



## Regulation of behaviour in pursuit of health goals

Shema Orbell & Paschal Sheeran

**To cite this article:** Shema Orbell & Paschal Sheeran (1998) Regulation of behaviour in pursuit of health goals, *Psychology and Health*, 13:4, 753-758, DOI: [10.1080/08870449808407429](https://doi.org/10.1080/08870449808407429)

**To link to this article:** <https://doi.org/10.1080/08870449808407429>



Published online: 19 Dec 2007.



Submit your article to this journal [↗](#)



Article views: 238



View related articles [↗](#)



Citing articles: 2 View citing articles [↗](#)

## REGULATION OF BEHAVIOUR IN PURSUIT OF HEALTH GOALS

SHEINA ORBELL\* and PASCHAL SHEERAN

*Department of Psychology, University of Sheffield, Western Bank, Sheffield, UK*

*(Received 3 April, 1997; in final form 24 July, 1997)*

Prediction of health related behaviours and the specification of cognitive processes which might guide development of effective interventions may be promoted by the identification of processes which mediate between intentions and health behaviour. The present commentary addresses theoretical developments concerning the role of cognitive and personality processes in volitional pursuit of health related goals and in the maintenance of behavioural change.

**KEY WORDS:** Intention, self-regulation, volition.

Interventions to promote public health can be targeted at individual, group and societal levels. The papers by Bagozzi and Edwards (1998), Fuhrmann and Kuhl (1998), and Gollwitzer and Oettingen (1998) each address the social-cognitive determinants of individual-level behaviour change. In contrast, Leventhal, Leventhal and Contrada (1998) address both the individual and group levels, conceptualising patients' beliefs as the proximate determinants of responses to disease, derived from, and reinforced by, the person's cultural context. Bandura (1998) considers the implications of self-efficacy for interventions at all three levels. Health psychology has often neglected its potential to achieve change beyond the individual level and we welcome Bandura's proposals for group- and societal-level interventions based upon collective self-efficacy. This construct may provide a valuable theoretical basis for 'community development', which is an expanding field within health promotion, and one which may have utility in confronting health variations due to social class, gender and ethnicity.

Research and interventions in health psychology have traditionally been guided by three social cognitive accounts of health and social behaviour; the Health Belief Model (HBM, Janz and Becker, 1984), the Theory of Reasoned Action (TRA, Fishbein and Ajzen, 1975) and Protection-Motivation Theory (PMT, Rogers, 1983). Meta-analytic reviews have shown that while HBM variables have only modest predictive power (Harrison, Mullen and Green, 1992) the behavioural intention construct from the TRA and PMT typically accounts for 20–30% of the variance in behavioural performance (e.g., Sheppard, Hartwick and Warshaw, 1988; Hodgkins, Sheeran and Orbell, 1997). This suggests that there is usually a good deal of inconsistency between intentions and health behaviour. Unfortunately, correlational data obscures the source of this inconsistency. Decomposition of the intention-behaviour relation into 4 cells (intend-act, intend-do not act, do not intend-act, and do not intend-do not act) has shown that the main source of inconsistency between intention and behaviour lies with intenders who do

---

\* Corresponding author. E-mail: s.orbell@sheffield.ac.uk.

not act ("inclined abstainers") rather than non-intenders who act ("disinclined actors") (Orbell and Sheeran, in press). We view the intention-behaviour gap as one of the most pressing concerns for self-regulation theorists. Since most of the papers included in this Special Issue describe theoretical developments which directly address this issue, our aim in this commentary is to examine the advances made by the authors in understanding intention-behaviour consistency and to discuss the implications for intervention in health psychology.

## SPECIFICATION OF PROXIMAL DETERMINANTS OF GOAL SUCCESS

Prochaska and DiClemente (1992) maintain that understanding health-related behavioural change requires attention to individuals' readiness for change and that interventions must be targeted according to the 'readiness' of particular individuals to be effective. They outline a stage model which suggests that people pursue health goals according to a linear progression from precontemplation (no intention to change), contemplation (intention to change), action and maintenance of behaviour change. Bandura provides a convincing critique of this approach, arguing that stage models typically violate necessary assumptions regarding qualitative transformations across discrete stages, an invariant sequence of change and nonreversibility. We would add, that the most convincing test of a stage model, namely, comparison of a stage-matched *versus* a stage non-matched intervention, has yet to be reported in the literature. More importantly, as Bandura points out, because stage models focus on 'readiness' rather than the factors predicting readiness, this approach would seem to describe, rather than explain, individuals' failure to act upon their intentions.

