HACT
Ideas and innovation in housing

Working paper 2

State of evidence-based practice in other sectors

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Contents

1. Introduction 3
2. Addiction treatment 4
3. Crime 5
4. International development 6
5. Impact investment 7
6. Social policy 8
7. Education 10

1. Introduction

As the housing sector attempts to move towards a more evidence-based approach, it is perhaps useful to look at the role of evidence in other sectors. Though medicine is the most obviously evidence-based discipline, there are several examples of other sectors that are increasing the role of evidence in their standard practice and policymaking. This paper comprises a series of sections, each examining how evidence is used in a different area: addiction treatment, crime, international development, impact investment, social policy, and education.

Surveying the practice in these sectors is intended to serve as more than just background interest, it is a valuable exercise that can provide pointers for the potential future direction of evidence in housing. First, it acts as reassurance that applying approaches to evidence-based practice that have been developed in medical settings in other sectors is entirely possible. Secondly, the sectors studied are at various stages along the path of evidence inclusion, and by noting obstacles that have presented themselves it is possible to be prepared for the appearance of similar difficulties in increasing the use of evidence in housing. Finally, and perhaps most crucially, it offers the chance to see how these obstacles have been overcome, providing a large pool of knowledge from which housing can draw in order to bolster its efforts to undertake a similar process.

2. Addiction treatment

Addiction treatment, despite being a field with clear relations to medicine, is yet to fully integrate evidence into its practices. Indeed, the evidence suggests that few addicts receive anything which could reasonably be called evidence-based care.[1] However, the literature would suggest that addiction treatment has started the process of orientating itself more towards evidence-informed intervention.

Addiction treatment is at a stage where evidence-based research certainly exists, and offers a fairly substantial body of work on 'what works'. However, the principal issue currently being addressed is how this research can be transformed into evidence-based treatment.[2,3] As a sector, housing will have to confront the same difficulty, if it wishes to become more evidence based, and hence addiction treatment has some insights to offer.

Perhaps the most valuable lesson can be learned from the issues evidence-based addiction treatment has encountered around 'fidelity'.[4] Simply, this refers to the difficulty in ensuring that broader implementation of a practice tested in robust a study is faithful to intervention design as tested; evidence-based treatment relies not only on a rigorously tested and proven intervention, but on its faithful implementation. Principally, in the field of addiction treatment, the issue of fidelity has focused on the common disparity in expertise between researchers and real-world implementers.[3] One suggested solution is to offer field training, as opposed to classroom training, to the staff responsible for implementation.[5] An alternative solution is to develop pragmatic trials, ensuring they reflect actual practice situations, thus offering a robust assessment of how the intervention will work when implemented.

For their part, staff need to be open-minded about new methods, which may question their existing methods, and not see new evidence as a threat to their knowledge and experience.[3]

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[1] The National Center on Addiction and Substance Abuse at Columbia University (2012) *Addiction Medicine: Closing the Gap between Science and Practice*, available: http://www.casacolumbia.org/addiction-research/reports/addiction-medicine

[2] California Society of Addiction Medecine (no date) *Evidence-Based Medicine and Unproven Treatments*, available: http://www.csam-asam.org/evidence-based-medicine-and-unproven-treatments

[3] Glasner-Edwards, S. and Rawson, R. (2010) *Evidence-Based Practices in Addiction Treatment: Review and Recommendations for Public Policy*, available: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2951979/

[4] Gallon, S. (no date) *About Evidence-Based Practices*, available: http://adai.washington.edu/ebp/about.htm

[5] Taxman, F.S. and Belenko, S. (2012) *Identifying the Evidence base for "What Works" in Community Corrections and Addiction Treatment*, available: http://cebcp.org/evidence-based-policing/the-matrix/inclusion-criteria-methods-key/http://www.springer.com/cda/content/document/cda_downloaddocument/9781461404118-c1.pdf?SGWID=0-0-45-1277151-p174125259

3. Crime

Crime prevention is a field that is at the beginning of the process of adopting evidence-based programmes as standard practice. Whilst hierarchies of evidence have been crafted[6,7], reflecting those in medicine with RCTs and systematic reviews at the top, RCTs are relatively rare in the policing and crime reduction field.[8] Consequently, the literature has attempted to identify ways in which evidence could be better included in the sector's general practice.

