Nurse Researcher

Using the Visible ImpaCT Of Research (VICTOR) questionnaire to evaluate the benefit of a research fellowship programme

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Abstract:	Introduction There is increasing emphasis on developing a nurse, midwife and allied health profession (NMAHP) workforce that is research active, with training for clinical academic careers being provided by the National Institute for Health and Care Research (NIHR). However, the low number of successful applicants suggested there were barriers in achieving this. The Centre for Nursing and Midwifery Led Research (CNMR) launched a fellowship programme in 2016 to backfill NMAHP time two days a week, for up to a year, to give them time to make competitive applications to the NIHR. The aim of this paper is to report the evaluation of this fellowship programme. Methods The Visible ImpaCT Of Research (VICTOR) tool was developed to describe the organisational impact of research. It contains 23 items in six domains, which are responded to as yes/no/not yet. Respondents are asked to provide written detail to support the response. VICTOR was designed for multiple stakeholders to complete the questionnaire so impact could be measured from various perspectives. The 2016/17 (n=6) fellows completed the questionnaire. These were analysed using a framework approach. Results Key benefits of participating in the programme included protected time for research, opportunities to develop collaborations, increasing intra and inter-professional awareness of NMAHP research, peer-reviewed publications and conference presentations. Challenges included lack of support from line managers, limited value placed on NMAHP research and failure to backfill posts. Conclusion Despite some challenges with the fellowship programme, all recipients found it to be a positive experience and undertook significant scholarly activity.
Keywords:	Clinical academic, research leadership, fellowship
Additional Information:	
Question	**Response**
Have all named authors contributed to the article and reviewed and approved its content before submission?	Yes
Please confirm that you have read and agree to our Publisher's Agreement that is available here	Yes
Have you been asked by RCNi to write	No

this article?	
Have you submitted this manuscript elsewhere?	No
Has this manuscript already been published?	No
Do you have copyright for all the images, graphics and figures included with your submission?	Yes
What is the word count of your article including the abstract, body text, boxes, tables and figures, and references?	4034
Author Comments:	We are submitting this to the special edition on research leadership. I've added the point-by-point response to the reviewers as a manuscript because it didn't fit any of the other categories. Acknowledgements: We would like to thank the previous directors of the CNMR: Kaye Mitchell and Lesley Baillie. Funding for the fellowship programme was gratefully received from UCLH Charity, National Brain Appeal and UCL Midwifery Legacy Fund. The CNMAR is funded by UCLH Charity and the views expressed in this article are those of the author and not necessarily those of UCLH Charity or the National Brain Appeal.

Comments from the Editors and Reviewers:

Reviewer #1
This is a very important topic and very relevant in today's environment. The paper was written from a very UK standpoint and needed to be presented more for an international market. It would have been good in the introduction and the discussion to draw on international evidence to support the paper.

- Thank you for your feedback. International evidence to support the deficit of research active nurses, midwives and allied healthcare professionals is now supplied (please see highlighted text).

The sample was very small.

- This has been acknowledged in the limitations.

The methods section needs more information. It is unclear what the programme was. It would have been good to see what interns were given within the programme to enable readers to review learn and potentially implement in their own context. How the data was gathered for this paper was not clear and not discussed in the methods section.

- Details of VICTOR are presented on page 8, along with a link to the toolkit containing the questionnaire. A table has been added summarising the items within the VICTOR questionnaire. Additional detail has been added to the methods on its administration and the approach to the analysis. The details about what the fellowship programme entailed is provided on page 7. This makes it clear that each fellowship is unique to the requirements of the applicants and what they need to achieve to make a competitive application to the NIHR (or similar) for a doctoral fellowship.

The results section was disappointing. The authors discussed presenting the data against the 6 pillars of the Victor tool, but then the data was not presented against these, just the diagram was inserted. The results section was quite superficial and lacked a good level of analysis of the data obtained.

