Universities of Leeds, Sheffield and York
http://eprints.whiterose.ac.uk/

White Rose Research Online URL for this paper:
http://eprints.whiterose.ac.uk/85427

Published paper

Ong, B.N., Rogers, A., Kennedy, A., Bower, P., Sanders, T., Morden, A., Cheraghi-Sohi, S., Richardson, J.C. and Stevenson, F. (2014) *Behaviour change and social blinkers? The role of sociology in trials of self-management behaviour in chronic conditions*. Sociology Of Health & Illness, 36 (2). 226 - 238.
http://dx.doi.org/10.1111/1467-9566.12113

Behaviour change and social blinkers? The role of sociology in trials of self-management behaviour in chronic conditions

Bie Nio Ong[1], Anne Rogers[2], Anne Kennedy[2], Peter Bower[2], Tom Sanders[1], Andrew Morden[1], Sudeh Cheraghi-Sohi[1], Jane C. Richardson[1] and Fiona Stevenson[1]

[1]*Arthritis Research UK Primary Care Centre, Keele University, UK*
[2]*Health Sciences, Manchester University, UK*

Abstract Individual-focused self-management interventions are one response to both an ageing society and the purported increase in chronic conditions. They tend to draw on psychological theories in self-management interventions, but over-reliance on these theories can reinforce a narrow focus on specified attitudinal and behavioural processes, omitting aspects of living with a chronic condition. While advances have been made in health behaviour change theory and practice, scant attention has been paid to the social, with the question of social context remaining under-theorised and under-explored empirically. This is particularly noticeable in trials of behaviour change interventions for self-management. The common sociological critique is that these ignore context and thus no explanation can be given as to why, for whom and under what circumstances a treatment works. Conversely, sociologists are criticised for offering no positive suggestions as to how context can be taken into account and for over-emphasising context with the risk of inhibiting innovation. This article provides an overview of these issues and provides examples of how context can be incorporated into the rigid method of trials of self-management for chronic conditions. We discuss modifications to both trial interventions and design that make constructive use of the concept of context.

Keywords: self-management, social context, trials, behaviour change, self-efficacy

Introduction

Individual-focused self-management interventions have been one response to an ageing society and purported increase in chronic conditions in most western countries. In the UK health policy documents appear to promote self-management approaches that are underpinned by behavioural change theories, for example, in the expert patient programme (EPP) that has been adapted from the USA model (Lorig *et al.* 1993, 1999). While advances have been made in behaviour change theory and practice, the question of social context remains under-theorised and under-explored empirically. This is particularly the case in trials of self-management, which have tended to focus solely on the individual and individual attributes that require modification.

In this article we argue for modifications to both trial design and interventions to change behaviour that make constructive use of the concept of social context. We start by outlining the policy drivers for self-management approaches, followed by discussing some behaviour change models underpinning self-management approaches that inform current UK health policy, and examine their implications for change in patients and healthcare professionals. This is followed by a discussion of the use of trials to amass evidence about the effectiveness of interventions. To conclude, two examples of theory-based self-management trials for chronic conditions are presented. These highlight the complex nature of self-management and the necessity of better integrating the social into behaviour change models.

Health policy and self-management

Since the late 1990s successive governments in the UK and elsewhere have promoted self-management. The Labour Government (1997–2010) embarked on a wide-ranging reform of the English National Health Service (NHS). Moreover, it endorsed upstream changes promulgated in the Wanless report (2002: 9) which defined 'the fully-engaged scenario' whereby the state and citizens share responsibility for health and wellbeing. This translated into the government's leitmotiv of fostering greater patient choice and involvement in decision-making. The patient was placed at the centre of health care within a system that was a quasi-consumer resource for patients to manage their own health (Department of Health 2000).

The first outline of the new way of managing long-term conditions appeared in a keynote report: 'The expert patient: a new approach to chronic disease management for the 21st century' (Department of Health 2001). It argued that patient knowledge and experience was an underused asset and made the case for an approach that promoted engagement with patient's psychological needs and social context (Department of Health 2001). One key route to ensuring the optimised self-management of chronic conditions was the EPP. The EPP was deemed an essential tool for empowering patients to have the motivation and self-efficacy to manage their condition effectively, and to enhance their ability to engage with professionals and reclaim control their lives (Department of Health 2001, Donaldson 2003). However, the endorsement given to the EPP and embedding patient-centred self-management in primary care was also driven by an economic rationale. The EPP was heralded as a way to reduce the economic burden associated with chronic illness and the financial pressures on the NHS and the welfare state (Department of Health 2001, 2005, Donaldson 2003). There was little underlying these general aspirations that specified the mechanisms of behavioural change: instead there was a reliance on idealised identities which were presumed to emerge:

> [W]hilst previous policies focused on what patients should do to maintain their health, the new policy approach to self-management is focused on what sort of person the patient should become … There has been a proliferation of terms representing an idealized self-managing individual ('empowered', 'autonomous', 'future', 'expert', 'activated', 'wireless', 'co-producer' or 'flat pack patient'). The ideal type notion of patienthood demands the capacity of being confident, in control, able to monitor and manage a condition, engage with technological innovations, whilst at the same time allowing constraints on the demands made on services. (Rogers 2009: 173)