Key to this is cultural change, instigating a commitment to the generation of evidence and the implementation of evidence-based policing. Engaging with evidence should become part of routine police practice. Currently, and this is not unique to policing, reading research is not seen as 'real work', and is often perceived to be a threat to established expertise and methods.[6] If policing is to become evidence based, keeping up to date with the latest research and keeping an open mind about its potential implementation should become central to the day-to-day work of policing. Additionally, where evidence is already being used it needs to be supported and encouraged.[6]

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[6] Center for Evidence-Based Crime Policy (no date) *Inclusion Criteria & Methods Key*, available: http://cebcp.org/evidence-based-policing/the-matrix/inclusion-criteria-methods-key/

[7] Prendergash, M. (2011) *Issues in Defining and Applying Evidence-Based Practices Criteria for Treatment of Criminal-Justice Involved Clients*, available: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3246745/

[8] Bullock, K and Tilley, N. (2009) *Evidence-Based Policing and Crime Reduction*, available: http://epubs.surrey.ac.uk/410694/1/Karen%20Bullock%20-%20Evidence%20Based%20Policing%20and%20Crime%20Reduction.pdf

4. International development

This is a sector in which there are several important players that demonstrate strong commitment to evidence-based initiatives. Numerous evidentially strong trials (generally RCT-based) have been run in recent years. 3ie (International Initiative for Impact Evaluation), an international grant-making NGO that seeks to promote the use of evidence in international development, has awarded over 200 grants since 2008 for the undertaking of impact evaluations and systematic reviews[9]. All the evidence from every project assessment and systematic review is held open-access on its website, to allow evidence to be disseminated as widely as possible throughout the field. 3ie, as well as being a key player in the creation and dissemination of evidence, works closely with policymakers to ensure that the work of researchers is properly and clearly communicated, whilst also encouraging an understanding of, and enthusiasm for, evidence-based programmes amongst those who have the power to implement policy.[9]

In terms of the evidence itself, 3ie does not propose a particular hierarchy, such as is found in medicine and is proposed by other organisations. However, this is to avoid creating prescriptive instructions to follow, rather than because there are not some methods that are better than others for answering questions of effectiveness. Whilst there is no proposed hierarchy as such, 3ie does state that RCTs are very often the most appropriate and that, in the cases where an RCT is not appropriate or feasible, some quantitative method must be used in order for a project to be considered evidence based.[10]

The influence of the work of 3ie, and similar organisations, is demonstrated by the adoption of evidence by the Department for International Development (DfID). DfID has identified robust research as crucial to implementing efficient policy, both in terms of delivering value for money and achieving successful outcomes. Consequently, it has stipulated that the quality of evidence available must be considered in all DfID policy decisions. In order to assess evidence, DfID uses its own 5-point scale of evidence assessment, ranging from 'no evidence' to 'very strong evidence', with level 5 indicating that high-quality quantitative experimental methods (generally RCTs) have been used.[11]

[9] International Initiative for Impact Evaluation (no date) *About 3ie*, available: http://www.3ieimpact.org/en/about/

[10] White, H. (2009) *Some Reflection on Current Debates in Impact Evaluation*, available: http://www.3ieimpact.org/media/filer_public/2012/05/07/Working_Paper_1.pdf

[11] Department for International Development (2014) *Assessing the Strength of Evidence*, available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291982/HTN-strength-evidence-march2014.pdf

5. Impact investment

It is not only internationally that evidence has been adopted as central to investment in social projects. Nesta, a British charity that aims to foster and enable innovative social projects, has devised its own standards of evidence to judge the impact of its investments. This is a five point scale, ranging from, at one end, justification of why a product or service could have an impact, to, at the top end, demonstrable evidence that a project both works and could be scaled up and successfully operated by someone else in a different location whilst continuing to have a direct impact and remaining financially viable. Nesta has made this scale, and thus evidence, central to its business operations, using it to assess the impact of current investments, screen potential new investments for impact and to determine future funding decisions.[12]

[12] Nesta (2013) *Standards of Evidence for Impact Investing*, available: http://www.nesta.org.uk/sites/default/files/standards_of_evidence_for_impact_investing.pdf

6. Social policy

In recent years the UK government has made notable efforts to increase the role evidence plays in the formation and implementation of social policy. The Cabinet Office in particular has developed a framework to attempt to bring evidence into the heart of social policy by adapting medical hierarchies of evidence to make a social policy hierarchy of evidence. This is a four-point scale, placing systematic reviews at the top, above RCTs, quasi-experimental studies and, finally, pre-post studies at the bottom.[13] It is interesting to note that whilst other hierarchies may continue below pre-post studies, the Cabinet Office's hierarchy does not, suggesting a commitment to relatively robust evidence-based research and policy, with three of the four levels in the hierarchy requiring at least quasi-experimental methods.

In order to facilitate the alignment of policymakers with evidence, the Behavioural Insight Team (formerly part of the Cabinet Office and now jointly owned by Nesta, the Cabinet Office, and its employees) has published a 9 step methodology, titled 'Test, Learn, Adapt', which clearly outlines how RCTs can be effectively and efficiently carried out in social policy.[14] The belief is that this methodology has the potential to be adopted in almost all aspects of public policy. Indeed, as the Behavioural Insight Team points out, in a climate of ever decreasing government budgets, the adoption of evidence is increasingly crucial to effective social policy.

