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Delivering the 'H' in NHMRC: the case for implementation research in mental health

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In their editorial, 'Funding the 'H' in NHMRC', Baum and colleagues make a strong case for the value of public health and social determinants research, and the need for increased funding in this domain.¹

In particular, the authors highlight a key issue with which we wholeheartedly agree: the 'tendency for certain methodologies to be privileged over others', which often results in meaningful and practical research being sidelined.

This paper supports and extends Baum et al.'s commentary on the favouring of certain methodologies by drawing attention to another important area typically overlooked by funding bodies: implementation research. This is particularly true in the field of mental health. In this commentary, we draw attention to the dearth of translational research in mental health, and suggest that Australia is lagging behind in its approach to implementation science. Further, with regards to academic versus 'real-world' impact, we question whether funders of mental health research have the balance right.

Bridging the quality chasm

The Federal Department of Health and Ageing (DoHA) states that its mission is to create "better health [and active ageing] for all Australians"² Inherent in this statement is the notion that high-quality, evidence-based treatments should not only be developed and refined, but should also be available and accessible to the people they were designed to assist. The practical problem that all health systems face is the estimated 17-year gap between the acquisition of knowledge generated by randomised controlled trials and the incorporation of this knowledge into routine clinical practice.³ This so-called 'quality chasm' suggests that we are getting a poor return on our investment in research,⁴ as the

treatments deemed most efficacious are not being provided to people 'on the ground'. It indicates the need for greater emphasis on implementation research.

Implementation research (or implementation science) "seeks to identify which techniques are effective for encouraging the translation of evidence into practice, and to provide information about real-world variability in effectiveness and cost effectiveness of interventions, and about the practicalities of introducing and sustaining new treatments or services"⁵ This research is quite distinct from the process of implementation itself, which simply describes the use of evidence-based interventions in practice, without an understanding of the myriad of variables that may lead to an intervention's success or failure. The value of implementation research, therefore, is its ability to maximise the efficiency and effectiveness of interventions being delivered to individuals on the ground. For example, a paper was recently published describing the impact of online Cognitive Behavioural Therapy (CBT) training.⁶ Two groups of mental health practitioners participated in a 12-week training period; one group received 15 minutes of support every two weeks from a clinical psychologist (supported), while the other received no extra support (unsupported). Completion rates for the program were 96% and 76%, respectively, at the end of 12 weeks. The latter rate was consistent with results from previous research on online CBT programs,^{7,8} while the former completion rate represented an improvement on previous studies. The following year, a cohort of health professionals was enrolled for the same online training program, and given full access to the program without clinician support (similar to the unsupported research group). After six months, only two individuals (of 37) had completed the program – a completion rate of just 5%. The

substantial difference in completion rates between the research and community-based groups begs a number of questions that highlight the value of implementation research. Were there contextual parameters at play such as the selection procedure, or other specific factors intrinsic to the research protocol but absent from a traditional clinical setting? Did the three-month timeline vs. open-ended schedule affect completion rates? Was the difference due to inherent differences in the populations, or the amount they paid for the program (\$200 vs. \$440)? Bearing in mind that the Australian Psychological Society was funded to roll out online CBT training to 4,000 therapists between 2011 and 2013, answers to these questions have obvious practical and financial implications for the delivery of effective psychological interventions.

Implementation research in Australia: progress and barriers

There is a current lack of infrastructure, funding and support for implementation studies; however, it is important to acknowledge that there have been some significant advances in this field in Australia in the past few years (as noted by Baum et al.), especially with regards to investment in capacity building. More specifically, the NHMRC has highlighted research translation as a priority in its 2013-15 Strategic Plan, citing that it aims to accelerate research translation and build future capability for translation. This will be achieved through a range of dedicated streams of funding for translating research into practice including Translating Research into Practice (TRIP) and Practitioner Fellowships, Partnerships Projects/Centres for Better Health, Centres of Research Excellence and targeted calls for research. It has also recently launched a Research Translation Faculty, which is tasked with identifying the most significant gaps between research evidence and health policy and practice, and developing ideas for ways to address those gaps.

In addition to governmental investment, there are other independent organisations that facilitate the translation of health research into practice (e.g. the Sax Institute, Australian Institute for Health Innovation). A number of universities around the country have also introduced undergraduate and postgraduate level courses focused on implementation principles.

