



ORIGINALES

Research reality of nurses in primary health care: what is the current situation?

Realidad investigadora de los enfermeros en atención primaria de salud: ¿cuál es la situación?

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ABSTRACT:

Aim: The aim of this study is to examine the research activity of nurses in primary health care and to know its dissemination.

Method: It is a descriptive cross-sectional study carried out between May 27 and June 29, 2022, in a Health Management Area through a self-administered questionnaire. A total of 242 nurses answered the questionnaire. A total of 5,2% have a Master's degree and none have a PhD. Some 8,3% have collaborated in a funded research project, with 0,4% subscribing to PAIDI groups. Participation is mostly collaborative with only 1 case as PI in funded projects. Contribution to congresses or other dissemination activities is 18,7% for oral communications and 16,5% for written communications.

Results: Regarding the publication of results, 16,5% have published at least 1 scientific article, 1,3% in impact journals (none in Q1 or Q2). The subject matter of the publications is very diverse. Collaboration in research with other disciplines was 10,4%, and in research studies carried out with other institutions or health services are 11,3%.

Conclusion: It is concluded that the research activity carried out in primary care is of low level and quality. There is dispersion both in the subject matter and in the nursing profiles that carry out research activity, which implies the lack of a consolidated network in research in care that supports care practice based on scientific evidence.

Key words: Nursing research; Primary care nursing; Clinical nursing research; Health Services Research.

RESUMEN:

Objetivo: Examinar la actividad investigadora de los enfermeros en atención primaria de salud y conocer su divulgación.

Metodología: Se trata de un estudio transversal descriptivo realizado entre el 27 mayo hasta el 29 de junio de 2022, en un Área de Gestión Sanitaria a través de un cuestionario electrónico autoadministrado. Contestaron el cuestionario 242 enfermeros. Un 5.2% posee el grado de Máster y ninguno el de Doctor. Un 8.3% ha colaborado en algún proyecto de investigación financiado, siendo la suscripción a grupos del Plan Andaluz de Investigación, Desarrollo e Innovación (PAIDI) de un 0,4%. La participación es principalmente colaborativa con sólo 1 caso como IP en proyectos financiados. La aportación a congresos u otras actividades de divulgación es de un 23% para comunicaciones orales y de un 26,1 % para comunicaciones escritas.

Resultados: Sobre la publicación de resultados, un 16,5%, han publicado al menos 1 artículo científico, siendo un 1,3% en revistas de impacto (ninguna en Q1 y Q2). La temática de las publicaciones es muy diversa. La colaboración en investigaciones realizadas con otras disciplinas ha sido de un 10,4 % y en estudios de investigación realizados con otras instituciones o servicios de salud de un 11,3%.

Conclusión: Se concluye que la actividad investigadora realizada en atención primaria es de bajo nivel y calidad. Existe dispersión tanto en la temática como en los perfiles enfermeros que desarrollan actividad investigadora, lo que implica inexistencia de una red consolidada en investigación en cuidados que sustente la práctica asistencial basada en la evidencia científica.

Palabras Clave: investigación en enfermería, enfermería de Atención Primaria, investigación enfermería clínica, investigación sobre Servicios de Salud.

INTRODUCTION

Nursing research is integrated into both clinical and operational processes to ensure safer and better practices for patients and their environment. It can be defined as: "a process of systematic inquiry that uses the scientific method to answer questions or solve problems", its main objective being to develop, improve and extend knowledge.

It is recognised that in order to provide safe, effective and efficient care, the latter must be underpinned by rigorous decisions and evidence from research. In other words, the need to implement and disseminate evidence in our daily practice demands greater scientific rigour on the part of nurses. Currently, scientific production through research by nurses is increasing at an ever-increasing rate ^(1,2). However, the prevailing initiatives are insufficient for the organisation and the professionals, both to achieve interest in their specialisation and to subsequently develop doctoral programmes ⁽³⁾.

