Received: 3 August 2023 | Revised: 10 October 2023 | Accepted: 11 October 2023

DOI: 10.1002/alz.13530

Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

RESEARCH ARTICLE

Supporting early-career dementia researchers: Identifying support needs and ways forward via a European study

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Funding information
national funds through the FCT – Fundação para a Ciência e a Tecnologia, I.P.„ Grant/Award Number: 2020FEDER; Scientific Employment Stimulus – Individual Call (CEEC Individual), Grant/Award Number: 2020.04083.CEECIND/CP1589/CT0002; National Institute for Health and Care Research (NIHR) Three Schools Dementia Career Development, Grant/Award Number: 20000123; NIHR Clinical Research Network East Midlands, Grant/Award Number: UF18

Abstract

INTRODUCTION: Early-career researchers contribute significantly to dementia research and clinical practice. However, a growing group of early-career dementia researchers (ECDRs) lack appropriate support throughout their careers. Thus, we aim to (i) explore support needs, (ii) determine recommendations, and (iii) set the agenda for organizations to better support ECDRs.

METHODS: An iterative, explanatory sequential mixed-methods design was applied. First ECDRs' needs were identified using an online survey informed by the Vitae Researcher Development Framework. Next, priority areas were selected and explored qualitatively with ECDRs in two workshops, utilizing the World Café methodology.

RESULTS: Sixty-five ECDRs throughout Europe completed the survey, with the majority reporting that greater support is needed in terms of funding and career opportunities, social support and well-being, and "wide-reaching" dissemination.

DISCUSSION: Based on the findings, six recommendations for support organizations, funding bodies, and universities to better support ECDRs are formulated, each intended for specific target audiences.

KEYWORDS
career management, dementia, early-career researcher, needs, training

Highlights

- This article reports on focal points of career-related support needed in doctoral education and postdoctoral employment to foster a healthier academic environment, including finance, work–life balance, dissemination of research findings, and supervision, both in general and in dementia fields specifically.
- Funding and resources were identified as a significant challenge, and there was a call for more long-term positions and transition funding for postdoctoral researchers.
- Early-career dementia researchers addressed the need for support in producing outputs for non-academic audiences, including people living with dementia. The importance of disseminating research to diverse audiences has long been recognized; thus, it is critical that early-career dementia researchers be supported in this effort.
- Recommendations were formulated for researcher support (organizations), funding bodies, and universities. These recommendations include providing support for disseminating research to non-academic audiences, offering training in supervision skills, and promoting peer-to-peer mentoring and social activities for early-career dementia researchers.

1 | BACKGROUND

Dementia is recognized as a major health and social problem,[1] impacting not only persons living with it but also their family and society at large.[2] Only through research can dementia be better understood, allowing for the development and provision of treatments and support to patients and their families and integrating preventive measures into the social structure. Progress in dementia research and clinical practice is driven by researchers working in a wide variety of disciplines and domains.[3] A key domain is basic biomedical research, which helps to better understand what causes dementia and how the condition progresses and to develop pharmacological treatments.[4] Moreover, epidemiological research helps identify populations with a greater risk of developing dementia. In addition, psychosocial research on the emotional, psychological, and social needs of people living with dementia and their families can contribute to interventions aiming to improve the well-being and quality of life of people affected.[5]

In all these domains of dementia research, early-career researchers (ECRs) make a significant contribution. Still, within the field, several issues affect the ability of these researchers to contribute to science successfully and to develop their careers.[6] Research from various disciplines shows that ECRs face many barriers: lack of resources and funding, heavy workloads, unsupportive attitudes within their departments, and lack of collaboration.[7] ECRs indicate they experience high stress levels, have long working hours, and have problems with securing permanent positions.[8,9] These difficulties and barriers can lead to mental health issues, such as anxiety and burnout.[10,11]

To better support early-career dementia researchers (ECDRs) around the world, University College London (UCL) and the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) Professional Interest Area (PIA) to Elevate Early Career Researchers (PEERs) recently investigated ECDRs' experiences of their workplaces, fields, careers, and support via a global online survey.[10] The survey results (n = 584) stress that the ECDR community is enthusiastic, dedicated, and thriving but that there are also many areas of concern and room for improvement.[10] While 77% of the surveyed ECDRs are happy in their current role, 84% agree or strongly agree that the short-term nature of contracts is a significant barrier to advancing the field. Moreover, primary issues affecting career progression are seen in funding (74%), job availability and security (60%), and work–life balance (54%). ECDRs experience considerable pressure to publish (92%) while also reporting they have little time available for analyzing results (42%) or academic writing (50%).[10] Additionally, the COVID-19 pandemic had a substantial impact on ECDRs, resulting in research delays (78%), adjustments to research plans (54%), and a perceived negative impact on ECDRs' career progression (42%).[10] This survey from autumn 2021 highlights that support is especially needed in areas such as grant and fellowship writing (58%), building collaboration (57%), and one-on-one coaching and mentoring (39%).[10]

Although this survey is a good starting point to enhance the voices of ECDRs, more detailed and contextual input from ECDRs is needed to better understand and address their needs. For example, ECDRs' needs likely vary across the world, and it remains unclear in which areas European ECDRs in particular need extra support or how they would like to be supported prospectively. Following the call for action to invest time and resources in ECDRs' career development[6] and encourage the delivery of specific, targeted improvements, we aimed to perform

a follow-up mixed-methods study to (i) investigate the current needs of European ECDRs related to their (research) career, (ii) determine ECDR-driven recommendations for practice, and (iii) set an agenda for organizations supporting ECDRs in dementia research and identifying areas for improvement that will be disseminated to academia, funders, and policymakers.