In 2010 the Conservative–Liberal coalition government set in motion a radical reform of the NHS in England that destabilised the infrastructure of the NHS against the backdrop of financial austerity and reductions in public sector funding (Timmins 2012). Despite a reduced emphasis

on EPP, the drive to increase self-management remains central to health policy. This is reflected in the new NHS outcomes framework 2012–2013 (Department of Health (2011) that defines five domains, the second of which being entitled 'enhancing quality of life for people with long-term conditions'. The first improvement area is described as: ensuring people feel supported to manage their condition. Thus, self-management remains at the top of the health agenda.

Individual behaviour change models in self-management interventions

Behaviour change is clearly a key issue for psychology. The role of the social has, however, changed over time. Lewin coined the equation B $=$ f(P,E), to encapsulate the notion that behaviour is a function of the person (P) and their environment (E), and early debates in the discipline concerned the relative priority of P and E as determinants of behaviour. The influence of the social has waxed and waned in psychological models, with behaviourist models contending that the environment was a necessary and potentially sufficient explanation for behaviour (Davison 2007). The rise of cognitive approaches to understanding behaviour and emotion have increasingly focused interest and behaviour change technologies on the intra-psychic processes of belief and attitude formation, cognitive styles and mental models. Such approaches have a relatively dominant position in current guidance around certain aspects of behaviour change (British Psychological Society 2008).

A large number of psychological models of behaviour change exist which differ in their exact formulation. The commonsense illness model (McAndrew *et al.* 2008) and the transtheoretical stages of change (Prochaska *et al.* 1992) have unique features, but many of these models have significant similarities, for example, the theory of planned behaviour (Conner and Norman 2005, Conner and Sparks 1996) and the health belief model (Schwarzer and Fuchs 1996). These postulate a basic set of social-cognitive variables that may account for most of the variance in behavioural outcomes (Fishbein *et al.* 2001):

- Environmental constraints that impact on the ability to carry out the behaviour
- Intention to conduct the behaviour and an evaluation of the skills that are required to carry out the behaviour.

Other concepts that may have either a direct impact on behaviour or indirect impact through intention are:

- Self-discrepancy (gap between internalized representations of the self)
- Emotional reactions such as fear, anxiety, stress, dissatisfaction or guilt.

Based on a detailed review of behaviour change interventions Michie *et al.* (2011) developed an integrated model, entitled the behaviour change wheel, which characterises interventions and policies to change behaviour. It places individual behaviour at the centre, encircled by intervention functions and policy categories that include a number of social and contextual issues. Environmental constraints are seen as a key determinant that may act directly on the likelihood of a type of behaviour occurring, while social psychological processes can impact on the formation of intention to change through social pressures and perception of the social norms surrounding activities. Although this model acknowledges the social, it is fundamentally built upon notions of self-efficacy and the technologies adopted remain individually focused.

Behaviour change in self-management interventions is frequently viewed as mediated through increases in the psychological attribute of self-efficacy (Bandura, 1977). Self-management technologies, which present the processes of change in terms of modelling persuasive

communication by health professionals and the reinterpretation of physiological symptoms (Barlow *et al.* 2000) tend to propose standardised ways of responding to patients and clients. Consequently, interventions are designed to move an individual from one stage to the next, even in the face of the observation that where change does occur it does not necessarily follow the theoretical stages of change incorporated into models of health behaviour (O'Connor *et al.* 1997). This view of cognitive processes and stages of change and outcome measures may detract from a focus that views change in relation to the complexities of patients' existing ways of behaving and responding to chronic illness. Detailed examination of existing behaviour and activities in context are more usually ignored or viewed as maladaptive, requiring reform. The latter is evident in the normative assumptions underlying theories of planned action about the desirability of changing one form of behaviour for another. While such assumptions may be appropriate in behaviour such as smoking, arguably this is less applicable to chronic illness self-management, given the variety of strategies adopted in coping with illness.

Prioritising a focus on beliefs rather than practices in self-management is problematic for three reasons. Firstly, it tends to exclude a fine-grained view of patient agendas and potentially fails to engage with those from marginalised groups. Moreover, explanations about the causes of the problems may not relate primarily to behavioural explanations, but rather to structural issues (for example, Hodgins *et al.* 2006). Secondly, theories predicated on changing beliefs are not designed to evaluate the everyday components of patient practices and strategies in the broader social context (Balfe 2007, Seear 2009). Thirdly, identifying the points of intervention most likely to change behaviour in causal modelling may not be as relevant as the priorities that individuals hold about managing a chronic condition. For example, symptom management may not be as important to maintain as preserving valued social roles, coherent identities and a normal life (Morden *et al.* 2011, Townsend *et al.* 2006).

