

Planning interventions for behaviour change: A protocol for establishing best practice through consensus

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Key Issues

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There has been a rapid increase in the use of planning techniques in interventions to promote health-related behaviour (Abraham, Kok, Schaalma, & Luszczynska, 2011). The proliferation of interventions using planning has largely been a direct response to the considerable literature which has recognised the limitations of intentions as a predictor of behaviour (Dekker, 2008; Sheeran, 2002; Webb & Sheeran, 2006), the so-called intention-behaviour 'gap'. Recent theoretical models incorporating both *motivational* and *volitional* phases have sought to resolve this issue by examining the role that furnishing intentions with planning exercises plays in improving the link between intentions and behaviour (Gollwitzer & Sheeran, 2006; Schwarzer, 2001; Sheeran, Milne, Webb, & Gollwitzer, 2005). Prominent among these planning interventions are *implementation intention* and *action planning* techniques. These techniques aim to bolster or augment intentions with means to promote recall and enactment of the intended behaviour.

These planning techniques are two of the most recognised and frequently-applied components in health behaviour interventions (Adriaanse, Vinkers, De Ridder, Hox, & De Wit, 2011; Bélanger-Gravel, Godin, & Amireault, 2013; Webb, Sniehotta, & Michie, 2010). There are numerous reasons why these techniques have attracted so much attention: they are steeped in established social psychological theory (Gollwitzer, 1999; Heckhausen & Gollwitzer, 1987), have been embedded in popular and well-cited

theories of social cognition applied in health contexts (e.g., Theory of Planned Behaviour, Orbell, Hodgkins, & Sheeran, 1997), and address a commonly-known limitation of these theories (i.e., the intention-behaviour 'gap', Webb & Sheeran, 2006); they have intuitive appeal in their parsimony; they have low response burden making their dissemination through multiple modes of delivery comparatively easy; and they are low-cost. Above all, there is growing support for their effectiveness in engendering behaviour change health-related contexts as stand-alone intervention strategies or as part of more elaborate interventions involving multiple behaviour-change techniques. Implementation intention and action planning interventions have been shown to be effective in changing diverse behaviours such as physical activity participation (Arbour & Martin Ginis, 2009; Barg et al., 2012; Conner, Sandberg, & Norman, 2010; Gellert, Ziegelmann, Lippke, & Schwarzer, 2012; Luszczynska, 2006; Milne, Orbell, & Sheeran, 2002; Prestwich et al., 2012; Prestwich, Lawton, & Conner, 2003), healthy and unhealthy eating (Adriaanse, de Ridder, & de Wit, 2009; Adriaanse et al., 2010; Armitage, 2007; Chapman, Armitage, & Norman, 2009; Prestwich, Ayres, & Lawton, 2008; Sullivan & Rothman, 2008), quitting smoking (Armitage, 2008; Armitage & Arden, 2008), alcohol consumption (Armitage, 2009; Hagger et al., 2012), breast self-examination (Orbell et al., 1997; Prestwich et al., 2005), rehabilitation from injury (Scholz, Sniehotta, Schuz, & Oeberst, 2007), vitamin consumption (Sheeran & Orbell, 1999), cancer screening behaviours (Browne & Chan, 2012; Rutter, Steadman, & Quine, 2006; Sheeran & Orbell, 2000), workplace health and safety (Sheeran & Silverman, 2003), vaccine uptake (Milkman, Beshears, Choi, Laibson, & Madrian, 2011;

Payaprom, Bennett, Alabaster, & Tantipong, 2011), contraception use (de Vet et al., 2011; Martin, Sheeran, Slade, Wright, & Dibble, 2009; Teng & Mak, 2011), and dental health behaviours (Orbell & Verplanken, 2010; Schüz, Wiedemann, Mallach, & Scholz, 2009). In addition, systematic reviews have confirmed the effect of implementation intentions on behaviour in multiple behavioural domains (Gollwitzer & Sheeran, 2006) and in specific health-related behavioural domains such as physical activity (Bélanger-Gravel et al., 2013) and healthy eating (Adriaanse et al., 2011).

