

NURSE-LEAD SYMPOSIUM
26-27.10.2020



Competence profiles for doctoral and post-doctoral nursing researchers

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FUTURE PLANNING: TWO DIMENSIONS TO CONSIDER

SOCIETY – HEALTH- HEALTH CARE

(international/national)

OECD Health Data 2019,
<http://www.oecd.org/els/health-systems/healthdata.htm> and
Health statistics WHO2020 •
<http://www.nationmaster.com/cat/health>

Health/health issues – what are the
future health problems

Solutions for health
care/organisations- health
strategies

Values/competencies/

SCIENCE-KNOWLEDGE- RESEARCH (international)

- Content and level of knowledge
- Knowledge-continuum:



exploring/finding/identifying



Describing



Explaining



Changing/influencing



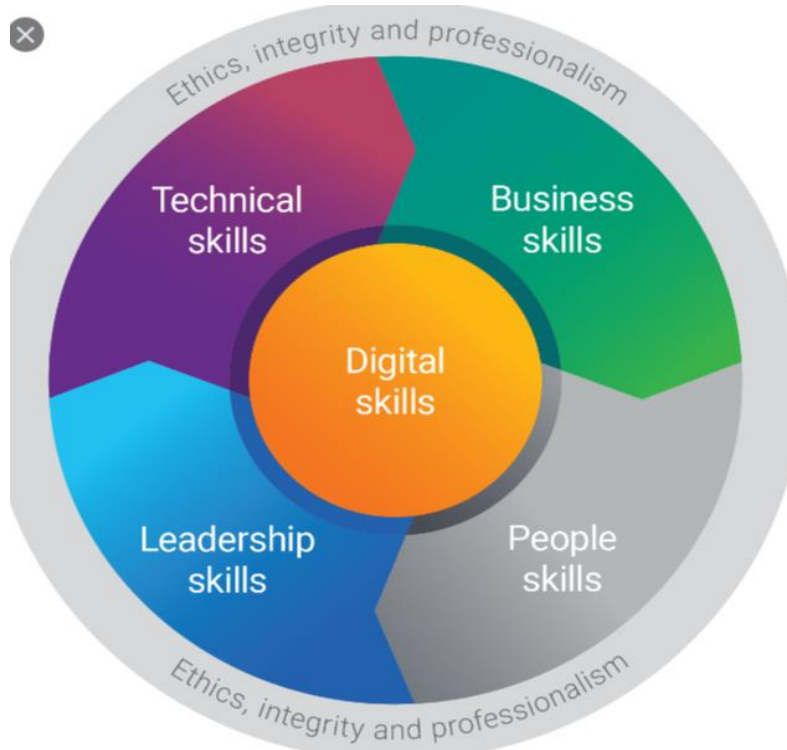
WORLD
HEALTH
STATISTICS
2020

MONITORING
HEALTH FOR THE
SDGs
SUSTAINABLE
DEVELOPMENT GOALS





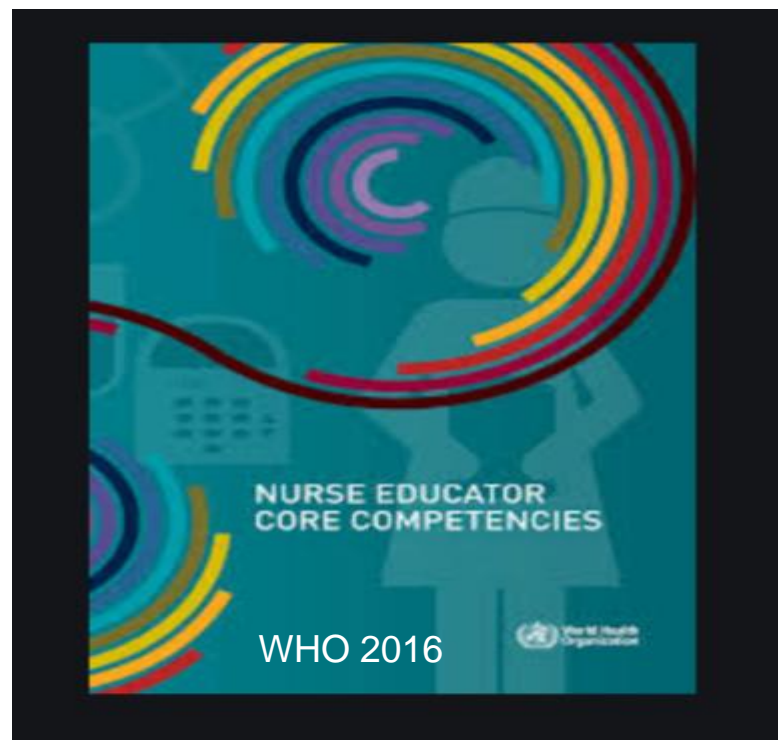
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The CGMA Competency Framework
(2019 Edition)/The Chartered Global
Management Accountant (CGMA)



The Medical Leadership Competency Framework (NHS Institute for Innovation and Improvement and the Academy of Medical Royal Colleges, May 2009, p.g.6).



