Understanding and treating obsessive–compulsive disorder

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Abstract

The development of behaviour therapy for OCD and its evolution into cognitive behaviour therapy is described, highlighting the importance of a crucial series of experiments conducted by Rachman and colleagues in the mid-1970s. More recently, developments in cognitive theory suggest that the key to understanding obsessional problems lies in the way in which intrusive thoughts, images, impulses and doubts are interpreted. The important negative interpretations usually concern the idea that the person's action (or choice not to act) can result in harm to oneself or others. This responsibility interpretation has several consequences (such as motivating neutralising behaviour and other counter-productive strategies, increasing selective attention, increased negative mood); these serve to maintain the negative beliefs and therefore the obsessive–compulsive problem. Both general and specific aspects of cognitive-behavioural treatment are described. A number of treatment strategies which are specific to obsessional problems are described in clinical detail. © 1999 Elsevier Science Ltd. All rights reserved.

Introduction

From a present day perspective, it is almost impossible to imagine what it must have been like for the behaviour therapist who sought to treat obsessional problems in the late 1960s and early 1970s. Although behaviour therapy was gaining acceptance at that time, the main treatment strategies used for the reduction of anxiety were variants of Wolpe's rather gentle approach, systematic desensitisation (Wolpe, 1958). Such an approach required that patients' anxiety should remain at very low levels, to allow the establishment of reciprocal inhibition. Systematic desensitisation was initially used with specific phobias, although it was hypothesised that it would also be effective in the treatment of other stimulus-related anxiety disorders. However, obsessional problems were, in general, seen as a much more serious problem, not least because of the influence of psychoanalytic theories which were still very important at the time. The impact of psychoanalysis lay not only in the specific theory of obsessions as espoused by the majority of psychotherapists at that time, but also because psychoanalytic concepts had become part of clinical 'common sense'. With regard to obsessional problems, the

notion that a ritual should not be interrupted or prevented was almost an article of faith during the 1950s and early 1960s. This view was based on the supposition that people suffering from OCD were characterised by weak ego boundaries (hence the constant intrusion into consciousness of ideas from the id), and that obsessional rituals were an important defence mechanism which had the effect of strengthening the otherwise unduly weak boundaries. It therefore followed that attempts to prevent rituals would result in a breakdown of ego boundaries and plunge the patient into a psychosis.

This was the context in which Jack Rachman and his colleagues (Rachman, Hodgson, & Marks, 1971; Rachman, Marks, & Hodgson, 1973) contemplated the application of behavioural techniques derived from two process theory to obsessional problems, building in part upon earlier work by Meyer (1966). These techniques subsequently became known to us as exposure and response prevention, and their effectiveness in the absence of either symptom substitution or the development of psychotic symptoms meant yet another set of predictions from psychoanalysis were directly falsified.

There were other important theories of obsessional states at the time as well; Beech and Liddell (1974) regarded OCD as more closely linked to affective disorders. Their theory revolved around notions of 'adverse mood and indecisiveness', with the specific prediction that performance of rituals would be accompanied by a deterioration in mood and a consequent increase in doubting, which would in turn trigger more ritualising. It was against this background that Hodgson and Rachman (1972) carried out the first of an elegant series of clinical experimental studies, in which obsessionals with contamination concerns were asked to contaminate themselves. It was demonstrated that washing was, as they had predicted, associated with anxiety reduction rather than an increase. They went on to systematically replicate and extend this finding in a series of studies, (Roper & Rachman, 1976; Roper, Rachman, & Hodgson, 1973) culminating in the classic study by Rachman, de Silva, and Roper (1976). In this latter study, 12 obsessional checkers were exposed to a situation designed to provoke the urge to check. Immediate checking was again associated with immediate anxiety reduction. In addition, a similar degree of anxiety reduction was noted over a period of an hour in patients who were asked not to check. This phenomenon, known as spontaneous decay, firmly established the clinical and scientific basis of exposure and response prevention. In a further extension of this experimental work, Roper and Rachman (1976) used the same methodology (but in the patients' own homes, rather than the laboratory) to demonstrate that the elicitation of discomfort was substantially blocked by the presence of the experimenter during the provocation phase. They wrote "As the presence of the experimenter markedly alters the course of the reactions of compulsive checkers in a provoking situation... it is probably crucial for the patient to carry out a large variety of self-directed and self-monitored tasks outside the treatment sessions". (p. 31). This suggestion anticipates later recommendations of self-directed exposure, and provides a clear empirical basis for such procedures (see also below). That paper also concludes that "One reason for this effect may be the transfer of some responsibility from the checker to the other person". The profound implications of this simple conclusion are now clear in the light of recent developments in the cognitive understanding of obsessional problems as described here.