- We have included text in the methods clarifying that the results are presented as the authors of VICTOR described. We have expanded to provide some narrative to accompany this.

The conclusions and recommendations/implications for practice are quite known and not new information. I think the discussion needed to extend the findings more and be more strategic in how this can be embedded in practice.

- The discussion has been amended to include text (highlighted) to support how the findings can be embedded to support improvements in practice.

The literature in this area is quite prevalent especially since 2019 and this is not reflected in the paper.

- Recent relevant literature has now been referenced in this paper to reflect the widening evidence base.

Reviewer #2:

Thank you for the opportunity to review this manuscript titled Using the Visible ImpaCT Of Research (VICTOR) questionnaire to evaluate the benefit of a research fellowship programme. Overall the manuscript is well-structured and written. There are a few editorial errors noted below.

- Thank you for your comment and taking the time to review our manuscript.

In the abstract there is a typographical error in the aim. Please amend to ..report the evaluation of this fellowship programme.

- We have amended the text as requested.

Under the heading results in the abstract, suggest clarify that the key benefits relate to participation in the programme.

- Text has been added to the results as requested.

In the second paragraph of the introduction, a better link is required between the descriptions of the two studies mentioned to enhance flow and clarity.

- The text has been amended to provide a better link.

Suggest rephrasing the first sentence of the second paragraph of the methods section eg the individual perspectives of members of the research team?

- This has been amended as requested.

Using the Visible ImpaCT Of Research (VICTOR) questionnaire to evaluate the benefit of a fellowship programme for nurses, midwives and allied health professionals

Abstract

Introduction

There is increasing emphasis on developing a nurse, midwife and allied health profession (NMAHP) workforce that is research active, with training for clinical academic careers being provided by the National Institute for Health and Care Research (NIHR). However, the low number of successful applicants suggested there were barriers in achieving this. The Centre for Nursing and Midwifery Led Research (CNMR) launched a fellowship programme in 2016 to backfill NMAHP time two days a week, for up to a year, to give them time to make competitive applications to the NIHR. The aim of this paper is to report the evaluation of this fellowship programme.

Methods

The Visible ImpaCT Of Research (VICTOR) tool was developed to describe the organisational impact of research. It contains 23 items in six domains, which are responded to as yes/no/not yet. Respondents are asked to provide written detail to support the response. VICTOR was designed for multiple stakeholders to complete the questionnaire so impact could be measured from various perspectives. The 2016/17 (n=6) fellows completed the questionnaire. These were analysed using a framework approach.

Results

Key benefits of participating in the programme included protected time for research, opportunities to develop collaborations, increasing intra and inter-professional awareness of NMAHP research, peer-reviewed publications and conference presentations. Challenges included lack of support from line managers, limited value placed on NMAHP research and failure to backfill posts.

Conclusion

Despite some challenges with the fellowship programme, all recipients found it to be a positive experience and undertook significant scholarly activity.

Keywords

Evaluation, research, fellowships, clinical academic careers

Introduction

Integrating research into healthcare policy and practice is a global imperative (Uzochukwu et al 2016). Nurses, midwives and allied health professions (NMAHPs) have an integral role in undertaking research to enhance the quality, organisation and safety of patient care (CQC, 2018; AUKUH, 2016). Historically, research has been universally valued within medicine and dentistry, with clinical academic research pathways embedded within their career structures. Internationally, this culture of opportunity does not apply for NMAHPs (Smith et al, 2018). In the UK, while 4.6% of medical consultants work in a clinical academic role, only 0.1% of the NMAHP workforce are clinical academics. The aspiration is for 1% for the NMAHP workforce to be in clinical academic roles by 2030. (Baltruks and Callaghan, 2018)

