

Evaluation of the New Dynamics of Ageing Programme

Carol Holland, Holly Gwyther, Helen Griffiths, Ian Nabney, and Jonathan Tritter
Aston Research Centre for Healthy Ageing

Executive Summary

This report presents the findings and conclusions from an evaluation of the academic quality of the New Dynamics of Ageing (NDA) research Programme, carried out by Aston Research Centre for Healthy Ageing (ARCHA) between September 2016 and March 2017.

In order to fairly appraise the NDA programme, we need to understand that it was a product of its time. There have been significant developments in the scientific and societal landscape since this work, and work like it, that means that such a programme might be designed or delivered differently now. Life expectancies have increased, our awareness of the risk factors for conditions associated with older age such as dementia and frailty have progressed, societal attitudes to ageing have become more complex, and our understanding of stereotyping and identity on the process of ageing has changed. Further, technological advances have opened up possibilities for research which were not even considered ten years ago.

Origins and background to the NDA Programme

The NDA Programme was the first, cross-Research Council, multidisciplinary research Programme on ageing to be commissioned, with the ultimate aim of improving the quality of life of older people. It was a pioneering collaboration between five UK Research Councils: led by the ESRC (Economic and Social Research Council), with the involvement of the Engineering and Physical Sciences Research Council (EPSRC), the Biotechnology and Biological Sciences Research Council (BBSRC), the Medical Research Council (MRC) and the Arts and Humanities Research Council (AHRC). It ran over a ten year period, and incorporated 35 different research projects and more than 300 researchers. It also developed a number of international collaborations, most notably with the Canadian Institute of Ageing.

This evaluation was commissioned to consider the scientific achievements of the NDA Programme with a view to informing any future Research Council investment in ageing research. The evaluation assesses:

1. The scientific quality and academic impact of NDA Programme research.
2. The contribution that the academic work has made to relevant research fields, and the achievement of research objectives, including the degree of multidisciplinary, innovation, international focus, and other scholarly attributes (and lessons learned regarding maximising these attributes).
3. The capacity building achieved within and beyond academia.
4. The value added to NDA by the programme organisation, including synergy between research project, research coherence and enhanced collaborations and impact, and enhanced capacity to interact with a variety of stakeholders. Also, the added value of the Programme being funded jointly by five Research

Councils.

5. Future research priorities in the area covered by the Programme.

Methods

Information was systematically collated from project related documentation and online resources. Peer reviewed outputs were appraised for methodological quality (ranging from 1 to 4*) using the Mixed Methods Appraisal Tool [MMAT: 7]. The MMAT is a checklist for concomitantly appraising the quality of original qualitative, quantitative and mixed methods studies. Papers were concurrently allocated to discipline experts for an in-depth quality appraisal, according to a Research Evaluation Framework (REF) exercise (assessed as ranging from 1 to 4*). We also reviewed and collated information on early career researchers (ECRs). Value added was appraised through a project-by-project synthesis of information, an overarching thematic analysis (framework analysis) and four comparative case studies carried out by discipline experts.

Key findings

Assessment of the scientific quality and academic impact of the programme

- The NDA programme has produced 133 peer-reviewed articles to date, with a significant international scientific impact in a range of fields.
- Over 75% of papers achieved an MMAT rating over 3* for methodological assessment, while 57% achieved a 3* or higher quality appraisal rating, and 19.5% received the highest accolade of 4*, but 13 of 35 projects produced no papers within the time span that were rated as 4*.
- This illustrates a clear achievement of 3 and 4* rated research both in terms of methodological quality and overall scientific quality, including internationally excellent and world leading research, with some clearly providing important step changes and major influence on a research theme or field.
- Over 80% of the papers have been cited internationally.
- Some of the research clearly opened up new avenues of research and this was particularly noticeable in the multidisciplinary collaborations, while other studies have made important contributions to methods and to terminology used in socio-gerontological studies today.
- Although several projects had generated limited numbers of published academic outputs, a few projects managed the ideal combination of non-academic impact and quality academic outputs, notably Grey and Pleasant Land, SomnIA, Sus-IT, Ages and Stages, Quality of Life, HALCYon, Stress and Immunity, Cardiovascular Ageing, Look at Me! and Music for Life.
- Critically, the issues of timing, funding duration (or availability of follow on funding) and researcher continuity had a bearing on the variable number of academic outputs available.