These advances are worthwhile and important; however, it should be noted that many of these programs and facilities tend to be focused on medical rather than mental health research. Further, the initiatives are new and it is clear that a genuine and substantial investment in knowledge translation is more of a goal for the future, rather than a current reality. Presently, implementation studies receive only a fraction of the funding allocated toward basic and efficacy research. In 2013, translational research received just 6.9% of the annual allocation of NHMRC funds, compared to 73.1% for research that “creates new knowledge”.⁹ This imbalance is due, at least in part, to the fact that purity of research design is still valued as a top priority by major Australian health research funders.

When experimental rigour is favoured over ecological validity, implementation research is placed at an intrinsic disadvantage. By its very nature, research in this field tends to be less experimentally amenable, due to a host of often unpredictable (but crucially important) organisational, cultural, professional and personal variables. While researchers aim to develop and implement scientifically robust studies, these factors necessarily affect study design in a way that they do not affect RCTs. Accordingly, some researchers are put in a position where they have to choose between designing less controlled studies that have real-world relevance, or more traditional, fundable research.

There are additional characteristics of implementation studies that may serve as barriers to funding (and conducting) such research, including limited generalisability and complex research designs. The nature of implementation science is context-dependent. The purpose of these studies is to determine what works for whom under specific circumstances. Necessarily, the generalisability of such research will be relatively more limited than for those studies examining theories or models. Further, the methodology that is commonly used to answer implementation questions bridges the qualitative/quantitative divide, with mixed methods approaches often used to capture both the size and meaning of a given effect.

Despite the benefits associated with this complementary approach, consumers, researchers and funders are often unfamiliar with the full gamut of these methodologies, which results in difficulty or – at least –

additional effort comprehending the entirety of these complex designs.

Lessons from the United States

While Australia is in the early stages of venturing into mental health-related implementation science, the United States provides a good example of a nation that has already begun to embrace this style of research. This is largely because the process of funding and supporting implementation research was put in place many years ago. A key example of wide-scale, institutional implementation research is the Quality Enhancement Research Initiative (QUERI), which was introduced into the US Veterans Affairs (VA) system in 1998. QUERI has a dedicated Mental Health centre, with a mission to “improve quality of care, outcomes, and health-related quality of life for Veterans with mental health conditions by promoting research to close gaps in knowledge and implementing evidence-based practice”.¹⁰ Given that VA operates the largest mental health program in the US, their dedication to ‘closing the gap’ paves the way for other mental health organisations to invest in similar approaches. In addition, the National Institute of Mental Health has a dedicated dissemination and implementation research program, which funds studies that facilitate effective transmission of mental health information to multiple stakeholders. In conjunction with VA and NIMH, a number of US universities also participate in collaborative training programs aimed at nurturing a new generation of implementation researchers. For example, the Implementation Research Institute is a two-year learning collaborative hosted by Washington University that provides individualised mentoring to help early career researchers shape a research agenda in implementation science and prepare a competitive research grant proposal. Implementation researchers also meet regularly at a range of national conferences, one of which is dedicated solely to mental health research (Seattle Implementation Research Collaborative; SIRC). Finally, and importantly, implementation researchers have an appropriate outlet where they can share their findings. *Implementation Science* is a peer-reviewed online journal that publishes research on methods to “promote the uptake of research findings into routine healthcare in clinical, organisational or policy contexts”. The journal’s editorial and advisory boards

consist of academics, health professionals and policymakers, and the audience is intended to be equally diverse. Overall, institutional support, funding and appropriate opportunities for publication lend legitimacy to the field of implementation research in the US, and facilitate the reconciliation of professional and practical goals. That is, it is feasible for mental health researchers to obtain funding for and publish studies with real-world impact, and to simultaneously progress in academia.

The next steps

Implementation science can only succeed and thrive in this country when there is broad acceptance of the field as valid and legitimate. For this to occur, funding bodies, reviewers and researchers working in mental health must change their mindset.

For the most part, we still exist within a scientific community that rewards researchers who utilise tightly controlled designs, and conduct studies in ‘siloes’ academic environments. A new culture of reward for translational research, together with genuine cross-disciplinary collaboration is required. Academic centres must model this mindset by creating and nurturing opportunities for young researchers to follow this path, providing incentives and awards for contributions to the field. Research and health training programs will also need to expand their coverage of research paradigms (i.e. both qualitative and quantitative) to ensure that future researchers (and funders) are better equipped to conduct and interpret complex implementation designs. Additionally, new partnerships must form between different research disciplines, and across the research and practice sectors. These collaborations will broaden our collective skill set and facilitate truly translational research.

