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ORIGINAL ARTICLE

Rising to the Challenge of promoting research in primary care and nursing: Research productivity and professional view☆

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Nursing research;
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Abstract
Objective: To analyse the evolution of scientific production in a privately managed public institution, and to explore the perceptions of primary healthcare professionals with regard to research.
Method: The institution includes a university hospital and 10 primary health centres, 673 physicians, and 747 nurses. A bibliometric analysis on scientific production was performed. A questionnaire was designed, with 5 sections (sociodemographic data, competences, needs, motivation and satisfaction s with research) and 40 items (scale of 1–10). Its understanding, pertinence and validity of content were analysed.
Results: In 2014, the contribution of primary care to research accounted for 2.8% of the total impact factor of publications, and 4.8% of clinical trials. Nurses accounted for 0.6% of the impact factor, having published articles in first quartile journals. A total of 110 (51%) primary care professionals participated in the survey. The average motivation for research was 7.85 points and satisfaction with research 4.37 points. The interest in receiving training in research (8.46 points) was highlighted as well as the lack of leadership in research (2.93 points). Regarding competences, research in teams was highlighted (6.87 points), and obtaining funding was noted as a negative (3.44 points).

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Conclusions: Research is experiencing a surge in all institutions, especially in hospitals. The primary care professionals expressed their motivation towards research and their dissatisfaction with the difficulties encountered, especially in obtaining funds.

PALABRAS CLAVE
Investigación en enfermería;
Percepción;
Encuestas y cuestionarios;
Atención Primaria;
Bibliometría

El reto de potenciar la investigación en Atención Primaria y Enfermería: productividad científica y opinión del profesional

Resumen
Objetivo: Analizar la evolución de la producción científica en una institución de asistencia pública concertada con gestión privada, y conocer la percepción de los profesionales de atención primaria sobre la investigación.
Método: La entidad engloba un hospital universitario y 10 centros de salud, 673 médicos y 747 enfermeras. Se realizó un análisis bibliométrico de la producción científica. Se diseñó un cuestionario, con 5 secciones (datos sociodemográficos, competencias, necesidades, motivación y satisfacción hacia la investigación) y 40 variables (escala, 1-10), para que fuese autocumplimentado por los profesionales de atención primaria. Se analizó su comprensión, pertinencia y validez de contenido.
Resultados: En 2014, la contribución de la atención primaria a la investigación global representó el 2,8% del total de factor de impacto de las publicaciones y el 4,8% de los ensayos clínicos. Las enfermeras contribuyeron con el 0,6% del factor de impacto, con publicaciones en revistas del primer cuartil. Participaron en la encuesta 110 (51%) profesionales de atención primaria. La motivación media hacia la investigación fue de 7,85 puntos y la satisfacción con ella de 4,37 puntos. Destacó el interés por recibir formación en investigación (8,46 puntos) y la falta de liderazgo en esta (2,93 puntos). Como competencia destacó la investigación en equipo (6,87 puntos) y negativamente la obtención de financiación (3,44 puntos).
Conclusiones: La investigación aumenta en la institución, especialmente en el hospital. Los profesionales de atención primaria manifestaron motivación hacia la investigación e insatisfacción por sus dificultades y falta de recursos para investigar.

What is known?

The benefits of researching in nursing and primary health care are currently considered invaluable, despite the obstacles involved. Research is more consolidated in hospitals than in primary care and also more extended among doctors than among nurses.

What is offered?

In this study we reflect on how to enhance research in nursing and in primary care, from the perception of health professionals on their motivation, possibilities and skills. The contribution of nursing and primary healthcare to total scientific production of an institution is also quantified.

Introduction

The main mission of healthcare centres, regardless of the level of care, consists in caring for the health of the population and providing them with healthcare. Those centres which seek to improve the quality of service they provide also consider essential aspects to be teaching and research, in addition to a central focus on healthcare and its management. Since 2008, the worldwide financial crisis has marked a turning point in scientific research of health in the West.[1,2] In Spain several initiatives and strategies have been followed to promote research,[3,4] which is currently going through a critical time due to budget reductions.[5]