Quite apart from the fact that this research radically changed the direction which the psychological treatment of obsessional problems took, this study is typical of the work of

Rachman as a clinical scientist. His primary focus was on clinical phenomena (contamination, discomfort elicited, urges to ritualise and actual ritualising), in people suffering from the problem itself. The research was not ruled or bounded by existing conventions (psychoanalytic and behavioural), but rather on Rachman's own incisive and empathic understanding of his patients' problems in the context of scientific psychology. It confronted key theoretical issues in the most direct way possible, with little room for ambiguity in terms of the results obtained. Clinicians and theoreticians alike had no problems in understanding the implications of the study, precisely because it stemmed from an understanding of the phenomenology of obsessional disorders. Even more remarkably, this work continues to exert an extraordinary influence more than twenty years later. Probably the majority of those who use exposure and response prevention describe these studies (or their results) as part of the process of explaining to patients the importance of compulsive behaviour in the maintenance of obsessional problems, and how exposure and response prevention works.

Rachman's work provided two fundamental elements which held the key to the development of current cognitive theory. Rachman and de Silva (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984) demonstrated not only that the content of normal intrusive thoughts and obsessional thoughts was indistinguishable, but also that such intrusions occur in at least 90% of the general population. Rachman (1971) had previously hypothesised that obsessional thoughts could probably be best regarded as conditioned stimuli, with the obvious implication that nonclinical intrusive thoughts were usually neutral stimuli. Salkovskis (1985) combined these observations with Beck's theory of emotion and emotional disorders (Beck, 1976) which is predicated on the hypothesis that emotional responses such as anxiety occur when stimuli or situations are interpreted in a negative fashion. Salkovskis (1985) drew upon and synthesised both sets of ideas (together with the implications drawn from clinical observation, phenomenology and the results of the spontaneous decay experiments) to propose an explicitly cognitive hypothesis of obsessional problems.

This theory proposes that obsessional thinking has its origins in normal intrusive cognitions. Intrusive cognitions are ideas, thoughts, doubts, images or impulses which intrude in the sense that they interrupt the person's current stream of consciousness and the person also finds them upsetting, unacceptable, or otherwise unpleasant. The difference between normal intrusive cognitions and obsessional intrusive cognitions lies not in the occurrence or even the (un)controllability of the intrusions themselves, but rather in the interpretation made by obsessional patients of the occurrence and/or content of the intrusions. If the appraisal is entirely focussed upon harm or danger on the one hand, or loss on the other, then the emotional reaction is likely to be anxiety or depression, respectively. Such evaluation of intrusive cognitions and consequent mood changes may become part of a mood-appraisal spiral (Rachman, 1983; Teasdale, 1983), but would not necessarily be expected to result in compulsive behaviour, neutralising and clinical obsessions. According to the cognitive hypothesis, an obsessional pattern *would* occur if intrusive cognitions were interpreted as an indication that the person may be, may have been, or may come to be, responsible for harm or its prevention (Salkovskis & Warwick, 1985; Salkovskis, 1985, 1989a; Rachman, 1993, 1997, 1998; Salkovskis, Richards, & Forrester, 1995). It is this specific interpretation in terms of responsibility for harm to oneself or other people which is believed to link intrusive cognitions with both the discomfort experienced and neutralising (compulsive) behaviours, whether overt

or covert. Following a meeting of researchers including Jack Rachman, Mark Freeston, Paul Salkovskis and Bob Ladouceur at which it was agreed that the single word was relatively ambiguous, responsibility was operationally defined in the context of cognitive theory as

> The belief that one has power which is pivotal to bring about or prevent subjectively crucial negative outcomes. These outcomes are perceived as essential to prevent. They may be actual, that is, having consequences in the real world, and/or at a moral level (Salkovskis et al., 1996)

The structure of this cognitive conceptualisation closely parallels the cognitive approach to other types of anxiety disorder in that a particular nonthreatening situation becomes the focus of concern as a result of beliefs concerning danger or threat. However, Salkovskis (1996a) suggests that special considerations may apply to the specific cognitive model of obsessional problems. These differences arise from the hypothesis that OCD results from the way in which the person interprets the occurrence of *intrusive thoughts, images, impulses and doubts*, and that obsessional thoughts often focus on fears for which the focus may be far in the future (e.g. that blasphemous thoughts will result in one burning in hell for the rest of eternity) and that these are therefore not subject to disconfirmation in ways which might be possible for other anxiety disorders. Such considerations mean that therapy is likely to be conducted best with the major emphasis on validation of a less threatening explanation of the person's problems as opposed to attempts to disconfirm their negative beliefs. This means that the therapist must themselves have a thorough understanding of the cognitive behavioural theory as it applies to OCD, and how this theory accounts for the phenomenology of obsessional problems.