This contrasts with Bagozzi and Edwards' (1998) Theory of Self-Regulation (TSR) which explicitly addresses variables hypothesised to mediate the relationship between intentions and behaviour. While the TSR appears to borrow some of the vocabulary of stage models (e.g., "preactional phase and action initiation"), the primary concern of this model is not assigning individuals to discrete stages but rather identifying psychological and behavioural processes which most effectively translate goal intentions into goal outcomes. In this regard, we see the concepts of mental and physical trying as useful advances in specifying the proximal determinants of goal success. However, we would note that the variance explained in mental and physical trying was relatively modest in Bagozzi and Edwards' study ( $R^2=.10$ ) which might suggest that the Volitional Components Inventory which demonstrated significant relationships with perceived effort in Fuhrmann and Kuhl (1998) might usefully augment the model.

Gollwitzer's (1990) and Heckhausen's (1991) Model of Action Phases (MAP) also provides a theoretical advance on stage models. The MAP makes a conceptual distinction between the desire for behaviour change culminating in goal setting (the motivational phase) which parallels the TRA's view of intention formation, and the volitional phase, which is characterised by the steps taken by individuals to ensure goal achievement. Importantly, the model suggests that movement from the motivational to the volitional phase is characterised, first, by the intention or decision to pursue a given goal, and second, by the formation of plans concerning where, when and how to act. Only when plans specifying the action and the location and timing of its enactment ("implementation intentions") are formed, can the individual move from the motivational to the volitional phase of behaviour change. Since the MAP specifies the cognitive prerequisites of progress

towards goal achievement, it provides a basis for psychological interventions which directly address the question of *how* to promote movement from contemplation to action.

## INDIVIDUAL DIFFERENCES IN GOAL PURSUIT AND GOAL ACHIEVEMENT

Fuhrmann and Kuhl (1998) provide a unique contribution to the problem of goal pursuit by suggesting that volitional success may be moderated by a dispositional variable which they call Action-State Orientation. State-oriented individuals are characterised by a tendency to hesitate before deciding to act and by a cognitive focus on goals rather than actions which may impair volitional success. Action-oriented individuals, on the other hand, demonstrate rapid decision making rather than hesitation, and focus on actions rather than goals leading to improved volitional success. One implication of their distinction is that individuals who are action oriented are more likely to translate their intentions into action (Kuhl and Beckmann, 1985). Although some previous research has not supported this contention (e.g. Kendzierski, 1990), Fuhrmann and Kuhl's paper suggests a resolution, namely, that volitional success may be the result of a complex interaction between type of goal (self-set *versus* other-set), situational constraints which make the goal easy or difficult to pursue, and personality disposition. They present evidence indicating that volitional success in goal pursuit was superior when the goal was self-set, as opposed to being recommended by another person. Furthermore, this effect was even more powerful for action-oriented individuals and when the goal itself was difficult to pursue. An important implication for interventions in health psychology is that encouraging participants to set their own goals for health-related behavioural change is likely to lead to higher success rates, particularly where the task of behavioural self-change is perceived as difficult or challenging and the individual disposition is action-oriented. The development of these findings in the context of interventions to promote health will require that health educators pay attention not only to the manner in which behavioural or health state goals are set (by the participant, rather than by the educator), but to the nature of the goal itself. The flexible presentation of the behavioural task as either challenging or easy according to the individuals' personal disposition is likely to enhance intervention effectiveness depending on his or her personality.

Bagozzi and Edwards (1998) present a novel methodology for eliciting goal structures which may simultaneously address problems with expectancy-value theory and may also have utility in understanding intention-behaviour relations. Sutton (1996) has pointed out that researchers employing the TRA frequently find that the beliefs about the consequences of a behaviour (attitude) which underlay a behavioural intention may be so highly intercorrelated that it becomes difficult to determine which beliefs are most important and should therefore be the focus of interventions. Bagozzi and Edwards' idiographic approach to hierarchical goal structures may prove valuable in addressing this problem. Regarding intention-behaviour relations, we believe that this approach could be used to address many interesting questions. For example, the reasons given for non-performance of a health behaviour usually relate to contextual and situational factors which undermined positive intentions (e.g., "I was drunk" or "I did not expect to have sexual intercourse" as reasons for condom non-use, see Duncan *et al.*, 1997). It might be valuable to contrast the reasons for intending to perform a behaviour *versus* the reasons for not actually performing the behaviour using this method in order to determine factors distinguishing "inclined actors" and "inclined abstainers". Relatedly, this method could be used