Currently the national extent of on-going NMAHP research activity is uncharted. Two recent UK studies have explored the routes through which NMHAPs pursue a research career. A Nottinghamshire study (Trusson et al 2019) encompassing 67 survey respondents and 16 in-depth interviews, investigated NMAHPs motivations and experiences in embarking on academic pathways and enabled comparisons with their medical colleagues. Interventions to support NMAHPs earlier in their career trajectories were proposed. An investigation of 134 doctoral and 96 post-doctoral NMHAPs applicants at University Hospital, Southampton, found that the limited availability of research roles, clinical academic positions and funding presented barriers to career progression (Avery et al, 2021). Both studies highlighted the competing demands of undertaking clinical and academic roles and proposed action to enhance the visibility and access to clinical academic career pathways. In neither study was formal evaluation of the benefit to the individual, organisation or the patient

recorded. Olive et al (2022) and Newington et al (2021) addressed this omission in their evaluations of NMAHP clinical academic programmes, describing tangible benefits for professional development, clinical teams and patients, and in terms of embedding a research culture.

The emergence of clinical academic careers (CACs) in nursing can be determined from 2007. An enquiry into research capability and capacity in nursing (UKCRC, 2007), underpinned three key recommendations: a structured research-based educational pathway; a flexible career structure to enable nurses to work clinically as well as having a research role; and NHS careers advisors to promote the range of opportunities in research (Finch et al, 2007).

Initially, the proposed educational pathway to support research-interested nurses was not accompanied by any funding or resources. This initiative did not progress until 2013 when the National Institute for Health Research (NIHR), in collaboration with Health Education England (HEE) launched the Integrated Clinical Academic (ICA) fellowship programme. Five levels of funding were introduced to support NMAHPS from pre-masters level to senior post-doctoral research (HEE, 2015). This was akin to the well-established Clinical Academic Training (CAT) fellowships for medics and dentists. Funding was provided for the research aspect of the role and training within the clinical role continuing to be covered by the National Health Service (NHS). The ICA award today incorporates funding for the whole fellowship, including clinical development.

Annually, the ICA fellowships are awarded to approximately 170 healthcare professionals in England (NIHR, 2019). To date, nurses have been less successful

with their applications in comparison to other allied health professionals (NIHR Strategic Review of Training, 2017). Emphasis on direct patient care within nursing cultures can create conflicting role expectations for undertaking clinical academic research (Van Oostveen et al, 2017) and these professional asymmetries in CAC progression require further investigation.

Providing support for nurses and midwives in a university hospital

The NIHR provides funding for 20 Biomedical Research Centres (BRCs) across England to support research activity within the NHS. In 2010 funding from University College London (UCL)/University College London Hospitals NHS Foundation Trust (UCLH) BRC was provided to establish the Centre for Nurse and Midwife Led Research (CNMR). The CNMR was led by a senior clinical nurse supported by two professors of nursing. The launch of the CNMR accompanied the launch of the Trust nursing and midwifery research strategy. This focused on five clinical themes: cancer, women's health and children, long term conditions and ageing and acute and critical care, each area led by a research-active senior nurse or midwife (Mitchell et al 2015). The aim of the CNMR was to support the development of clinical academic careers and research capability for nurses and midwives in the Trust, which was provided through a host of activities (Table 1).

Table 1: Aims and activities provided by the CNMAR

Aims	Examples of activities
Increase research capability	• Provide research education through formal lectures, 1-to-1 personalised support and a series of handbooks

	• Monthly newsletter including available training for the forthcoming months • Doctoral support group • Action learning sets for NMAHP on intern and fellowship programmes
Increase research capacity	• Fellowship and intern programme • Support the delivery of research, i.e., guidance through regulatory processes • Support research grant and fellowship applications • Support CAC progression
Raise the visibility of research undertaken by NMAHP across the Trust	• Publish *CONNECT*, the Trust's in-house academic journal • Lead the annual research conference • Host a Royal Literary Fund Writing Fellow to support written communication • Include a synopsis of new publications from NMAHP in the monthly newsletter • Publish an annual report, including academic achievements for the previous 12 months

