tandem grant

Health Psychology and Implementation Science in tandem: developing questionnaires to assess theoretical domains and multiple goal pursuit

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Much research and funding is invested into developing, piloting and evaluating complex interventions, including theory-based health behaviour change interventions. However, the transfer of effective interventions into widespread application is relatively less frequently a focus of health psychological research. The translational gap of moving research evidence into practice is a limiting factor to the impact that effective interventions can ultimately make on public health (Glasgow, Klesges, Dzewaltowski, Bull, & Estabrooks, 2004; Grol & Grimshaw, 2003). Research in implementation science focuses on understanding how best to bridge this gap by studying the uptake of research findings into routine care (Foy, Eccles, & Grimshaw, 2001), such as healthcare professionals' delivery of interventions demonstrated to be effective. Implementation science is a growing area of research to which health psychology is providing an impactful contribution.

The uptake of evidence-based interventions into routine care often requires changes in healthcare professionals' behaviours (Bartholomew, Parcel, Kok, Gottlieb, & Fernández, 2012; Cane, O'Connor, & Michie, 2012; Fleuren, Wiefferink, & Paulussen, 2004; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). Therefore, the same theoretical processes described in our contemporary theories of behaviour change can be applied to healthcare professionals' implementation behaviours, and effective implementation may be therefore informed and guided by behaviour change theory (Eccles, Grimshaw, Walker, Johnston, & Pitts, 2005). For instance, a popular technique for promoting behaviour change in health professionals is the provision of information via dissemination of clinical practice guidelines. Contemporary theory and evidence in health psychology suggests that targeting knowledge is often necessary yet insufficient to change their behaviour. Thus, it is perhaps not surprising that uptake of recommendations in clinical practice guidelines are typically suboptimal. Just as interventions targeting health behaviours, effective program adoption and implementation may also be helpfully informed by theory-based intervention development and evaluation.

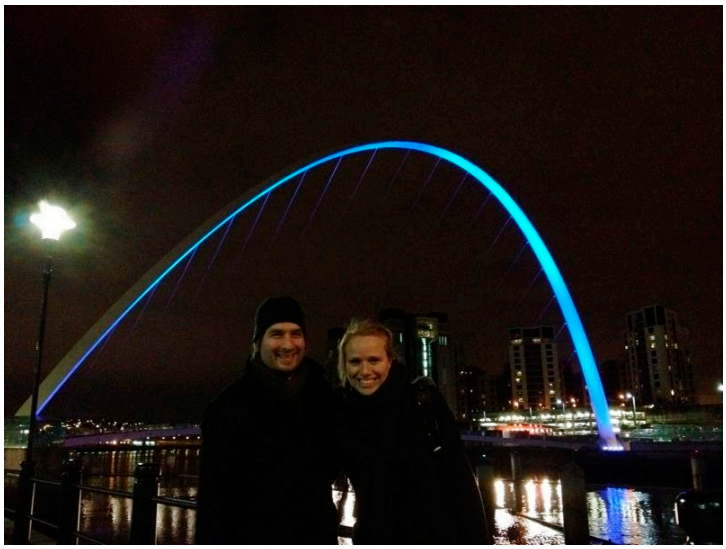
Health psychology is well positioned to inform efforts in implementation science and bridge the gap between research and practice. At the EHPS conference in Prague in 2012, Professor Charles Abraham highlighted implementation as a key challenge for our discipline to make a larger impact. Much effort is focused on developing theory, methods, procedures and evaluating interventions, and rightly so; these are the foundations upon which all health behaviour change interventions are developed and evaluated (Craig et al., 2008). Applying health psychological science to informing the implementation of effective interventions holds potential not only for increasing the reach and impact of our research, but also in further developing and refining our theories and methods of behaviour change in

novel contexts, leading to scientific progress.

The Tandem Grant

The EHPS awarded us with a Tandem Grant to build collaboration between Leiden and Newcastle in health psychology-based approaches to implementation science. This recognition further emphasises the increased acknowledgement of the role that health psychology can play in this growing area of research.

Both of our research had the objective to better understand which factors may influence healthcare professional behaviours in implementing interventions, to develop theory and understand the provision of high quality care in routine practice. In particular, Josanne's research focused on the implementation of physical activity (PA) interventions by primary care professionals and the associated impacts of professionals' characteristics, the intervention itself, its strategy for implementation, as well as the wider organisational and socio-political context (Huijg et al., 2011a, b). Part of Justin's work concerned developing theory to understand how primary care professionals manage multiple behaviours when implementing guideline-recommended behaviours in the provision of care to people with type 2 diabetes. Results from our previous studies (Huijg et al., 2011a; Huijg et al 2011b; Presseau, Sniehotta, Francis, & Campbell, 2009) provided insight into the factors influencing the implementation of PA interventions and guideline-recommended behaviours in primary care, respectively. Both our projects were at a stage requiring the development and content validation of theory-based questionnaires to assess factors associated with health professional behaviour. Therefore, the aim of this tandem research was to develop and validate two questionnaires that could be generalised across a range of health professional behaviours and contexts: a questionnaire assessing theory-based constructs related to primary healthcare professionals' implementation behaviour based on the Theoretical Domains Framework (TDF; Cane, O'Connor, & Michie, 2012; see also http://www.implementationscience.com/series/TDF), and a questionnaire assessing perceptions about multiple goal pursuit (i.e., goal conflict, goal facilitation, goal priority, and self-efficacy for managing multiple goals; Presseau, Tait, Johnston, Francis, & Sniehotta, in press). The EHPS Tandem Grant provided a timely opportunity to work together to develop each questionnaire and test their content validity.



