b) one's perception of an organization's related norms (policy); (c) personal predisposition toward the behavior and (d) one's belief in one's own ability to successfully perform the action. Additionally, Graves & Sarkis (2011) stressed the importance of transformational leadership on employees' motivation. In fact, enhancing corporate sustainability performance is likely to involve substantial changes in employee behavior, thus the value based, inspirational nature of transformational leadership may be particularly effective in stimulating these changes (Egri & Herman, 2000).

Being less visible, less conspicuous, often anonymous and contingent (Boiral, 2009), pro-environmental behaviors are also difficult to formalize and reward in organizations. Given these characteristics, scholars have suggested that pro-environmental behaviors could be treated as a peculiar type of Organizational Citizenship Behaviors. Organ (1988) defined Organizational Citizenship Behavior as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and, in aggregate, promotes the efficient and effective functioning of the organization". Daily et al. (2009) expanded the definition of OCBs into the environmental field coining the term Organizational Citizenship Behavior toward the Environment (OCBE). Thus, OCBE has been conceptualized as the engagement of discretionary actions by employees that are not formally rewarded by the organization and that are directed toward the improvement of environment-related performance. OCBE is determined by the employee's own set of values (Daily et al., 2009), their organizational commitment enhanced by the perception of the organization's social performance (Daily et al., 2009), green leadership by managers (Daily et al., 2009; Boiral, 2009), a pro-environmental culture (Boiral, 2009) and adapted training, information, and recruitment policies (Boiral, 2009). Furthermore, Boiral (2009) correlated each of the six main dimensions of OCBs as defined by Organ et al. (2006) - helping, sportsmanship, organizational loyalty, organizational compliance, individual initiative, and self-development – with their possible environmental applications. For example, he suggested that the OCBs category "Individual initiative" can be translated into the environmental field taking account of pro-environmental behaviors such as participation in environmental activities, sharing knowledge and suggestions on pollution prevention etc.

Concerning individual initiatives, Starik and Rands (1995) claimed that individuals bring critical ideas and energy to the greening of their organizations and stress individuals' innovative resources in terms of ideas that can help increase ecological sustainability. Thus, in order to achieve a better performance, employees have to show some degrees of Innovative Work Behaviors (IWBs), that have been defined by West and Farr (1989) as the intentional creation, introduction, and application of new ideas within an organization, in order to benefit the organization. Equally to OCBs and OCBE, IWBs are not the typical job of most employees and therefore they can be identified as extra-role behaviors (Katz & Kahn, 1978). Moreover, often they are not directly or explicitly recognized by the formal reward system (Katz, 1964; Katz & Kahn, 1978; Organ, 1988). Within the environmental literature, Ramus and Steger (2000) and Ramus (2002) assumed that eco-initiatives, initiatives promoted by employees in the environmental area, are creative ideas that companies implemented and test whether (1) a set of organizational factors, communicated through environmental policy, and (2) supervisory behaviors affect employee motivation to generate environmental innovations. They demonstrate that a written environmental policy influences employees' willingness to promote eco-initiatives, but actions occur only if managers show supportive behaviors, such as participative management style, encouragement of competence building, use of environmental rewards and recognition and encouragement of experimentation.

The previous studies clarify that pro-environmental behaviors are discretional and cannot completely mandated by managers. These behaviors are thus engaged by employees because they are willing to and able to. Managers should understand how to promote and facilitate these behaviors without assuming that they can make them compulsory. With this respect, it becomes essential to identify the interplays between the plans of action that have been proved to be the most effective in improving environment-related performance and the determinants of a discretional individual behavior. Other than organizational commitment and leadership, human resource practices and human resource development interventions appear particularly important to change employees' behavior and ensure the integration of sustainability principles into action (Garavan et al., 2010). At the individual level, corporate environmental awareness, education and training activities are the most important factors for the success in environmental management (Daily & Huang, 2001; Govindarajulu & Daily, 2004; Jabbour & Santos, 2008; Garavan et al., 2010; Hoffman & Bazerman, 2009; Hoffman, 2010). Furthermore, addressing climate change and other