Primary healthcare, the pillar of the health system, is also going through a crisis and has increasingly limited resources, with no consolidation of a research culture. There are many recognised advantages to increasing research in primary care,[6,7] including the importance of an essential healthcare level for the population's health outcome. However, it is not easy for teachers to combine their professional duties and research. The pressure of a high workload, the lack of tradition and culture of research and the difficulties in

applying the outcome of basic research in the clinic are some of the most common and obvious obstacles.[8,9] Although at least in theory, any healthcare professional may research, in practice, there is a greater tradition of this and better facilities in hospitals than in primary care centres. There is also a greater tradition to research among doctors than among nurses. It is therefore essential for the nursing discipline to continue advancing towards greater research.[10–14] Increasing research among nurses means, among other multiple aspects, promoting synergies and alliances,[10] and also adapting to current times, when care, according to Sánchez Gómez,[12] is written down with a ''4-coloured pen: vision, knowledge, sensitivity and research''. There is also the added factor of the different perception primary care doctors and nurses have regarding their respective functions and skills.[15]

In this context the Mútua Terrassa Group, which manages a university hospital of the University of Barcelona, 10 primary care centres and 20 socio-medical and community centres, among other resources, offers privately managed public healthcare. This is a century-old institution which created a foundation in 2001 to increase research. On 13th November 2015 the 1st Mútua Terrassa Primary Care Research Conference took place which was aimed at disseminating and reflecting specifically on primary care research. The strengths, needs and areas for improvement–several of which had already been previously detected–were analysed.[16–18] The Mútua Terrassa professionals are characterised by their high motivation in training in research and improving scientific production.[16] It is possible that a certain amount of idealisation exists with regards to research since it was observed that the 2 groups with the lowest scientific production–primary care and nursing–were the ones with the greatest motivation.[16] The traditional Nursing Awards, currently in their 23rd edition, are notable for their visibility among the varied strategies applied by Mútua Terrassa for increasing research.

The aim of this study was to contrast the evolution of scientific production which had taken place in this institution over the last 14 years, and analyse the perception of primary care doctors and nurses on research.

Method

A two-stage transversal study: bibliometric analysis of scientific production and an opinion poll.

Scientific production

The scientific activity of health professionals of the Mútua Terrassa group obtained from scientific diaries was analysed. The number of publications was collected as indicators, the impact factor (IF) and the number of publications included in the first quartile. Medline and Web of Science (WoS) data bases were consulted. The IF and quartile were consulted in the Journal Citation Reports (JCR), ISI WoS and Thomson Reuters.

In addition to analysing overall scientific production, 2 subgroups were defined: nursing and primary attention. Differentiation was also made between research itself (developed into teams completely formed by Mútua group professionals) and collaborative research (when the main researcher of the study did not belong to the institution).

Professional opinion

Transversal study based on a questionnaire to find out the opinion on research of primary care nurses and doctors. Two strategies were followed for sample selection, which was intentional. The first consisted in personally distributing the questionnaire to the participants of the Mútua Terrassa primary care research conferences, celebrated on 13th November 2015. Attendance at the conferences was recommended to the resident doctors and nurses by the teaching unit. In order to reach those primary care doctors and nurses who had not attended the research conferences, voluntary participation was personally requested of professionals who attended several meetings organised by the health centres, for the 2 weeks after the conferences were held. Respondents were offered the possibility of filling in the questionnaire in situ or sending it by internal mail. Anonymity and confidentiality were guaranteed. Primary care professionals were considered to be the doctors and nurses who worked in primary care in Mútua Terrassa and also family medicine and community specialists who worked in hospital emergencies departments and who chose to voluntarily participate in the research conferences.

After revising the bibliography no questionnaire was located which would adapt completely to the aims of this study, and the authors therefore developed an ad hoc questionnaire for self-completion. The questionnaire contained 5 sections with a total of 40 variables: (1) socio-demographic data, (2) motivation and satisfaction with professional development, (3) research skills, (4) needs and possibilities in research and (5) suggestions. The following were included in the socio-demographic data: gender, age, years of professional practice, academic training, professional category, work centre, speciality and conference attendance. Four facets were asked about with regards to motivation and satisfaction which could or could not be present in the work of the health professional: care, teaching, research and management. In skills the following variables were included: researching in a team, reading up on the subject matters, attending congresses, collaborations, evidence-based medicine, designing projects, planning and executing projects, analysing data, providing new knowledge, level of English, scientific writing, obtaining financing. And in needs and possibilities in research: training in research, improvement in healthcare, importance in professional career, research in free time, inherent to my job, possibilities of researching, peer recognition, recognition by the institution, collaboration in research projects, research during working hours, leadership of projects. Finally, the section of suggestions included an open question. A scale of 1–10 was used (less to more). An initial technical validation was carried out (understanding and belonging), consulting with professionals with knowledge of research and questionnaire methodology, followed by a pilot test with 30 respondents.