WHO 2016



Pisa 2018



COMPETENCE – SEVERAL DOCUMENTS!

- <https://www.euro.who.int/en/health-topics/Health-systems/nursing-and-midwifery/activities/education>
- [European Council, Recommendation on key competences for lifelong learning](https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en) https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en

EURAXESS – European Commission

http://ec.europa.eu/euraxess/index_en.cfm

- recruitment tool, information source
- information on job vacancies, funding opportunities/fellowships for researchers/help for planning
- information about the **European Charter for Researchers** and **Code of Conduct** for the recruitment of researchers
- rights and duties for researchers and institutions





SOME REFERENCES...

Competence areas of nursing students in Europe.

Satu KU, Leena S, Mikko S, Riitta S, Helena LK.

Nurse Educ Today. 2013 Jun;33(6):625-32. doi: 10.1016/j.nedt.2013.01.017. Epub 2013 Feb 22.

Nursing education in the European higher education area - variations in implementation.

Lahtinen P, Leino-Kilpi H, Salminen L.

Nurse Educ Today. 2014 Jun;34(6):1040-7. doi: 10.1016/j.nedt.2013.09.011. Epub 2013 Sep 19.

The impact of the Bologna process on nursing higher education in Europe: a review.

Collins S, Hewer I.

Int J Nurs Stud. 2014 Jan;51(1):150-6. doi: 10.1016/j.ijnurstu.2013.07.005. Epub 2013 Aug 5.

Humar L, Sansoni J. Bologna Process and Basic Nursing Education in 21 European Countries. Ann Ig. 2017 Nov-Dec;29(6):561-571. doi: 10.7416/ai.2017.2185. PMID: 29048453.



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JOURNAL OF
NURSING SCHOLARSHIP

Profession and Society | Full Access |

Postdoctoral Nurses' Experiences With Leadership and Career Development: A Qualitative Study

Wendela de Lange MSc, RN, Marijke C. Kars PhD, RN, Irina E. Poslowsky PhD, RN, Marieke J. Schuurmans PhD, RN, Thóra B. Hafsteinsdóttir PhD, RN

First published: 21 October 2019 | <https://doi-org.ezproxy.utu.fi/10.1111/jnu.12519> | Citations: 2

International Journal of Nursing Studies 75 (2017) 21–34

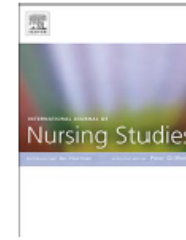


ELSEVIER

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

International Journal of Nursing Studies

journal homepage: www.elsevier.com/locate/ijns



Leadership mentoring in nursing research, career development and scholarly productivity: A systematic review



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European background- strong influence in doctoral education

- **1999 Bologna declaration**

<http://www.ehea.info/>

http://www.ehea.info/Uploads/about/BOLOGNA_DECLARATION1.pdf

<http://ec.europa.eu/education/policies/educ/bologna/bologna.pdf>

http://www.ehea.info/Uploads/about/050520_Bergen_Communique1.pdf (2005)

1st cycle (3yrs*) : typically 180–240 ECTS (bachelor degree)