RESEARCH IN CONTEXT

1. **Systematic review**: Via the international survey of University College London (UCL) and the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) Professional Interest Area to Elevate Early Career Researchers (PEERs) (Smith et al., [17]), key points to support early-career dementia researchers (ECDRs) were identified. However, to enhance the voices of ECDRs, more detailed and contextual input is needed to better understand their situations and needs. Thus, we conducted a mixed-methods study to (i) explore ECDRs' support needs, (ii) determine recommendations, and (iii) set the agenda for organizations to better support ECDRs. A new international survey with a focus on European ECDRs was conducted by the authors. Also, an in-depth search of existing literature was carried out to identify the needs of early-career researchers. These relevant references are appropriately cited. Lastly, we used a theoretical framework to structure the survey and results.
2. **Interpretation**: This study shows that ECDRs have various support needs as well as a clear idea of how possible future efforts from organizations can meet their needs. Based on these findings, we were able to formulate recommendations for specific target groups, namely, researcher support (organizations), funding bodies, and universities.
3. **Future directions**: To move dementia research forward, ECDRs are of utmost importance. To support these ECDRs in their academic work and career, increased awareness and actions to integrate best practices should be continuously promoted, especially involving stakeholders representing universities, professional (dementia) associations, and conference organizing committees.

2 | METHODS

2.1 | Study design

This study used an iterative, explanatory sequential mixed-methods design[12] and was performed by ECDRs who are members of INTERDEM Academy, a network of ECDRs exploring psychosocial interventions for dementia under the supervision of INTERDEM members,[13] in collaboration with the European Working Group of ISTAART PEERs. First, ECDRs' needs were determined via a quantitative online survey building on the findings from the work by UCL and ISTAART PEERs mentioned previously. The survey's questions were based on the Vitae Researcher Development Framework of the Career Research and Advisory Centre (CRAC[14]) covering four main domains (ie, engagement, influence, and impact; knowledge and intellectual abilities; research governance and organization; personal effectiveness) and 12 subdomains, each with their descriptions (63 in total) (Figure 1). This framework was used to structure the needs assessment.

Second, the top priority areas where ECDRs needed support were selected based on the results of this survey. We then qualitatively built on the survey findings by involving ECDRs in two workshops applying the World Café methodology.[15,16] Using mixed methods allowed us to quantify the areas where ECDRs need support and then explore in detail how to address those needs. Please see Figure 2 for an overview of the study flow and methodological approach, with more details on the procedure in what follows.

2.2 | Participants and recruitment

2.2.1 | Survey

We recruited ECDRs based in Europe, without age limitation, comprising PhD students, postdoctoral researchers, assistant/support researchers, and assistant professors who self-identified as ECRs. The participants could specialize in any area of dementia research (eg, clinical, public health, biomarkers, neuropsychology, arts). Because the survey was in English, participants needed to possess a reasonable level of English.

Participants were recruited via email and social media. The survey was distributed via the existing membership list of involved organizations (ie, INTERDEM, ISTAART PEERs). Members of these organizations agreed to receive regular updates via email about the activities, such as research, surveys, and workshops. In addition, all organizations and authors distributed the survey through their social media channels (ie, Twitter, LinkedIn, Facebook) and professional networks (eg, Dementia Research Network Ireland). The email and social media posts were directly linked to the online survey. Participation was voluntary, and informed consent was given online through the survey platform. Participants could complete the survey from July 15 until October 1, 2022.

2.2.2 | Workshop

We organized one in-person and one online workshop to allow ECDRs to discuss the survey results and identify current approaches, best practices, and the support strategies and approaches they recommended. We recruited ECDRs through email and social media