This study was authorised with approval from the Mútua Terrassa Clinical Research Ethics Committee and from management.

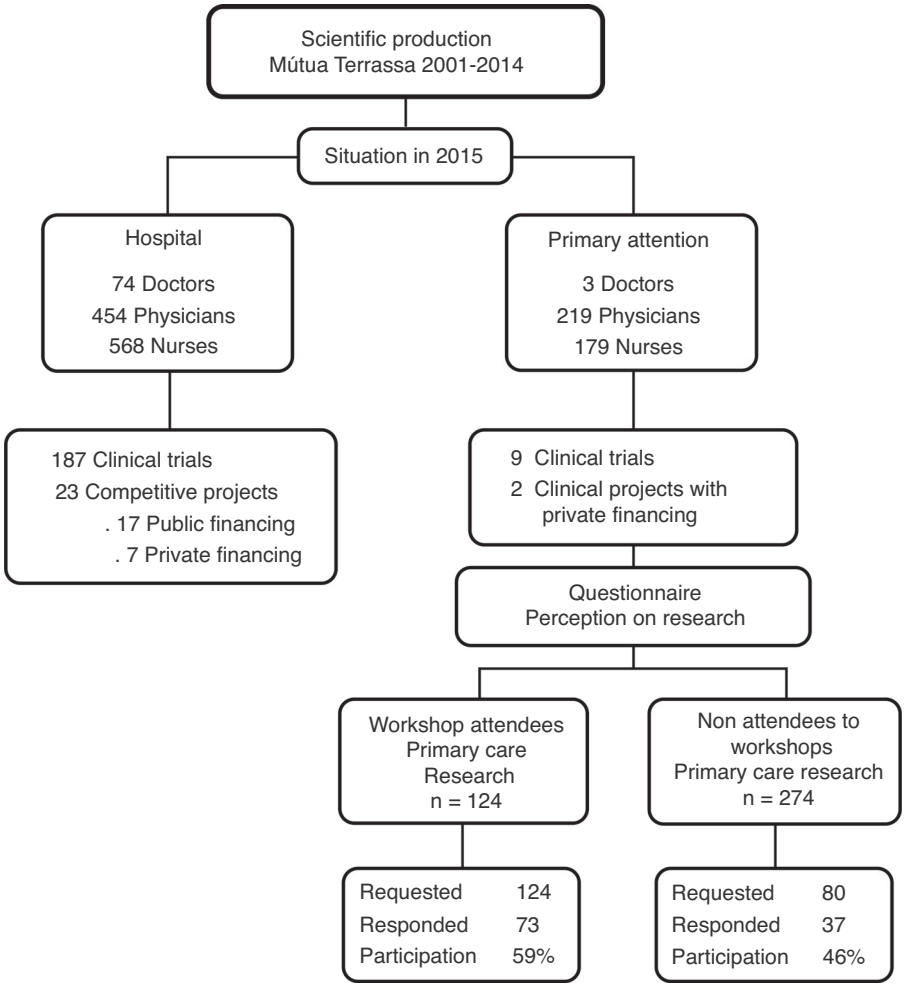


Figure 1 Professionals in charge of the scientific production of Mútua Terrassa. And participation of primary care professionals in the survey on perception.

Statistical analysis

The reliability of the tool was evaluated using the Cronbach alpha coefficient; content validity with a principal component analysis (PCA) with varimax rotation to measure each factor separately from the others. The meeting of requirements was confirmed prior to this. The distribution of responses to each variable was analysed, the sample suitability measurement of Kaiser-Meyer-Olkin was used and the Barlett sphericity test.