The cognitive theory proposes that, in OCD, assumptions about the meaning of intrusions and the person's role in causing or preventing harm mean that the occurrence and/or content of intrusions (thoughts, images, impulses and/or doubts) are interpreted (appraised) as indicating that the person may be *responsible* for harm to themselves or others. This type of interpretation leads both to adverse mood (including anxiety and depression) and the motivation/decision to engage in neutralising behaviours (which can include a range of behaviours such as compulsive checking, washing and covert ritualising). Adverse mood and neutralising behaviours can both have the effect of increasing the likelihood of further intrusions, the perceived threat and the perception of responsibility, leading to a cycle of negative thinking and neutralising. Thus, the *interpretation* of obsessional intrusions as indicating increased responsibility has a number of important and interlinked effects which can maintain the negative interpretations made: (i) increased discomfort, anxiety and depression, (ii) increased attention focussed on the intrusions and/or to stimuli related to them, (iii) greater accessibility of the original thought and other related ideas and (iv) active and counter-productive attempts to reduce the thoughts and decrease or discharge the responsibility which is perceived to be associated with them, including behavioural and cognitive 'neutralising' responses and the adoption of unusual and sometime unattainable criteria for completion of obsessional actions. Behaviours can include compulsions, avoidance of situations related to the obsessional thought, seeking reassurance (having the effect of diluting or sharing responsibility) and attempts to get rid of or exclude the thought from the mind. Each of these responses not only contributes the maintenance of negative beliefs but can also increase the likelihood of

further intrusion and doubt, and increase the degree of preoccupation experienced. The net effect is a worsening spiral in which the occurrence and content of intrusive thoughts are misinterpreted in ways which lead to counter-productive affective, cognitive and behavioural reactions. This is depicted in Fig. 1; more specific details of this model and the associated beliefs are described in detail elsewhere (Salkovskis et al., 1995; Salkovskis, 1996b; Salkovskis, Richards, & Forrester, 1998; Salkovskis, Forrester, Richards, & Morrison, 1998). What is important to note here is that an individualised version of the model as portrayed in the figure is an essential part of the process of therapy as described below.

Rachman (1997, 1998, 1993) has recently published major amplifications and clarifications of the cognitive hypothesis in which he emphasised the similarity between the cognitive theory of
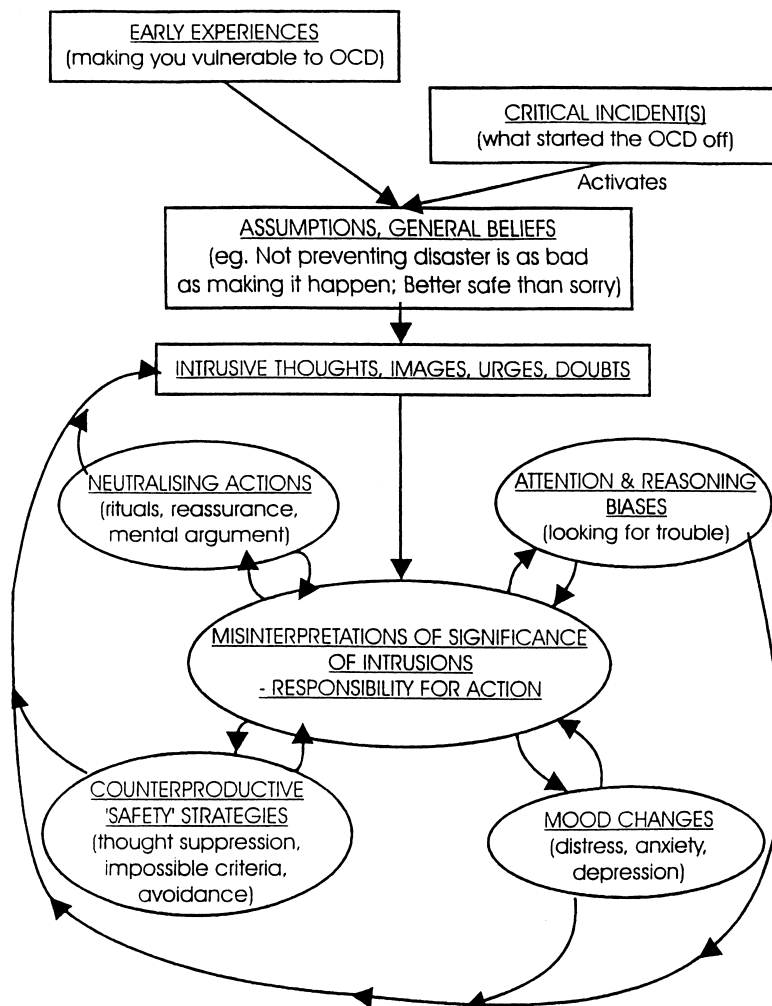

Fig. 1. Integrated schematic model describing the cognitive hypothesis of the origins and maintenance of obsessional problems. Authors: Salkovskis, P.M., Forrester, E., Richards, C. (1998) *British Journal of Psychiatry, 173* (Suppl. 35), 53–63.

obsessions and, for example, the cognitive theory of panic (Clark, 1986) and its emphasis on catastrophic misinterpretations of bodily sensations (see also Salkovskis (1996b)). More recently, attention has also turned to consideration of the implications of the cognitive theory for ideas about the *development* of obsessional problems (Salkovskis, Shafran, Rachman, & Freeston, 1999).