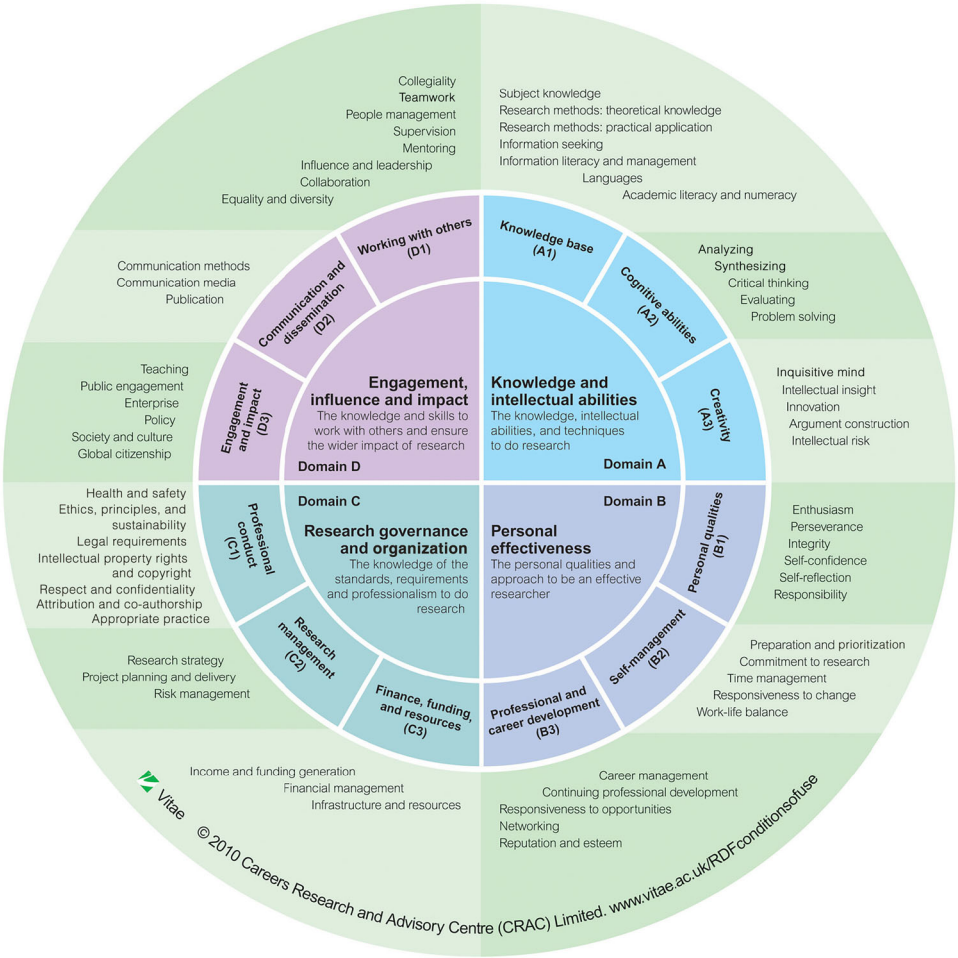

FIGURE 1 Vitae Researcher Development Framework from the Careers Research and Advisory Centre (CRAC)[14] used as the foundation for the survey and workshops.

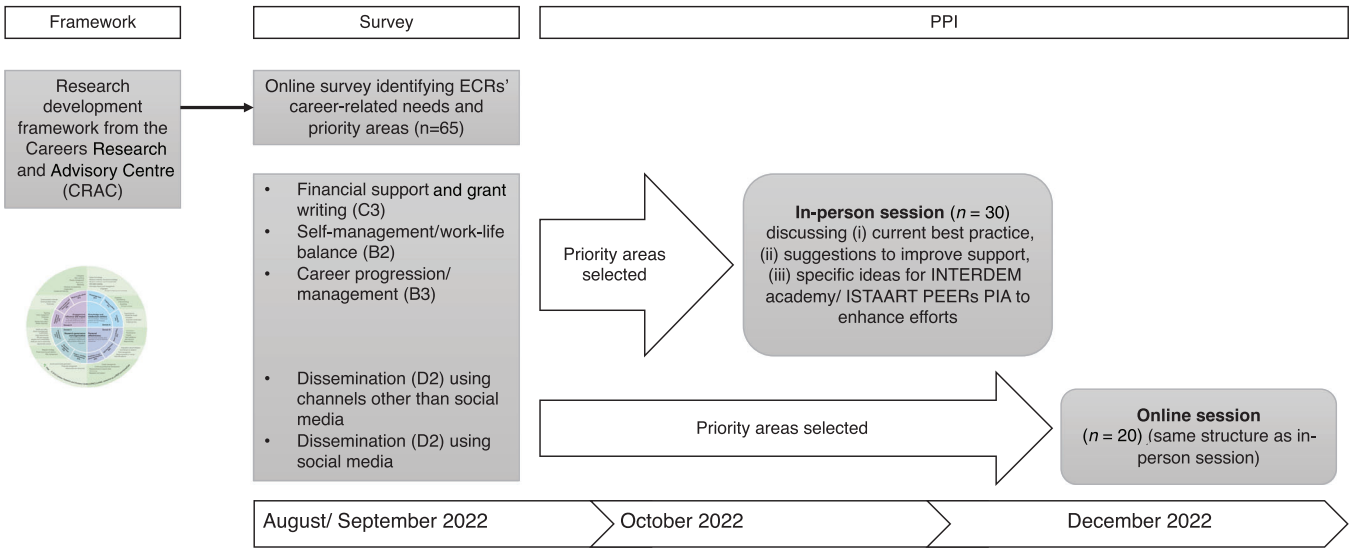

FIGURE 2 Study flow and methodological approach.

(as described previously). Participants registered voluntarily, and oral informed consent was given to audio-record and transcribe these workshops.

2.3 | Data collection and procedure

2.3.1 | Survey

Lime Survey was used as a platform for the survey, which was estimated to take participants between 10 and 20 min to complete. As mentioned earlier, participants were asked to indicate what their needs for support are working as a researcher in dementia, based on the competencies of academic researchers from the Vitae Researcher Development Framework, and to rank them and describe how they want to be supported in these challenges (see the full survey in Supporting Information Appendix 1). Moreover, they were asked how the involved organizations (ie, INTERDEM Academy, ISTAART PEERs) could most effectively disseminate these support measures to ECDRs prospectively. In addition, participants were asked to provide demographic data (ie, age, gender, country of work, current position). The survey was structured with a combination of multiple-choice questions and answer options "yes," "no," and "uncertain" (Supporting Information Appendix 1). The survey questions were designed as "required," meaning participants were obligated to respond to each question. However, to respect participants' preferences and accommodate situations where a question might not apply, or individuals did not wish to respond, we included "not applicable," though no respondent chose this option.

2.3.2 Workshop

The five most mentioned topics (based on the subdomains of the Vitae Researcher Development Framework[14]) from the survey were selected for discussion in the workshops. One in-person and one online workshop were organized in accordance with the World Café methodology,[15,16] which has been used for similar research aims.[18] The World Café method is a powerful way of facilitating group discussions.[15] It is particularly useful for gathering the views of large groups and creatively working together in a single conversation where several experts are present. World Cafés typically involve bringing together small groups of people physically at tables in a relaxed environment, much like a café, to discuss a particular issue.[15,16] After a set period, participants move to new tables with new issues, which are repeated several times. During the COVID-19 pandemic, the World Café method was also adapted to an online format.[18] For each workshop, a semi-structured guide with questions and prompts was used (Supporting Information Appendix 2). The exact number of individuals participating in both the survey and workshops remains indeterminate because survey responses were anonymous, so their opinions may have been reflected multiple times in the data.