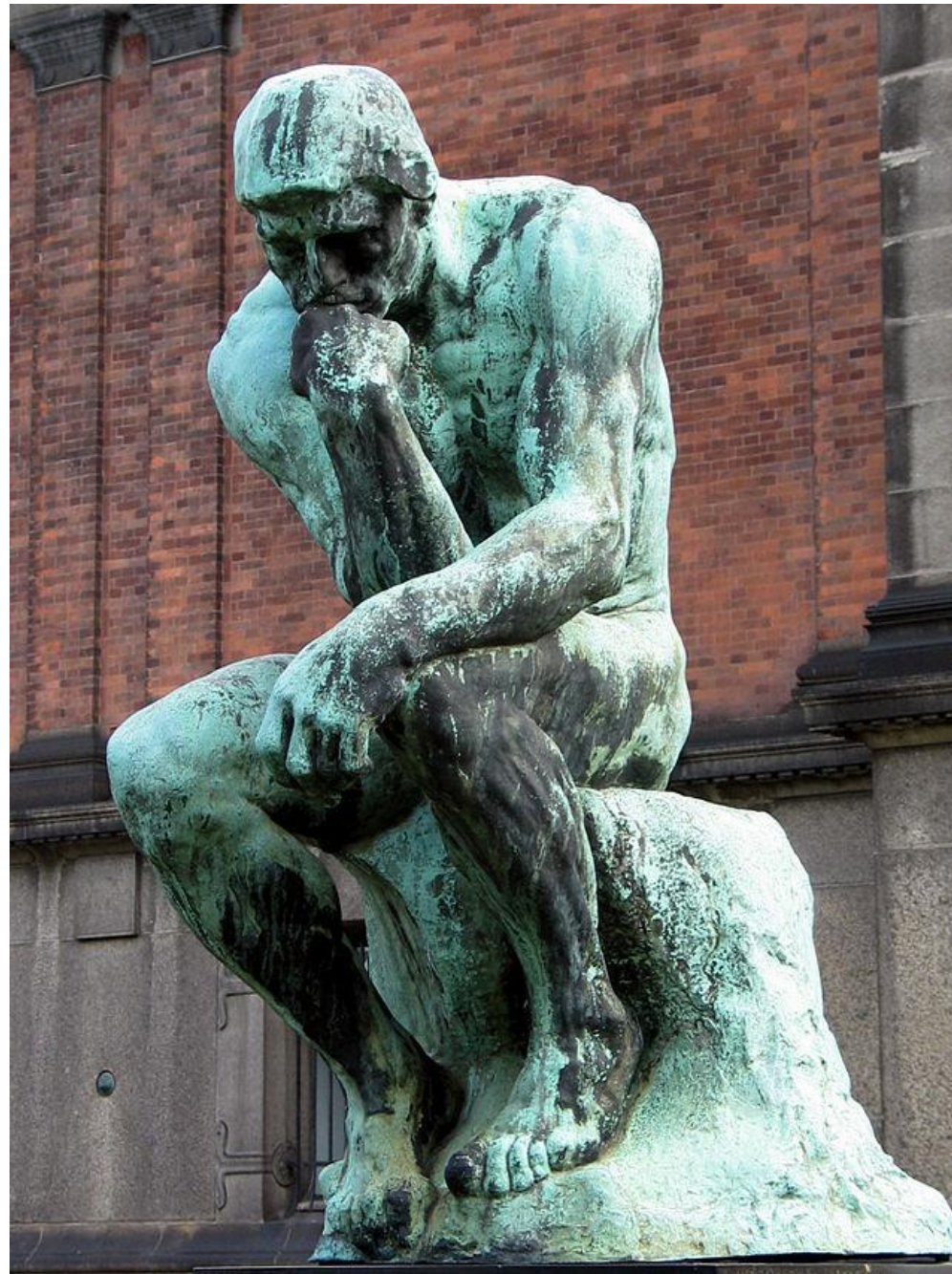
2nd cycle (2yrs*) : typically 90–120 ECTS (minimum of 60 on 2nd-cycle level, master's degree)

3rd cycle (3yrs*): Doctoral degree (variation in ECTS)

unige.ch/cre (CRE, Association of European Universities)

http://ec.europa.eu/research/era/index_en.htm

<http://www.eurodoc.net/>



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Career options (national/international) for PhDs/Postdocs

- 1. **Academic** (universities, research institutions)
- 1. **Clinical** (health care organisations, nursing homes)
- 1. **Administrative/Leadership** (health care organisations, nursing homes, other institutions, foundations, research institutions)
- 1. **Pedagogic** (educational institutions, health care organisations)

and combinations / new future careers !