In the case of primary health care, the situation is similar and the research culture is not yet consolidated ^(4,5). There are many factors that impede its development as in hospital care, but additionally there seems to be more tradition and facilities for research in hospitals than in health centres, which further aggravates the situation in this area of care ⁽⁷⁾.

For many years, health assistance in primary care has been focused on the treatment and control of diseases to reduce morbidity and mortality. This situation, maintained and intensified over the years, has highlighted the need to establish lines of research that prioritise a holistic approach to the patient and their environment, within the population and cultural context in which they develop ⁽⁸⁾.

The demand for care has grown considerably, the ageing of the population and other lifestyle factors have increased the number of chronic diseases and multimorbidities ⁽⁹⁾.

This increases the needs to be covered, where nurses, from a holistic perspective, play a very active role in care, education, counselling and emotional support in the community ⁽³⁾.

Most of these nurses are generalists, working together in multidisciplinary and multi-agency networks, with access to the expertise of specialist colleagues. All primary care professionals work flexibly, using local knowledge, clinical expertise and an ongoing supportive and empowering relationship with the individual to make shared decisions about their care and help them manage their own health and wellbeing ⁽⁸⁾.

Despite its impact on health outcomes, the reality is that research work is mainly carried out by a few professionals and is framed in another reality separate from care practice. Various studies highlight the fact that research is a recognised and essential task for nurses, but its development is still insufficient ⁽¹⁰⁾.

It is therefore essential and beneficial to identify priorities and direct resources to support a care environment that integrates research development and evidence-based practice in both care delivery and shared decision-making ^(8,11). To foster the success and sustainability of research utilisation, areas for improvement need to be developed that include both organisational and individual practitioner strategies that involve real research uptake by nurses.

In the case of primary health care nurses, it is necessary to be able to analyse and understand the existing research activity and to examine, in a real and objective way, the situation in the contexts where strategies are to be implemented.

The aim of this study is to examine the research activity of nurses in primary health care in the Jerez, Costa Noroeste y Sierra de Cádiz Health Management Area (JCNSC) and to find out how this activity is disseminated.

METHOD

Study design

Descriptive cross-sectional study.

Population and scope of study

In Andalusia, the JCNSC Health Management Area provides health assistance to the population, at the levels of specialised and primary health care. In primary health care, the Area consists of 23 Clinical Management Units that serve as reference centres for more than 450,000 people. It has a staff of approximately 392 nurses, of which 272 are structural staff, as of May 2022.

Based on these data, the sample size was calculated for a confidence level of 95%, with a heterogeneity of 50% and a margin of error of 5%, resulting in 195 participants being necessary to obtain statistical representation.

Data collection was conducted from 27 May to 29 June 2022.

The participants in the study were the nurses who were part of the staff in the aforementioned period.

- Inclusion criteria: nurses who agree to participate in the study and who have more than 6 months of experience in primary care centres.
- Exclusion criteria: Nurses who are in the period of specialisation (EIR).

Study variables

The variables were grouped into 4 blocks, which were obtained from the information collected in the items of the self-administered questionnaire:

- First block: socio-demographic variables: age, sex, years of experience, unit where they carry out their work, work shift, academic level, possession of nursing speciality and level of accreditation of their professional competence in the accreditation system of the autonomous health service.

- Second block: collaboration in projects or membership of research groups: research groups of the Andalusian Public Health System (year of entry), participation in research projects and funded and unfunded clinical trials (year of completion), as well as level of participation (principal investigator or collaborator).

- Third block:

* Publications: number of publications, year of publication, subject matter (community nursing, medical-surgical, mental health, oncology, critical/emergency, gynaecology/obstetrics, paediatrics/neonatology, patient safety, care and dependency, research in care and others). Journals published: journal name, highest impact quartile.