environmental issues require new kinds of metrics to represent new considerations for previously accepted behaviors (Hoffman, 2010). Hence, integrating traditional performance measurement systems with environmental KPIs, organizations are able not only to monitor progress toward achievement of sustainability targets, but also to motivate individuals driving their attention toward the desired goals. Moreover, communicating feedback to the workforce, concerning their impact and effectiveness on environmental improvements, organizations can avoid employees efforts come to a standstill (Govindarajulu & Daily, 2004). Unfortunately, in the workplace environment, feedback is often given only in aggregate form and not very frequently and , consequently, their effectiveness can decrease (Carrico & Riemer, 2011). However, research suggests that even relatively infrequent feedback reports (e.g., weekly, monthly or bimonthly) that are aggregated to the level of group/organization can also lead to both significant and substantial behavior change (Carrico & Riemer, 2011). Finally, rewards have an irresolute role. As stated before in the paper, some scholars have often characterized pro-environmental behaviors as difficult to reward within organizations but others suggest to use rewards as a reinforcement to continuously motivate and increase commitment from workers to be environmentally responsible (Daily & Huang, 2001; Govindarajulu & Daily, 2004; Jabbour & Santos, 2008; Hoffman, 2010). However, research also suggests that employees are not likely to be motivated by money all the time (Govindarajulu & Daily, 2004) and that rewards tend to have short-term effects only, for as long as they are in place (Steg & Vlek, 2009).

Author	**Behavior**	**Individual determinants**	**Organizational determinants**
hoffman & bazerman (1999)	environmentaily destructive behaviors	• over-discounting the future • egocentrism • positive illusions • mythical fixed-pie • pseudosacredness	• artifacts • espoused values • basic underlying assumptions
ramus & steger (2000)	promotion of eco-initiatives		• organizational support (policy) • leader supportive behaviors
cordano & frieze (2000)	implementation of source reduction activity	• pollution prevention attitude • subjective norms for environmental regulation • perceived behavior control	• facility's amount of past source reduction activity
flannery & may (2000)	environmental ethical decision concerning the treatment of hazardous wastewater	• attitudes • subjective norms • perceived behavioral control • moral obligation	
ramus (2002)	promotion of eco-initiatives		• organizational support (policy) • leader supportive behaviors
topf (2005)	environmentally responsible behavior	individual psychological barriers • environmental paradoxes • value conflicts • denial	group psychological barriers • diffusion of responsibility • pleuristic group ignorance • groupthink

ramus & killmer (2007)	promotion of eco-initiatives	• personal predisposition • belief in one's own ability to perform the action.	• organizational norms (policy) • support from the direct supervisor
tudor et al. (2007)	gap between intended waste management behavior and action	• belief system and attitudes • awareness • subjective norms • behavioral control	
daily et al. (2008)	ocbe	• environmental concern • organizational commitment • perceived corporate social performance	• supervisory support
boiral (2009)	ocbe		• green leadership • culture • voluntary programmes and structures • adapted training, information, and recruitment policies
carrico & riemer (2011)	energy-saving behavior		• feedback • peer influence
graves & sarkis (2011)	pro-environmental behaviors	• self-determined motivation	• direct manager's environmental leadership

Table 1. Conceptualizations of pro-environmental behavior and their individual and organizational determinants

Framework and hypotheses

From the literature review emerges that pro-environmental behavior is best conceived of as a special type of pro-social extra-role organizational behavior and lots of different factors that may lead to employees to act in a sustainable way. The perspectives discussed above focus mainly on intra-personal or organizational factors that could affect individual motivation to perform a pro-environmental behavior. However, research have demonstrated that human behaviors do not depend on motivations alone (Steg & Vlek, 2009). Some scholars have also highlighted the importance of employees' beliefs in their ability to perform actions toward sustainability (Ramus & Killmer, 2007; Boiral, 2009). In general it emerges a low use of behavioral models that take explicitly into account the antecedents of individual behavior and a lack of contextual factors such as physical infrastructure and technical facilities that may facilitate or constrain the environmental behavior (Steg & Vlek, 2009).

To overcome these shortcomings and to better understand how to influence individual pro-environmental behavior at work, we adopted the Motivation, Opportunity and Ability (MOA) framework (MacInnis et al., 1991; Rothschild, 1999) to identify the linkages between the organizational and physical factors and the behavior though their influence on the three behavioral determinants of such a behavior. The MOA framework, that has been successfully used to explain pro-environmental behavior outside the workplace (Binney et al., 2006), consists of three dimensions: motivation captures the individual's willingness to act, opportunity represents the contextual mechanisms that enable action and ability represents the individual's skills or knowledge base related to the action (MacInnis et al. 1991; Rothschild, 1999). Thus, we argue that:

Hp1: Motivation is positively related to pro-environmental behavior

Hp2: Ability is positively related to pro-environmental behavior

Hp3: Opportunity is positively related to pro-environmental behavior

In the followings, we present the hypotheses which connect each of the three determinants of the pro-environmental behavior - motivation, ability and opportunity - with the organizational level factors, tracked in the literature, that may influence it.