General academic qualifications/merits (very international)

- **Scientific** (publications, funding, education of researchers)
- **Pedagogical** (pedagogical education, experience, supervision)
- **Administrative** (leadership education, administrative/leadership positions, project management)
- **Societal/Disciplinary** (academic activities, journal editing/referee, committees, evaluative tasks, competence statements)
- **Clinical** (clinical education, experience, specialization, expert positions, clinical guidelines)
- **International collaboration** (research networks, education/educational networks, developmental programs)
- **?**

Competence criteria/profile – Nurse Lead

Europe



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Early phase of Nurse Lead – WP4

WP 4 was carried out in two phases:

- 1) conducting literature reviews and**
- 2) making a summary of the competence profiles.**

Competency profiles are based on:

- Literature reviews**
 - a) Policy papers (educational and research policy documents)**
 - b) Scientific scoping review (scientific articles, Numminen et al 2019)**
- EANS Expert Group review (Winter Summit 2018)**

(Focus groups interviews)



Analysis of policy papers (international)

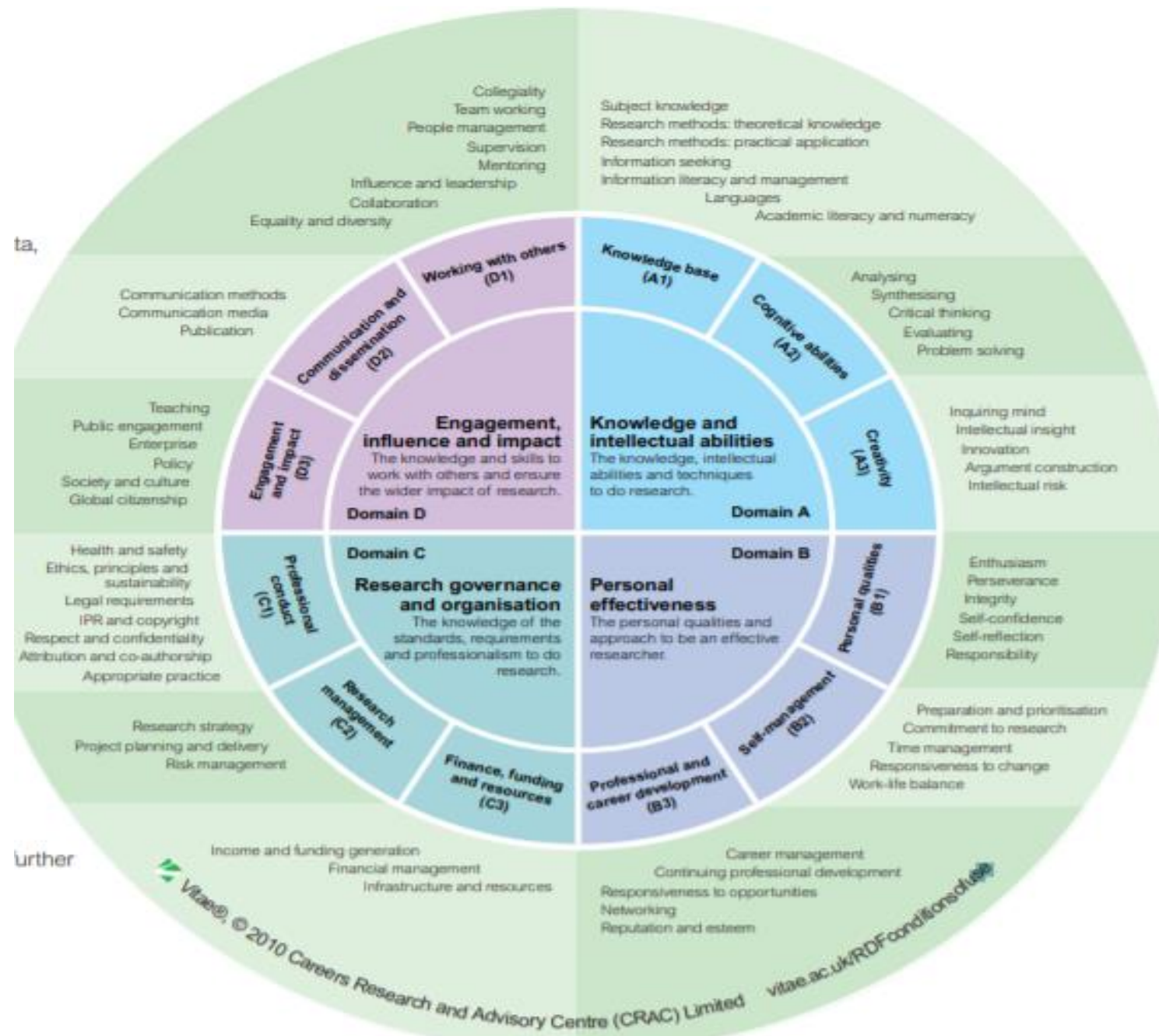
- **D1)** ESF 2009. Working Group 2: Human Resources Development (Chair: Iain Cameron): Transferable skills, ESF Member Organisation Forum on Research Careers for the comparison of the competencies.
- **D2)** EU 2005. European Charter for researchers.
https://euraxess.ec.europa.eu/sites/default/files/am509774cee_en_e4.pdf
- **D3, D4)** EU 2011. Towards a European Framework for Research Careers.
http://ec.europa.eu/euraxess/pdf/research_policies/Towards_a_European_Framework_for_Research_Careers_final.pdf
- **D5)** LERU, League of European Research Universities 2016. Maintaining a quality culture in doctoral education. At research-intensive universities. Advice paper No. 19 - March 2016. <https://www.leru.org/files/Maintaining-a-Quality-Culture-in-Doctoral-Education-Full-paper.pdf>
- **D6)** National Postdoctoral Association (NPA) Core Competencies Self-Assessment Checklist
- **D7)** UK GRAD Programme and the Research Councils 2001. This version published by Vitae®
<http://www.vitae.ac.uk> <http://www3.imperial.ac.uk/pls/portallive/docs/1/45857697.PDF>
- **D8)** Vitae 2001. <https://www.vitae.ac.uk/researchers-professional-development/professional-development-advice-sheets#domain-d--engagement--influence-and-impact>



