"I'm doing my best, considering" - the relationship between worker satisfaction with HRM practices and worker perception of individual performance in the healthcare sector

Introduction

Throughout the world, hospitals are facing many challenges including increased costs, *per capita* decreases in government funding, technology that delivers both less invasive surgery (consequently capacity to perform more inpatient procedures) and the capacity to deal with more complex medical interventions; also, health care systems that include hospitals have been under constant and continuing pressure to deliver quality improvements, better accountability, consumer choice and cost savings (Kabene, 2006; Grimshaw et al, 2010). As such, it is arguable that one important area of improving and maintaining service delivery as well as facing current challenges is through the hospital's arguably most important asset: the people that work in hospitals, the Human Resources (HR) (West et al., 2006).

In this sense, and in face of the rapidly changing environment, it seems crucial for Hospitals to develop the best Human Resources Management (HRM) practices for their context. However, the relationship between human resources and health care is very complex and research about HRM seems to be lacking because of contextual and methodological issues (Kabene et al, 2006).

Adding to this, the case has been made in recent years for making a clear distinction between intended HR practices (those designed on a strategic level), actual – or implemented – HR practices (those implemented by, for example, the direct supervisor), and perceived HR practices (those perceived by the employees) (Wright & Nishii, 2004). It seems clear to some authors that although not much research has been developed around employee perceptions, more and more studies are being developed with these constructs (e.g. Bowen and Ostroff, 2004) and Nishii and Wright (2008) go so far as to raise the notion that the perceptions of employees regarding HRM can be as important as the HRM Practices themselves

The present study aims at furthering our knowledge on how satisfaction with HRM practices

affects employee perception of their own performance. Bearing in mind that most psychometric instruments are self-report measures and that performance appraisal itself usually includes a self-assessment section, this paper intends to shed some light on what the connection might be between how well workers feel their employing organization is treating them and how well they feel they are doing their job.

Literature Review

Within many health care systems worldwide, increased attention is being focused on HRM (Kabene et al, 2006). Human resources have been described as "the heart of the health system in any country" (Joint Learning Initiative, 2004), "the most important aspect of health care systems" (Narasimhan et al, 2004) and "a critical component in health policies"(Dussault & Dubois, 2003). Thus, considering that HR is such a key element in health care systems, it is reasonable to understand why Human Resources Management (HRM) practices have been recognized as an important factor in developing sustainable competitive advantage across sectors (Pfeffer, 1998; Lado & Wilson, 1994; Kidd & Oppenheim, 1990).

HRM practices also provide employees with concrete and visual evidence of the organisation's intent to anticipate and meet their needs (Armstrong-Stassen & Schlosser, 2010). When an organisation engages in HR practices that reflect investment in, and support of, its employees, it signals that the organisation is seeking to continue a social exchange relationship with its employees (Allen et al., 2003).

Although the effects of a company's overall HR practices, or HR bundle, have been extensively examined, the effects of employees' overall perception of HR effectiveness have rarely been studied (Chang, 2005). This might be due to the fact that perception is classically a construct approached by Psychologists whereas the HRM field researchers are from very different backgrounds. Only recently has the notion emerged that the perceptions of employees regarding HRM can be as important as the HRM Practices themselves (e.g. Wright & Nishii, 2008).

Several studies have been supporting the importance of this type of variables: Boselie and Van den Wiele (2002) concluded, in a study with circa 2000 security workers, that positive perceptions of individual employees on the HRM/TQM concepts leads to a higher level of satisfaction and less intention to leave the organization; Bowen and Ostroff (2004) developed work considered "groundbreaking in their acknowledgement of the role employee perceptions play in translating HR practices into desired organizational outcomes" (Nishii et al, 2008: 5);

Chang (2005) attempted to examine the construct of employees' overall perception[1] as one of the possible mechanisms by which the commitment HR bundle influences employees' attitudes and results indicated that employees may readily perceive a certain practice to be effective if they have perceived other HR practices as effective, and their attitudes may be strongly influenced by the consistency of their perceptions. The author also points out that the other side of the coin is that a salient negative perception can undermine other effective practices; Nishii et al. (2008) introduce the construct of HR Attributions and argue that the attributions that employees make about the reasons why management adopts the HR practices that it does have consequences for their attitudes and behaviors, and ultimately, unit performance[2,] meeting a general trend in considering employees cognitions (and therefore perceptions) as an antecedent of attitudes and performance.