Appraisal of capacity building in ageing research

- The capacity building capability of the programme was commendable. We identified and mapped 54 early career researchers' career development to date. The majority, 74%, had remained in academic work but when the job roles for those who had left academic work were considered, we determined that the NDA project had benefited 92.6% of those who had taken part.
- The cross-Council funding clearly furthered the careers of a number of individuals, and this was particularly evident where novel methods were being developed, notably in design (the Envision project) or across the collaborative research projects (NANA, HALCyon and SomnIA).
- The added value of the programme structure was critically reflected in career based workshops and training for early career researchers. ECRs were provided with unique travel and networking opportunities, as well as receiving policy, innovation and discipline specific training.

Appraisal of added value

- That the NDA programme had an influence that was greater than the sum of its parts is an understatement. There is a range of evidence to suggest that the programme organisation had an enduring influence on science in ageing related research in addition to the direct achievement of individual project objectives. For example, its influence on integrative European research strategies (notably the European Road Map for Ageing Research) still resonates today, as does its part in the development of multidisciplinary working.
- This was a ground-breaking research programme that owed as much to the overall programme "add ons" as to the individual project and programme research funding. The ECR workshops and facilitation to attend European FLARE meetings, the NDA conferences, support for policy links, the organization of the Older People's Reference Group (OPRG) to enable the involvement of older people, and the international networking were all facilitated by the Director and his team.
- The success adds support to the concept of an integrated programme with an active and influential leader supporting the researchers, for example, with advice on follow-on funding, or creating joint writing initiatives, liaising in terms of policy impact.
- While it is apparent that projects did not necessarily work with other projects, there is evidence of working across and between disciplines. There are examples where the exchange of ideas, methods and theories is evident, notably from the arts and humanities, but also in terms of product/technological developments, and where basic science meets other disciplines. Understandably, there are learning points to be considered in terms of the step- change in scientific methods required to achieve full interdisciplinary and mixed methods working; these include determining an appropriate and rounded publication strategy as well as developing convergent methods and analyses.
- However, the preparatory networks were seen as an important factor in developing multidisciplinary working programmes, and were perhaps essential to the endeavour of the research councils to fund multidisciplinary cross-Council work.

- Funding for multidisciplinary programmes is essential for complex societal and health challenges such as ageing. Multidisciplinary and indeed holistic thinking are essential, and this understanding has been crucial in developing the way forward in international research. The coherent working of the research councils was crucial in enabling this.

Other findings

- This was a developmental programme which laid some of the groundwork necessary to begin to change academics' and funders' approaches to "stakeholder", or end-user involvement in research from the outset.
- There were some excellent examples within NDA where cross-sector working as full partners in the research was apparent (e.g. TACT3), but this was the exception rather than the rule. Other projects included business or services as participants or in their targeted dissemination (e.g. social services and banks in the Financial Abuse project) and this strategy was more common, but perhaps not as effective as working together from the research design phase of a study.
- The inclusion of older adults in research on ageing was only beginning to develop during this period and provides significant insights from their experiences (some of them quite negative) of the NDA OPRG. Importantly though, their call for full valued involvement from the planning stages of a call, of a project and of applications should be heard, and researchers in 2017 may now have more evidence to respect the value of this process.

Future challenges in ageing research

Since the inception of the NDA, life expectancies have increased and research that purports to be working with an older population but stops their recruitment of participants at the age of 75 or 80 years old is no longer appropriate. Conversely, longitudinal studies have also demonstrated long term influences of earlier trauma, socio-economic status, psychological health and lifestyle on later life health and wellbeing, so a need for studies of ageing which include much earlier age ranges is also salient.

Societal attitudes to ageing have become more complex, with constant conflicting images of frail older adults contrasting with positive images of active ageing. Our understanding of influence of stereotyping and identity on the process of ageing and people's need for care and contribution to society is changing, with related needs for research to examine these influences.

There is also scope to improve the disciplinary links. Links between Psychology and Biology, or Health Psychology and Medicine could be highlighted, as understanding of the importance and possibilities of prevention and rehabilitation has increased. There was notably very limited cognitive psychology or dementia research in the NDA, and almost no work on frailty. With current developments of understanding of risk factors for both dementia and frailty, and behavioural and psychological processes involved in this, the need for research on health behaviour and health education is clear.

Evaluations of interventions of any nature were limited perhaps reflecting the developmental and basic science stages of the research. Investigations of impact have noted the important role of social sciences in linking biological and engineering sciences to business and health translation. Work on e- health applications or methods for integration of care are current research needs which were also less clear ten years ago.