European Science Foundation (2009)	European Charter for Researchers, EU (2005)	Bologna Declaration/European Framework for Research Careers (2011)	Bologna Declaration/European Framework for Research Careers (2011)
Doctoral candidates and postdoctoral researchers	All stages of doctoral career	Doctoral candidates	Postdoctoral researches

The League of European Research Universities (2016)	National Postdoctoral Association (2002)	UK GRAD/UK Research Councils (2001)	Researcher Development Framework/Vitae (2010)	Scoping review
Doctoral candidates	Postdoctoral researchers	Doctoral candidates	All stages of doctoral career	All stages of doctoral career





<https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf>



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National Postdoctoral Association (NPA) Core Competencies Self-Assessment Checklist											
Rate your current level of development in each of the following, with 1 being "Needs attention" and 9 being "extremely competent."											
For more information on these competencies, please visit www.nationalpostdoc.org/competencies .											
		1	2	3	4	5	6	7	8	9	n/a
1	Discipline-Specific Conceptual Knowledge										
	Analytical Approach to Defining Scientific Questions										
	Design of Scientifically Testable Hypotheses										
	Broad-Based Knowledge Acquisition										
	Interpretation and Analysis of Data										
2	Professional/Research Skill Development										
	Literature Search Strategies and Effective Interpretation										
	Experimental Design										
	Statistical Analysis										
	Data Analysis and Interpretation										
	Laboratory Techniques and Safety										
	Principles of the Peer Review Process										
3	Communication Skills										
	Writing										
	Speaking										
	Teaching										
	Interpersonal										
	Special Situations										
4	Professionalism										
	Workplace										
	Institutional										
	Collegial										
	Universal										
5	Leadership & Management Skills										
	Leadership-Strategic Vision										
	Leadership-Motivating and Inspiring Others										
	Management-Project Management										
	Management-Data and Resource Management										
	Management-Research Staff Management										
6	Responsible Conduct of Research										
	Conflicts of Interest										
	Data Ownership and Sharing										
	Publication Practices and Responsible Authorship										
	Identifying and Mitigating Research Misconduct										
	Research with Human Subjects (when applicable)										
	Research Involving Animals (when applicable)										

Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact



Sean C McConnell, Erica L Westerman , Joseph F Pierre, Erin J Heckler, Nancy B Schwartz

American Medical Association, United States; University of Arkansas, United States; University of Tennessee Health Science Center, United States; Washington University in St. Louis, United States; University of Chicago, United States

Feature Article · Dec 18, 2018

Cited 6 Views 12,424 Annotations 

Cite as: eLife 2018;7:e40189 DOI: 10.7554/eLife.40189



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LERU, League of European Research Universities 2016

<https://www.leru.org/files/Maintaining-a-Quality-Culture-in-Doctoral-Education-Full-paper.pdf>

These skills should enable and enhance the doctoral worker/graduate in three complementary domains:

- **Competence**: acquiring specific expertise, knowledge, technology and methodology to conduct and understand research within a discipline and across disciplines;
- **Achievement**: gaining personal effectiveness, time, project, and self-management, developing a problem solving attitude and assuming a leadership role;
- **Relationship**: developing a team work attitude, collaborating and communicating with specialists and non-specialists.