Behaviour change interventions and health professionals

Health professionals are expected to promote and support self-management. It is therefore equally important when considering the promotion of behaviour change interventions in health settings to take account of how they respond to a change in their own role and its potential effects on their relationships with patients. The assumption underlying self-management is that health professionals adopt a patient-centred approach, tailor their support to individual patients and relinquish a degree of power. This requires behaviour change in professionals. A growing body of literature covers this issue and we draw on the concepts most relevant to this article.

Interventions aimed at changing the behaviour of clinicians have had limited success (Post *et al.* 2009, Vollmar *et al.* 2010). There is an assumption that rationalistic approaches to behaviour change, such as encouraging uptake of clinical guidelines, are self-evidently adopted in practice (Sackett *et al.* 2000). Yet it is clear that this view does not reflect the everyday work of clinicians, who may prefer to manage patients in accordance with established clinical routines. Checkland *et al.* (2007), following Weick (1995), claim that health professionals engage in sense-making to assign meaning to their role and changes to the content of work, both of which involve an evaluation of the impact of change on tasks and relationships. Armstrong and Ogden (2006) reported that general practitioners (GPs) engaged in experimentation to try out new medications and their impact on routines before introducing alterations to their work. Looked at in this way, innovations that 'make sense' are more likely to succeed by virtue of their positive impact on clinical routines. The introduction of new innovations in health care may also demand a proactive response so that professionals engage in what might

be called transition work. Consequently, health professionals may need to become convinced of the benefits of a new approach, in terms of what is 'practical' or 'relevant', and what may be professionally desirable.

The implementation literature suggests that coercive drivers alone, such as indicators in the NHS outcomes framework, are unlikely to be successful in bringing about change (Baus 2004). Addressing the different layers of implementation at the level of health professionals is needed to understand its complexity. However, tensions may arise between the different components of change. Wider policy promoting self-management and behaviour change technologies may conflict with the priority to maintain the self–other relationship between clinicians and patients (Blakeman *et al.* 2010). The alignment of self-management interventions with local or personal priorities is central to their adoption. To further complicate matters, professionals may not simply apply abstract evidence to their own context, but engage in the active interpretation and reconstruction of its local validity and usefulness (Lave and Wenger 1991, Wood *et al.* 1999). Thus, translation involves testing out a new approach in daily practice (Armstrong and Ogden 2006, Berg 1999, Doolan *et al.* 2003).

Trials of behaviour change interventions

Current policy has influenced the growing interest in implementation and why interventions work, and evidence from the trials literature has figured prominently. A UK trial of the EPP, a programme designed to improve self-efficacy for self-management, revealed that the EPP produced modest effects on self-efficacy and did not result in reduced healthcare utilisation (Kennedy *et al.* 2007). Suggested reasons for this centred on the idea that people's expectations and problems were not adequately dealt with by the course because the self-management skills training prioritised improvements in self-efficacy and did not engage with patients' material and social needs (Rogers *et al.* 2008). In other words, changing behaviour may not be a priority for the individuals being targeted.

The effects of trials of self-management in musculoskeletal pain have been assessed in a systematic review (Miles *et al.* 2011), but behaviour change in both patients and professionals has not previously been addressed systematically. In the two examples below we discuss a range of issues relating to these processes. Firstly, we highlight a few concerns, relevant to these case examples, about the appropriateness of the trial design to test self-management interventions.

The traditional randomised controlled trial (RCT) aims to measure the clinical effectiveness of a trial intervention rather than the real-world change and impact once an intervention is rolled out. Yet what works under ideal trial conditions may have less than the desired effect when implemented in routine practice. Such limitations have precipitated the move towards pragmatic trials that assess the benefit of the intervention in an everyday context (Roland and Torgerson 1998). Moreover, assessing behaviour change is a complex and multifaceted phenomenon with multiple levels of influences (Miles *et al.* 2011). While RCTs are often adopted in this field, they present an important limitation in that they rely on a positivist worldview. This assumption of a closed system ignores field effects, such as the complex political, social and economic currents that permeate the social world (Burawoy 1998) which is an open system; fluid, interactive and with permeable boundaries. As a consequence, RCTs can tell us which interventions are most successful or not under controlled circumstances but they cannot, on their own, tell us why or how success or failure has occurred and what role social context has played in achieving particular results.

Qualitative research has been used to address the contextual and sense-making issues in RCTs. While qualitative methods are not synonymous with a sociological approach the role

that can be played by both in the context of RCTs is similar. Lewin *et al.* (2009) outline the three areas in which qualitative methods can be used alongside RCTs: before (to generate hypotheses, to develop interventions and outcome measures); during (to explore the delivery of and responses to the intervention, to explore processes of change) and after (to explore reasons for findings, including variations in effectiveness, to examine the appropriateness of the underlying theory or to generate further hypotheses). Despite the wide range of possibilities for the use of qualitative methods alongside trials, the largest group of studies identified by Lewin *et al.* was the studies carried out before trials. These, and studies carried out alongside or after a trial, reported little integration of findings and suffered from poor reporting of methods. In the examples below we aim to show how researchers from different disciplines have worked together successfully at all stages of a trial in order to fully explore the social context of behaviour change.