The first physical workshop occurred in October 2022 in a meeting room at the 32nd Alzheimer Europe Conference in Bucharest, Romania. Conference attendees could join this meeting voluntarily based on an abstract added to the conference program. The abstract clearly described the purpose of the session and how notes from the attendees' discussions would guide future support efforts for ECDRs. In this first workshop, we discussed three of the five topics. After the involved organizations, study aim, and method were introduced, participants were divided into six groups (two groups per topic). Each group consisted of a maximum of five participants, a moderator, an expert, and a note taker. Each expert was an experienced academic with a specialist interest in one of the discussion topics. Their role was to contribute to the discussion by sharing insights and giving examples of how the ECDRs' needs could be supported. During the discussions, participants were asked whether they were supported in a given need (ie, What is the current best practice?), how they would like to be supported, and how the organizations involved could support them. Each participant joined two consecutive group discussions. The moderator changed groups, while participants remained in the same group.

The online workshop was organized via ZOOM in December 2022. Interested participants registered via email. Registered participants received an invitation to the session. The online workshop followed the same structure as the physical session. Four of the five identified topics were discussed. To maintain interaction in the online sessions, break-out rooms (like the aforementioned tables) were used, with a maximum of five participants. Each break-out session involved a moderator, an expert, and a note taker. Notes were taken on Miro, an online whiteboard, so participants could easily follow the discussion. Each participant joined two consecutive group discussions. The moderator changed between break-out rooms, while participants remained in the same break-out room.

2.4 | Data analysis

2.4.1 | Quantitative analysis

All survey data were analyzed using IBM SPSS software. Descriptive statistics were employed to characterize participant demographics and indicate support needs. Frequency analysis focused on identifying the prevalence (top 15) of specific support needs among ECDRs. Additionally, the written text responses in the surveys were categorized and summarized participant comments by topic.

2.4.2 | Identification of themes

Moderators (ie, the authors of this article) examined the notes and recordings from the workshop sessions. Best practices (ie, support/strategies to meet career development needs) set forth by workshop participants were organized into themes by the moderators. Each moderator inductively identified themes for the workshop they had led. Existing themes based on the Vitea Framework, new themes, and corresponding best practices were discussed among all moderators for verification and consensus. This process is known as peer debriefing and is a recommended means of enhancing the trust-

worthiness and rigor of qualitative analysis.[12] When presenting the themes, it should be noted that it is not possible to link the "suggested future efforts" to a specific career stage or area of research, as these are results from the workshops, where no information on attendees was collected. Instead, these themes and suggested future efforts represent overarching bottom-up solutions provided by ECDR workshop attendees.

2.5 | Data management and ethics

Data are stored and handled as recommended by the Research Information and Data Management department of the Vrije Universiteit Brussel and in accordance with General Data Protection Regulation 2018.[19] All participants in this study were informed about the purpose of the study and their rights as participants. Due to national ethics guidelines, the authors cannot share the raw data used in this study. Inquiries about collaborations to use these data can be sent to the corresponding author. Additionally, at the beginning of the workshops, participants were reminded that the session was being recorded, and their verbal consent was requested. The study received approval via the Ethics Review Board of Brussels University Hospital of the Vrije Universiteit Brussel (BUN: 1432022000155).

3 | RESULTS

3.1 | Survey results

Of the 70 ECDRs who completed the survey, 65 were included in the analysis after exclusion of those who were not ECRs in dementia. Table 1 provides an overview of the respondent characteristics. Other types of dementia research in which respondents worked were delirium and dementia ($n = 1$), dementia diagnostics in primary care ($n = 1$), epidemiology ($n = 1$), inpatient psychiatric dementia care ($n = 1$), design ($n = 1$), interventions ($n = 1$), social sciences, communication, and media ($n = 1$), and young-onset dementia ($n = 1$). Other current positions of respondents were clinicians ($n = 2$), scientific staff ($n = 1$), research associate ($n = 1$), and teaching and research fellow ($n = 1$).

3.1.1 | Top 15 mentioned needs

Sixty-four participants described their needs for career-related support as an ECDR (Table 2). ECDRs mainly indicated needs in knowledge and intellectual abilities and personal effectiveness. Two domains of support needs were selected by >80% of respondents: 87% ($n = 57$) in income and funding generation and 81% ($n = 53$) in research methods: practical application.

TABLE 1 Overview of survey respondent characteristics.

Characteristic	Number of respondents ($n = 65$)
Country of work	
Austria	2 (3%)
Belgium	3 (5%)
France	1 (2%)
Germany	5 (8%)
Ireland	6 (9%)
Italy	2 (3%)
Netherlands	17 (26%)
Portugal	1 (2%)
Spain	2 (3%)
Sweden	1 (2%)
United Kingdom	24 (37%)
Albania	1 (2%)
Gender	
Women	56 (86%)
Men	6 (9%)
Field of dementia research	
Arts and dementia	11 (17%)
Basic science and pathogenesis	1 (2%)
Biomarkers	10 (15%)
Clinical	11 (17%)
Communities/environment	14 (22%)
Data analysis	8 (12%)
Delivery of drug trials	3 (5%)
Dementia care	38 (58%)
Drug discovery/development	1 (2%)
Neuropsychology	7 (11%)
Patient and public involvement	14 (22%)
Public health	19 (29%)
Social care	20 (31%)
Technology	2 (3%)
Other	7 (11%)
Current position/title/training level	
PhD student	38 (58%)
Postdoctoral researcher	13 (20%)
Research assistant	5 (8%)
Assistant professor/faculty	2 (3%)
Undergraduate	1 (2%)
Other	5 (8%)
Percentage (of working time) in academia	
100%	54 (83%)
50%	4 (6%)
0%	2 (3%)

(Continues)

TABLE 1 (Continued)

Characteristic	Number of respondents ($n = 65$)
Other[a]	4 (6%)
Next steps in career	
Academia	54 (83%)
Clinical work	5 (8%)
Charity or social enterprise	19 (29%)
Government or public sector	27 (42%)
Industry or private sector	21 (32%)
Unsure	2 (3%)

[a]80% ($n = 2$), 60% ($n = 1$), and 40% ($n = 1$).