* Communications: number of contributions (posters, oral presentations and written communications), year of publication, subject matter (community nursing, medical-surgical, mental health, oncology, critical/emergency, gynaecology/obstetrics, paediatrics/neonatology, patient safety, care and dependency, research in care and others).

- Fourth block: interdisciplinary scientific activities: collaboration of nurses in research studies with other disciplines and/or institutions.

Data collection

The tool used for data collection was a self-administered electronic questionnaire, designed by the research team based on the electronic application "Google Forms®".

Initially, an analysis of the content validity of the instrument was carried out by means of an evaluation of a first version of the questionnaire by the team of expert members of the research group. Once the corrections and recommendations made by the team of experts had been applied, the instrument was disseminated.

Data processing and analysis

The data were coded, entered and analysed using the statistical programme SPSS version 34 for Windows. A descriptive analysis of the variables was carried out by calculating frequencies and percentages.

For the bibliographic review proposed in order to discuss the results presented, the search strategy was carried out in the following databases: Science Direct, Proquest and Pubmed. The descriptors and keywords were: nursing research, primary care nursing, clinical nursing research, health services research. The results were narrowed down into two periods: publications less than 10 years old and publications less than 5 years old.

Ethical considerations

The study was approved by the Management of the Jerez Costa Noroeste y Sierra de Cádiz Health Management Area. Approval was also requested from the Ethics and Research Commission, which ruled that, as this was not a clinical study, it was not necessary to issue an opinion. However, recommendations were made regarding the protection of personal data (obtaining informed consent in compliance with Organic Law 3/2018 on Data Protection and guarantee of digital rights and the Data Protection Regulation).

RESULTS

A total of 242 nurses responded, 12 professionals were discarded for not indicating their consent for data analysis and/or having worked less than 6 months in the primary care centres of the Area. The final sample was 230 participants.

Socio-demographic characteristics

69.1% of respondents were between 41 and 60 years of age. 71.7% were women. The most representative range of years of experience was 16 to 25 years with a percentage of 34.3%. Most of the nurses were full-time (97.4%) and the most prevalent shift was the day shift (59.6%). In relation to the academic degree, 5.2% had a master's degree and no nurses had a doctoral degree. 79.1% of the sample did not have a nursing speciality, with Family and Community Nursing being the most frequent in primary care (7%), followed by Paediatric Nursing (5.7%). (table 1).

Table 1: Socio-demographic characteristics of nursing professionals

Variable	N	%
Age		
20-30 years	14	6,1
31-40 years	42	18,3
41-50 years	79	34,3
51-60 years	80	34,8
>60 years	15	6,5
Sex		
Female	165	71,7
Male	65	28,3

Academic level		
Diploma/Graduate degree	218	94,8
Master's degree	12	5,2
Doctoral degree	0	0
Specialty		
None	182	79,1
Paediatrics	13	5,7
Medical-surgical	5	2,2
Obstetrics and Gynaecology	8	3,5
Family and community nursing	16	7
Mental Health	3	1,3
Geriatrics	0	0
Occupational nursing	3	1,3
Years of experience		
< than 5 years	18	7,8
From 5 – 15 years	45	19,6
From 16 – 25 years	79	34,3
From 26 – 35 years	60	26,1
> than 35 years	28	12,2
Personal dedication time		
Full time	224	97,4
Partial time	6	1,3
Work shift		
Day shift	137	59,6
Rotating shift	72	31,3
Night shift	21	9,1

Collaboration in projects or membership of research groups:

Regarding participation in research groups, 0.4% of the total sample belonged to a regional research group of the Andalusian Plan for Research, Development and Innovation (PAIDI). 8.3% have participated in a funded study, 2.7% of which have been carried out in the last 3 years. In relation to non-funded research projects, 12.6% have participated and 4.3% in clinical trials. Participation in all these modalities is mainly collaborative, with 1 case as PI in funded projects and 5 in non-funded research projects (table 2).