This apparent connection between perceived practices and work related attitudes leads us to our first hypotheses, connecting satisfaction with HRM practices with arguably two of the most popular work attitudes in research:

H1a. Higher levels of satisfaction with HRM practices are positively related with higher levels of Organizational Commitment.

H1b. Higher levels of satisfaction with HRM practices are positively related with higher levels of Job Satisfaction.

Worker-Organization Relationship

"The nature of the employment relationship has been an important but amorphous topic since probably the very first time one individual struck bargain with another, trading labor for otherwise inaccessible valued outcomes" (Coyle-Shapiro, Shore, Taylor & Tetrick, 2004: 1).

It is almost intuitive that there is a certain give-and-take in the work relationship: that is the

---

[1] According to Chang (2005) employee overall perception, the employee's beliefs about diverse aspects of HR practices, and consideration of diverse beliefs about an object in shaping an individual's overall attitude can be traced back to the Fishbein model (Fishbein, 1963). This model has mainly had application in costumer behavior theory, depicting that when an individual holds beliefs towards more than one aspect of an object, the overall attitude is influenced by a summation of the product of each belief and evaluation regarding the belief.

[2] These authors proclaim that although a number of scholars have suggested that employees' interpretations or attributions of HR practices are likely to play an important role in influencing the ultimate effect of HR practices, their study is among the first to provide evidence that this is the case.

fundament of the Social Exchange Theory (Homans, 1958, Gouldner, 1960, Blau, 1964, Coyle-Shapiro & Conway 2004). Social Exchange Theory has been used to examine a variety of organizationally desired outcomes and to examine how employees view their relationships with their employer in different cultures and in different contractual arrangements. Overall, the empirical evidence seems to support the universality of social exchange as a framework for understanding the employment relationship (Shore and Coyle-Shapiro, 2003).

Although the seminal works on social exchange theory (SET) date back from the 1960's (e.g. Homans, 1961; Thibaut & Kelly, 1959, Blau, 1964), in the past few years it has seen it's popularity boost in a number of social sciences as is the example of employee relations Coyle-Shapiro, Shore, Taylor & Tetrick, 2004), project teams (Lin & Huang, 2010), psychopathology and neuroscience (Wischniewski et al, 2009), tourism (Ward & Berno, 2011), marketing (Kingshott, 2005), etc. Cooperation between genetically unrelated individuals is a highly positively selected and perhaps quite unique trait in humans (Fehr and Rockenbach, 2004; Jensen et al., 2007), such that universally accepted rules of social exchange evolved as ''the decisive organizing principle of human society'' (Nowak, 2006) and several studies have confirmed as crucial in developing and maintaining relationships (Maslyn & Ul-bien, 2003).

According to the social exchange theory (Blau, 1964), positive, beneficial actions directed at employees by either the organisation and/or its representatives (e.g. supervisors) contribute to the establishment of high-quality exchange relationships that create obligations for employees to reciprocate in positive, beneficial ways (Settoon et al., 1996).

Social exchange theorists have viewed the employment relationship as an exchange of tangible and intangible benefits (Coyle-Shapiro & Conway, 2004). As such, it is the emphasis on the exchange of the intangible benefits that differentiates social exchange from economic exchange. Eisenberger et al. (1986) propose that fulfilling important socio-emotional needs in the workplace is similar to fulfilling individual needs for respect, caring, and support in interpersonal relationships. For example, some authors argue that perceived organizational support (POS) fulfills the need for self-esteem by communicating recognition of employees' contributions (Armeli et al. 1998), the need for emotional support by signaling to employees that the organization can be relied upon to help when required, and the need for social approval by communicating that they are adhering to organizational norms. Therefore, a social exchange perspective on the employment relationship goes beyond the exchange of tangible benefits to include the fulfillment of socio-emotional needs.