- Motivation

According to the literature review, two major organizational factors can enhance employees' motivation to act in an ecological way: leaders support and organizational commitment toward the environment .

Leader support has been considered essential to motivate employees in "weak situations" where rewards are less used (Ramus & Steger, 2000; Ramus, 2002; Ramus & Killmer, 2007; Daily et al. 2009; Boiral, 2009; Graves & Sarkis, 2011).
Environmental leaders are "master managers", who balance between the transformational and transactional leadership behaviors (Fernández et al., 2006). According to Egri & Herman (2000), Ramus & Steger (2000), Ramus (2002) and Graves & Sakis (2011), they value collaboration, grants responsibility to subordinates, use two-way communication, are oriented towards change, create trust with employees but also specify employees' environmental performance goals and tasks and actively monitor the employee's behavior. Adopting these behaviors, environmental leaders increase the willingness of employees to promote eco-initiatives (Ramus & Steger, 2000; Ramus, 2002) and to adopt a pro-environmental behavior (Ramus & Killmer, 2007; Daily et al. 2008; Boiral, 2009).

Hp4: Leader supportive behaviors are positively related to the motivation to perform a pro-environmental behavior

Organizational commitment toward the environment is important to signal employees what is valuable and what behaviors are expected (Ramus & Steger, 2000; Ramus, 2002; Govindarajulu & Daily, 2004; Ramus & Killmer, 2007). It can be communicated in different ways, such as organizational policies and norms (Ramus & Steger, 2000; Ramus, 2002) or cultural artifacts (slogans, symbols, rituals and stories) which serve to articulate and reinforce the importance of sustainable performance (Starik & Rands, 1995). Thus, when employees assess the commitment in their organizations as not limited to regulatory compliance, they would show greater predisposition to pro-environmental behavior (Cordano & Frieze, 2000).

Hp5: Organizational commitment to the environment is positively related to the motivation to perform a pro-environmental behavior

Measurement of both qualitative and quantitative sustainability indicators guides employee behavior to the environmental targets desired by the organization (Ramus & Steger, 2000; Ramus, 2002; Govindarajulu & Daily, 2004). Although monitoring individual pro-environmental behavior can be difficult (Boiral, 2009), objectives can be assigned to groups or departments and feedback provided in an aggregate form. As demonstrated by Carrico & Riemer (2011) feedback intervention can lead to a significant drop in energy use, also when feedback reflects the behavior of hundreds of individuals who share an office building. Thus, it is essential to measure and report environmental

targets and achieved results throughout the organization to sustain motivation toward sustainability and behavioral change.

Hp6: Performance measurement and feedback are positively related to the motivation to perform pro-environmental behavior

Environmental training has significant benefits particularly in terms of its impact on employee motivation to implement CSR initiatives in organizations (Cook & Seith, 1992) and on the level of eco-innovations proposed by individuals (Ramus & Steger, 2000; Ramus, 2002). In fact, it can motivate employees to conduct their activities in an environmentally responsible manner (Sharistava, 1995; Boiral, 2009) and may result in higher employees' willingness to participate in proactive environmental management activities (Starik & Rands, 1995; Govindarajulu & Daily, 2004).

Hp7: Education and training are positively related to the motivation to perform pro-environmental behavior

- Ability

Hostager, Neil, Decker, and Lorentz (1998) assert that individuals need to have the capacity (skills and capability) to be environmental innovators. Unfortunately, employees often share a relative lack of literacy with regard to environmental issues, thus, any effort to address environmental problems must begin with education (Hoffman, 2010). In fact, insufficient training and education may result in employees who are unable to participate in environmental improvement efforts (Starik & Rands, 1995; Govindarajulu & Daily, 2004). Furthermore, a systematic formulation of training programs increase employees' ability to identify not only the problematic environmental issues but also the best way to treat them (Denton, 1999).