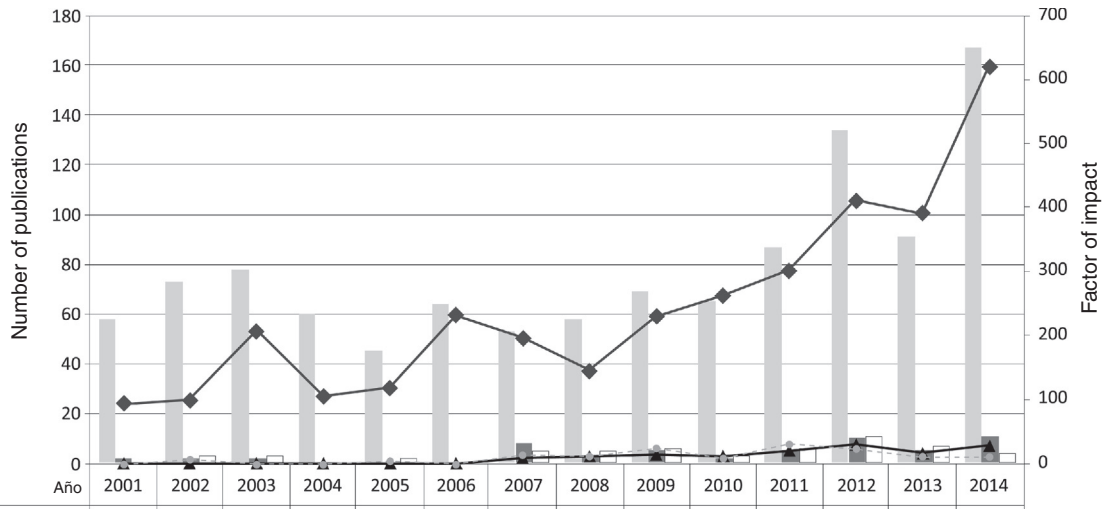
The categorical variables were expressed as numbers and percentages and the quantitative with means and standard deviation. A scale from 1 to 10 was used (less to more). For the normality analysis the Kolmogorov-Smirnov test was used. To compare categorical variables the chi-square test was used and to compare means, the Student's *t*-test and ANOVA test were used.

To contrast statistics, for bilateral significance, a *p* value under 0.05 was established. The SPSS 17.0 (SPSS Inc., Chicago, IL, USA) statistical package was used.

Results

The Mútua Terrassa professionals responsible for scientific production and questionnaire participation are listed in Fig. 1. In the hospital 16% of them were doctors (n = 74) and in primary care 1% (n = 3) were doctors. Among the nurses, one had a doctorate and worked in the hospital and 4 were studying for a doctorate (3 in hospital and one in primary care).

The development of the Mútua Terrassa scientific production is listed in Fig. 2 and showed an upward trend with occasional fluctuations. In 2014, the contribution of primary care to the institution research represented 2.8% of global IF, with 11 articles and IF = 17.52. At this level of care 4.8% of the clinical trials were being performed. The nursing contribution represented 0.6% of the IF, with 4 articles and IF = 3.23. Nurses collaborated in 100% of clinical trials, but without ever being the primary researcher. 69% of primary care research was from the centre and 31% was collaborative whilst in nursing 96% was from the centre and 4%



Año	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total factor of impact	93.3	98.163	206.339	104.36	118.13	230.72	194.963	147.72	229.259	261.503	301.676	407.315	390.858	620.669
Total number of articles	58	73	78	60	45	64	53	58	69	65	87	134	91	167
Quartile 1 total number (%)	8 (14%)	19 (26%)	16 (21%)	7 (12%)	16 (36%)	25 (39%)	20 (38%)	17 (29%)	21 (30%)	15 (23%)	45 (52%)	52 (39%)	45 (49%)	69 (41%)
Nursing impact factor	0	4.75	0	0	1.074	0	4.623	3.089	10.56	2.548	19.087	16.143	3.518	3.234
Number of nursing articles	0	3	3	0	2	0	5	5	6	3	6	11	7	4
Quartile 1 nursing number (%)	0	1 (33%)	0	0	0	0	1 (25%)	0	1 (20%)	0	3 (50%)	3 (27%)	0	1 (25%)
Primary care impact factor	0	0	0	0	0	0	2	2.62	4.135	3.7	9.671	18.268	8.831	17.521
Number of primary care articles	2	2	2	0	0	0	8	3	5	2	5	10	5	11
Quartile 1 pirmary care number (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 2 Evolution of total scientific production of Mútua Terrassa 2001–2014, and also in 2 areas to enhance: nursing and primary care.

collaborative. Hospital nurses collaborated in several scientific articles, including some of the first quartile. However, there were no publications in journals of the first quartile in primary care (Fig. 2).

124 people registered for the research conferences in primary care. In the questionnaire the overall rate of response was 51% (56% from those registered in the research conferences and 45% from those who did not attend but from whom collaboration was requested). The socio-demographic traits of the professionals are shown in Table 1. No differences were observed according to age or gender from among the professionals who attended the research conferences and those who did not, although there were differences in the professional category, as more doctors attended. All participants were primary care professionals: 90% worked in primary care and 10% in the hospital (mainly in the emergency departments). With regard to quality of information, over 95% of the interviewees responded to all the questions.