Conclusions

Understanding that the NDA and its emphases was a product of its time is important. New developments have emanated from this work, and work like it, that means that such a programme might be designed differently now, with modified focus and with a more developed understanding of multidisciplinary, interdisciplinarity, cross-sector partnerships and of innovation and intervention development. Greater focus on implementation, prevention or intervention science would now be possible that perhaps was not envisaged ten years ago, and a greater recognition of older people's contribution and agency in the changing experiences of ageing, as opposed to an emphasis on any kind of deficit model would hold promise. Our increased understanding of risk factors and potentials for prevention, and the benefits of holistic and person- and social environment-centred approaches could have very significant impacts if such a programme was instituted today. In terms of academic outputs and capacity building, it is recommended that exploitation of data, and translation of such into tangible outcomes are maximised through selective follow-on funding and further development of strategies that link research funding to ongoing institutional commitment to individual researchers.

Recommendations

Lessons for different groups of users of this report are summarised in Table I.

Table I: Lessons for different user groups

For the ESRC and other research funders:

- Reviewers of grant proposals should consider whether a multidisciplinary or collaborative approach would lead to greater success within ageing related research projects.
- Interdisciplinary research can provide new insights and greater penetration than single discipline based research when the research question is complex. Collaborations add strength to a proposal but need not be multi-centre or cross-Council. However, for it to reach the success criteria for any single grant awarding body, the review panel would need to have a good understanding of the approaches and their validity outside of the normal panel remit, suggesting training or processes for reviewers could be developed.
- The length and breadth of awards has a significant impact on academic success. Facilitators of success include the funding of preparatory networks which enable high quality researchers to develop collaborative research proposals, and longer-term awards, or evidence based follow on funding to maintain academic momentum, facilitate international collaborations and build research capacity.
- Method richness, cohesive support and stimulation of cross-discipline fertilisation of ideas should be supported.
- While it is definitely important to fund innovative and curiosity-driven research, projects that are not trying to achieve methodological innovations should have a much greater responsibility to deliver impact.

- Outputs are a critical component of academic success. However, the academic legacy of multidisciplinary, complex and/or innovative projects, specifically arts and humanities projects, may take more time. Further, local and social impacts are not

always reflected in publication rates. Irrespective, academic rigour does need to be captured.

- The difference in the numbers of publication outputs between projects is not always proportional to the investment. Importantly, outcomes other than academic papers, which have direct impact on population understanding of issues, on cultural richness or on practice are more apparent in large international, collaborative, or multidisciplinary projects.
- While many projects were exemplary in their engagement with stakeholders and use of participatory methods, some projects did this less well. Stakeholders, particularly older adults, should be a key component of all ageing research programmes and projects from the outset.
- Embedding ECRs and PhD students within a project generates long-term benefit to disciplines and to the research area. Consideration should be given to how funders support high calibre researchers to return to work after career breaks and assist with career planning during short-term contracts.

For academic departments and wider academia

- While there are clear contributions to be made from single discipline and single funder projects, particularly where new concepts need exploring, interdisciplinary research can result in a wider range of methods and cross-fertilisation of ideas which improve study quality and academic reach.
- There are positive benefits to researchers being co-located, in terms of increased rates of project progression and mutual understanding of project goals.
- Stakeholder engagement, particularly through inter-sectoral partnership, and with older adults, needs to be strategic and embedded in projects from the outset. In this way, projects benefit through further insights, e.g. economically or health care related, and in terms of pathways to impact.
- Maximising the output from data is as important as collecting it. Consider pre-preparing a publication strategy to maximise exposure. Ensure that papers are submitted to high impact factor journals first and that appropriate thought is given to dissemination to a wider audience. The attribution of outputs in multidisciplinary projects is critical.
- Researchers should focus on developing credible pathways to impact to generate a lasting research legacy, e.g. in order to create lasting health benefits for people. For example, directly through companies, health organisations and policy makers.
- Mixed method projects would benefit from more systematic integration of methods.
- Consider embedding ECRs and PhD students within a project in order to generate academic output and build capacity.
- Grant holders should acknowledge their funding source on publications and personal webpages.

For programme directors

- Through active management of the projects, the programme director has a unique overview and understanding of the variety and scope of the Programme. This awareness is critical in the generation of new collaborations or identifying potentially synergistic projects.
- Dedicating time to training events and writing workshops is particularly effective in building a research community, building capacity in the research area, developing academic outputs, and creating a strong academic legacy from the Programme.

- Project outputs can be maximised through follow-on funding.
 - The role of the programme director is vital in whole programme dissemination planning and ensuring individual projects have clear dissemination plans that are revisited at regular intervals.
 - A programme director can add significantly to career development for ECRs by adding programme meeting, facilitating access to networking. Career development plans could be a useful addition to any future programme.
 - Facilitating follow-on funding may be one way that full outcomes of the funded research are supported to come to fruition.
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