Towards a TDF-based screening tool for possible barriers and facilitators to implementation

Josanne's early work focused on the adoption, implementation and continuation of PA interventions in primary care, informed by implementation theory (Fleuren, Wiefferink, & Paulussen, 2004; Greenhalgh et al., 2004; Grol, Wensing, & Eccles, 2005), to study factors influencing this complex process. As qualitative findings emerged, the potential role of behaviour change theory in implementation science became clear and fostered an interest in

specifically focusing on primary care professionals' implementation behaviours (Huijg et al., 2011a, b). The first step in that process involved developing a theory-based questionnaire on the quality of the delivery (i.e., implementation) of PA interventions by primary care professionals, informed directly from her qualitative work. For this purpose, Josanne was able to benefit from Justin's experience in theory and questionnaire development methods. The aim was to develop a questionnaire for use to screen for the theoretical factors that may be relevant to understanding the use of PA interventions in Dutch primary care. We identified the TDF (Cane, O'Connor, & Michie, 2012) as the theoretical basis for developing and validating the content of the questionnaire. In addition, the development of Josanne's questionnaire was informed by results from her previous qualitative studies.

Towards an index of Multiple Goal Pursuit

Justin's interest in the role of goal facilitation and goal conflict in multiple-goal pursuit (Presseau et al., in press) has led part of his research to focus on the implementation of high quality, guideline recommended diabetes care. After all, primary care professionals are tasked with performing and prioritising multiple behaviours when providing care, offering an ideal context in which to test and develop theory in relation to multiple goal pursuit. Existing approaches to assessing multiple goal pursuit (cf. Presseau, Sniehotta, Francis, & Little, 2008) can sometimes be time consuming to complete; a limiting factor in conducting multiple behaviour research with health professionals. There was a need to develop a parsimonious questionnaire to assess how competing and facilitating priorities are perceived to impact on the performance of a given behaviour. With the aim of conducting an online study to assess the discriminant content validity of a newly developed scale, Justin was able to benefit from Josanne's expertise in implementation research, in the use of web-based methods for developing questionnaires and her experience with consensus methods. After our first week of collaboration, discussions resulted in an extensive set of items that could be used as a basis for the questionnaire.

Tandem Grant meetings

In addition to lengthy discussions about the role of health psychology in implementation science, our Tandem Grant meetings involved the interactive and iterative development of two questionnaires. Once the items were identified, we conducted two discriminant content validation (DCV; Dixon, Pollard, & Johnston, 2007; Dixon, Johnston, McQueen, & Court-Brown, 2008) exercises with behaviour theory experts in Leiden and Newcastle. As no multi-item TDF-based questionnaire had yet been published at the time, we undertook the task of reviewing the literature for measures (standardised where available) of constructs from each domain and conducted a DCV to assess whether items from each domain could be identified and discriminated between domains by a group of experts. For the constructs of interest for Justin's questionnaire (i.e., goal facilitation, goal conflict, goal priority, and self-efficacy for managing multiple goals), we identified existing measurement tools, and developed new items where appropriate. A DCV was conducted to examine if multiple behaviour related items could be identified and discriminated from related behavioural constructs (e.g., intention, self-efficacy) by a group of experts. Both questionnaires have been developed to be generalizable to any health professional behaviour and context and thus we anticipate that they will be of interest to anyone interested in quantitative tests of constructs from the TDF and multiple behaviour constructs. Currently, we are writing up these results for

publication.

Overall, the Tandem Grant was a tremendously successful opportunity to achieve the scientific goals we set for ourselves. In addition, finding a kindred spirit in health psychological approaches to implementation science fostered much discussion and ideas of future collaborative opportunities. Thanks to the Tandem Grant, we were both able to benefit from each other's networks in Newcastle and Leiden. In addition with a few additional years' experience in academia, Justin was able to gain experience in, and was able to provide, peer mentorship to Josanne as she entered the final stages of her PhD. Furthermore, the Tandem Grant provided further opportunity to build each others' international collaborative network at an early stage in our careers. The Tandem Grant of course extended beyond our work. Meeting up with each other allowed us to experience each other's cultural (and dietary) idiosyncracies, from the salted liquorice and stroopwafels of the Netherlands to a traditional Canadian thanksgiving dinner (in the UK!).

Next steps

We are both happy to see implementation science continue to make strides within the Society and are keen to connect with others interested in developing ideas and research using health psychology-based theories and methods to progressing the science of moving research into widespread use. We look forward to the next Synergy workshop on 'Methods for changing Environmental Conditions for Health: influencing organisations, stakeholders and key actors', facilitated by Prof Gerjo Kok and Prof Rob Ruiter.

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