This is not to suggest that RCTs are not already performed, or are in fact a totally new idea to policymakers. In 2003, for example, the DWP ran an RCT looking at the effect of different methods of 'signing on' on the success of finding employment, finding that many of the alternative methods suggested to the existing method actually had a negative impact upon jobseekers' chances of finding jobs.[14] This is a good example of how evidence-based policy can be as much about assessing and validating current methods as it is challenging them. The Behavioural Insights Team itself has run trials with local authorities, HMRC, DVLA and the Courts Service, and found that in many cases the infrastructure and evidence necessary is already in place, and an RCT can be carried out with only a small amount of extra resources, proving it a myth that RCTs are inherently expensive and difficult to run. Furthermore, in some cases the initial extra expense of an RCT is more than offset by the more effective and efficient policy it allows to be introduced. For example, the Behavioural Insights Team ran an RCT with the Courts Service to see whether texting payment reminders to people who owed court fees, before sending in bailiffs, and found that the intervention greatly increase the punctual payment of the fees and decreased the needs for bailiffs.[14] This is a good example of how an RCT can often be effectively run with little extra resource (in this case, an automated text message system),

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[13] Leigh, A. (2009) *What Evidence Should Social Policymakers Use?* Available: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.379.1455&rep=rep1&type=pdf

[14] Haynes, L., Service, O., Goldacre, B. and Togerson, D. (2012) *Test, Learn, Adapt: Developing Public Policy with Randomised Control Trials*, available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/62529/TLA-1906126.pdf

but can generate sizeable efficiency increases, both in terms of value for money and the effectiveness of policy itself.

Further signs of the commitment to evidence in social policy can be found in the government's recent creation of the world's first network of What Works centres.[15,16] These were announced by the government in March 2013 and consist of a series of centres that will publish evidence on intervention effectiveness, assess the evidence, publish clear synthesis reports and share their findings. The centres cover health and social care, crime reduction, early intervention, local economic growth, quality of life for the elderly, education, and wellbeing; between them, their respective policy areas account for £200 billion of public spending. These centres are intended to be independent of government, and to exist outside of its influence to ensure that all government policy in these areas is as rigorously evidence-centric as possible.

Whilst social policy cannot yet be described as entirely evidence-based, in recent years the UK has taken strong measures to encourage it, and, assuming the political will remains, it may not be long before the UK can be considered one of the most rigorous pursuers of evidence-based public policy.

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[15] HM Government (2013) *What Works: evidence centres for social policy*, available: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/136227/What_Works_publication.pdf

[16] Cabinet Office (2013) *What Works Network*, available: https://www.gov.uk/what-works-network

7. Education

Whilst not fully integrated, evidence is increasingly strongly followed within the education sector. The Sutton Trust and Education Endowment Foundation (EEF) have developed the 'Teaching and Learning Toolkit',[17] which includes a scale for assessing the strength of evidence in education interventions, and is widely referenced throughout the sector. In order to get a top rating of 5, a programme must demonstrate high quality evidence from at least five robust and recent meta-analyses, whilst even getting a rating of two requires at least one meta-analysis. Similarly, Nesta uses its scale (as detailed in the 'impact investment' section above) to assess evidence in education.[18] The stringency of both these hierarchies – i.e. the highly robust evidence needed to achieve the top rating – gives an indication of where the education sector is currently at with regards evidence. Whilst other sectors have somewhat softer criteria for rating how evidence-based a programme is, evidence-based policy and practice has advanced far enough into the mainstream in education that its criteria can be stricter.

Whilst there has been, and remains, some push-back against the use of quantitative evidence in education, RCTs have been proven to be eminently possible to deliver in the school environment. In March 2013 the Department for Education launched two large RCTs nationally.[19] The first is testing whether allowing schools to compare pupils' results and collaborate on methods can improve standards in maths and science. 480 schools and thousands of teachers are involved in this RCT, which is due to report in summer 2015. The second, due to report in spring 2015, aims to test the new Safeguarding Assessment and Analysis Framework (SAAF) tool for child protection by randomly assigning social workers in trial areas to use either the new method or the existing one, in order that results be compared. Both these cases demonstrate that RCTs can be conducted in non-medical settings, including those where complex interactions affect outcomes. Indeed, the EEF has funded more than 55 successful projects in primary and secondary schools, many using RCTs, and has been allocated £135 million by the DfE to improve the quantitative data available in education.[19] Another scheme, launched in 2013 with a £4 million budget called 'Closing the gap: test and learn', will see a number of strategies analysed to establish which are the most effective and could be implemented more widely.[19]

Further, the education sector has learned from the medical sector that the implementation of research-based policy does not merely have to be top down. In medicine doctors are encouraged to submit any strategies they have implemented that appear to them to be having success for rigorous