In the survey it was confirmed that the requisites for carrying out a PCA were met, with a Kaiser-Meyer-Olkin index of 0.812 and a statistically significant Barlett sphericity index of ($p < 0.001$). The best solution was found in the PCA, both theoretically and through Kaiser statistical criteria and from the sedimentation diagram, a factorial solution of 3 primary components with varimax rotation was found, which explained 56% of the total variance. The skills formed a component which explained 33% of the variance (α of Cronbach = 0.954; Table 2); the second component formed the satisfaction with professional development together with the opportunity to research, which explained 13% variance (α of Cronbach = 0.875; Table 3); and finally motivation and research needs explained the 10%variance (α of Cronbach = 0.801; Table 4). The global Cronbach coefficient α was 0.922.

The self-perception data on skills in research is listed in Table 2. The ability to research in a team was, at 6.87 points, the best scoring skill and the ability to obtain financing to research had the lowest score at 3.44 points. Differences were observed between the perception of nurses and doctors. However, with regard to skills, no statistically significant differences were observed between the attendees and non attendees of the research conferences in scores of any of the 12 skills studied.

Self-perception on research needs and opportunities are shown in Table 3. The interest in receiving training in research received the highest score, a mean of 8.46 points. Several differences were observed between the doctors and nurses scores (Table 3). Some differences were also observed between professionals according to attendance at research conferences. Those who attended conferences gave a mean score of 1.63 points more, regarding research forming part of their work, with 1.52 more points regarding their possibilities of leading research projects, and 1.21 points more regarding their satisfaction with peer recognition towards research and 1.19 points more regarding their possibilities to research within working hours, compared with those who did not attend conferences.

Self-perception on motivation and satisfaction with diverse facets of health professional work is listed in Table 4. Care and teaching scored the highest, whilst satisfaction with research and management received scores under 5. There were no significant differences in motivation towards research among those who attended the research conferences (7.90 points) and those who did not

Table 1 General and socio-demographic features of primary care professionals of Mútua Terrassa.

No. = 110	Primary care research workshops	
	Attend workshops n = 73	Do not attend No. = 37
Age, years, mean (SD)	41 (10)	41 (10)
Gender: male n (%)	15 (21)	8 (22)
Professional category n (%)		
Nurses (n = 44)	18 (25)	26 (70)
Doctors (n = 54)	43 (59)	11 (30)
Resident doctors (n = 10)	10 (14)	0 (0)
Resident nurses (n = 2)	2 (2)	0 (0)
Workplace n (%)		
Primary care (n = 100)	70 (96)	30 (81)
Hospital (n = 10)	3 (4)	7 (19)
Years of practice, mean (SD)	16 (11)	18 (11)

SD: standard deviation.

Table 2 Self-perception of research skills. Ordered according to score given.

Skills	Nurses n = 44 Mean (DE)	Doctors n = 62 Mean (DE)	Total[a] n = 110 Mean (DE)	*p*
Team research	6.36 (2.06)	7.23 (1.92)	6.87 (2.02)	0.025
Read up on	6.24 (1.86)	7.30 (1.59)	6.86 (1.78)	0.002
Congresses	5.27 (2.25)	6.69 (2.07)	6.10 (2.25)	<0.001
Collaborative work	5.32 (2.36)	6.39 (2.41)	5.95 (2.44)	0.024
Evidence-based medicine	5.09 (2.00)	6.47 (.95)	5.90 (2.08)	<0.001
Project design	5.16 (2.29)	5.55 (2.57)	5.39 (2.46)	0.415
Plan and execute projects	4.91 (2.24)	5.70 (2.66)	5.38 (2.52)	0.116
Analyse data	4.89 (2.21)	5.38 (2.55)	5.18 (2.42)	0.305
Contribute new knowledge	4.51 (2.50)	5.10 (2.47)	4.85 (2.49)	0.231
English	3.64 (2.55)	5.67 (2.46)	4.83 (2.68)	<0.001
Scientific writing	4.04 (2.19)	5.28 (2.56)	4.77 (2.48)	0.010
Obtain financing	3.20 (2.32)	3.61 (2.53)	3.44 (2.44)	0.392

SD: standard deviation.
[a] Four people responded to the questionnaire, leaving the professional category blank (doctors or nurses).

Table 3 Self-perception on needs and possibilities of research.