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.Competence areas based on policy review (n=13)

- Research field management
- Research skill management
- Ethics management
- Cognitive management
- Self-management
- Research communication management
- Team working management
- Team leadership management
- Resource management
- Career development
- Pedagogy management
- Implementation management
- Future vision management



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REVIEW ARTICLE

NursingOpen Open Access WILEY

Postdoctoral nursing researcher career: A scoping review of required competences

Olivia Numminen¹  | Heli Virtanen¹ | Thóra Hafsteinsdóttir² | Helena Leino-Kilpi^{1,3} |

On behalf of Nurse Lead Consortium*



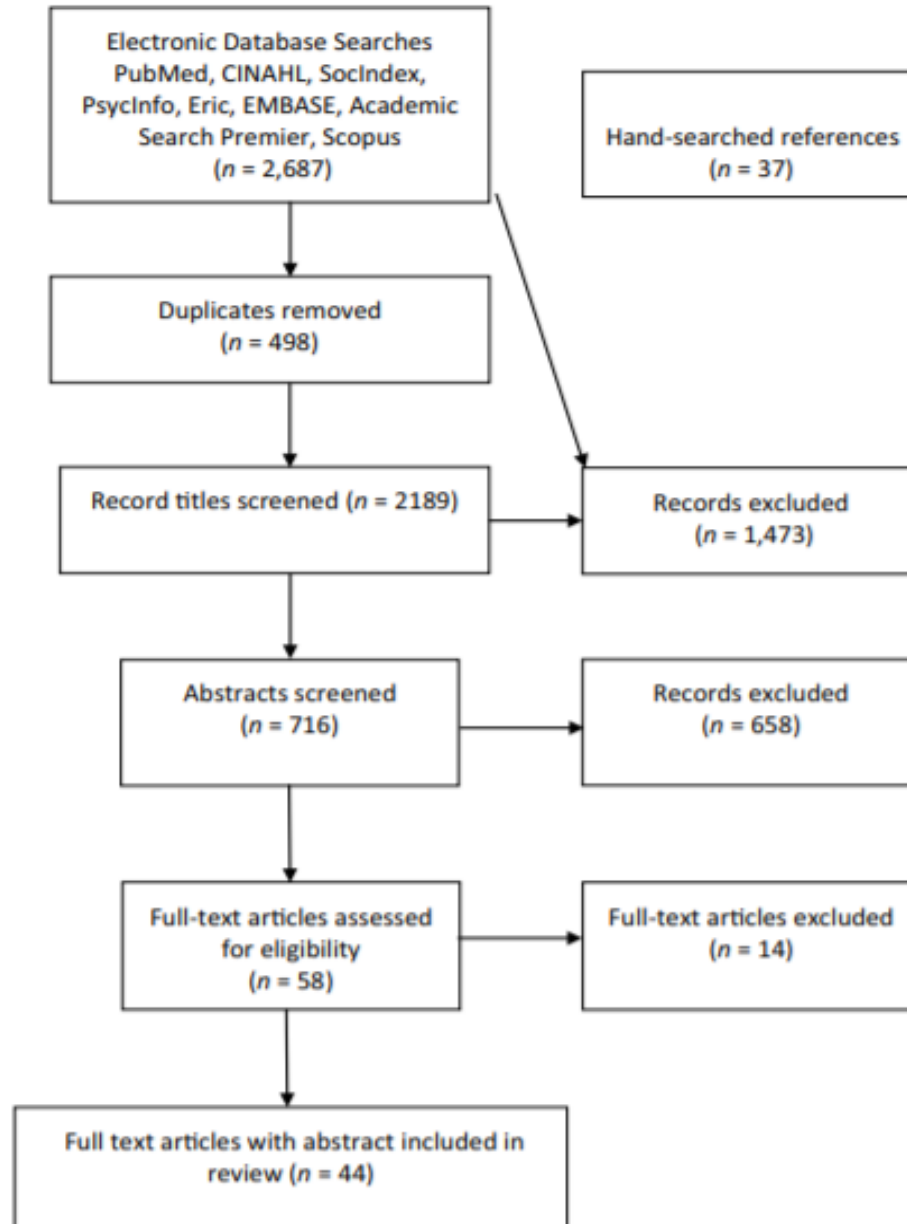
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Identification

Screening

Eligibility

Included



Boolean combination of keywords as follows:
 PubMed/PsycINFO: (((doctoral OR phd OR postgradu- ate*) AND (candidate* OR student* OR education*)) OR postdoc* OR post doc* OR (principal AND investigator*)) AND competenc* AND leadership* and Scopus/
 Eric/Embase/CINAHL/SocIndex/Academic Search Premier/Web of Science (((Doctoral OR phd OR postgradu- ate*) AND (candidate* OR student* OR education*)) OR postdoc* OR "post doc*" OR (principal AND investigator*)) AND competenc* AND leadership*.