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[17] Education Endowment Foundation (no date) *About the Toolkit*, available: http://educationendowmentfoundation.org.uk/toolkit/toolkit-a-z/about-the-toolkit/

[18] Nesta (2014) *From Good Intentions to Real Impact: Rethinking the role of evidence in education businesses*, available: https://research.pearson.com/content/plc/prkc/uk/open-ideas/en/articles/standards-of-evidence/_jcr_content/par/articledownloadcompo/file.res/Good%20Intentions%20V2%20Web%20Ready.pdf

[19] Department for Education, Gove, M. and National College for Teaching and Leadership (2013) *New randomised controlled trials will drive forward evidence-based research*, available: https://www.gov.uk/government/news/new-randomised-controlled-trials-will-drive-forward-evidence-based-research

appraisal. Noting this, the National College for Teaching and Leadership is encouraging teachers with the best track record for reducing attainment inequalities to put forward their best classroom-honed strategies for rigorous RCT testing, to provide an evidence base for potential future roll-out of the most successfully developed classroom methods.[19]

Therefore, as we can see, the education sector is increasingly strongly orientated towards evidence-based teaching. However, it has by no means completed this move, and enthusiasm for evidence in education still perhaps outweighs the sector's current capabilities to use it. Furthermore, the UK still lags far behind other countries, especially the USA in terms of undertaking RCTs in education.[20] This probably helps to make the lessons of the UK's education sector be useful for the housing sector, as it allows the chance to look at what difficulties the education sector has faced in moving towards more evidence-based teaching, and what is being suggested to overcome them. The education sector has a series of lessons that are likely to be highly applicable to the journey the housing sector will take.

Firstly, it is helpful to look at some of the answers the sector has come up with to the misgivings those who say RCTs cannot be generalised beyond the medical field. The first, and most easily dismissed, is that RCTs simply are not feasible in education. As noted above, there are numerous cases disproving this. The more interesting lessons that can be learned are around how education has adapted RCTs to its specific requirements. Principally, this has consisted of recognising that, whilst RCTs have their origin in medicine, not all of the practical and ethical considerations involved in medical research are germane to education. For example, it has been argued that RCTs are more difficult in education as performing a 'blind' trial is more challenging.[21] In medicine, a blind trial requires both doctor and patient to be unaware of whether the patient is in the control or intervention group, to minimise the possibility of the results being affected by this. In education, this is more difficult, as typically teachers will need to know whether they are part of the control or intervention group, in order that they know which teaching method to use. Similarly, the pupils will likely be able to work out whether they are receiving a new method of teaching, and therefore part of the intervention group. Additionally, if RCTs are run within schools, it is almost impossible to ensure segregation of control and intervention groups, as pupils from different classes will inevitably talk to each other. Both these drawbacks increase what is known as the 'Hawthorne effect', otherwise known as 'observer bias', in which, during social science experiments, participants commonly change their behaviour (consciously or unconsciously), if they know they are being observed, making conclusions less robust. Nonetheless, these are not insurmountable problems to running RCTs in education, merely matters that need to be considered and designed around. For example, the Hawthorne effect can be counteracted by designing RCTs to take place at school level, rather than class level, and by choosing non-adjacent schools to take part.

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[20] Goldacre, B. (2013) *Building Evidence into Education*, available: http://media.education.gov.uk/assets/files/pdf/b/ben%20goldacre%20paper.pdf

[21] Hutchison, D. and Styles, B. (2010) *A Guide to Running Randomised Controlled Trials for Educational Researchers*, available: http://cebcp.org/evidence-based-policing/the-matrix/inclusion-criteria-methods-key/

One way in which it has been found that education is actually perhaps even more suited to RCTs than medicine is that it is already routine to undertake pre-post tests. We might not think of them as such, but start and end of term exams are just pre-post tests. This means that the education sector already has existing structures and practices that can be easily adopted into rigorous research, on upon which further research can be 'piggybacked'.[21]

Nonetheless, the education sector still has some improvements to make, and again this provides the chance to see what the housing sector could import. Firstly, widespread cultural change still needs to be instigated, teachers need to be shown that evidence-based practice is not about telling them what to do, or questioning their methods, but in fact frees them from top-down government edicts based on political whims. Secondly, more needs to be done to disseminate evidence and share best practice between schools and teachers. Thirdly, and perhaps most crucially, teachers need to be trained to be evidence literate. In Singapore, for example, career advancement for a teacher is almost impossible without publishing research. Whilst it is not being suggested that this should be the case in the UK, it certainly would be valuable if research literacy became part of general teacher training and professional development. This would leave teachers more equipped to become critical consumers of research themselves and allow them to pose research questions themselves and identify where they feel evidence is lacking, as doctors do in medicine.[20]