Underpinning this type of exchange is trust (Anderson & Narus, 1990; Doney & Cannon, 1997; Dwyer, Schurr, & Oh, 1987) and the norm of reciprocity (Gouldner, 1960; Homans, 1958; Levi-Strauss, 1957; Malinowski, 1922; Simmel, 1950). However, these constructs cannot simply materialize, as they evolve as a result of some form of socialization process (Axelrod, 1986; Doney & Cannon, 1997; Ford, 1980; Jones & George, 1998; Williams, 2001).

As a social exchange relationship involves unspecified obligations, exchange partners are required to trust the other to discharge their obligations and also to accept the norm of reciprocity that obligates an individual to return favorable treatment. Exchange partners can demonstrate their trustworthiness by reciprocating benefits received. As such, social exchange relationships take time to develop as exchange partners begin to demonstrate their trustworthiness and show that they accept the norm of reciprocity governing the relationship.

Gouldner (1960) made this process more explicit through his seminal work on the "norm of reciprocity", stating that this norm implies two demands "(1) people should help those who have helped them and (2) people should not injure those who have helped them"[3].

According to the same author, the norm of reciprocity can be understood by examining different elements or components of this process, including equivalency (how much of what is returned is equivalent/proportional to what was attained), immediacy (how long has passed between a benefit and its return, where a feeling of unfulfilled duty remains) and interest (the reason why the other element of the dyad is in the exchange relationship). The combination of these elements is arguably the base of the mechanisms through which the stability of social systems is maintained, (Homans, 1958; Liden et al., 1997; Simmel, 1950; Thurnwald, 1932), or even, as Thurnwald (1932: 106) puts it "the vital principle of society".

The norm of reciprocity plays an important role in the development of social exchange relationships by perpetuating the ongoing fulfillment of obligations and strengthening indebtedness[4]. There is some empirical evidence that a high social capital is associated with improvements in the social and economic well-being (Pretty, 2003).

In the specific context of organizations and according to SET (e.g. Blau, 1960), workers will

---

[3] Gouldner (1960) argues that the strength of an obligation to repay is contingent upon the value of the benefit received. Benefits are more valued when (a) the recipient is in greater need; (b) the donor cannot afford to (but does) give the benefit; (c) the donor provides the benefit in the absence of a motive of self interest; and (d) the donor was not required to give the benefit. Therefore, highly valued benefits create a stronger obligation to reciprocate.

[4] "Money can be exchanged quickly, but love takes time" (Foa & Foa, 1980 cit in Coyle-Shapiro & Conway, 2004)

experience more will to reciprocate the trust and care that leaders may express in a relationship (Cardona & Eola, 2003; Dirks et al., 2002; Konovsky et al., 1994; Organ, 1990).

We believe this need to reciprocate will manifest itself in how well workers feel they are doing their job (not necessarily how others perceive this or how well they actually do, because other factors are involved in that assessment), considering their satisfaction with HRM practices, which leads us to our next hypotheses:

> **H2. Workers that are more satisfied with HRM practices will have a perception of their own performance that is higher than those less satisfied with the same HRM practices;**

However such a reciprocation process might not necessarily be balanced: it is possible that the leader may trust the worker, and the worker does not trust the employee (e.g., Brower et al., 2000; Mayer et al., 1995). But even if the leader trusts the worker in a reciprocal manner, this does not mean that both trusts have the same level (Cardona e Eola, 2003): reciprocity depends strongly upon the subjects perception and sense of indebtedness.

Thus reciprocity seems to contribute to the development of mutual obligations between people in the long term which helps attaining positive environmental results and ultimately contributes towards organizational performance (Pretty, 2003).