If, as the cognitive theory proposes, obsessional problems are a result of sensitive individuals *trying too hard* to be certain that they have not caused harm, this poses a special therapeutic problem. How can people be helped to try to stop trying too hard?

2. Cognitive behaviour therapy

It has long been known that attempts to dispute the truth of obsessional thoughts are of no therapeutic value (e.g. "Let's prove to you that you will not molest your children"). Giving reassurance is like helping an obsessional washer to wash sufficiently, or the checker to be more sure that they really did lock the door. Attempting to convince the person that they are clean, that they will not lose control, that their door is locked and so on simply perpetuate the person's obsessional problems by meshing with and amplifying the patients' obsessional ritualising and reassurance-seeking. Instead, the aim of more recently developed cognitive therapy approaches is to help the patient to step outside their concerns and adopt an entirely different and more helpful perspective on their problems. One of the consequences of the development of specific and explicit cognitive theories of OCD has the been the development of highly integrated cognitive-behavioural interventions. Such approaches emphasise the integration of cognitive and behavioural strategies at the level of the way in which the problem is formulated and the rationale used to direct treatment.

A particularly important element in cognitive behaviour therapy involves helping the patient to construct and actively test a coherent alternative and less threatening explanation of their problem by contrast with the one which they had previously applied and which had motivated their obsessional and avoidance behaviour. Attempting to provide a well articulated alternative explanation as an explicit rationale for the procedures used in therapy can be hampered by the use of separate cognitive and behavioural accounts. The remainder of this paper describes the integrated approach developed in Oxford. We consider that it is necessary not only to tailor treatment to the specific shared understanding reached between therapist and patient concerning the particular idiosyncratic pattern of maintaining factors, but also to follow well-defined general principles concerning the way therapy is conducted. These general principles and several of the more important specific techniques are described below. Several other sources provide further details of these and other techniques in the treatment of obsessional problems (Salkovskis & Warwick, 1985, 1988; Salkovskis, 1989b; Salkovskis & Westbrook, 1987, 1989; Salkovskis & Kirk, 1997; Salkovskis, Richards, & Morrison, 1998).

2.1. The general context, style and goals of therapy

Treatment needs to take place in the context of a good therapeutic relationship in which the therapist seeks to maximise the extent to which the patient feels understood and wishes to

actively engage in changing how they react. The use of normalising is particularly important, in that the patient is helped to see that their reactions are not as unusual, strange or crazy as they had previously thought. Patients will often be self critical, and echo the words of others who often say that they should 'pull themselves together'. In discussion, the therapist helps patients to see that they desperately wish to do so, but do not know how to. The conclusion of this discussion is usually that the therapist's job is to make it possible for the patient to discover and try things which might help the patient to bring about the changes they so strongly desire. In other words, the therapist aims to help the patient to find effective ways of pulling themselves together.

Therapy sessions are audiotaped, and the patient given the tape to listen to as homework. Audiotapes are used for two main reasons. First, therapy sessions are relatively long, and the patient is likely to have problems recalling all that was discussed. Second, if therapy is well conducted the patient will frequently become upset, because therapy focusses on eliciting and modifying negative beliefs and behaviours which are central to the patients' concerns. The emotion experienced can make it difficult for the patient to process fully what went on during the therapy session. Listening to the tape allows the person to fully assimilate what occurred in therapy, and to benefit more fully from the new ideas discussed and discovered in the session.

The style in which cognitive therapy is conducted is best characterised as a process of 'guided discovery', where questioning and discussion are used to help the patient to understand the nature of their problem and the factors involved in its persistence. Guided discovery almost inevitably leads the patient to reach an understanding of the changes which they need to make in order to overcome their problems. As with other types of cognitive behaviour therapy, treatment techniques can be broadly split into 'discussion techniques' and 'behavioural experiments'. The links between these two types of strategy are very close. In discussion, the patient and therapist work on achieving a better understanding of the problem, considering evidence, past and present, for the patients key beliefs and interpretations. As such discussion proceeds as a process of guided discovery, it will become clear that information important to answering crucial questions is simply not available. At such points, the aim is to devise behavioural experiments which have the effect of providing information relevant to these questions. Sometimes, such experiments can fully answer key questions, as in experiments which provide the patient with disconfirmation of their feared consequences (Salkovskis, 1991, 1996a). On completion of the behavioural experiment, the focus returns to discussion. In this way, good cognitive therapy involves the interweaving of discussion and behavioural experiments.