The inclusion criteria were as follows: (a) an empirical study, (b) related to any scientific field, (c) related to PhD students and/or postdoctoral researchers (with a PhD), (d) related to competence, (e) full text available, (f) published in English in a peer-reviewed journal and (g) published between January 1990 and November 2018. The exclusion criteria were as follows: (a) theoretical or descriptive article and (b) related to Doctor of Practice.



TABLE 4 Data collection and analysis methods (N = 44)

Data collection methods	N	Analysis methods	N	%
Tailored questionnaires (Open ended: 3/ Structured: 12/ Mixed: 3)	18	Statistical	16	36
Semi-structured interview (individual/ focus group)	22	Content analysis (inductive/deductive/ thematic)	26	59
Research Self-Efficacy Scale (RSES) (Bieschke, Bishop & Garcia,1996)	1	Constant comparative analysis	3	7
RSES (Greeley et al. 1989)	1	Discussion/dialogical analysis	2	5
Interest in Research Questionnaire (Bishop & Bieschke, 1994)	1	Fenomenographic analysis	1	2
Research Knowledge Assessment (Lambie, 2012)	1	Life-world analysis	1	2
Survey by Kane (1983), modified by Fey and Carpenter (1996)	1	Critical analysis	1	2
Zinger Folkman Leadership Survey	1	Theory-driven analysis	1	2
American College of Epidemiology Education Committee Questionnaire (ACE)	2			
NRSS (Edwards, Bexley & Richardson, 2011) selection criteria	1			
Importance of quality indicators guided by CID (Walker, Golde, Jones, Bueschel,& Hutchings, 2008), Anasta's (2012) survey of social work doctoral students and CADE quality guidelines	1			

TABLE 3 Study settings and participants/data sources (N = 44)

Study setting/Discipline	N	%	Participants/data sources
Educational sciences (behavioural science, leadership, pedagogy)	18	41	Doctoral students/PhD students
Various disciplines (unspecified)	8	18	Postdoc students/researchers
Humanities (linguistics, music, philosophy, social sciences)	9	21	PhD/Doctoral supervisors
Medical sciences (dentistry, epidemiology, medicine, neuroscience, nursing,)	8	18	University presidents (PhD)
Economics/Business	1	2	University academics (Directors/professors/faculty members, educators with various academic degrees, alumni, students: groups not specified by number)
Natural sciences	1	2	Chief student affairs officers Epidemiologists/recently graduated PhD programme Web-site handbooks Job descriptions on university websites Personal journal, activity logs and critical incident reports



Required competences for a academic/researcher career – based on literature review

Management of....

A. Research

Research field

Research skills

Research communication

Implementation of results

B. Researcher

Cognitive competence, creativity

Self-management

Professional engagement and development

Career

Future visions

C. Others/social environment

Team skills (team working/leadership)

Intercultural management

Pedagogical elements

D. Working environment

Resources (financial/others)

Technology

E. Value-base

Research ethics

Professional conduct



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Table 6. Summary of the competence profiles based on policy and scientific reviews and EANS Expert Group review

Competency	Conceptual definition	Principles
Research field management	Research field management is a fundamental part of the competencies in research. This competence area includes knowledge base of the research field and ability to synthesize appropriate theory and use sophisticated insights for research design and conducting research (Mowbray & Halse 2010).	Doctoral candidates are expected to have knowledge base of their research area of their own and manage to design their own doctoral research with appropriate methodologies under supervision. In addition of these abilities, postdoctoral researchers are expected to have ability to evaluate critically the components and the wholeness of the knowledge base of the research area and generate novel insights for strengthening the research area and disciplinary.
Research skill management	Research skill management includes knowledge on research methodologies and techniques and their appropriate application in research (Vitae 2010) and an ability to design and manage research (UK Research Councils and AHBR 2001).	Doctoral candidates are expected to have knowledge of the research methodologies and techniques of their own doctoral research and an ability to design and conduct their own doctoral research under supervision. In addition of these abilities, postdoctoral researchers are expected to have ability to evaluate critically the methodologies and methods of the research field and develop novel methods for broadening and deepening the whole research field.