The introduction of funding mechanisms to support applied, real-world research is a welcome change, and we encourage more funding from a greater variety of sources. Co-funded partnerships between major health providers and researchers may offer a more viable funding model. For example, the Health Research Council of New Zealand has spearheaded an initiative known as Research Partnerships for New Zealand Health Delivery (RPNZHD), which funds partnerships that position research within practice or service delivery settings. A unique feature of this model is that the participating decision

maker must make a contribution of at least 25% towards research costs. In addition to improving cost-effectiveness, this model is likely to increase ownership and uptake from the service provider, in contrast to the current model where an evidence-based practice is mandated for roll-out within a service, often at the expense of the provider, but without their input.

Further, as new funding mechanisms for implementation research emerge, we need to have appropriate outlets for publication so that the findings can be shared with relevant stakeholders. As noted, implementation studies are often context specific, so it may not be feasible, appropriate or beneficial to publish in an international journal such as *Implementation Science*. However, local (i.e. national) studies, although conducted in different settings, will have greater relevance and generalisability, as the broader context (e.g. in terms of federal and/or state regulations and policies) will still be applicable. Accordingly, reviewers for existing Australian mental health journals may need to broaden their view of appropriate submissions and consider non-randomised, pragmatic studies that offer helpful insights into who, what and how interventions work in the real world. It would also be advantageous to introduce an Australian publication that focuses specifically on studies pertaining to translating evidence into practice, or to have specific sections of journals allocated to implementation research. Additionally, to maximise and facilitate the value of these studies, researchers should make every effort to highlight in their publications which (if any) elements of their research findings may generalise to other contexts.

Finally, we encourage efficacy and effectiveness researchers to take it upon

themselves to start thinking differently about their research. It is not necessary to abandon individual research interests or methods. Rather, we suggest that is feasible (and beneficial) to simply factor in some key implementation issues when designing studies; for example, balancing fidelity with adaptation, considering both internal and external validity, including multiple stakeholders, using mixed-methods and taking a pragmatic approach.

Conclusions

Mental health researchers are on the cusp of a new era, one in which we not only value studies that develop and refine interventions, but also those that investigate the ways they can be effectively implemented in real-world settings. We have made significant progress towards this goal, but there is still much to do to ensure that scientists can produce meaningful work that is also feasible and fundable.

We need to shift our collective mindset to support research that has real-world impact, even if it doesn't conform to traditional standards for academic impact. In order to this, we urge the mental health community to recognise the importance of translational research through increased funding for implementation studies, as well as the creation of an Australian journal (or journal space) specifically geared towards implementation science. Further, we call on those who are deeply embedded in the science of mental health research (and are often furthest away from real-world implementation), to work together with clinicians and policy makers to ensure that implementation research gets the attention and support it deserves.

References

1. Baum F, Fisher M, Trewin D, Duvnjak A. Funding the 'H' in NHMRC. *Aust NZ J Public Health*. 2013;37:503–505.
2. Department of Health and Ageing. *Vision Statement* [Internet]. Canberra (AUST): Commonwealth of Australia; 2012 [cited 2012 Dec 9]. Available from: <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-overview.htm>
3. Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington (DC): National Academy Press; 2001.
4. Chorpita BF, Regan J. Dissemination of effective mental health treatment procedures: Maximizing the return on a significant investment. *Behav Res Ther*. 2009;47:990-3.
5. Craig P, Dieppe P, McIntyre S, et al. *Developing and Evaluating Complex Interventions: New Guidance*. London (UK): Medical Research Council; 2008.
6. Bennett-Levy J, Hawkins R, Perry H, et al. Online Cognitive Behavioural Therapy (CBT) training for therapists: Outcomes, acceptability, and impact of support. *Aust Psychol*. 2012;47:174-82.
7. Dimeff LA, Koerner K, Woodcock EA, et al. Which training method works best? A randomized controlled trial comparing three methods of training clinicians in dialectical behavior therapy skills. *Behav Res Ther*. 2009;47: 921-30.
8. Weingardt KR, Cucciare MA, Bellotti C, et al. A randomized trial comparing two models of Web-based training in cognitive-behavioral therapy for substance abuse counselors. *J Subst Abuse Treat*. 2009;37:219-27.
9. National Health and Medical Research Council. *Research Funding Datasets 1990 – 2013* [Internet]. Canberra (AUST): Commonwealth of Australia; 2013 [cited 2013 Sep 17]. Available from: <http://www.nhmrc.gov.au/grants/research-funding-statistics-and-data/funding-datasets>
10. United States Department of Veteran Affairs. *Mental Health QUERI Mission and Goals* [Internet]. Washington (DC): VA; 2013 [cited 2013 Sep 17]. Available from: http://www.queri.research.va.gov/mh/mission_goals.pdf