Therapy is predicated on the assumption that, prior to treatment, the patient is distressed because they have particularly threatening beliefs about the nature of their obsessional experiences as indicating that they are dangerous to themselves and/or those around them. More specifically, patients interpret their intrusive cognitions and doubts as evidence for beliefs such as "I am in danger of becoming a child molester"; "I have contaminated things so that they may be dangerous" and "I am wicked/damned".

Assessment and treatment have the aim of helping the person to consider an alternative view of their situation, viz: "Maybe you are not dangerous, but are very *worried* about being dangerous". Much of the early part of therapy involves the explicit identification of the two contrasting views of the patient's problem together with a detailed exploration of the

implications of each, sometimes referred to as theory A/theory B. In this way, patient and therapist work together to construct and test a new, less threatening explanation of the patient's experience, and then to explicitly examine the validity of the contrasting accounts. The early part of therapy therefore seeks to pose a general question of the form ''Which explains things best: that you are a child molester, or that you fear being a child molester?''. From early in therapy, therapists make it clear that they do not expect patients simply to change their views as a result of discussions and the construction of an alternative explanation. ''Don't trust me, test it out for yourself'' is the explicit theme of therapy sessions subsequent to the therapist and patient agreeing on a possible, anxiety based alternative account of their problem.

In summary, reaching a shared understanding involves the identification of key distorted beliefs and the collaborative construction of a nonthreatening *alternative account* of their obsessional experience and preoccupations. This alternative explanation is important because it allows the patient to consider and explicitly test beliefs about the nature of their problem. Such beliefs emphasise the role of an inflated sense of responsibility for harm (to themselves and/or others) in generating and motivating compulsive and avoidant behaviours, and the way in which such neutralising and avoidant behaviour can in turn sustain or increase distorted beliefs concerning responsibility. One of the implications of such an approach is that it leads not only to verbal change strategies but also to a variant of exposure and response prevention in which belief change is the guiding principle; the two types of strategy, verbal and behavioural, are closely interwoven. That is, exposure and response prevention strategies are used as a way of helping the patient discover the way in which neutralising behaviour acts to maintain their beliefs and the associated discomfort, and that stopping such behaviours is beneficial. Discussion helps the patient understand how their problem works and directs them both to particular behavioural experiments and to ways of conducting these so as to maximise their understanding, which is consolidated in further discussion.

2.2. Specific aspects of cognitive-behavioural assessment

The first step in any programme of cognitive behaviour therapy is to establish a good rapport with the sufferer. This is usually done as part of a general assessment, which may often involve taking a simple history of the problem. During the more focussed assessment, therapist and patient begin by identifying a recent episode during which the person's obsessional problem occurred or intensified. Careful questioning and discussion about this episode is used to identify the *particular intrusion* (thought, image, impulse or doubt) and the *significance* that the person attached to it (i.e. the way the intrusion was interpreted/appraised). The therapist then helps the patient focus on the way their particular interpretation, at the time in question, resulted in both distress and the desire (compulsion) to prevent or put right any possible harm which the patient has foreseen. Thus, discussion helps the patient and therapist identify the specific sequence of

$$intrusion \rightarrow evaluation \rightarrow reactions \ to \ the \ evaluation.$$

The importance of negative evaluation can be further highlighted by asking the patient if they can recall an occasion when the intrusion occurred, but they were *not* bothered by it.

Discussion focusses on what might be different on such occasions. Almost invariably, the difference lies in the fact that the person attached little or no significance to the occurrence of the intrusion. The focus in on helping the patient realise that an intrusion which is not negatively interpreted does not result in either distress or attempts to neutralise. The patient is asked what they think they can learn from this comparison in terms of understanding the problems they experience when an intrusion occurs. An exploration of the way in which negative beliefs contribute to the experience of anxiety, discomfort and neutralising should also incorporate discussion of the notion that threat beliefs tend to be multifaceted (Salkovskis, 1996a). In particular, the perceived probability of threat tends to interact with the perceived awfulness of such threat. That is, if a catastrophe is seen as quite unlikely but particularly awful, it will provoke both high levels of discomfort and efforts to prevent it even although the person might appear to regard the fear as 'senseless' purely on the basis of probability.

Having identified the fact that negative beliefs (particularly concerning responsibility for harm to oneself or others) account for the experience of distress, the focus shifts to understanding the other implications of the way in which the person interprets intrusions. It is particularly useful to help the person put these factors together in a formulation of the type depicted in Fig. 1 above. Again, questioning and discussion are the main techniques used. When the person believed that they may have harmed a passer by, how did that make them feel? When they became depressed and afraid, what effect did those emotions have on their thinking? What did they try to *do*? What was the effect of trying to push the intrusions out of their mind? Did seeking reassurance make them feel more or less sure? What about in the longer term? And so on. It is important to check whether this was a typical episode. If not, or if the patient believes that there are different types of episode, repeat the assessment with another specific episode, seeking to identify both commonalities and differences.