Tabla 2: Participation in groups or projects

Variable	N	%
Belonging to PAIDI group		
Yes	1	0,4
No	22	99,6
	9	
Participation in Funded research project		
Yes	19	8,3
No	21	91,7

	1	
Role in Funded research project (n=19)*		
Principal investigator	1	0,4
Collaborating investigator	7	3
No answer	11	4,8
Participation in Non-funded research project		
Yes	29	12,6
No	20 1	87,4
Role in Non-funded research project (n=29)**		
Principal investigator	5	2,2
Collaborating investigator	11	4,8
No answer	13	43
Participation in clinical trial		
Yes	10	4,3
No	22 0	95,7
Role in clinical trial (n=10)		
Principal investigator	2	0,9
Collaborating investigator	3	1,3
No answer	5	50

* Clarification n= 19 (for those who have participated in funded projects)

** Clarification n= 29 (on those who have participated in non-funded projects)

Scientific activity, communications to conferences and publications

On the dissemination of research results in scientific congresses or other activities, 18.7% of respondents have developed at least 1 oral communication, of which 4.3% have made more than 5. Analysing written communications, 16.5% have developed at least one communication, of which 9.6% have made more than 5. In poster communications 29.6% have participated with at least one communication, 19.1% being those made in the last 5 years. In terms of publication of results, 16.5% have published at least one scientific article, of which 1.3% have published at least 10 or more. Regarding the age of published articles, 56.4% have been published more than 5 years. Regarding publication in journals, 16.5% have made a publication, 98.6% of which are articles that either lack impact or have not been left blank. The remaining 5.7% were published in journals with impact, with the following breakdown: 0.4% Q4, 0.9% in Q3 and none in Q1 or Q2. Analysing these results implies that 1.3% of the total sample has published in journals with impact (table 3).

Tabla 3: Dissemination of results: communications and publications

Variable	N	%
Contribution to congress oral communication		
0 contributions	17 7	77
1-5 contributions	43	18,7
6-10 contributions	6	2,6
More than 10	4	1,7
Contribution to congress written communication		
0 contributions	17 0	73,9
1-5 contributions	38	16,5
6-10 contributions	17	7,4
More than 10	5	2,2
Contribution to congress in poster format		
0 contributions	12 0	52,2
1-5 contributions	68	29,6
6-10 contributions	26	11,3
More than 10	16	7
Publishes scientific articles		
Yes	38	16,5
No	19 2	83,5
Impact of published articles (n=38)		
Q1	0	0
Q2	0	0
Q3	2	0,9
Q4	1	0,4
Non-impact journal	10	4,3
No answer	30	13
Not available	25	81,3

The subjects of the contributions to conferences and articles refer to community nursing care, medical-surgical care, mental health, oncology, critical and emergency care, gynaecology, paediatrics, safety, dependency, research and other subjects. Regarding participation in congresses, the percentages were 18.3% contributions related to community nursing, 11.3% to medical-surgical nursing and 10.9% to critical and emergency care. The remaining 59.5% were on other unspecified topics.

Regarding interdisciplinary scientific activities and collaboration in other health services or institutions

The collaboration of nurses in biomedical research studies, carried out with other disciplines has been 10.4 %. The results on collaboration of nurses in research studies, carried out with other institutions or health services are 11.3%.

DISCUSSION

We can deduce from the results obtained that the nurses in the Cadiz area who work in primary health care have a low level of participation in research activities. This connects with the fact that despite the need to work in contexts based on the best available scientific evidence is imposed, the reality is rather different ⁽¹²⁾.

Although it is recognised the need for nurses to create evidence to guide their clinical practice and improve health outcomes, their contact with the research world is distant, with little familiarity with scientific activities and/or with other nurses leading or participating in transdisciplinary research groups ⁽¹³⁾.

Currently, some progress can be identified, but research development is still insufficient and even more so when analysed in the light of the potential that primary care nurses have and its impact on care practice ⁽⁷⁾.