Self-management	Self-management refers to personal resources to manage with the research process and research project. This management includes ability to develop an effective work regime (Mowbray & Halse 2010) and to get things done on time (Durette et al. 2014).	Doctoral candidates are expected to have ability to express personal resources and cognitive capacities in their doctoral study. In addition of these abilities, postdoctoral researchers are expected to have ability to evaluate critically personal resources and cognitive capacities of their own and other researches and to encourage and inspire other researchers
Research communication management	Research communication management refers to academic, professional and non-scientific reporting as well as oral presentations of research results of own doctoral study or research team. Communication in research team and networks.	Doctoral candidates are expected to have ability to write different types of research reports and keep oral presentations to different type of audience and to have an ability to collaborate with supervisor and research colleagues.
Team working management	Team working management contains knowledge of working in a team as a member (Durette et al. 2014), co-operative networks and relationships in a team and receiving and giving feedback (UK...2001).	Doctoral candidates are expected to have ability to work as a member of the research team and/or a network and to contribute group activities and achievement of goals. In addition of these abilities, postdoctoral researchers are expected to have ability to evaluate critically relationships and activities of the team. Furthermore, postdoctoral researcher is expected to have ability to create own research team and to

Competence profile/criteria – some issues and future thoughts

- PhDs and post-docs have high expertise → multidimensional competences
- Several international descriptions, on different levels (+ national ones)
- Basic structure:
 - ☺Research (field, skills, actions, dissemination, implementation....)
 - ☺Researcher (cognitive, self, career)
 - ☺Others/Social environment – broadening of expertise
 - ☺Working environment (financial, resources, environment, sustainability)
 - ☺Value-base (ethics)

↓

Future testing/measuring/checklists/knowledge tests/narratives

Career options (national/international) for PhDs/Postdocs- variation of competence profiles?

- 1. **Academic** (universities, research institutions)
- 1. **Clinical** (health care organisations, nursing homes)
- 1. **Administrative/Leadership** (health care organisations, nursing homes, other institutions, foundations, research institutions)
- 1. **Pedagogic** (educational institutions, health care organisations)

and combinations / new future careers !





Thank you for your interest!

	Natural Sciences			Social Sciences	Health Sciences		
Competence areas	Information sciences	Information technology	Biology	Psychology	Bio medicine	Nursing Science	Medicine
Professional and career development	Van Besouw et al 2013	Wu et al 2015	Hubbard & Dunbar 2017			De Lange et al 2019	Irwin et al 2019
Cognitive ability	Van Besouw et al 2013	Wu et al 2015	Hubbard & Dunbar 2017	Stiers et al 2015			
Communication and dissemination	Van Besouw et al 2013	Wu et al 2015		Stiers et al 2015	Anderson et al 2016; Mayowski et al 2019	De Lange et al 2019	Irwin et al 2019
Professional engagement and impact	Van Besouw et al 2013				Anderson et al 2016		
Finance, funding and resources	Van Besouw et al 2013			Stiers et al 2015			Irwin et al 2019
Knowledge base	Van Besouw et al 2013	Wu et al 2015	Hubbard & Dunbar 2017	Stiers et al 2015	Mayowski et al 2019		Irwin et al 2019
Working with others	Van Besouw et al 2013			Stiers et al 2015	Anderson et al 2016; Mayowski et al 2019	De Lange et al 2019	Irwin et al 2019
Personal qualities			Hubbard & Dunbar 2017	Stiers et al 2015	Anderson et al 2016; Mayowski et al 2019	De Lange et al 2019	
Professional conduct				Stiers et al 2015		De Lange et al 2019	
Creativity		Wu et al 2015				De Lange et al 2019	
Research management				Stiers et al 2015	Mayowski et al 2019	De Lange et al 2019	
Self management					Mayowski et al 2019	De Lange et al 2019	

NURSING SCIENCE RESEARCH PROGRAMME

Empowering Population, Patients, Professionals in Health and Care

**Ethical
Health Care
and Nursing**



**Connected
Health
UTU**



**Mental
Health and
Technology**



**Older
Individuals'
Health, Nursing
and Services**



**Quality of
Clinical Nursing
and Health
Care**



**Empowering
Patient
Education
(EPE)**



**Health Care
and Nursing
Education**



Koulutus ammentaa tutkimuksesta

<https://www.utu.fi/fi/yliopisto/laaketieteellinen-tiedekunta/hoitotieteen-laitos/tutkimus>

15.10.2020

HLKCompetenceNurseLead2020