2.2.1. Overcoming obstacles to assessment

Probably the commonest difficulty experienced in assessment is when it is not clear what the intrusions are. In such instances, patients may often refer to 'my thoughts' repeatedly in session, but will not specify what they are. Usually, reluctance to describe intrusions is a result of specific beliefs about what might happen if they did describe their thoughts (e.g. the therapist will think they are mad or bad, will laugh, or that simply saying things out loud will make the thoughts worse, the feared outcomes more likely to happen and so on). It is relatively easy to identify such factors. The therapist indicates a degree of understanding ("Many people with this type of problem find it difficult to mention what their thoughts are about, often because they think that it is risky to do so. Does that type of idea ever cross your mind?... what do you think is the worst thing which would happen if you mentioned them to me?"). It can often be helpful to 'second guess' the type of thoughts by giving clinical examples which the therapist judges are likely to be similar to the present patient's experience. "I saw someone last week who was bothered by thoughts of being violent to their family; they were worried that I might think that they wanted to do these things, which of course I did not...".

In some patients with prominent, frequent or long-standing compulsive behaviour or neutralising, it can often seem from the standard assessment that there are no obvious negative interpretations or evaluations. This usually happens because the avoidance and neutralising behaviours have become relatively automatic responses which pre-empt the perception of

threat. As such responses are used, awareness of threat recedes. To help the patient consider what is being sought, a simple metaphor can be useful. The patient is asked why they stop at red traffic lights[1]. What *actually* runs through their mind each time they stop? In fact, few people call to mind the danger involved. How could they identify their beliefs? What would run through their mind if they found that their brakes were not working as they approached lights? Is it possible that something similar is happening when they check or wash at the moment? How could they find out? Such a discussion almost inevitably leads to a simple behavioural experiment in which the patient refrains from their ritual or other neutralising in order to identify the implicit negative evaluations motivating their obsessional behaviour.

Finally, home visits can be a particularly useful adjunct to assessment, often helping the therapist to observe and work with the patient to explore the full scope of their problem.

2.3. Goal setting

As the therapist gains a better understanding of the patients problems, it is important to agree with the patient their principal goals. This can be divided into: *short term goals*, goals which can reasonably be achieved in two to four sessions; *medium term goals*, i.e. what can reasonably be achieved by the end of therapy and *long terms goals*, i.e. what the patient would like to do over the next few years. It is important to note that *getting rid of all intrusive thoughts is not a helpful or achievable goal* (because such thoughts are known to be both common and normal; Rachman & de Silva, 1978; Salkovskis & Harrison, 1984a,b). There are two main therapy goals which guide treatment as it progresses. These are explicitly introduced to the patient as and when the opportunity arises.

1. Therapy aims to help the patient conclude that obsessional thoughts, however distressing they originally are, are irrelevant to further action. They should not be the target of control strategies and the patient is helped to see how such strategies are actually counter-productive, having the effect of increasing pre-occupation, the urge to neutralise and distress.
2. Therapy seeks to modify the way the person interprets the occurrence and/or content of their intrusions as part of a general process of reaching an alternative, less threatening view of their problem.

2.4. Engagement in active treatment

Therapy is only likely to be successful if the patient is actively engaged in a collaborative relationship which has the explicit aim of changing their reactions to obsessional intrusions and the situations which provoke them. Such an aim can conflict with the patient's initial goals, which are often: to be reassured, to find more effective ways of washing, checking or

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[1] For the patient who does not drive, crossing a busy road at a pedestrian crossing can be used.

overcoming doubts. This conflict of goals is usually not an issue once a shared understanding has been reached. Much of the more specific engagement work involves helping the patient shift perspective. A good way of doing this is to help the patient to identify the full balance of costs and benefits involved in their obsessional behaviour, not just the immediate ones. Many patients will be reluctant to change the way they react to obsessional fears unless they can gain some convincing guarantee from the therapist that the catastrophes they fear being responsible for will not happen. Early in therapy, there is no point in seeking to work with the probabilities of disaster (which in any case often tend to seem very low but very awful to them), but rather to have them refocus. For example, someone who seeks assurance that their house will not be burgled if they reduce their checking is told "I can't guarantee that your house will be safe if you don't check. I *can* guarantee that you will continue to suffer from obsessional problems, probably for the rest of your life, if you continue to check". "How much would you pay to get rid of your obsessional problem?"; "How much *are* you paying to make sure that you are clean/sure/etc.".

The other strategy commonly used is 'theory A/theory B', in which the aims of treatment (to consider an alternative, less problematic explanation of their problem) are made completely explicit. For example: "There are two ways of thinking about your problem. The first theory is that your problem is that *you are contaminated*, and that you have to wash repeatedly because you believe that your failure to wash to your complete satisfaction could result in you being responsible for your family falling ill and possibly dying. The alternative is that you are someone who, for understandable reasons, is sensitive to *worries* about being contaminated and who reacts to those worries in ways which tend to actually increase your concerns and which disrupt your life (for example, by washing excessively)".