Example 1 *The whole system informing self-management engagement (WISE) patient normalisation: self-management interventions and assumptions about change in complex interventions*

WISE is a conceptual model that is used to guide a portfolio of studies on complex interventions in the area of self-management for chronic conditions. The WISE approach set out to work with a view of the everyday, relational and embodied ways that patients can and do behave. People are viewed as having the capacity to creatively reformulate practices that meet local situations and the individual's own situation. It incorporates a focus on three domains relevant to integrating self-management within a broad environment:

- Lay/patient arena
- Consultation
- Health service organisational level.

The model suggests that creating interactions within and between these domains is the most likely way of providing effective self-management support (Kennedy and Rogers 2001). Within the patient/lay domain three key components are identified relating to integration and effectiveness: firstly, a recognition of patients' pre-existing experiences and way of living with a chronic condition; secondly, lay social support networks and resources and thirdly, interpersonal interaction at the level of the professional–patient consultation.

How people experience and manage illness beyond the realms of professional health care is intrinsic to the first two components. The sociology of chronic illness provides insights into the workability of self-management interventions. The literature on the experience of chronic illness points to the way in which people develop strategies for managing, as a naturalistic response to being diagnosed with a chronic illness. This provides a point of reference for explaining what happens to people's management of their condition when technologies designed to change illness behaviour or improve their knowledge are introduced. Implicit to WISE has been illness work and a recursive relationship with services.

In relation to illness, Corbin and Strauss (1985) identified three types of work:

- Illness work (concerned with symptom management)
- Everyday life work (the practical tasks such as housework, caring, paid employment)
- Biographical work (the reconstruction of the ill person's biography).

The parameters of change with regard to complex self-management interventions can be viewed as a continued search for meaning and legitimacy of a chronic condition and the negotiation of a new personal and social equilibrium. An essential part of this process necessarily

draws upon the various coping mechanisms, strategies and styles of adjustment that individuals develop over time (Bury 1991). Additionally as Faircloth *et al.* (2004) note, while biographical work tends to be associated with biographical histories, the future also emerges as a concern in the experience of illness.

The role played by services has at times been separated out from people's own efforts to manage illness. For example, self-management has been viewed as something that is marginalised in the consultation in favour of medical instruction (Stevenson *et al.* 2003). This picture of a failure of medicine to engage with the life-worlds of patients has encouraged a view in which living with chronic illness is conceptualised as a reactive flight into normalisation rather than being connected to the clinical settings that provide access to resources for self-management. It is this body of work that has utility for contextualising component three (interpersonal interaction at the level of the professional–patient consultation). Contacts with a variety of resources, services and expert knowledge have been viewed as invoking a process whereby individuals bring into play frequent internal contestation and revision of what constitutes legitimate expert knowledge about the best way to manage health and illness (Giddens 1991). The framing of illness in such settings has been shown to be highly differentiated, depending on the negotiated relationship between professional and patient. The role played by contact and utilisation with the health service has at times been viewed as separated from people's own efforts to manage illness, for example, by viewing these efforts as a purposive action that stops at the outset of the consultation in which 'proper' medicine takes over. Rather, contact with services or technologies can be seen as a recursive relationship that reinforces or changes illness identities and illness-related activities (Rogers *et al.* 1999) and contextualises complex self-management interventions

Narrative analysis of respondents' accounts from an early study of WISE introduces the notion of change as a process of continuity and accelerated change. We have shown how this can be seen as relating to patients' work in self–management in terms of perceptions and experience of previous relationships, perceptions about authority to change matters (for example, appointments) and perspectives over what counts as patients' self-management (Rogers *et al.* 2007). A new technology for self-management must fit an actual or realisable set of roles within the patients' division of labour. Simultaneously, it must be capable of integration within existing patterns of service utilisation and contact with professionals. Therefore, the advantage to patients must be tangible and evident to their everyday illness work and contact with services is crucial to the evaluation of new interventions and practices.

A training intervention has been developed for delivery in primary care incorporating the WISE approach (as part of a RCT). The intervention contains a patient-centred approach where practitioners are trained to consider the patient's current ability to self-manage, their priorities and what they are able and prepared to work on, and what support they need to manage their condition. In order to focus attention on patient needs and experiences, information resources were developed in partnership with patients incorporating lay experiences and views on self-management.

WISE envisages a changed professional response and the training intervention is focused on providing clinicians with the skills and knowledge to assess patients' needs and priorities, to share decisions and increase patient participation in management decisions and to support patients in any changes they need to make. A simple questionnaire tool called patient response informing self-management support (PRISMS) jointly created by patients and professionals assists in this process. The training has a behavioural change basis and has been refined over time. At the level of the health system, WISE envisages more joined-up support where practice staff work together to develop systems and resources to provide information and access to appropriate support for patients, ideally, set in a wider health and social system where resources are available and accessible.