In 2015 the scope of the CNMR extended to include allied health professionals (AHPs) in line with contemporary guidance (AUKUH 2016) and was rebranded as the CNMAR. No additional financial or operational resources were provided. While the CNMAR was successfully increasing the visibility of research within the Trust, there was limited success with NIHR fellowship applications. With the support of UCLH Charity and the

UCL Midwifery Legacy Fund, funding was provided in 2016 to launch a Trust-based fellowship programme. NMAHPs on a substantive UCLH contract, in post >12 months could apply for funding to backfill their jobs for up to two days a week for 12 months. The CNMAR fellowship allowed protected time to undertake research and prepare a competitive application to the NIHR (or equivalent) fellowship scheme. An additional £1,500 each was also available for directly incurred costs.

The objectives and financial outlay of the CNMAR fellowship was uniquely determined depending on the individuals' level fellowship (doctoral or post-doctoral) and the requirements to achieve a competitive application. For example, costs arising from pilot/feasibility studies, patient and public involvement and education and training. Additional support included an honorary contract with the university to facilitate electronic journal and database access

Applicants required support from line managers to be released from clinical practice for two days a week for 12 months and engagement of an academic supervisor/mentor. Candidates attended a formal interview, including a 10-minute presentation on "How does your proposed research fit with the CNMAR, hospital and NIHR strategies?". The panel included the Deputy Chief Nurse, Director of the CNMAR, a clinical academic psychologist and an academic nurse from a university.

No formal evaluatIon had been proposed to accompany the fellowship programme, only the submission of a final written report outlining the activity undertaken and achievements. The aim of this study was therefore to evaluate the first two cohorts of

fellows, using a questionnaire developed to measure the organisational impact of research.

Methods

The **V**isible **I**mpa**CT** **O**f **R**esearch (VICTOR) questionnaire (available at www.https:hseresearch.ie/wp-content/uploads/2021/09/victor-pack.pdf) (accessed 17.5.22) was developed by Yorkshire and Humber Collaborations for Leadership in Applied Health Research and Care (CLAHRC) to capture the impact at organisation (hospital) level of research being undertaken in the NHS. VICTOR, developed with a community of practice and from a comprehensive review of the literature, is based on six pillars of impact: participant health, service and workforce, knowledge, influence, economy, and research capacity (NIHR 2019). Each pillar contains 3-5 open ended questions, with prompts, to guide reflection. In total, it contains 23 items in six domains (Table 2), which are responded to as yes/no/not yet. Respondents are asked to provide written detail to support the response.

Table 2: Summary of the pillars and items within VICTOR

Pillar	Items
A. Health benefits, safety and quality improvements for research participants and carers	• Health benefit • Experience • Patient safety • Social capital
B. Service & Workforce impacts	• Service change • Clinical or generic skills • Workforce

	• Collective action • Guidelines
C. Research profile and capacity	• Research culture • Research awareness • Research capacity • Networks and collaborations • Engagement
D. Economic impacts	• Cost saving/cost effectiveness changes • Commercialisation • Income
E. Influence	• Cohesion • Reputation • Recruitment and retention of staff
F. Knowledge generation and knowledge exchange	• Form dissemination • Knowledge sharing • Actionable outputs

VICTOR enables collated responses and insight into the individual perspectives of members of the research team, e.g. principal investigator, research nurse, clinical staff and laboratory staff to assess the wider impact of the study. For example, if a clinical trial included a new piece of equipment, traditional methods of measuring impact would focus on whether it was effective, but VICTOR captures the impact on the wider workforce in developing a new skill through learning how to use the new equipment.

The multiple perspectives are important in identifying the 'hidden' impacts on the organisation, the benefits to the hospital over and above the primary outcome of the study.