Some patients will agree that the alternative makes sense of what is happening to them, and agree that this is the sensible way to work with their problems. Some patients will find this more difficult, initially suggesting that it is too difficult or dangerous for them to change their obsessional patterns of thinking and behaving. In such instances, it is helpful to contrast their previous counter-productive ways of coping with the possibility of change. The patient can be asked: "How much effort have you put into dealing with the problem *as if* you were a danger to those around you?" Most patients are aware that this is the *only* way they have sought to deal with their obsessional concerns, so this is followed up with "How helpful has that been?". This discussion reaches the conclusion that any relief they have obtained from being obsessional has been short lived at best, and that trying to obsess one's way out of an obsession almost always results in a worsening of the problem.

This discussion is followed by further questioning which aims to have the patient consider the possibility for change and its likely consequences: "Have you ever tried to deal with the problem *as if* it were a problem of excessive concern and worry?" Few, if any, patients have done this at all. The therapist suggests that, as the assessment indicates that this is now an obvious alternative way of dealing with their current problems, "Would you give it a wholehearted try for three months, then review it with me?"; assuming the answer is yes, it is then helpful to ask "How do you think it would be most helpful to begin to change things?". This last question is a very helpful way of beginning things, as it usually results in the patient making active suggestions for changes in the way they respond to their intrusions.

Given that most obsessional problems reflect the patients' sensitivity to fears that they will

cause or fail to prevent harm, it is not surprising that some patients express the concern that changing their behaviour as part of therapy might result in an over-reaction, so that they become excessively careless, dirty, irreligious and so on. If such fears are expressed, the therapist asks "In your experience, how easy is it to get less obsessional? How easy to get more obsessional?". Without exception, obsessional patients will indicate that it is all too easy to become more obsessional, and thus far has been extremely difficult to reduce their OCD. On the basis of this discussion, the therapist promises to help the person to become more obsessional in the unlikely event that, as treatment draws to an end, there have been unacceptable negative effects. That is, if some aspect of the changes they have made has resulted in a significant and, to the patient, undesirable reversal of their obsessional behaviour (that a cleaner has become dirty, that a checker has become careless). This has not so far been requested in the author's practise.

2.5. Reappraisal and building on the formulation: normalising

Given that the focus of treatment is on helping the patient to adopt and test an alternative, less threatening explanation of their problems, most therapy techniques focus on reappraisal. A key component of this is *normalising* the experience of intrusions, helping the patient to change their understanding of the significance of the occurrence and content of intrusions. Some normalising will have taken place in the course of the assessment, through the fact that the therapist is clearly aware of the type of intrusive thoughts which occur and the use of simple empathic statements (e.g. "So it's not surprising that you felt uncomfortable in that situation, because the thought 'I'll kill my baby' came to your mind just as you were cuddling him, and you thought that this might mean that you wanted to kill him"). As treatment begins, the therapist uses more explicit normalising strategies, often beginning this phase by saying something like "people suffering from obsessions often wrongly believe that their thoughts are abnormal, insane or unusual. I'd like to examine whether that really is so." Guided discovery is used to help patients consider several important questions:

Who has obsessional thoughts? It is helpful to ask patients who is likely to be troubled by a intrusions concerning a range of obsessional themes, starting with some which they are *not* currently experiencing. Who is likely to be bothered by blasphemous obsessions? Obsessions of harming children? Violent obsessions? When might a positive thought be upsetting? The patient is asked to consider the effect of a thought about having a pleasant holiday on someone if it occurs in the context of a close friend being lowered into their grave. This discussion is used to emphasise the idea that it is not the intrusion itself which causes discomfort, but the way in which it is interpreted. By definition, negative interpretations are most likely in those who hold personal beliefs which are the opposite of the content of intrusions. Religious people are bothered and worried by blasphemous thoughts, gentle people by violent thoughts, careful people by thoughts of carelessness and so on. The discussion can also turn to consideration of the similarity between obsessional thoughts and worry. When people worry, what do they worry about? Do people worry more about good things not happening or terrible things happening? What does the patient think the therapist might worry about? What intrusive thoughts might the therapist have? Once the patient

concludes that obsessions usually concern areas in which one is particularly sensitive, the discussion refocusses on their own obsessional intrusions.

How common are intrusive thoughts? Do they only occur in people suffering from OCD? Patients are invited to consider how common negative intrusive thoughts might be. Research findings indicating that almost everyone experiences unwanted and unacceptable intrusions are discussed (Rachman & de Silva, 1978; Salkovskis & Harrison, 1984). Intrusions as a general phenomenon are discussed (including the fact that intrusions can be positive, negative and neutral intrusions). The patient is asked to consider what it would be like to never have intrusions; "Imagine that you had to plan every thought you were going to have; what would that be like?".

