Success determinants of full-time researchers at hospitals. A perceptions-based study

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Introduction

Different factors affecting performance and productivity of researchers have been described in the literature. Namely individual factors (Bonaccorsi & Daraio, 2003; Fox, 2005; Leahey , 2006; van Arensbergen et al., 2012,), contextual and organizational factors (Smeby & Try, 2005; Seashore et al., 2007), and psychological factors (Rey-Rocha et al., 2007; Torrisi, 2013).

Most studies have been carried in an academic environment, mainly in laboratories. But these factors may affect researchers activity in a different way within the essentially clinical hospital environment. In this work we investigate the extent to which different individual and institutional characteristics can influence performance and productivity of researchers within the hospital setting.

The Miguel Servet (MS) Research Contract Programme is one of the most important strategic actions being undertaken by Spanish Administration in order to enhance the research activity at public hospitals. The Programme is aimed at incorporating researchers with excellent training within the National Health System (NHS) in order to improve its research capacity and to promote the creation of stable research groups within the NHS.

Methodology

Population, sample and research instruments

The universe to be studied consisted of the 367 researchers funded by first eigth calls (1998-2005) of the MS Programme, whose contracts ended between 2005 and 2012.

We used a web-based survey to obtain data from the population of MS researchers (72.2% response rate). Data on research activity and productivity were obtained from the activity reports submitted by researchers.

The present work is based on data from the 174 researchers who finished its six-year contract and who answered the survey.

Variables

After the six-year contract, MS researchers' activity and results are evaluated anew for those who wish to apply for a further five-year contract through the Researcher Stabilization Programme. To be evaluated positively, researchers must demonstrate a certain productivity in high impact journals together with leadership (i.e. leading of funded research projects and first authorship of articles).

Thus, in this work research performance of researchers has been assessed through the following indicators:

- art_N: number of articles in ISI journals.
- art_Q1, %art_Q1: number and percentage of articles in first-quartile ISI journals.
- art_FL, %art_FL: number and percentage of ISI articles as a first or last author.
- proj_N: number of funded projects.
- proj_PR, %proj_PR: number and percentage of projects as principal researcher.

Researchers were asked about different aspect of their research activity and their perceptions, judgements, thoughts and feelings about this activity and its organizational context. In this paper we investigate the effect of the following factors:

a) Satisfaction with… (in a 1 to 5 scale):
   - Scientific quality of the host group.
   - Scientific quality of the host centre.
   - Research autonomy.
   - Decision-making capacity.
   - Leadership.
   - The conditions of the facilities and space available.
   - Job stability expectations.

b) Satisfaction with the resources at their disposal (1 to 5):
   - Human resources: technical and support staff and researchers in training.
   - Material resources: infrastructures, equipment and research materials.
   - Support units.
   - Economic resources.

c) Creation of new research groups (Yes, my incorporation has led to the creation of a new

research group I lead / No, I stayed in a already existing group).

d) Self-assessment of their contribution to the relationship between clinical and basic researchers (1 to 5).

e) Type of research performed (basic, clinical, both).

Data analysis

In order to determine whether the means for paired samples were systematically different, we applied the Student's t-test, adjusted using the Bonferroni correction.

Results

Productivity and the capacity to obtain research projects are related with researchers' satisfaction with the human resources in their groups. Thus, art_N increases by 57% in satisfied versus unsatisfied researchers. The capacity to publish in top journals is also influenced by this satisfaction: art_Q1 increased by 65% (Figure 1). Likewise, satisfied researchers participated in 44% more projects than those unsatisfied, but did not obtain a significant higher number of projects as principal researcher.

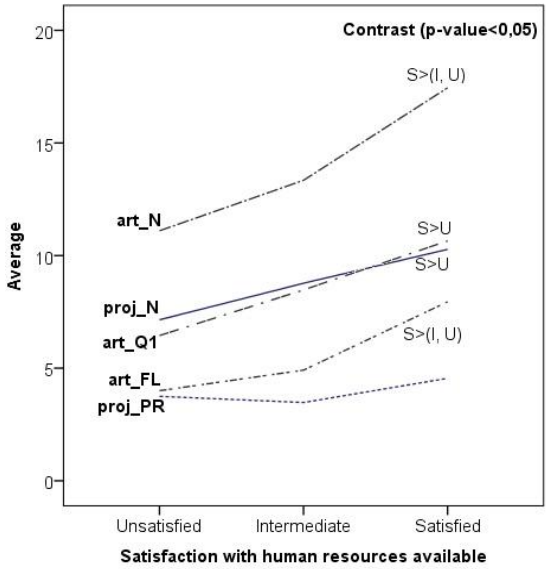

Figure 1

As expected, leadership of a research group increases proj_PR and %proj_PR (+ 61% and +29% respectively).

Productivity in ISI journals is also related with the kind of research performed. Researchers doing clinical research published more articles (65% more than those doing basic research and 21% more than basic+clinical researchers), more art_Q1(+ 70% than basic) and obtained a higher proj_N and proj_PR (+69% and +98% respectively) (Figure 2).

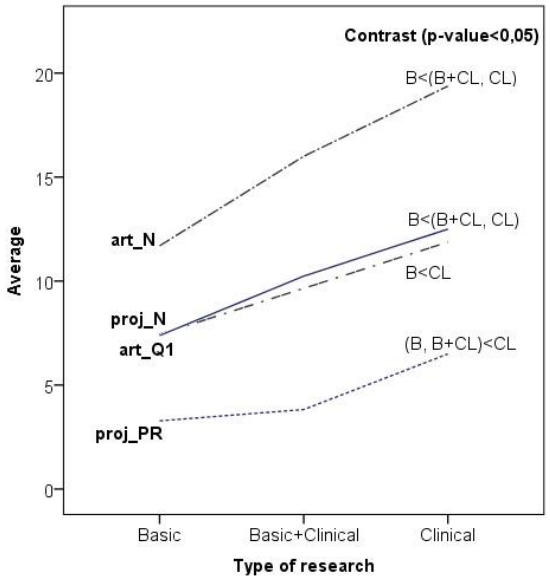

Figure 2

Acknowledgments

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