While VICTOR was developed to measure impact at organisational level, discussion with the development team in the CLAHRC (JC) and the Head of Research and Innovation in a hospital that had extensive experience of using it (JH), indicated it could be used as a guide for reflection in other research activity. In 2018 VICTOR was therefore administered to the first two cohorts of CNMAR fellows (n=6). A minimum interval of 12 months following completion of the fellowships allowed for outcomes from the fellowship to be realised (i.e., grant applications, acceptance of conference abstracts or submitted manuscripts for publication). The word version of VICTOR was emailed to the CNMAR fellows with one follow-up reminder after three weeks. Analysis followed the methodology provided by the authors (see link above). The open-ended responses were analysed using content analysis and were presented as the six pillars of VICTOR. While the VICTOR hexagon was designed to be a standalone template. Supportive quotes have been provided in the text.

Results

The six fellows comprised: one nurse, two midwives and three allied health professionals (two physiotherapists and a dietician). They submitted a total of 16 fellowship/research grant applications (1 to six per person); five (83%) were shortlisted for fellowship interviews and three (60%) were successful. Fellows published 14 manuscripts, made 15 conference presentations and attended 14 conferences/training days.

Completed VICTOR questionnaires were returned by five fellows. The results are shown in Figure 1. The fellowship allowed valuable time to develop an application: *"The fellowships help realise research potential, and without them I think it would make delivering the NMAHP strategy almost impossible aside from those consultant level roles".* There was an increase in NMAHP research activity: *"Within [directorate] there is a lot of clinical research ongoing… little of this is currently [NMAHP] led"*. Finally, fellows were clinically based so their colleagues were exposed to option of a clinical academic career: "*Having the opportunity to participate in research I feel has improved staff morale and motivation*".

Although mostly positive about the scheme the fellows reported a number of challenges: the 12 month honorary contract with the university for the fellowship duration had concluded when NIHR interviews were held and fellows had no access to library facilities to explore more recent evidence. While managers authorised their support for the application, following appointment managers did not always honour this concord so additional negotiations were required for the appointee to be able to continue. A key issue related to being able to backfill the applicant's post. Some managers took receipt of the funding but did not back fill the post. Whether this was due to a lack of available applicants was unclear, but as a consequence there was additional pressure on the rest of the team.

Figure 1: Summary of the impact of the fellows

Discussion

Operationalising the CNMAR fellowship scheme enabled insight into the organisational and managerial structures available to support those combining academic research with clinical practice and the future commitment required. The

programme granted awardees access to a network of professional role models including senior academics. These supportive clusters enabled discussion of fellows' aspirations and ambitions and signposting to routes for progression of CACs. The key benefits of the scheme included increasing research capability (number of researchers) and capacity (increase in papers published in peer reviewed journals). These benefits, combined with the increased visibility of NMAHPS undertaking research, may impact how individuals see the role of research in relation to their own career choices. Collectively, these positive outcomes can influence perceptions of how the Trust values research led by professionals outside of medicine.

Nevertheless, as mirrored in evaluations by Nightingale et al (2020) and Olive et al (2022), fellowship benefits were largely driven opportunistically by individual practitioners, not organisational processes. Institutional barriers to the CNMAR fellowship programme were apparent. Those submitting a doctoral-level application needed to have identified a supervisor within a university to provide support and guidance on the fellowship application. Elected supervisors did not always provide regular meetings or the pastoral support to steer progression on the NIHR ICA application. Formal guidelines to frame the expectations and requirements of the supervisory role (now in place) were not embedded at this time. Coaching and mentoring and peer support meetings were later implemented by the CNMAR to bridge this gap.

Perhaps unsurprisingly, organisational preparedness and the internal visibility of the fellowships was limited. Uncertainty exists as to where research active NMAHPs 'sit' within higher education institutions (HEIs) and NHS settings, and organisational

responsibility for these groups remains ambivalent. Research undertaken in the UK and Sweden indicates leadership of fellowship schemes can be compromised by differing priorities and lack of integrated practices between HEIs and healthcare organisations. (Springett et al. 2014, & Nyström et al (2018). Conflicts can therefore arise through different role expectations and demands in the practitioner's and educator's contexts (Nyström et al 2018).