It is thus clear that the need to reciprocate may depend on the relationship that the worker has previously established with the organization, leading us to our third hypotheses:

> **H3. The relationship between satisfaction with HRM practices and the workers perception of individual performance is mediated by the overall worker-organization relationship.**

Since the worker-organization is a extremely vague concept, we decided to create a composite measure of this construct, that includes the relationship of the worker with their own job (job satisfaction), the bond between the worker and the organization (organizational commitment) and finally, because we are talking about the exchange of behaviors, the voluntary relationship of workers with their colleagues that benefits the organization (organizational citizenship behaviors).

Job Satisfaction
Job satisfaction (JS) is an attitude that relates to overall attitudes towards life at work, or life

satisfaction (Illies et al., 2009) as well as to service quality (Schneider and Bowen, 1985). It can be defined as positive affect towards employment (Mueller and McCloskey, 1990) and it is arguably a fairly stable, multidimensional evaluation of how the job meets the employee's needs, wants, or expectations (Fisher, 2003).

JS has had a key role in management research, especially because of the "happy-productive worker hypotheses" (Petty et al., 1984; Fisher, 2003). The search for a relationship between job satisfaction and job performance has been referred to as the 'Holy Grail' of organizational behavior research (Weiss and Copranzano, 1996). The idea that satisfied employees will perform their work more effectively underpins many theories of performance, leadership, reward, and job design (for example, Batt, 2002; Cherns, 1976; Hackman & Oldham, 1976; Morrisey, Cordery, Girardi, & Payne, 2005; Patterson, Warr, & West, 2004 cit in Shipton et al, 2006). Managers and lay people are thought to believe in what has been called the 'happy–productive worker hypothesis' (Kluger & Tikochinsky, 2001; Ledford, 1999; Staw & Barsade, 1993 cit in Fisher, 2003).

Regardless of the (in)success of scholars in proving the connection between JS and Performance, the latter remains one of the most prominent variables in study in business science and organizational behavior (Spagnoli et al., 2012). JS is relevant for scholars interested in the subjective evaluation of work conditions, but also for managers and researchers regarding organizational outcomes (e.g. organizational commitment, extra-role behavior) and for employees, job satisfaction has implications for subjective well-being (Judge and Hulin, 1993) and life satisfaction (Judge and Watanabe, 1993). It is assumed that Job Satisfaction has major implications as it is a prevailing construct covering all professions, work, jobs and contexts (Spagnoli et al., 2012).

> **H3.a1 Workers that report higher satisfaction with HRM also report higher levels of job satisfaction.**

> **H3.a2 Higher levels of Job Satisfaction are related with higher levels of the workers' perception of individual performance**

> **H3.a3 The relationship between satisfaction with HRM practices and the workers' perception of individual performance is mediated by the different facets of job satisfaction.**

Organizational Commitment

Organizational Commitment has been the target of growing attention and popularity in the area of Organizational Psychology in the past decades (Bergman, 2006; Mathieu & Zajac, 1990; Meyer & Allen 1997); investigation has been extensive although relatively unsystematic (Meyer, Becker & Vanderberghe, 2004).

Meyer et al. (2004) identify two major moments in the development of the theory relative to Organizational Commitment in the last decades: the acknowledgement that it can assume several shapes (e.g., Meyer & Allen, 1991; Mowday Steers e Porter, 1979; O'Reily & Chatman, 1985) and the consensus around the existence of several foci (such as the organization, the job, the career, the union, etc.).

Although there is some redundancy among the several models, there are also important differences among them (cf. Meyer & Herscovitch, 2001 for a review). The several definitions reflect essentially three main ideas: commitment reflecting an affective orientation (e.g., Mowday et al., 1979), the recognition of the costs of leaving the organization (e.g., Becker, 1960) and the obligation to remain with the organization (e.g., Wiener, 1982).