In the pragmatic trial of the WISE approach, we aimed to test whether patient outcomes can be improved through a training intervention that gives practice staff the skills and tools to support their patients to manage their illness themselves in the context of a supportive health economy. Many self-management interventions have focused on patient behaviour change or professional training only, but each level has a different function in encouraging and supporting self-management behaviour and effects are maximised when interventions occur at all levels and include attention to patient action outside health service contexts. This affects trial design (Bower *et al.* 2012, Kennedy *et al.* 2010).

We aimed to recruit practices and patients from within one health economy and to offer the training intervention to all eligible practices in this area. The trial took place in a primary care trust (PCT) with the active provision of community activities and groups to support it. The PCT employed and supported two trained facilitators who delivered the training and created and maintained a web-based directory of local self-management support organisations. In order to measure the impact of this whole systems approach on patient outcomes, a cluster randomised trial was considered appropriate, with randomisation at the level of the practice. The trial intervention development and process of recruitment was set in a normalisation framework, that is, we aimed to implement the WISE approach in such a way that self-management support behaviour could be integrated into everyday clinical practice (Murray *et al.* 2010). When recruiting practices we were aware that training had to be arranged to fit everyday working behaviour and priorities, for example, at certain times of the year, practices prioritised meeting the pay-for-performance targets of the quality outcomes framework, so were unavailable for training. Providing self-management support may require clinicians to challenge current patient behaviour and risk disrupting existing relationships. During the recruitment of the practices the emphasis was on the benefits of the training, including development of practical strategies and improving skills to benefit patient care. The training intervention itself was put across in a pragmatic and flexible way to allow the practices to own and shape the approach. Patients were recruited to the trial by practices that contacted all those on their lists with the conditions of interest to the trial (diabetes, chronic obstructive pulmonary disease and irritable bowel syndrome). Changes in behaviour at the patient level were expected to come through better support during consultations and signposting what community groups could be of help to patients. As part of the trial process, we sent all patients in the intervention group a leaflet including a PRISMS form to inform them to expect a different approach from their practice: 'Your doctor or nurse can find the best type of support to help you make changes to the way you manage your life with your condition'.

Example 2 *The management of osteoarthritis in consultations study (MOSAICS) pilot trial of implementing a new model of osteoarthritis consultation in primary care*

The National Institute for Health and Clinical Excellence (NICE 2008) has formulated osteoarthritis (OA) guidelines that define a set of core treatments for use in primary care to support self-management alongside other recommended treatments with evidence of efficacy. Research has shown that patients with OA are not optimally treated (Jinks *et al.* 2007, Porcheret *et al.* 2007) and a pilot trial has been designed to implement a new approach to OA management based on the NICE recommended core treatments in eight general practices. The intervention is a model OA consultation delivered by GPs and practice nurses, developed by researchers in close collaboration with primary care clinicians and patients (Dziedzic, 2012a, Porcheret 2012). It contained an important element of WISE concerned with improving professionals' response to patients' need. GPs in the eight practices use a computer-based template that prompts and enables GPs to code aspects of a consultation for OA (Edwards *et al.* 2011). In the four general practices randomised to deliver the intervention the GP can offer the patient

an OA guidebook specifically written by professionals and patients for use in the consultation (Grime and Dudley, 2011) and refer them, if appropriate, to a nurse-led OA clinic. This clinic is staffed by specially trained practice nurses who can see patients for up to four sessions and tailor their advice and support to individual needs (Dziedzic 2012b). The four control practices continue with usual treatment.

For the purpose of this article we focus on the practice nurses who, through their training, were introduced to new behaviour change technologies such as use of the specific, measurable, appropriate, realistic, time-based tool for goal setting with patients, but in the context of the WISE approach (Dziedzic 2012b). Thus, the training emphasised the fact that patients' own experience of living with chronic joint pain had to be the starting point and that advice and support about using the NICE core treatments to self-manage needed to make sense to the individuals concerned. The adaptive nature of the intervention, by locating it within people's own meaning-making frame of reference and social roles and relationships, allowed the adoption of behaviour change technologies to be flexible and evolve over time. Early indications from current observations of the nurse clinics are that the personal, embodied knowledge of the practice nurses is important in that they mesh their expertise (often gained from running other special clinics such as for diabetes or asthma) with the learning from the OA training. Thus, they appear to be confident in embracing a patient-centred consultation style that is responsive and adaptive.

This approach to implementing a complex intervention and system change poses a challenge to the traditional cluster RCT design with an often fixed timing of training and of intervention delivery within the researchers' control. In response, our pragmatic design adopts a realist perspective in that it reflects the everyday contexts of both patients and health professionals and the real-world primary care setting where the practitioners, rather than the researchers, control the implementation of the intervention. The WISE model already states that the social world of patients represents an open setting, and primary care may be similarly denoted because of the variability between and within practices and health professionals operationalising the intervention in individualised ways. The MOSAICS trial recognises this reality and adjusts its behaviour change interventions by taking the individual and the practice within their social context as a starting point, and also builds the social into the trial design. Counterbalancing the potential threat of compromising the interventional–control comparison of an RCT, the MOSAICS cluster trial carefully documents the implementation of the intervention (through interviews with professionals and patients and observations of clinics and feedback meetings) in each of the four practices. Insights into the interaction between the model OA consultation, its interpretation by individual practice nurses and its application to the patient's needs, circumstances and illness work can thus be highlighted and recognised. In some ways, this can be understood as a sociological theory-based iteration of the behaviour change wheel, adding more depth and meaning to the intervention in action.