However, while there is growing support for these planning interventions in the health-behaviour literature, a number of limitations in the research have been noted. For example, the meta-analytic findings indicate substantial heterogeneity in the effect size for implementation across studies (Adriaanse et al., 2011; Bélanger-Gravel et al., 2013; Gollwitzer & Sheeran, 2006). In other words, there is a lot of variation in the strength of the effects of planning interventions, implying that their effectiveness varies across studies. The presence of heterogeneity should lead to a search for possible moderators of the effect (i.e. the parameters for effectiveness explained in Kok, 2014, this issue). Examples of 'classic' moderators that may account for the heterogeneity in effects across studies include variations in study design and execution, sample characteristics and contexts, and individual difference variables (Hagger, 2006). For example, studies may differ in their definition and operationalisation of planning procedures and their proposed mechanisms for the effect (e.g., mediation analyses). In addition to the heterogeneity, there also appears to be considerable variation in the definitions of the constructs and techniques that comprise planning techniques. This makes it difficult for experienced researchers to establish a consistent pattern of effects for planning interventions and also makes it difficult for practitioners, particularly those unfamiliar with the theory or terminology, to make sense of the findings and establish the best means to implement

planning interventions. The heterogeneity in the effect sizes and lack of consensus in the definitions and operationalisation of planning interventions in health contexts present considerable challenges for researchers and practitioners attempting to develop interventions to change health behaviour adopting planning techniques. There is therefore a need to conduct a close examination of the current literature to establish whether there is sufficient evidence that may assist in accounting for the variation which may identify important considerations to take into account when designing interventions adopting planning interventions to change behaviour. This will assist researchers to identify what is 'best practice' when it comes to developing planning interventions and the limitations and gaps in the research that to be addresses in future studies. It also will assist interventionists interested in developing planning interventions based on the 'best available' evidence.

Establishing Consensus on Planning Interventions: Aims

A possible approach that may contribute to identifying the current state of the literature on a particular research topic, to help resolve outstanding gaps in the literature, and to arrive at a set of guidelines or recommendations for 'best practice' is to use a panel of experts and arrive at a consensus based on a thorough review and discussion of current research and pool expertise. In August 2014, the EHPS hosted a *Synergy* expert meeting on the topic of planning interventions to stimulate discussion and debate of the evidence on planning interventions in health behaviour. The meeting drew together leading theorists, intensive researchers and practitioners to form an expert 'panel' with considerable experience in the development, implementation, and evaluation of planning interventions in health behaviour. The goal was to develop a consensus on the most effective means to implement and evaluate planning

interventions, resolve some of the theoretical, operational and methodological 'gaps' in the literature through consensus on the current state of the research, and identify future priority areas for research to move knowledge in the field forward.

Key Topics and Issues: Starting Points for the Consensus Statement

Specifically, the consensus meeting focused on the following key topics identified in a recent review of planning interventions in health contexts (Hagger & Luszczynska, 2014): evaluating the research evidence on interventions adopting planning components; identifying the common features and differences of planning interventions in terms of operationalisation, design, measurement, mechanisms, and evaluation of planning components; identifying the salient gaps in the literature; formulating possible guidelines for good practice; and identifying priority areas for future research that will improve understanding of planning interventions in the field of health behaviour. This list was not considered definitive by the expert panel, but rather as a starting point to generate discussion and identify key topic areas. The ultimate aim was to produce a consensus statement on guidelines for 'best practice' for research and practice with planning interventions.

What will the 'statement' look like? The planned consensus statement is being prepared in the form of a 'research article' and will be submitted for publication under the authorship of the Synergy expert panel with all participants as co-authors. The 'consensus' statement is a rare, underused format for the dissemination of academic discussion and debate, but those that have been published are often considered highly influential as they represent the 'state-of-the-art' of pooled knowledge and expertise on a given topic or issue. Consensus statements provide practitioners with a set of recommendations for most effective practice based on current evidence. They

also have the potential to move the knowledge of the topic issue forward and develop new knowledge by outlining the key areas of research in need of future investigation and maximising researchers' effectiveness to contribute to the field by directing them to topics that are of the highest priority. The statement will outline 'best practice' guidelines under key headings including operationalisation – (e.g., What should a planning intervention 'look like'? What are the defining features?), mechanisms (what are the 'knowns' and the 'unknowns' in terms of the evidence for planning interventions?), measurement and design issues (e.g., What are the best form or format for planning interventions? How should they be best presented?), key constructs and measures (e.g., what measures should be included to evaluate the effectiveness of a planning intervention?), key moderating variables (e.g., what conditions will magnify or diminish the effects of planning interventions on behaviour?), and recommendations for researchers and practitioners (e.g., what is the best protocol to use when developing an planning intervention?).