Greater focus should be given to brokering the education relationships to align education and health service leadership to anchor clinical academic research pathways. This cannot rely on individual goodwill. Remuneration structures must ensure clinical research leaders in the NHS no longer spend significant time periods assessing fellowship applications outside their paid roles. NHS primary objectives reside with improvement in patient care outcomes, integration of services and cost efficiencies. HEIs compete to achieve income generation through grants and enhanced reputation through peer reviewed publications (Springett et al. 2014). Competing organisational priorities and activities, economies, political decision making, organisational changes and delays may undermine the infrastructure to support research.

The CNMAR fellowship experience revealed that research aware, supportive enthusiastic managers, who understood the value of research, played a significant role in enabling programme success. This finding was echoed by Nightingale et al's (2020) study, identifying managers as 'gatekeepers' to research. In a climate of workforce staff shortfalls, effective planning to allow backfilling of the fellow's post prevents the burden of responsibility falling to the clinical team. Development of new

job descriptions with protected time for research could legitimise the research as 'fundamental' rather than 'optional' ensuring research time is planned from inception as an initiative conducted outside rostered clinical hours. Connecting the positive impacts of fellowships with staff recruitment and retention could help assuage participation challenges centred on staffing concern (Olive et al, 2022; Newington et al. 2021).

Perceptions of the value of clinical academic NMAHPs in the NHS, and their visibility, have not evolved in line with the skilled professions themselves. Locally, the achievements captured in *Connect,* elevate the profile of NMAHP research, but this does not align with the limited organisational attention accorded to their efforts, activities and outputs. Internationally, the heterogeneous nature of NMAHP research should be illuminated and a deeper exploration of their co-priorities, i.e., high task volumes, patient advocacy expectations and time constraints, should be conducted. Wider evaluation of the impact of NMAHP research on patient experiences and outcomes, organisation of service delivery and service efficiencies is required.

Implications for practice

- A contractual agreement must be established to foster committed partnerships between HEIs and NHS organisations
- Frank discussion of the challenges encountered in fellowship programmes should be conducted between HEIs and NHS.
- Positive initiatives/outcomes in tertiary education and clinical settings should be shared to enhance HEI and NHS partnerships and fellows' experiences'
- Job descriptions should include time allocation for review of fellowship candidate's applications regardless of outcome.

- Showcasing research successes and the benefits of NMAHP research must evolve to secure organisational 'buy in', the precursor to widening access to clinical academic pathways.

Limitations

This evaluation was based on the perspectives of a small cohort of interns in one region so the findings may not be transferable to other organisations. Two interns left the Trust following the programme, one remains research active in the hospital, two NIHR fellowships are ongoing and one participant is continuing in their professional role whilst retaining a research role.

Future research must address the longer term professionals and organisational impact of fellowship/intern programmes and how they differ nationwide and internationally. The impact in relation to the increasing prevalence of healthcare burnout (Mongomery et al, 2019) should also be explored. Diverse professional role comparisons and investigation of NMAHP role symmetries in clinical academic successes should be undertaken. Improved understanding of how dynamics within professional cultures, institutional narratives and structures can impede but also facilitate research engagement in different professional groups, could assist in designing more enabling programmes for nurses and midwives. There is also potential to explore if positive practices and new collaborations can be gained from medical clinical academic pathways, to support non-medics in their research journeys. Gender and ethnicity of participants should be recorded to determine if specific groups are leading or trailing in research.

Conclusion

While VICTOR was developed to draw out and highlight the impact of a research project or portfolio, it proved helpful in guiding reflection on the organisational impact of the fellowship programme. This small study revealed how leadership priorities, organisational values and culture impact academic research in clinical practice. Supervisors and mentors have a key role to play in providing pastoral support and navigating the parallel priorities of NMAHPs arising from their clinical roles. Their investment must extend beyond academic support to provide encouragement, reflective discussion and if necessary, intervention with partnering organisations to resolve issues arising from competing demands in practice and research.

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