> **H3.b1 Workers that report higher satisfaction with HRM also report higher levels of organizational commitment.**

> **H3.b2 Higher levels of organizational commitment are related with higher levels of the workers perception of individual performance.**

> **H3.b3 The relationship between satisfaction with HRM practices and the workers perception of individual performance is mediated by organizational commitment.**

Organizational Citizenship Behaviour

Organizational Citizenship Behavior (OCB) can be defined as an individual behavior that is discretionary, not contractually guaranteed and that in the aggregate promotes the effective functioning of the organization (Organ, 1997; Smith, Organ & Near, 1983).

Organizational Citizenship Behavior is discretionary in the sense that it is not an enforceable requirement of the role or the job description, but a matter of personal choice (such that its omission is generally not understood as punishable) and by "not contractually guaranteed" we mean that an OCB is not directly or explicitly recognized by the formal reward system (Organ, 1997).

This construct, however fashionable at the moment, has been much debated over time due to the concepts of in-role and extra-role behavior. Although some of the original articles referred to OCB as extra-role behaviors, further research verified that much of the OCB's were perceived by the workers as in-role, rather than extra-role (cf. Morrison, 1994, cit in Organ, 1997), a question that inheres the very fuzziness of the concepts "role" and "job" themselves (Organ, 1997).

In order to avoid the discussion between what employees could consider in-role or extra-role and to distance ourselves from a discussion that is not the focus of this study, we chose to approach this subject by restricting our research to specific Extra-role Behaviors such as Van Dyne and LePine's (1998) model "Helping and Voice Behaviors".

The consequences of organizational citizenship behavior can result in feelings of higher Job social support from supervisors and coworkers, that can reduce turnover intention (Chiu et al, 2009; Shader et al., 2001).

> **H3.c1 Workers that report higher satisfaction with HRM also report higher levels of extra-role organizational citizenship behaviors.**

> **H3.c2 Higher levels of extra-role organizational citizenship behaviors are related with higher levels of the workers perception of individual performance.**

> **H3.c3 The relationship between satisfaction with HRM practices and the workers perception of individual performance is mediated by extra-role organizational citizenship behaviors.**

Organizational Performance in the Health Care Sector

Similar to other organizations, hospitals are concerned with maximizing effectiveness through the adoption of appropriate management policies and practices. Unlike most other organizations, however, 'effectiveness' in hospitals can be measured partly by their success in treating illness and avoiding deaths (West et al, 2006).

Crêteur et al (2000) have synthesized major performance criteria in a rational model in which five criteria have been retained: quality of care, satisfaction of patients, satisfaction of human resources, efficiency and financial results. However, measures of OP are always controversial in the healthcare sector; authors like West et al (2006) prefer to use only the standardized mortality rate (or Jarman Index), but authors from the area of the economic evaluation of

health technologies (e.g. Drummond et al, 1997) contemplate other indexes such as the QALY (Quality Adjusted Life Years) or the money saved from certain procedures, depending on different approaches.

Buchan (2003, cit in Buchan, 2004) structured a series of other indicators that Hospitals use in order to measure effectiveness/performance, dividing them in 3 groups: "activity"/Process-related (beds, occupied beds, outpatient visits, client contacts), staffing-related (job satisfaction -measured by attitudinal survey -, accidents/injuries, absence, assaults on staff, vacancy rates, overtime, turnover/stability/retention, use of temporary staff) and care-related (output/outcome) (patient length of stay, readmission rates, live births, mortality rates, urinary tract infections, pneumonia, shock, upper gastrointestinal bleeding, deep vein thrombosis, pressure sores/ulcers, cross-infections, patient satisfaction survey).

However, the majority of the authors agree that using the same measures in different hospitals may not be the most adequate criteria since the case mix might be different and hospital policies that involve the indicators might contaminate the sample (e.g. if you measure mortality rates in different hospitals you might not only be measuring medical inefficiency but also the policy to keep terminal patients in the hospital or to send them home in their final moments) (Buchan, 2004).