3.1.2 | Most urgent needs

The survey asked participants to rank their top three most urgent needs. Table 3 presents an overview of the most urgent needs per domain, which were selected five times or more. Most participants reported that they needed income and funding generation support ($n = 21$). Ten participants had work–life balance in their top three, and nine indicated they needed support with publication. Notable is that many ECRDs indicated in their top three that they needed support in dissemination (eg, communication methods/technique, communication media, and public engagement).

3.2 | Workshops

Based on the survey results, five topics were chosen for discussion in the workshops: (1) self-management/work–life balance, (2) career progression/management, (3) financial support/grant writing, (4) dissemination of research findings using social media, and (5) dissemination of research findings using channels other than social media. While the first two topics are part of personal effectiveness (Domain B) of the research development framework, the third topic falls under research governance and organization (Domain C), whereas the last two are part of engagement, influence, and impact (Domain D). Thirty ECDRs attended the in-person workshop, while 20 joined the online workshop. ECDRs could opt to join one or both sessions.

3.2.1 | Topic: Self-management/work–life balance (B2)

Current approaches and best practices: Participants acknowledged the competitive nature of academic positions and related work pressure. ECDRs highlighted the work–life balance difficulties facing ECDRs, especially serving in multiple roles at the same time (eg, teaching, clinical practice, research). Participants also felt that they must engage in a considerable number of activities in addition to their PhD to be able to stay in academia. For example, some ECDRs mentioned they were board members or actively involved in interest groups. Moreover, ECDRs shared that they felt somewhat pressured to work outside of office hours because they saw their supervising senior researchers, who often worked outside office hours, as role models. The best practices for successfully managing work–life balance mentioned were: Say "no" or "yes but not now," choose what gives you energy, and have an open conversation with your supervisor about workload, concerns, boundaries, and mutual expectations. In addition, ECDRs valued the support of their peers by sharing experiences via informal communication channels or informal face-to-face meetings. Scheduling enjoyable after-work activities, such as sports or meeting friends, was also noted as a strategy to improve one's work–life balance.

Suggested future efforts: Participants made several recommendations related to the topic of self-management. To strengthen peer support, most participants valued ways to enhance informal communication and socializing between ECDRs, for example, through social activities for ECDRs (eg, at INTERDEM events or conferences) or an informal communication channel for ECDRs. Participants also highlighted that this should be facilitated to share not only successes in one's academic career but also failures. Some participants preferred individualized to general support for ECDRs. One example was a work–life balance coach who could provide personalized advice. Other participants thought they would benefit from freely available resources for time and self-management and general practical advice (ie, how to prepare for a meeting with a supervisor about expectations and boundaries).

3.2.2 | Topic: Career progression/management (B3)

Current approaches and best practices: Participants reported four sources of support: (i) supervisors (ie, by sharing information on conferences, vacancies, or calls for grants; sharing general advice on, for instance, when to start looking for a postdoctoral job); (ii) other PhD students or colleagues (ie, provide/receive peer support, career talks on "*how they did it*"), (iii) the host university (ie, training/leadership courses, mentoring options, general career advice through career support weeks, central resources to review their curriculum vitae, suggestions for postdoctoral options, understanding the career path); and (iv) external options (ie, master classes organized by INTERDEM Academy, ISTAART sessions/webinars). Moreover, ECDRs felt pressured to find a new job quickly and usually did not receive extra time to prepare job applications, making career transitions challenging.

Suggested future efforts: Career progression could be facilitated by funding a "grace period," for instance, immediately following the PhD defense, in which ECDRs could write up their final articles and prepare job applications or grant proposals. Moreover, ECDRs pointed out that they felt the advice they received depended on the extent to which their supervisors were up to date and well connected. Thus, existing resources and career support need to be widely accessible and disseminated. Accessing career support services from other universities would be helpful if the host institution has limited options. More information on alternative career paths, different fields, and career

TABLE 2 15 most frequently cited needs.

Needs based on framework competencies of academic researchers				Number of respondents ($n = 64$)	
Domain	**Subdomain**	**Description[a]**	**Yes[b]**	**No[a]**	**Uncertain[b]**
Knowledge and intellectual abilities	Knowledge base (A1)	Research methods: practical application	53	6	5
		Research methods: theoretical knowledge	46	12	6
	Cognitive abilities (A2)	Synthesizing	46	9	9
	Creativity (A3)	Argument construction	51	10	3
		Innovation	46	10	8
Personal effectiveness	Self-management (B2)	Preparation and prioritizations	49	11	4
	Professional and Career Development (B3)	Responsiveness to opportunities	49	10	5
		Career management	48	10	6
		Networking	46	13	5
Research governance and organization	Finance, funding, and resources (C3)	Infrastructure And resources	50	5	9
		Income and funding generation	57	5	2
Engagement, influence, and impact	Engagement and impact (D3)	Public engagement	47	9	8

[a]Complete description can be found in Vitae Researcher Development Framework.[14]
[b]Answer options to questions "In which areas of working with others would you like further/more support? Please choose the appropriate response for each item" in the survey.

examples would be appreciated. Another suggestion was to initiate lobbying of funders and raise key issues, such as short-term contracts or their set criteria, essentially promoting more flexibility for ECDRs. A European Union-wide mentoring program was also suggested to find new ways to collaborate. On a smaller scale, promoting writing groups well in advance of application deadlines could promote career progression. Finally, ECDRs wished for more acceptance and appreciation for those who remain at the same university for different phases of their career.