Methods and Planned Activities

The meeting aimed to draw consensus on key issues relating to planning interventions using a 'nominal group' approach. The approach is defined by Delbecq and van den Ven (1971) as a structured meeting that attempts to provide an orderly procedure for obtaining qualitative information from a target group who is most closely associated with a problem area. The approach requires the assembly of the 'expert' panel and to follow a three stage process. In the first step, members are asked formulate their own list of ideas on the topic with only a brief introduction and no discussion. At the completion of the step, each member feeds his/her key ideas back to the group and they are recorded on a chart. This process is repeated until the lists are exhausted. In the second step, group members engage in a

structured discussion on the listed ideas. This stage should lead to a clarification of the key ideas and their evaluation. The third step involves each member privately rating the worthiness of the ideas. All issues/solutions are rated on a five-point scale and only issues receiving a mean rating of 3.0 or greater across group participants are accepted. The ideas can then be discussed by the group and support for each evaluated by a consensus vote. Based on general guidelines for consensus, any particular topic should be supported by no less than two-thirds of participants with any topic opposed by at least 25% of participants dropped outright (Fink, Kosecoff, Chassin, & Brook, 1991).

We asked researchers to bring their own experiences of intervention research, with a specific focus on including implementation intentions and action planning techniques, to the expert meeting, particularly the scripts and methods they have used in their interventions themselves, and the source material for their interventions. The idea was for these to be a basis for discussion of variations and consistencies in the current literature and practice of planning interventions. We also asked participants to report on the success of their manipulations, any failed replications, and feedback and reports from participants on the use of the techniques. This enabled the identification of where the strengths of current descriptions of these techniques in the literature and the limitations, omissions, lack of clarity, and needs for future research. The meeting included a number of themes (outlined below) that were introduced by the facilitators, initial exercises in which participants worked in small groups on a particular aspect of the theme, and then a collaborative session where each group reported to the main group on their findings. The feedback session was followed by a general discussion of the main issues, with all participants encouraged to contribute. Ideas and points were recorded on a spreadsheet. The feedback session was followed by a summary discussion to finalise the points and ask for additions. The points from the session and the

spreadsheet were typed up and formed a set of summary notes. At the end of the expert meeting, a final summing-up session using the notes as a stimulus aimed to arrive at a consensus in terms of the definition, contents, appropriate study design (e.g., intervention components, measures, and analyses), and key issues in need of research with respect to planning interventions.

Program and themes:

(1) Defining and conceptualising of planning interventions (e.g., distinguishing between types of planning intervention and their role in social-cognitive models), how should they be operationalised, and what are the conceptual differences between types of planning e.g. implementation intentions and action planning.

(2) Format and measurement of planning techniques (e.g., mode of delivery, measurement effects, format, use of examples, self- vs. other-defined plans).

(3) Mechanisms and processes underpinning planning techniques (e.g., the role of habit, moderators of planning intervention effects, forming multiple plans, planning interventions for low intenders).

(4) Design issues around planning techniques and interventions based on them (e.g., sustainability of behaviour change, intervention fidelity).

(5) The way forward: what would a 'gold' standard design for a planning intervention study look like?

Practical Contribution

An increasing number of studies across multiple health-behaviour contexts are adopting planning interventions, and many researchers, whether or not they are affiliated to the European Health Psychology Society, are affiliated to labs and research groups currently incorporating at least one form of planning as part of their health behaviour interventions. There were also researchers with links to policymakers and practitioners interested in how planning

interventions can be most effectively employed on a practical level in the field to maximize health behavior maintenance. The topic is, therefore, a pertinent one for many members of the society and beyond and this was an opportunity for an in-depth discussion of the issues surrounding planning interventions and their implementation that did not only benefit the participants, but will also provide consensus recommendations for non-attending members and researchers unaffiliated with the society interested in using planning interventions in their research. It is anticipated that the consensus statement will also provide guidelines for best practice in the content, design, implementation, and evaluation of planning interventions as a means to change health behaviour.

The Expert Panel

The lead facilitators of the expert meeting were Martin Hagger (Curtin University, Australia) and Aleks Luszczynska (University of Colorado, Colorado Springs), both of whom have considerable experience with the use of implementation intentions and action planning interventions in health behaviour. The lead facilitators were supported by a team of international world-leaders in planning interventions including John De Wit (University of New South Wales, Australia), Peter Gollwitzer (New York University, USA and University of Konstanz, Germany), Gabriele Oettingen (New York University, USA and University of Hamburg, Hamburg, Germany), and Paschal Sheeran (University of North Carolina, USA) who have a wealth of expertise on planning interventions including the inception of implementation intention theory and techniques and the theoretical and application of interventions in numerous health-behaviour context. The panel of experts for the meeting were selected from self-nominated applicants with demonstrable experience (e.g., through publication, grant award etc.) on the design of intervention using planning and other behaviour-

change techniques to offer varying and complementary perspectives.

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