With regard to behaviour change in practice nurses, early indications from their feedback about implementing the model OA consultation are that they perceive it as increasing their skills and repertoire of options, thus enhancing professionalism. The continued adoption of the new approach may be realised as it fits the practice nurses' image of themselves as a learning profession.

Conclusion

Self-management is expected to remain a dominant feature of health policy, and the belief in the benefits of behaviour change technologies continues to underpin many government

initiatives. A constructive sociological critique, however, has the ability to enhance current approaches and this article has offered examples of the way forward. We build on the analysis of Taylor and Bury who argue that trialists of EPP-type interventions have presented their evidence without adequately contextualising their findings against the socioeconomic background of the participants, thus leading to an unsophisticated promulgation of the benefits of the approach (Taylor and Bury 2007). Critical commentators also observe the positive virtues of patient self-management interventions that use behaviour change technologies. They recognise that jettisoning them would reduce the options open to patients and be detrimental to those who may benefit from behaviour change approaches (Bury *et al.* 2005, Redman 2010). Taylor and Bury suggest that, rather than rejecting psychological approaches outright, it will be fruitful to integrate their strengths with sociological work that recognises context and the everyday lives and strategies of individuals living with chronic illness. They argue that this can facilitate the robust use of evidence and provide comprehensive and responsive health services (Taylor and Bury 2007).

Our discussion of the policy drivers, the contextualisation of behaviour change approaches and the responsive trial design used in WISE and MOSAICS points to a way forward to produce effective interventions for self-management. By re-emphasising the social and its constituent components – individuals' illness work, clinician–patient negotiation and sense-making by both patients and health professionals – and integrating these in the overall design of interventions a more complex understanding can be achieved of why certain interventions work and for whom, and under what circumstances they are accomplished. Consequently, it will be possible to improve support for self-management in ways that are meaningful to patients and professionals in their everyday life and work.

Address for correspondence: Bie Nio Ong, Arthritis Research UK Primary Care Centre, Research Institute for Primary Care and Health Sciences, Keele University, Keele, ST5 5BG
e-mail: b.n.ong@keele.ac.uk

Acknowledgements

References

Armstrong, D. and Ogden, J. (2006) The role of etiquette and experimentation in explaining how doctors change behaviour: a qualitative study, *Sociology of Health & Illness*, 28, 7, 951–68.
Balfe, M. (2007) Diets and discipline: the narratives of practice of university students with type 1 diabetes, *Sociology of Health & Illness*, 29, 1, 136–53.
Bandura, A. (1977) Self-efficacy: towards a unifying theory of behaviour change, *Psychological Review*, 84, 2, 191–215.
Barlow, J., Turner, A. and Wright, C. (2000) A randomized controlled study of the arthritis self-management programme in the UK, *Health Education Research*, 15, 6, 665–80.

Baus, A. (2004) *Literature review: barriers to the successful implementation of healthcare information systems.* Office of Health Services Research: West Virginia University Department of Community Medicine.

Berg, M. (1999) Patient care information systems and health care work: a sociotechnical approach, *International Journal of Medical Informatics*, 55, 2, 87–101.

Blakeman, T., Bower, P., Reeves, D. and Chew-Graham, C. (2010) Bringing self-management into clinical view: a qualitative study of long-term condition management in primary care consultations, *Chronic Illness*, 6, 2, 136–50.

Bower, P., Kennedy, A., Reeves, D., Rogers, A., *et al.* (2012) A cluster randomised controlled trial of the clinical and cost-effectiveness of a 'whole systems' model of self-management support for the management of long- term conditions in primary care: trial protocol, *Implementation Science*, 7, 1, 1–13.

British Psychological Society (2008) *Improving Health: Changing Behaviour. NHS Health Trainer Handbook.* London: Department of Health.

Burawoy, M. (1998) The extended case method, *Sociological Theory*, 16, 1, 4–33.

Bury, M. (1991) The sociology of chronic illness: a review of research and progress, *Sociology of Health & Illness*, 13, 4, 451–68.

Bury, M., Newbould, J. and Taylor, D. (2005) *A rapid review of the current state of knowledge regarding lay-led self-management of chronic illness.* London: National Institute for Health and Clinical Excellence.

Checkland, K., Harrison, S. and Marshall, M. (2007) Is the metaphor of 'barriers to change' useful in understanding implementation? Evidence from general medical practice, *Journal of Health Services Research and Policy*, 12, 2, 95–100.

Conner, M. and Norman, P. (2005) Predicting health behaviour: a social cognition approach. In Conner, M. and Norman, P. (eds) *Predicting Health Behaviour: Research and Practice with Social Cognition Models*, 2nd edn. Maidenhead: Open University Press.