Hp8: Education and training are positively related to the ability to perform pro-environmental behavior

- Opportunity

Opportunity represents the environmental or contextual mechanisms that enable action. In fact, in many work situations persons who are both motivated and capable of successfully accomplishing tasks, may either be inhibited in or prevented from doing so due to situational constraints beyond their control (Peters and O'Connor 1980). Although, the concept of opportunity is somewhat vaguer than the constructs of motivation and ability (Siemsen et al., 2008), Blumberg & Pringle (1982) identified several elements that shape the individual opportunity to perform, such as tools, equipment, materials and supplies; leader behavior; organizational policies.
Even though employees demonstrate intention to perform a pro-environmental behavior and are able to do so, lack of necessary facilities can impede their actions, as in the case showed by Tudor et al. (2007) in which in some departments, despite the generation of some domestic waste, have clinical bins only. Moreover, leaders' supportive behaviors and organizational commitment shape the context in which employees behave and thus create the appropriate conditions so that pro-environmental behavior can occur.

Hp9: Physical infrastructure and technical facilities are positively related to the opportunity to perform pro-environmental behaviors

Hp10: Leader supportive behaviors are positively related to the opportunity to perform pro-environmental behaviors

Hp11: Organizational commitment to the environment is positively related to the opportunity to perform pro-environmental behaviors

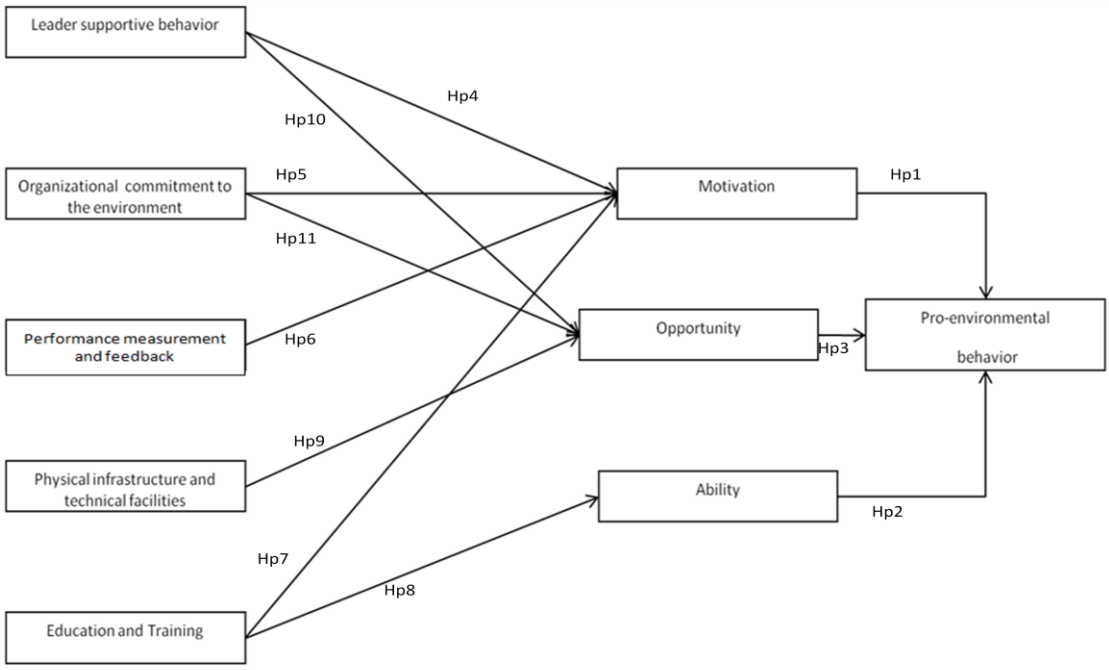

Figure 1. Conceptual framework and hypotheses

Conclusions

This paper offers new elements for the ongoing debate about the implementation of successful strategies for making healthcare – such as other industries – more sustainable over time. Past research identified some strategies and organizational levers that seem to be more promising in pushing an organization toward improved sustainability-related performance. Although these outcomes, past contributions failed to connect these strategies and levers to the antecedents of an individual pro-environment behavior and thus failed to provide managers with clear and evidence-based indications about how to promote and facilitate the engagement of new behaviors by employees.

Our study adopts the Motivation-Opportunity-Ability framework to shed first light on the connections between some organizational levers and the actual engagement of pro-environment behaviors by the employees because of the influence on one or more of the proximal antecedents of these behaviors. With thus respect, a conceptual framework and eight hypotheses have been generated that might be adopted as basis for further research by large sample surveys. Finally, we recommend further research in the healthcare sector since there is a limited evidence from this industry, as shown by our literature review.

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