3.2.3 | Topic: Financial support/grant writing (C3)

Current approaches and best practices: Supervisors often give advice about future career opportunities. Having a conversation about this with their supervisor was perceived as useful for PhD students. University information sessions/support on grant writing were mentioned, though these were not always well known to junior researchers, and PhD candidates were often unaware of the existence of a grant support office at their university. Information is often found via online tutorials, podcasts, and blogs on grant writing. Regarding their experience to date, most junior researchers at an early stage of their PhD have little experience in seeking and applying for grants, in addition to travel grants to attend conferences.

The financial support provided to PhD students varies depending on the country where they are based. For example, some students have regular employment contracts, some receive scholarships, while others receive no funding. Regardless of where PhD students are based, undertaking a self-funded PhD was associated with a difficult balance between dedication to doctoral research and the need to keep a job to ensure financial sustainability. The possibility of obtaining "transition funding" for the period after the PhD was regarded as very helpful. Postdoctoral contracts and scholarships are commonly only temporary or short-term, which puts ECDRs in a precarious position and makes it hard for them to make future life plans.

Suggested future efforts: ECDRs need practical grant writing support, especially for their postdoctoral career. It was noted that funders often fail to consider the practicalities of applying for grants (eg, the time needed for writing). The possibility of receiving more information on European grants was discussed, including an overview of where to look for them, such as newsletters and central websites by networks supporting ECDRs, who would like to have access to overviews of funding possibilities (national and international) and to be "informed and aware." It was also suggested that organizations supporting ECDRs should host events for networking and sharing experiences and opportunities for discussing grant writing with other researchers. Moreover, there is a clear need for financial stability, and the recommendation to lobby governments and universities for more long-term positions for postdoctoral researchers was widely supported.

TABLE 3 Overview of most urgent needs selected five times or more by survey participants.

Needs based on Researcher Development Framework			Times selected in the top 3 participants ($n = 65$)
Domain	**Subdomain**	**Description**[a]	**Yes**
Knowledge and intellectual abilities	Knowledge base (A1)	Research methods: practical Application	7 (11%)
	Knowledge base (A1)	Research methods: theoretical knowledge	5 (8%)
	Cognitive abilities (A2)	Synthesizing	5 (8%)
	Self-management (B2)	Work–life balance	10 (15%)
Personal effectiveness	Professional and career development (B3)	Responsiveness to opportunities	7 (11%)
	Professional and career development (B3)	Career management	7 (11%)
Research governance and organization	Finance, funding, and resources (C3)	Income and funding generation	21 (32%)
	Research management (C2)	Research strategy	5 (8%)
	Finance, funding, and resources (C3)	Infrastructure and resources	7 (11%)
Engagement, influence, and impact	Working with others (D1)	Teamwork	7 (11%)
	Communication and dissemination (D2)	Publication	9 (14%)
	Communication and dissemination (D2)	Communication methods/techniques	7 (11%)
	Communication and dissemination (D2)	Communication media	5 (8%)
	Engagement and impact (D3)	Public engagement	5 (8%)

[a]Complete description can be found in Vitae Researcher Development Framework.[14]

3.2.4 | Topic: Dissemination of research findings using social media (D2)

Current approaches and best practices: Social media channels were used to recruit research participants or to share publications, conference contributions, or other news. Participants reflected on the fact that it was not always clear what type of audience they would reach through social media. Generally, various media platforms were used by ECDRs to disseminate research findings and updates, including Twitter, LinkedIn, ResearchGate, and websites (eg, project or department website, Alzheimer Society website). Facebook and Instagram were also mentioned, though rarely used. Overall, ECDRs had little to no support when it came to learning how to use social media for academic purposes. Social media use was not always directly encouraged by research organizations, and "learning by doing" was mentioned as the main approach to using social media in an academic context. However, some strategies for research dissemination via social media were highlighted, such as having a dedicated person voluntarily managing the departmental Twitter account, resharing posts from colleagues, or developing strong connections with established dementia organizations that share content.

Suggested future efforts: ECDRs reported a need for individual, hands-on support, such as a mentor trained in the dissemination of information and research findingson social media. Additionally, ECDRs would benefit from creating a communication and dissemination plan at the beginning of a research project and having practical guidelines within an established social media strategy of the research center or organization. For ISTAART PEERs and INTERDEM Academy, participants recommended the creation of a fact sheet (including information on and examples of different hashtags, terms, and visuals), as well as podcasts or webinars educating and training ECDRs on how to update LinkedIn or use Altmetric. The promotion of existing resources through these networks was also highlighted (see Supporting Information Appendix 2).