In the case of primary health care, this implies rapid and effective implementation of knowledge with the highest possible level of quality of care and constant adaptation to rapidly changing and evolving environments ⁽³⁾.

The data obtained from the analysis of the academic degree reveals the null presence of nurses with doctorates and a low percentage of master's degree level, which indicates the scarce existence of references or key players in the development of research on the part of nurses ⁽¹⁴⁾. This reality coincides with some research that reveals a stage of crisis with regard to the new generations of scientific nurses, where there is a shortage of initiatives to ensure research opportunities for expert nurses and to awaken interest in doctoral programmes ⁽¹⁵⁾.

About the low participation in funded research projects, strategies are currently being developed to try to alleviate this situation with specific calls for proposals and support to facilitate access to funding and optimise the efforts of primary care professionals, based on care for the individual, the family and the community ⁽¹⁶⁾.

Additionally, these results show the lack of development of evidence-based care practice, where professionals apply interventions that do not come from scientific development ⁽¹⁷⁾. This may be due to the fact that nurses have recently joined this field, where previously research activity was exclusively occupied by other disciplines ⁽¹⁸⁾. This integration within multidisciplinary teams requires time and communication and should be part of the organisational culture of the health system to which it belongs ⁽¹⁹⁾.

Regarding the publication of articles in scientific journals, confusing results have been identified about the impact journal where the article has been published or about

ranking it within the quartile, if applicable. This confusion may be due to errors in the completion or lack of knowledge about the existing dynamics in the dissemination of research results.

With regard to the topics related to the research activity evaluated, the results are very scattered, which can be interpreted as the non-existence of networks or consolidated groups, with research activity apparently being carried out in isolation by the nurses. This implies difficulties in developing synergies between front-line nurses and those who are research referents, and therefore ways of connecting and communicating between them should be ensured ^(20,21).

Another aspect valued is the participation with other disciplines or health services in carrying out research, which is very weak. This reality demonstrates shortcomings that should be solved by promoting the figure of nurses who are leaders in research, as they could act as advisors and lead different initiatives that ensure research production and consumption, as well as collaboration with other health professionals or services within the healthcare field ⁽³⁾.

It has been found that one of the most important aspects of creating a research agenda in nursing is to inspire and engage nurses to participate, and innovative methods need to be developed and encouraged that fit with the research role models of nurses ⁽¹⁷⁾. Establishing trusting relationships with clinical nurses is one of the key strategies for fostering research capacity among nurses ⁽²⁰⁾.

One of the strengths of the study is the high response rate, which indicates a certain intentionality. In part this may be because research is a topic of high interest to nurses, which they clearly identify as a challenge to be developed. When research activities are relevant and impactful, it seems that the barriers to the participation of nurses in health care are easier to overcome ^(19,20). In this sense, it is essential to increase the resources and training strategies that support the development of research activity, both at institutional and individual level ⁽²²⁾.

In the limitations of the study it is found that it was not possible to carry out statistical tests of the association of variables in relation to the publication of impact articles, due to the low number of publications found.

With regard to recruitment, the analysis of the results focuses on the activity carried out in the field of primary health care, where for several years there has been a high mobility of professionals due to the concurrence of different selection and transfer processes, which limits the generalisability of the results. Bearing in mind the need to include research as an essential activity within healthcare practice, future research should include nurses from other healthcare settings and assess the existence of networks or synergies between specialised care and primary healthcare.

CONCLUSIONS

We consider it necessary the creation of strategies that include the implementation of measures to promote research among nursing professionals, such as the development of collaborative networks of nurse researchers, nurse mentors, a greater number of

research training activities, an increase in available resources and the inclusion of research in working hours.

It would be interesting for both institutions and researchers to direct these strategies at different levels (training, infrastructure and motivation) in order to promote the development of research activity among nurses.

As a future line of research, it is identified as necessary to analyse and evaluate the measures needed to encourage and integrate research activity into the reality of care.

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