to determine whether the intentions of people who are extrinsically motivated (e.g., people who view "social acceptance" as a 'prominent' reason for weight loss) are more likely to be enacted than the intentions of people who are intrinsically motivated. Eliciting hierarchical goal structures in the manner described by Bagozzi and Edwards might also serve as a motivational intervention which health educators could employ in order to challenge and/or reinforce people's reasons for pursuing particular health goals.

#### BEHAVIOURAL INITIATION VERSUS BEHAVIOURAL MAINTENANCE AND THE CONCEPT OF 'HABIT'

Many health-related behavioural goals can be described as *health state goals* or *complex behavioural goals* (Orbell *et al.*, 1997). Health state goals refer to goals where the outcome is a 'state' such as 'being fit', or 'being slimmer' which could be achieved by a variety of behaviours (e.g., dieting, exercise). Complex behavioural goals are goals which require the specification of a series of sub-goals in order to be pursued effectively (e.g., acquiring and carrying condoms and negotiating with a sexual partner could be considered sub-goals *vis* the goal of condom use). As Bagozzi and Edwards demonstrated, obtaining good correlations between goal intentions and goal success in the context of health state goals is facilitated by the specification of proximal behavioural acts. This approach may have particular utility in considering the behavioural strategies required to pursue complex health state goals such as those encountered by people dealing with chronic diseases such as diabetes or asthma. However, it's also important to note that in order to achieve a complex goal or a health state goal, behavioural acts in the service of the goal need to be sustained over a period of time. For example, in the context of the goal of losing weight, the person must not only initiate behavioural change by means of, e.g., an exercise programme, the person must also maintain regular exercise. One way of characterising this issue is to refer to the problem of 'creating habits'. Two of the papers in this special issue speak to this difficulty. Fuhrmann and Kuhl observed the phenomenon that some individuals may 'appear' highly motivated to pursue behavioural change while they are taking part in an intervention (McCaul, Glasgow and O'Neill, 1992) but, do not, in fact, maintain this ostensive motivation, nor translate it into volitional success, over the longer-term. Fuhrmann and Kuhl were also able to specify the conditions under which this 'tailing off' effect is most likely. Their data showed that action-oriented individuals are highly attentive to others recommendations when the goal in question is presented as 'easy' or likely to produce quick rewards, but that they do not in fact increase their commitment to the recommended course of action. Interventions which aim to promote participants' longer-term commitment to performing a behaviour would therefore need to emphasise the challenging nature of self-set goals. Gollwitzer's (1993, Gollwitzer and Oettingen, 1998) concept of implementation intentions also provides a perspective on the problem of creating habits. This approach addresses the cognitive mechanisms which facilitate behavioural enactment rather than the nature of goals or individual difference variables. The concept of implementation intentions has particular value for health psychology, since it provides a technique which can be used to develop *volitional* interventions for health state and complex goals. A significant hindrance to volitional success is difficulty with getting started, or, as Bargh (1990) terms it, the problem of 'missed opportunities'. For example, the goal intention of 'getting fit' might be executed in a variety of different ways, and in a variety of different contexts. By forming an implementation intention such as 'I will join the fitness

club on Friday on my way home from work', difficulties surrounding the initiation of action may be overcome. More importantly in the present context, the formation of an implementation intention may not only increase the likelihood of action and the speed with which intentions are enacted, an implementation intention may also ensure that the focal behaviour is initiated *on every occasion* that the appropriate context for action is encountered. Gollwitzer provides evidence that linking an intention and the context of its behavioural performance in memory is responsible for the effectiveness of implementation intentions. This effect has led us to suggest that mentally rehearsing what one will do, and when and where one will do it, mimics the effects of behavioural rehearsal which are known to lead to the development of habits (Orbell *et al.*, 1997).