Perceptions	Nurses n = 44 Mean (SD)	Doctors n = 62 Mean (SD)	Total n = 110 Mean (SD)	*p*
Training in research	7.93 (2.27)	8.84 (1.22)	8.46 (1.78)	0.017
Improves care	8.29 (1.81)	8.36 (1.26)	8.33 (1.52)	0.811
Importance in professional career	7.55 (2.27)	8.30 (1.64)	7.99 (1.95)	0.063
Research in free time	5.36 (3.26)	6.59 (2.69)	6.07 (2.99)	0.034
Inherent to my job	5.00 (2.49)	6.13 (2.61)	5.66 (2.61)	0.026
Research opportunities	5.64 (2.36)	5.39 (2.54)	5.50 (2.46)	0.598
Peer recognition	5.04 (2.53)	5.53 (2.53)	5.33 (2.53)	0.325
Recognition from institution	4.71 (2.68)	4.41 (2.46)	4.54 (2.55)	0.551
I co-operate in research projects	3.20 (2.61)	4.30 (3.26)	3.84 (3.04)	0.064
I research during work time	3.24 (2.39)	4.13 (2.48)	3.6 (2.47)	0.067
I lead projects	2.48 (2.39)	3.23 (2.84)	2.93 (2.68)	0.150

SD: standard deviation.

Table 4 Self-perception of motivation and satisfaction towards diverse facets of professional healthcare work.

Total n = 110	Nurses n = 44		Doctors n = 62		*p*	
	Motivation Mean (SD)	Satisfaction Mean (SD)	Motivation Mean (SD)	Satisfaction Mean (SD)	Motivation	Satisfaction
Healthcare	8.76 (1.19)	6.93 (2.26)	8.71 (1.68)	7.07 (1.99)	0.876	0.750
Teaching	7.89 (1.92)	6.18 (2.55)	8.11 (1.86)	5.46 (2.49)	0.549	0.152
Research	7.40 (1.98)	4.27 (2.25)	8.17 (1.57)	4.44 (2.45)	0.025	0.701
Management	6.22 (2.67)	4.73 (2.58)	5.73 (2.63)	3.75 (2.33)	0.346	0.041

SD: standard deviation.

(7.69 points) ($p = 0.459$), but there were in satisfaction with research itself (attendees = 4.75 vs non attendees = 3.75 points; $p = 0.044$).

26% of respondents offered suggestions to improve research. A literal example of these suggestions if that ''healthcare pressure is incompatible with proposing and executing research studies.'' Despite having ideas about interesting areas of research study, it is difficult to carry out the work outside the working day and out of personal motivation, having time to put it into practise (difficulty in having time to do teaching, work meetings, coordination with colleagues to reflect on common projects, etc.). And another example is: ''I think a lot of people would do major research projects, but a little more dedication is needed in the working day and greater recognition of what research involves. You cannot just depend on the willingness to do this out of work time, because people get burnt out''. In sum, we recommend reducing workload pressure, dedicating specific time to research within the working day, providing access to research training, to technical resources and to financing. They also showed the need to have leaders in research and requested facilities, as a minimum for those professionals with proven motivation towards research.

Discussion

This study was proof of the motivation and dedication of health professionals towards research. Following the creation of a foundation to increase research in 2001, a notable increase was observed, in both the quantity and quality of scientific production, and particularly in hospitals. Health professionals, with motivation and commitment, increased their research studies, even under adverse circumstances, such as those experienced after the economic recession.[2,19] Scientific production of nursing and primary care tends to progressively increase in our institution. Despite the undeniable progresses,[20] research into primary care nursing could still be considered insufficient if we compare it with its possible opportunities[21] and to the considerable importance of primary care in clinical practice.[20–22] For this reason, we would still recommend investing in research training and in consolidating structure which support professionals in research.[8,12,23] In Spain research budgets are lower than the European mean and have been considerably reduced due to the economic recession.[16] Meanwhile, the importance of enhancing research in nursing is both nationally and internationally recognised, despite its associated difficulties.[14,24,25]

What stands out is the scientific production of the entity which increased considerably, even despite the fact that the financial crisis has reduced the clinical trials financed by the pharmaceutical industry.[18] However, even so, the most consolidated research groups of the hospital increased their ability to obtain financing and notably grew. In our institution, as is habitual, scientific production together with researcher tradition, is higher in hospital than in primary care and also lower in nursing.[6,24] The percentage of clinical trials performed in primary care matches those cited in other studies.[9]

As predicted, the majority of scientific production of nursing was developed in the hospital, and was related to the presence of nurses in consolidated multidisciplinary research groups. Furthermore, there were also projects led from primary care nursing. Although scientific productivity in primary care nursing is relatively low, it has both research led by the professionals in these areas and in projects in collaboration with other disciplines and institutions. Moreover, the doctors contributed the most to scientific production. All primary care healthcare professionals shared perceptions, with regards to their needs and opportunities to research, although the nurses stated they dedicated less free time than the doctors to research and they perceived they had less training than the doctors. Doctors predominated among the conference attendees and there was also a more positive appraisal of research, compared with the perception of those who did not attend the research conferences. The professionals stated they felt greater motivation and expectations towards the diverse facets of their work than satisfaction regarding how they would develop these aspects in reality.