The most crucial part in relating to the HRM and performance is of course the linkage between the two (Paauwe, 2009). Although this linkage seems intuitive and clear to most researchers, some critics have stated that the evidence for an effect of HRM on performance is promising but only circumstantial due, for the most part, to inadequate research design (Wall & Wood, 2005).

Performance outcomes of HRM can be captured in a variety of ways; e.g. Dyer and Reeves (1995) mention:

- Financial outcomes (e.g. profits, sales, market share, Tobin's q, GRATE);
- Organizational outcomes (e.g. output measures such as productivity, quality, efficiency);
- HR-related outcomes (e.g. attitudinal and behavioural impacts among employees, such as satisfaction, commitment, intention to quit).

So, on the one hand we have the more strategic aspect of performance (based on economic rationality), which emphasizes outcomes such as labor productivity, innovation, quality,

efficiency gains and flexibility (Boselie et al., 2005) and on the other hand the more societal aspect of performance (based on relational or normative rationality) emphasizing legitimacy and fairness (Paauwe, 2004). The latter two can be operationalized through indicators like organizational citizenship behaviors, commitment, trust, perceived security, and perceived fairness (Paauwe & Boselie, 2005).

Central to these more sophisticated ways of thinking about the relationship between HRM and performance is the idea that HR practices at the organizational level affect the attitudes and behavior of employees at the individual level which, in turn, affect key aggregated level behavioral or HR outcomes such as labor productivity and turnover which, subsequently, might impact organizational or firm-level outcomes (Paauwe, 2009).

So we are in need of performance indicators that are far more proximal in terms of what HR practices can actually affect, such as changes, for example, in employee work-related attitudes (motivation, commitment, trust) and worker effort and subsequent changes in outcomes at organizational level (e.g. productivity and quality of services and/or products) (Paauwe, 2009).

In this study, and considering these problems we propose a self-report measure of workers performance: how well workers feel they are doing.

Method

Data collection

Data was collected in January of 2012 in a large a Hospital in the north of Portugal (circa 2000 workers) using both paper and electronic format. Paper format was distributed among workers that preferred this method or that did not have access to the intranet of the institution with envelopes so that responses could be sealed and anonymity ensured. Electronic questionnaires were divulged in the Hospital's intranet.

Instruments

Satisfaction with HRM Practices

Satisfaction with HRM Practices was measured using a scale created for this purpose based on Buchan's (2004) work on the impact of good practices in the healthcare context. We considered the six practices that were shown to affect performance in healthcare and created a scale with 24 items such as "how people are chosen to work in this hospital".

A 5-point Likert-type scale was used for measuring respondents' level of agreement with each

statement (from 1—very dissatisfied to 7—very satisfied).

Job Satisfaction

Job Satisfaction was assessed using the Minnesota Satisfaction Questionnaire.

The Minnesota Satisfaction Questionnaire (MSQ) was one of the outputs from the "Work Adjustment Project" at the University of Minnesota; the underlying theory is based on the assumption that work fit is dependent on the correspondence between the individual skills and the reinforcements that exist in the work environment (Weiss et al., 1967). This is a self-reporting measure, suitable for individuals of all school levels that can be administrated separately or individually.

The 20 MSQ-short version items are rated on a 5-point Likert scale (from 1 "very dissatisfied with this aspect of my job" to 5 "very satisfied with this aspect of my job").

Organizational Commitment

Employees' levels of commitment to their organization were measured using the revised version of Meyer and Allen's (1997) 19 item scale: Affective, Normative and Continuance Commitment Scale (Meyer & Allen, 1997). A 7-point Likert-type scale was used for measuring respondents' level of agreement with each statement (from 1—strongly disagree to 7—strongly agree). In the authors' version, the Affective Commitment Subscale contains 6 items, such as "I would be very happy to spend the rest of my career in this organization", the Normative Commitment Subscale integrates 6 items, such as "I'd feel guilty if I left my organization now" and the Continuance Commitment Subscale integrates 7 items, such as "I believe I have too few options to consider leaving this organization".