3.2.5 | Topic: Dissemination of research findings (using channels other than social media) (D2)

Current approaches and best practices: Participants reported that they had support from supervisors and the university for the dissemination of academic events (eg, participation in conferences). Some noted that they would appreciate guidance on choosing between the many different conferences and journals for both dementia research and interdisciplinary research. Some participants stated that communication and dissemination with a broader audience were commonly

encouraged. However, while some received support for this activity, such as access to a patient and public involvement (PPI) panel that could provide feedback on a broader audience dissemination of materials or co-present at dissemination events, others had little support in this connection. Many participants, even those who could consult PPI panels, wanted additional advice on communicating with a broader audience, including advice on alternatives to written communication (eg, public lectures, infographics), appropriate and accessible language for people living with dementia and their carers, and establishing a PPI panel for a study. A few participants mentioned that university support (eg, communication offices, workshops, audiovisual facilities) was available to them. It was also acknowledged that other stakeholders, such as national dementia associations, memory cafés, charities, and other research partners, served an important role in helping ECDRs to disseminate their research findings, as well as aiding their recruitment and engagement of participants.

Suggested future efforts: Participants reported a need for training on basic communication strategies, as well as hints and tips (eg, how to adapt language and create suitable visuals) on dissemination of research findings for a broader audience, particularly people with dementia and informal carers, as opposed to the general public. They also desired support related to formulating a dissemination plan. They recommended creating a dissemination plan at the outset of a PhD project or research study that encompassed various outlets and media (eg, conferences, social media, journal articles) and that would be reviewed regularly with supervisors. They advised organizations that support ECDRs to provide dissemination plan templates. These organizations should also provide an overview of dementia research journals and conferences to help ECDRs identify the most suitable ones to target for their research.

4 | DISCUSSION

This article reports on the focal points of career-related support needed in doctoral education and postdoctoral employment to create a healthier academic environment, including finance, work–life balance, dissemination of research findings, and supervision, both in general and in dementia fields in particular.

This study shows that ECDRs have various support needs and have a clear idea of possible future efforts for organizations like INTERDEM and ISTAART to meet their needs. In total, 65 ECDRs in Europe completed a survey, representing 12 countries, with most ECDRs working in the United Kingdom (n = 24) and the Netherlands (n = 17). Most ECDRs identified themselves as female (n = 56) and were PhD students (n = 38). Most support needs indicated by the ECDRs belonged to two domains of the Vitae Researcher Development Framework: (1) knowledge and intellectual abilities and (2) personal effectiveness. However, the need most frequently appearing in the top three (ie, finance, funding, and resources) belonged to the research governance and organization domain.

The need for support in finance, funding, and resources is a well-known challenge that many researchers experience. In other fields, there seems to be a growing concern among ECRs over the sustainability of a career in academia because of the competition for funding. The scoping review of Ranieri et al. highlighted that funding was one of the most mentioned barriers for ECRs in general.[20] According to workshop participants, research funding can be challenging to find,

TABLE 4 Overview of recommendations and who they apply to in particular.

Recommendations	Support organizations	Funding bodies	Universities
About funding and career support			
Make clear, centralized overview of available research funding for researchers – ideally per research area – covering national and international grants	X		X
Recognize importance of postdoctoral work and create long-term funding to create job security			X
Create "transition funding" or "seed money" to allow PhD students to write thesis and take first steps toward postdoctoral positions		X	X
Social well-being			
Take new approach to emphasize mental well-being and health, including more straightforward track to more sustainable and family-friendly career options within academia			X
Offer coaching programs			X
Mentoring and training			
Provide training and experience in employment outside academia	X		X
Offer training programs for researchers that include training in supervision skills for all supervisors and peer-to-peer mentoring	X		X
Enhance informal communication between ECDRs by organizing social activities, for example, during conferences	X		X
Dissemination			
Provide templates for dissemination plans and guidance on how to communicate with lay people[a]	X	X	X

[a]May also be interesting for patient organizations.

and they would benefit from an overview of options. Participants also mentioned the need for financial stability and suggested more long-term positions for postdoctoral researchers. This request has been raised many times.[21] The life of a postdoctoral researcher is uncertain and often poorly paid. The progression to permanent employment (eg, full-time professor) is uncertain and difficult to navigate. ECDRs in this study suggested creating "transition funding" for the period after their PhD and the need for policy initiatives that enhance the attractiveness of non-academic careers for PhD graduates. Other options are to foster flexibility in eligibility criteria by introducing conditional eligibility upon successful thesis defense. In other research areas, mentoring was critical when applying for independent funding.[20,22]

In addition, ECDRs highlighted work–life balance difficulties and felt somewhat pressured to keep working outside of core office hours. Previous studies identified constant peer pressure, high workload, financial difficulties, pressure to publish, lack of permanent employment, and an uncertain future as important stress factors.[23] These stress factors make it hard to maintain a healthy work–life balance, contributing to attrition rates.[24] Participants in this study suggested measures to improve well-being: strengthening peer support to share successes and failures and the availability of a work–life balance coach. Coaches may be beneficial for researchers' well-being because they can provide personalized advice and support. In a recent study of coaching interventions for improving the mental well-being of healthcare students, coaches were identified as being helpful for emotional and psychological support and professional development guidance.[25]

This article also provides evidence that ECDRs require support to produce outputs for non-academic audiences. The importance of disseminating research to diverse audiences has long been recognized, so it is critical that ECDRs are supported in this endeavor.[26] Researchers indicate that supervision, self-direction, and obtaining experience are essential to preparedness for disseminating research outputs.[27] Participating ECDRs indicated they needed support in particular with disseminating their research findings to a broader audience. This includes support with creating a dissemination plan early in their PhD trajectory. Organizations could further support ECDRs by providing templates or tips on how to communicate to and with a broader audience.