It is the intention of this study to keep the debate going about how to enhance research, specifically in nursing[14,15] and in primary care.[7] The professionals state they are motivated to research and request greater resources, training and specific time to research within their working day, in keeping with what is already a known fact.[16,17] A greater difference was observed between the hospital and primary care, both in the critical mass of researchers and in the volume of consolidated research. Motivation towards research seems to be omnipresent if we are guided by perception of the professionals,[17] but in practise only a minority develop projects.

Once again nursing and primary care professionals look favourably upon research and request that pressure from work lessens and that time and training resources increase.[16,17] Without these changes, they believe they would have fewer opportunities to lead projects and they request at least one part of this activity be developed inside working hours. Extreme workload pressure probably impacted the teaching and researcher facets. The institution wishes to foster[8,23,26] quality reesearch,[2] with research not depending exclusively on the motivation, willingness and free time that the professionals are willing to dedicate to it.[4]

With regard to the perception on research, the strongest point was the ability to research in a team and weakest in obtaining financing. These results coincide with the recommendation to train in research, working in consolidated groups. It is not surprising either that there is a current intense competition for not much financing.[18] It would be ideal for an institution like the Mútua Terrassa group, where different levels of healthcare are integrated (hospital, primary care and socio-sanitary care) under private management,[27] collaboration and communication between professionals of the different care levels were easy and fluid. The reality is that, although all parties wish to collaborate and be integrated, in practice it is still complex, both in care and in research.[8,28]

Among the limitations is that the study was conducted in a single institution, which conditions its representativeness. Moreover, the selection of professionals through a sample of convenience, limits the representativeness of the outcome obtains, as a selection bias is involved. It is probable that the professionals who participated were particularly highly motivated and had a higher interest in research. Furthermore, the findings from the questionnaires reflect the perception and opinion of the respondents and not necessary an objective reality. This would partly explain the variations observed among the professionals who attended the research conferences and those who did not. Finally, the questionnaire used was our own, and sought to debate and reflect on the research.

To conclude, nursing and primary care professionals maintain their motivation towards research and prefer to be part of and collaborate with research teams, rather than lead projects. Scientific production trends also evolve favourably in these areas. One possible strategy to enhance research would be to continue supporting those professionals who had proved their ability to research, even under adverse circumstance. Contributions from nurses and primary care would invariably benefit the population's health and society as a whole. Acknowledgement of those who feel higher motivation towards research would be a stimulus and who with their personal efforts and free time, could contribute to improving the health of the people. Analysing where we are at and reflecting on the expectations and satisfaction of health professionals could help in making strategic decisions which would contribute to enhancing research. Finally, we would recommend attaching value to the benefits of approaching research from multidisciplinary teams where the contribution from the nursing and primary care professionals would probably be advantageous to all.

Ethical approval

This study was authorised by management and was carried out with approval from the Mútua Terrassa Clinical Research Ethics Committee.

Conflict of interests

All the authors work in the Mútua Terrassa health centre.