Extra-role Organizational Citizenship Behaviors

Extra-Role Organizational Citizenship Behaviour was assessed using the 13-item Helping and Voice Behaviours Scale (Van Dyne & LePine, 1998). Responses to all items were assessed on 7-point scales (1 -strongly disagree to 7 - strongly agree). The Helping Behaviours original subscale contains 7 items such as "I volunteer to do things for this work group" and the Voice Behaviours subscale integrates 6 items, such as "I develop and make recommendations concerning issues that affect this work group".

Perceived Individual Performance

Perceived individual performance was measured with a 5 item scale developed for this study, with items such as "I think I'm a good worker", "I think I'm performing well in this

organization", "In my opinion, I contribute to the organization's success".

Responses to all items were assessed on 5-point scale (1 -strongly disagree to 5 - strongly agree).

Data Analysis

There are three main objectives of the data analysis required by this study: 1) validation and verification of psychometric properties of the instruments 2) sample description and 3) testing of hypotheses.

Validation and verification of psychometric properties of the instruments will be developed through exploratory and confirmatory factor analysis; reliability will be assessed using Cronbach's alpha.

Sample description will use frequencies analysis and descriptive statistics (mean, standard deviation, etc.).

Hypotheses testing will be carried out using structural equations modelling, with regression, moderation and mediation models, as well as path analysis, depending on results and needs the data indicates.

Sample

Sample is composed of a total of 942 subjects, with ages of respondents between 20 and 66 years old (mode=28 years and M= 38.5 years; standard deviation= 9.6); most respondents are female (80.3%; 16.9% male respondents; 2.2% missing). In terms of the job, the distribution of staff per job group is shown in Figure 2.
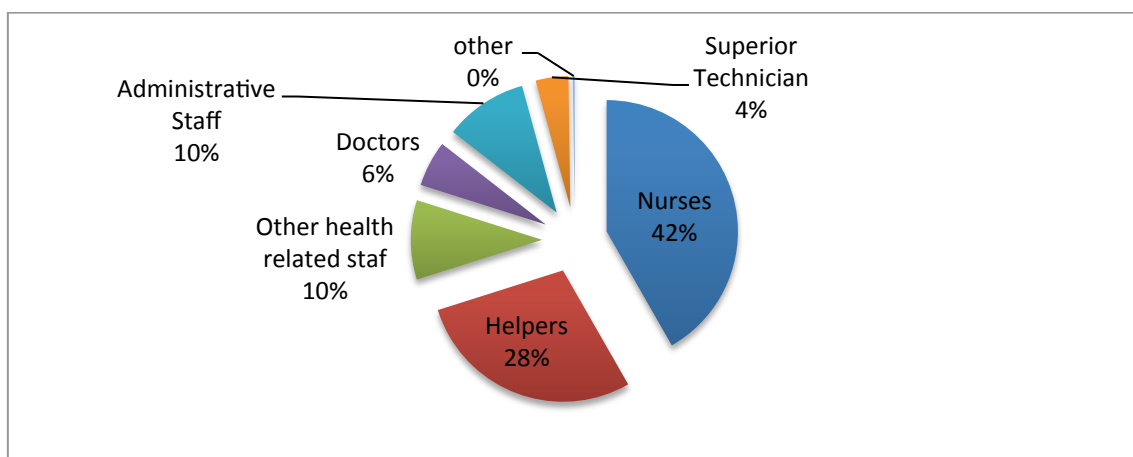

Figure 2. Percentages of staff in different job functions.

In terms of seniority, values range between less than a year to up to 39 years (mode=3 years and mean= 12.38 years, standard deviation= 8.46), where a significant amount of workers (71%) have an effective contract (hired with no predetermined ending date of the bond with the organization). When it comes to schooling, 17% of subjects have a school level inferior to the mandatory Portuguese level (9th year), 28.8% attended or graduated from middle school, 42.8% attended or graduated from College and 19.7% have post-graduate schooling (Specializations, Masters Degree, etc.).

References