Conner, M. and Sparks, P. (1996) The theory of planned behaviour and health behaviours. In Conner, M. and Norman, P. (eds) *Predicting Health Behaviour: Research and Practice with Social Cognition Models*. Buckingham: Open University Press.

Corbin, J. and Strauss, A. (1985) Managing chronic illness at home: three lines of work, *Qualitative Sociology*, 8, 3, 224–47.

Davison, G. (2007) Behaviour therapy. In Ayers, S., Baum, A., McManus, C., Newman, S., *et al.* (eds) *Cambridge Handbook of Psychology, Health and Medicine*, 2nd edn. Cambridge: Cambridge University Press.

Department of Health (2000) *The NHS Plan: a Plan for Investment, a Plan for Reform*. London: The Stationary Office.

Department of Health (2001) *The expert patient: a new approach to chronic disease management for the 21st century*. London: Department of Health.

Department of Health (2005) *Self care – a real choice. Self care support – a practical option*. London: Department of Health.

Department of Health (2011) *The NHS Outcomes Framework 2012–2013*. London: Department of Health.

Donaldson, L. (2003) Expert patients usher in a new era of opportunity for the NHS, *British Medical Journal*, 326, 7402, 1279–80.

Doolan, D., Bates, D. and James, B. (2003) The use of computers for clinical care: a case series of advanced U.S. sites, *Journal of the American Medical Association*, 10, 1, 94–107.

Dziedzic, K. (2012a) An overview of best practices in OA care, *Annals of the Rheumatic Diseases*, 71, Suppl 3, 5.

Dziedzic, K. (2012b) Self management in OA: evidence for the role of the multidisciplinary team, *Annals of the Rheumatic Diseases*, 71, Suppl 3, 20.

Edwards, J., Khanna, M., Jordan, K., Jordan, J., *et al.* (2011) A systematic review of quality indicators in the primary care of osteoarthritis, *Annals of the Rheumatic Diseases*, 70, Suppl 3, 388.

Faircloth, C., Boylstein, C., Rittman, M., Young, M., et al. (2004) Sudden illness and biographical flow in narratives of stroke recovery, *Sociology of Health & Illness*, 26, 2, 242–61.

Fishbein, M., Triandis, H.C., Kanfer, F.H. and Becker, M. et al. (2001) Factors influencing behaviour and behaviour change. In Baum, A., Revenson, T.A. and Singer, J.E. (eds) *Handbook of Health Psychology*. Mahwah: Lawrence Erlbaum Associates.

Giddens, A. (1991) *Modernity and Self-Identity*. Cambridge: Polity Press.

Grime, J. and Dudley, B. (2011) Developing written information on osteoarthritis for patients: facilitating user involvement by exposure to qualitative research, *Health Expectations*, doi:10.1111/j.1369-7625.2011.00741.x.

Hodgins, M., Millar, M. and Barry, M. (2006) '.. it's all the same no matter how much fruit or vegetables or fresh air we get': traveller women's perceptions of illness causation and health inequalities, *Social Science & Medicine*, 62, 8, 1978–90.

Jinks, C., Ong, B.N. and Richardson, J. (2007) A mixed methods study to investigate needs assessment for knee pain and disability: population and individual perspectives, *BMC Musculoskeletal Disorders*, 8, doi:10.1186/1471-2474-8-59.

Kennedy, A. and Rogers, A. (2001) Improving self-management skills: a whole systems approach, *British Journal of Nursing*, 10, 11, 734–7.

Kennedy, A., Reeves, D., Bower, P., Lee, V., et al. (2007) The effectiveness and cost effectiveness of a national lay led self care support programme for patients with long-term conditions: a pragmatic randomised controlled trial, *Journal of Epidemiology and Community Health*, 61, 2, 254–61.

Kennedy, A., Chew-Graham, C., Blakeman, T., Bowen, A., et al. (2010) Delivering the WISE (Whole Systems Informing Self-Management Engagement) training package in primary care: learning from formative evaluation, *Implementation Science*, 5, 1, 7. doi:10.1186/1748-5908-5-7.

Lave, J. and Wenger, E. (1991) *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.

Lewin, S., Glenton, C. and Oxman, A (2009) Use of qualitative methods alongside controlled trials of complex healthcare interventions: methodological study, *British Medical Journal*, 339, doi: \http://dx.doi.org/10.1136/bmj.b3496.

Lorig, K., Mazonzon, P. and Holman, H. (1993) Evidence suggesting that health education for self management in patients with chronic arthritis has sustained health benefits while reducing health care costs, *Arthritis and Rheumatism*, 36, 4, 439–46.

Lorig, K., Sobel, D., Stewart, A., Brown, B., et al. (1999) Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization, a randomized trial, *Medical Care*, 37, 1, 5–14.

McAndrew, L., Musumeci-Szabo, T., Mora, P., Vileiktye, L., et al. (2008) Using the common sense model to design interventions for the prevention and management of chronic illness threats: from description to process, *British Journal of Health Psychology*, 13, 2, 195–204.