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References

1. Barrera FN, Neira JL. Turbulent times in southern European science. Lancet. 2012;380:1229–30.
2. Portillo MC. Economic crisis, health systems and health in Europe: impact and implications for policy. Nurs Manage. 2016;23:15.
3. Puerta JL, Martín-Moreno JM, Bravo S, Gutiérrez-Fuentes JA. Valoración de la investigación que se realiza en los hospitales españoles. Rev Clin Esp. 2011;211:169–78.
4. Olmedo C, Buño I, Plá R, Lomba I, Bardinet T, Bañares R. La gestión de un instituto de investigación sanitaria: hacia la investigación de excelencia a través de la mejora continua. Gac Sanit. 2015;29:458–60.
5. Pain E. European debt crisis: research cuts will cause 'exodus' from Spain. Science. 2012;336:139–40.
6. De Maeseneer JM, van Driel ML, Green LA, van Weel C. The need for research in primary care. Lancet. 2003;362:1314–9.
7. Pereira Gray D. Research and teaching in general practice/primary care. BMJ. 2015;351:h4737.
8. Morténius H, Baigi A, Palm L, Fridlund B, Björkelund C, Hedberg B. Impact of the organisational culture on primary care staff members' intention to engage in research and development. J Health Organ Manag. 2015;29:234–51.
9. Sacristán JA. Clinical research and medical care: towards effective and complete integration. BMC Med Res Methodol. 2015;15:4.
10. Camacho-Bejarano R, Rodríguez-Gómez S, Padín-López S, Lima-Serrano M, Gómez-Salgado. Investigación, innovación y originalidad: la contribución enfermera al conocimiento científico. Enferm Clín. 2015;25:47–8.
11. Sastre-Funllana P, de Pedro-Gómez JE, Bennasar-Veny M, Fernández-Domínguez JC, Sesé-Abad AJ, Morales-Asencio JM. Consenso sobre competencias para la enfermería de práctica avanzada en España. Enferm Clín. 2015;25:267–75.
12. Sánchez Gómez MB. Visión, conocimiento, sensibilidad e investigación. Componentes esenciales para avanzar en el cuidado del mayor. Enferm Clin. 2016;26:93–5.
13. Moreno-Casbas T, Martín-Arribas C, Orts-Cortés I, Comet-Cortés P, Investén-isciii Co-ordination and Development of Nursing Research Centre. Identification of priorities for nursing research in Spain: a Delphi study. J Adv Nurs. 2001;35:857–63.
14. García-Padilla FM, Batres-Sicilia JP, Rojano-Pérez R, Frigolet-Maceras J, Martos-Cerezuela I, González-de Haro MD, et al.

Líneas de investigación propuestas por la Asociación de Enfermería Comunitaria de Andalucía. Enferm Clin. 2011;21:159–62.
15. Donelan K, DesRoches CM, Dittus RS, Buerhaus P. Perspectives of physicians and nurse practitioners on primary care practice. N Engl J Med. 2013;368:1898–906.
16. Giménez Gómez N, Pedrazas López D, Medina Rondón E, Dalmau Juanola D, Grupo de Estudio sobre la Formación en Investigación. Formación en investigación: autopercepción de los profesionales sobre sus necesidades. Med Clin (Barc). 2009;132:112–7.
17. Giménez N, Jodar E, Torres M, Dalmau D. Perspectiva de los profesionales sobre la investigación biomédica. Rev Calid Asist. 2009;24:245–55.
18. Redondo Capafons S, Arcenillas P, Giménez N, March López P, Soriano L, Pla R, et al. Impacto de la crisis económica en la actividad de un comité ético de investigación clínica. Farm Hosp. 2014;38:454–60.
19. Saper CB. The great depression of biomedical science. Ann Neurol. 2014;75:169–70.
20. López-Torres Hidalgo J, Basora Gallisà J, Orozco Beltrán D, Bellón Saameño JA. Mapa bibliométrico de la investigación realizada en atención primaria en España durante el periodo 2008–2012. Aten Primaria. 2014;46:541–8.
21. Krist AH, Green LA, Phillips RL, Beasley JW, DeVoe JE, Klinkman MS, et al. Health information technology needs help from primary care researchers. J Am Board Fam Med. 2015;28:306–10.
22. Is primary-care research a lost cause? Lancet. 2003;361:977.
23. Beasly JW, Starfield B, van Weel C, Rosser WW, Haq CL. Global health and primary care research. J Am Board Fam Med. 2007;20:518–26.
24. Laskowski-Jones L. Research: the path to enlightenment. Nursing (Lond). 2015;45:6.
25. Powell K. Nursing research: nurses know best. Nature. 2015;522:507–9.
26. Begley CG, Buchan AM, Dirnagl U. Robust research: institutions must do their part for reproducibility. Nature. 2015;525:25–7.
27. Giménez N, Martínez JM, Clanchet T. Centralización de servicios sanitarios en atención primaria en verano: opinión de usuarios y profesionales durante 2 años consecutivos. Semergen. 2015;41:421–8.
28. Giménez N, Pedrazas D, Redondo S, Quintana S. Ensayos clínicos y consentimiento informado: visión de investigadores, pacientes y médicos de familia. Aten Primaria. 2016, http://dx.doi.org/10.1016/j.aprim.2015.10.008.