Lastly, new models for doctoral training programs should include training in supervision skills for all supervisors and peer-to-peer mentoring. ECDRs indicated that supervision was vital to their PhD progress and career after their defense. The importance of a supervisor for academic career advancement has been mentioned in many studies on ECRs.[20] ECRs with a supportive mentorship and positive role modeling tend to have greater job satisfaction.[20] Also, having a supportive supervisor seems to increase ECRs' trust in their own capabilities, promote scientific independence, and inspire a greater desire to pursue a career in academia.[20] Moreover, ECDRs feel peer-to-peer support could improve well-being and career management. Previous studies identified peer support as a coping resource.[24] To enhance informal communication among ECDRs, peer-to-peer mentoring and social activities during conferences could be organized.

4.1 | Strengths, limitations, and future research

The strength of this study lies in taking a European-wide focus, rather than a national one, thanks to the close involvement of international organizations. The study utilized an iterative mixed-methods approach, where the target audience directly generated the results. The mixed-methods approach identified many potential needs, and possible support strategies were explored in depth during workshops. Workshops were conducted both in person and online. As such, we made it possible for European ECDRs to join without having to find the funding to travel. Also, an established framework, the Vitae Researcher Development Framework, was used to structure the survey.

Some limitations of the study need to be acknowledged. First, using the Vitae Researcher Development Framework meant that ECDRs' needs were predefined. Even though ECDRs could add further needs in an open-text field, additional relevant needs might exist and require further exploration. The survey was opened during the summer period, which may have caused participants to miss out on joining the study as they were on leave. One notable limitation is the gender imbalance observed in our sample, with 86% of respondents identifying as women. It is crucial to clarify that this gender skew was not intentional but may reflect broader trends in the field of dementia and care sciences. The same limitations were reported in a previous international ECDR survey,[10] and prospective studies may aim to recruit more participants identifying as male or other (eg, genderqueer) to explore gender differences in support needs and display diversity. Notably, this strong representation of women in junior roles in research, combined with the challenges posed by work–life balance and career stability, may highlight an important area where additional support and resources are needed, particularly for female researchers progressing from junior to senior roles. Moreover, participants were mainly based in the United Kingdom and the Netherlands, indicating a recruitment bias, while other European countries were under or not at all represented, limiting the generalizability of the findings. Moreover, many suggestions to improve ECDR support were made during the first workshop. We attempted to prioritize these suggestions by ranking them; however, there were no notable differences in ranking scores, indicating that participants saw all support as important. Therefore, in the future, it might be more relevant to prioritize actions based on feasibility rather than importance. Further, intersecting identities were addressed in this paper; however, this should be further explored in a European context as intersectionality may lead to additional or different support needs and challenges. Finally, further discussion and actions to integrate best practices should be continued with stakeholders representing universities, professional associations, and conference organizing committees, rather than purely with ECDRs.

4.2 | Recommendations

Based on our findings, we formulated key recommendations to better support ECDRs in the future (Table 4). Each recommendation

was developed for a specific target group, namely, researcher support (organizations), funding bodies, and universities.

5 | CONCLUSION

ECDRs require support especially in the areas of funding and career opportunities, social support and well-being, and "wide-reaching" dissemination. ECDRs can guide the development and implementation of tailored support efforts, thereby functioning as active agents. The findings and recommendations from this study may therefore be beneficial for dementia organizations, funding bodies, and universities in their efforts to promote not just career development of ECDRs but subsequently also dementia research and the quality of life of people directly affected by the condition. Yet, given that the specific requirements and challenges for ECRs can vary across countries and regions, it is essential to consider our findings as a foundational basis for further tailored support strategies, rather than relying on them as universally applicable recommendations.

ACKNOWLEDGMENTS

This article was facilitated by members of INTERDEM and INTERDEM Academy and the Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART), through the Professional Interest Area to Elevate Early Career Researchers (PEERs). The views and opinions expressed by the authors of this article represent those of the authors and do not necessarily reflect those of INTERDEM, INTERDEM Academy, PEERs, ISTAART, or the Alzheimer's Association. The authors thank Dr. Claire Sexton, Jodi Titiner, and ISTAART, as well as Prof. Marjolein de Vugt, Prof. Frans Verhey, and INTERDEM for their support. This article is part of the efforts of INTERDEM Academy and the European Working Group of the ISTAART PEERs. Questions related to this Professional Interest Area can be directed to the current chair, Dr. C. Elizabeth Shaaban: Beth.Shaaban@pitt.edu. Questions related to INTERDEM Academy can be directed to the coordinator, Dr. Fania Dassen: interdem-masterclass@maastrichtuniversity.nl. Finally, we thank Alzheimer Europe and the experts and note takers at the workshops, especially Christophe Bintener, Dr. Sarah Wallcook, Fanny Monnet, Adam Smith, Dr. Niels Janssen, Dr. Minke Kooistra, and Dinant Bekkenkamp from Alzheimer Nederland, and all participants who joined the survey and sessions. No specific funding was received for this study. The work of Rita Maldonado Branco is funded by national funds through the FCT – Fundação para a Ciência e a Tecnologia, I.P., and, when eligible, by COMPETE 2020FEDER funds, under the Scientific Employment Stimulus – Individual Call (CEEC Individual) – 2020.04083.CEECIND/CP1589/CT0002. The work of Eithne Heffernan is funded by a National Institute for Health and Care Research (NIHR) Three Schools Dementia Career Development Award (Ref. 20000123 Dementia Career) and an NIHR Clinical Research Network East Midlands research fund targeting underserved communities (Ref. UF18).

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest. Author disclosures are available in the supporting information.

CONSENT STATEMENT

All human subjects provided informed consent (for details see section 2.5).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Dupont C, Gilissen J, Dassen FCM, et al. Supporting early-career dementia researchers: Identifying support needs and ways forward via a European study. *Alzheimer's Dement*. 2023;1-13. https://doi.org/10.1002/alz.13530