## CONCLUSION

We have highlighted three key theoretical issues which have implications for improved prediction of health-related behaviour and the development of effective interventions. The first concerned the identification of processes which mediate between intentions and health behaviour. While existing social cognitive models deal only with the development of motivation to pursue a goal, Gollwitzer and Oettingen's paper outlined a two phase model which specifies not only the cognitive processes which characterise the volitional phase but also the acts required of the individual to move from one phase to the next. Secondly, we have highlighted the implications of Kuhl's work on personality dispositions in moderating the effective translation of intentions into action. This work illustrates the importance of matching intervention content to dispositional style. Third, we have considered the problem of maintenance of behavioural change. Bagozzi and Edwards suggestion that complex goals need to be broken down into behavioural subgoals provides a useful starting point for this work, while Gollwitzer's work on implementation intentions may prove an invaluable technique for achieving sustained behavioural change.

## References

- Bandura, A. (1998) Health promotion from the perspective of social cognitive theory. *Psychology and Health*, 13, 623-649.
- Bagozzi, R.P. and Edwards, E.A. (1998) Goal setting and goal pursuit in the regulation of body weight. *Psychology and Health*, 13, 593-621.
- Bargh, J.A. (1990) Auto-motives: Preconscious determinants of social interaction. In E.T. Higgins and R.M. Sorrentino (Eds.) *Handbook of Motivation and Cognition: Foundations of Social Behaviour* (pp. 93-130) New York: Guilford Press.
- Duncan, B., Sheeran, P., Spencer, C.P. and Hicks, D. (1997) Gender differences in explanations for condom non-use. Special Group in Health Psychology Annual Conference, Southampton, July 1997.
- Fishbein, M. and Ajzen, I. (1975) *Belief, Attitude, Intention and Behaviour*. New York: Wiley.
- Fuhrmann, A. and Kuhl, J. (1998) Maintaining a healthy diet: Effects of personality and self-reward versus self-punishment on commitment to and enactment of self-chosen and assigned goals. *Psychology and Health*, 13, 651-686.
- Gollwitzer, P.M. and Oettingen, G. (1998) The emergence and implementation of health goals. *Psychology and Health*, 13, 687-715.
- Gollwitzer, P.M. (1990) Action phases and mind-sets. In E.T. Higgins and R.M. Sorrentino (Eds.) *Handbook of Motivation and Cognition: Foundations of Social Behaviour* (pp. 53-92). New York: Guilford Press.
- Harrison, J.A., Mullen, P.D. and Green, L.W. (1992) A meta-analysis of studies of the health belief model with adults. *Health Education Research*, 7, 107-16.
- Heckhausen, H. (1991) *Motivation and Action* (pp. 163-188) Berlin: Springer-Verlag.

- Hodgkins, S., Sheeran, P. and Orbell, S. (1997) Prediction and intervention in health related behaviour: A meta-analysis of protection-motivation theory. Paper under review.
- Janz, N. and Becker, M.H. (1984) The health belief model: a decade later. *Health Education Quarterly*, 11, 1-47.
- Kendzierski, D. (1990) Decision making versus decision implementation: an action control approach to exercise adoption and adherence. *Journal of Applied Social Psychology*, 20, 27-45.
- Kuhl, J. and Beckmann, J. (1985) *Action Control*. Berlin: Springer-Verlag.
- Leventhal, H., Leventhal, E.A. and Contrada, R.J. (1998) Self-regulation, health and behaviour: A perceptual-cognitive approach. *Psychology and Health*, 13, 717-733.
- McCaul, K.D., Glasgow, R.E. and O'Neill, H.K. (1992) The problem of creating habits: Establishing health-protective dental behaviors. *Health Psychology*, 11, 101-110.
- Orbell, S., Hodgkins, S. and Sheeran, P. (1997) Implementation intentions and the theory of planned behaviour. *Personality and Social Psychology Bulletin*, 23, 953-962.
- Orbell, S. and Sheeran, P. (in press) Inclined abstainers: A problem for predicting health related behaviour. *British Journal of Social Psychology*.
- Prochaska, J.O. and DiClemente, C.C. (1992) Stages of change in the modification of problem behaviours. In M. Hersen, R.M. Eisler and P.M. Miller (Eds.) *Progress in behaviour modification* (Vol. 28, pp. 184-218) Terre Haute, IN: Sycamore.
- Rogers, R.W. (1983) Cognitive and physiological processes in fear appeals and attitude change: a revised theory of protection-motivation. In J.T. Cacioppo and R.E. Petty (Eds.) *Social Psychophysiology: A Source Book*. New York: Guilford Press, 153-76.
- Sheppard, B.H., Hartwick, J. and Warshaw, P.R. (1988) The theory of reasoned action: a meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15, 325-39.