Michie, S., van Stralen, M. and West, R. (2011) The behaviour change wheel: a new method for characterising and designing behaviour change interventions, *Implementation Science*, 6, 42. doi:10.1186/1748-5908-6-42.

Miles, C., Pincus, T., Carnes, D., Homer, K., et al. (2011) Can we identify how programmes aimed at promoting self-management in musculoskeletal pain work and who benefits? A systematic review of sub-group analysis within RCTs, *European Journal of Pain*, 15, 8, 1–11.

Morden, A., Jinks, C. and Ong, B.N. (2011) Lay models of self-management: how do people manage knee osteoarthritis in context?, *Chronic Illness*, 7, 3, 185–200.

Murray, E., Treweek, S., Pope, C., MacFarlane, A., et al. (2010) Normalisation process theory: a framework for developing, evaluating and implementing complex interventions, *BMC Medicine*, 8, 63. doi:10.1186/1741-7015-8-63.

National Institute of Health and Clinical Excellence (NICE) (2008) Osteoarthritis: the care and management of osteoarthritis in adults. Available online at \http://www.guideline.gov/content.aspx?id=14322 (accessed 27 October 2013).

O'Connor, P., Crabtree, B. and Yanoshik, M. (1997) Differences between diabetic patients who do and do not respond to a diabetes care intervention: a qualitative analysis, *Family Medicine*, 29, 6, 424–8.

Porcheret, M. (2012) Self management for OA: the role of the GP, *Annals of the Rheumatic Diseases*, 71, Suppl 3, 20.

Porcheret, M., Jordan, K., Jinks, C. and Croft, P. (2007) Primary care treatment of knee pain – a survey in older adults, *Rheumatology*, 46, 11, 1694–700.

Post, E., Kilboure, A., Bremer, R., Solano, F., *et al*. (2009) Organizational factors and depression management in community-based primary care settings, *Implementation Science*, 4, 84. doi:10.1186/1748-5908-4-84.

Prochaska, J., DiClemente, C. and Norcross, J. (1992) In search of how people change, *American Psychologist*, 47, 9, 1102–04.

Redman, B. (2010) Patient self-management: potential harms to control, *Chronic Illness*, 6, 2, 151–3.

Roland, M. and Torgerson, D. (1998) What are pragmatic trials?, *British Medical Journal*, 316, 7127, 285.

Rogers, A. (2009) Advancing the expert patient, *Primary Health Care Research & Development*, 10, 3, 167–76.

Rogers, A., Lee, V. and Kennedy, A. (2007) Continuity and change?: Exploring reactions to a guided self-management intervention in a randomised controlled trial for IBS with reference to prior experience of managing a long term condition, *Trials*, 8, doi:10.1186/1745-6215-8-6.

Rogers, A., Hassell, K. and Nicolaas, G. (1999) *Demanding Patients? Analysing the use of Primary Care*. Buckingham: Open University.

Rogers, A., Kennedy, A., Bower, P., Gardner, C., *et al*. (2008) The United Kingdom expert patients programme: results and implications from a national evaluation, *Medical Journal of Australia*, 189, 10, S21–24.

Sackett, D., Straus, S., Richardson, W., Rosenberg, W., *et al*. (2000) *Evidence-Based Medicine: How to Practise and Teach EBM*. Edinburgh: Churchill Livingstone.

Schwarzer, R. and Fuchs, R. (1996) The health belief model. In Conner, M. and Norman, P. (eds) *Predicting Health Behaviour: Research and Practice with Social Cognition Models*. Buckingham: Open University Press.

Seear, K. (2009) 'Nobody really knows what it is or how to treat it': why women with endometriosis do not comply with healthcare advice, *Health, Risk and Society*, 11, 4, 367–385.

Stevenson, F., Britten, N., Barry, C., Bradley, C., *et al*. (2003) Self-treatment and discussion in medical consultations: how is medical pluralism managed in practice?, *Social Science & Medicine*, 57, 3, 513–27.

Taylor, D. and Bury, M. (2007) Chronic illness, expert patients and care transition, *Sociology of Health & Illness*, 29, 1, 27–45.

Timmins, N. (2012) *Never Again? the Story of the Health and Social Care Act 2012*. London: King's Fund and Institute for Government.

Townsend, A., Wyke, S. and Hunt, K. (2006) Self-managing and managing self: practical and moral dilemmas in accounts of living with chronic illness, *Chronic Illness*, 2, 3, 185–95.

Vollmar, H., Mayer, H., Ostermann, T., Butzlaff, M., *et al*. (2010) Knowledge transfer for the management of dementia: a cluster-randomised trial of blended learning in general practice, *Implementation Science*, 5, 1. doi:10.1186/1748-5908-5-1.

Wanless, D. (2002) *Securing our future health: taking a long-term view*. London: HM Treasury.

Weick, K. (1995) *Sensemaking in Organisations*. London: Sage.

Wood, M., Ferlie, E. and Fitzgerald, L. (1999) Achieving clinical behaviour change: a case of becoming indeterminate, *Social Science & Medicine*, 47, 11, 1729–38.