Why are intrusions so common? Are they any use? Following on from the previous question, the patient is asked whether intrusive thoughts might be useful. The discussion leads to the ideas that intrusions play an important role in problem solving and creativity. If one is seeking to problem solve, what's the best way to generate solutions? Should you only try to consider solutions which you think are good? The creative function of brainstorming is highlighted. When might violent thoughts be helpful? How about when one's family were being threatened? If someone were on the point of accidentally drinking something poisonous, might it be helpful to knock the cup from their hand as the quickest way of stopping them? This discussion might turn to consideration of how helpful or otherwise it might be to only have positive thoughts when someone directly threatens the patient or their family. The aim of this discussion is to conclude that intrusive thoughts are not only normal, but are also an important part of daily life.

2.6. Strategies for reappraisal and building on the formulation

2.6.1. Understanding and testing counter-productive strategies

Having worked on decatastrophising the occurrence and content of intrusions, the therapist then turns their attention to helping the patient understand and deal with responses which are involved in the maintenance of their negative beliefs. These factors fall into several broad categories, including selective attention and vigilance, the effects of mood (anxiety and depression), physiological arousal, neutralising behaviours and other counter-productive safety-seeking strategies (including overt avoidance, thought suppression and cognitive avoidance, reassurance-seeking, the use of inappropriate criteria for stopping a behaviour and so on). Much of the this part of therapy focuses on those responses to intrusive thoughts, impulses, images and doubts which the patient actively engages in as part of their safety-seeking efforts. Such efforts are, of course, usually directed at attempts to ensure that harm does not come to themselves or others, and that they can be sure that they are not responsible (or risking being responsible) for such harm.

It is particularly important that the patient be helped to understand the impact of counter productive strategies. Several metaphors are clinically helpful here, including that idea that these activities (such as thought suppression and ritualising) are rather like digging to get out of a hole, trying to put out a fire with gasoline. That is, the action that one believes is making

things better is actually making them worse. The patient is helped to question whether obsessional behaviour is a good way of dealing with an obsessional problem, or whether the things the person is doing as part of their 'solution' to obsessional worries have in fact become a major part of the problem and its maintenance. For some patients, the discussion of the history of the development of their problem helps them to understand that, in the past, the harder they have tried to check, wash or otherwise neutralise, the worse their problem has become. It is suggested that it may not be appropriate to try to get out of a hole by digging faster or finding a bigger shovel. Another helpful strategy is to briefly describe the spontaneous decay experiments of Rachman et al. (1976) described above. The short term benefits of ritualising such as anxiety relief are contrasted with the longer term effects of obsessional fears, avoidance and behaviour. This discussion will inevitably lead to consideration of behavioural experiments involving elements of exposure and response prevention.

Consideration of the formulation leads to closely interwoven discussion and behavioural experiments designed to help the patient gather further evidence for the way in which the mechanisms identified affect them. For example, the patient is asked to consider what usually happens to someone who tries to avoid thinking about something which is important to them. Have they themselves ever had the experience of trying not to think of something? Could they try now, in the office, not to think of giraffes. What happens? Why would trying not to think of something make this thing come to mind more both now and later? The discussion focusses on the fact that, if one wishes to avoid something, one has to keep in mind what is being avoided! Follow up homework experiments involving an alternating treatments single case experimental design can be helpful in gathering further evidence for the importance of the paradoxical effects of thought suppression. The patient keeps a daily diary of intrusive thoughts, also recording the amount of effort they put into suppression in the course of the day. They are then asked to try very hard to get rid of their intrusions by suppressing them on some days (for example, on Monday, Wednesday, Friday and Sunday) and to simply record the occurrence of thoughts without making any special attempts at suppression on the other days. The frequency of intrusions are graphed with the two types of days interspersed. Fig. 2 shows an example from an actual patient.

This patient recorded their intrusion during intervals of the day on a diary for a week, then alternated suppression/recording for a further week. Ratings of suppression were also recorded, and indicated that the patient had indeed suppressed more on the days when they had been instructed to do this. The thought frequency information was then graphed as in Fig. 2. The patient is shown their graph, and asked what they make of the results. This patient concluded that attempts to push the thoughts out of her mind were worse than useless and agreed to stop any efforts to resist, suppress or neutralise her intrusions.

The Oxford group (Richards, 1995, 1997) have highlighted the importance of the use of unusual criteria in the decision to stop an activity (i.e. to stop checking, washing and so on). There is evidence that obsessional patients are more likely to use difficult to achieve internal states (being sure of something, feeling certain and so on) as the criteria for ceasing repetition (see also Salkovskis et al. (1998), p. 50). This is dealt with in similar ways to thought suppression, including the use of behavioural experiments using an alternating treatments design.

A similar sequence of discussion and behavioural experiments is used for each factor
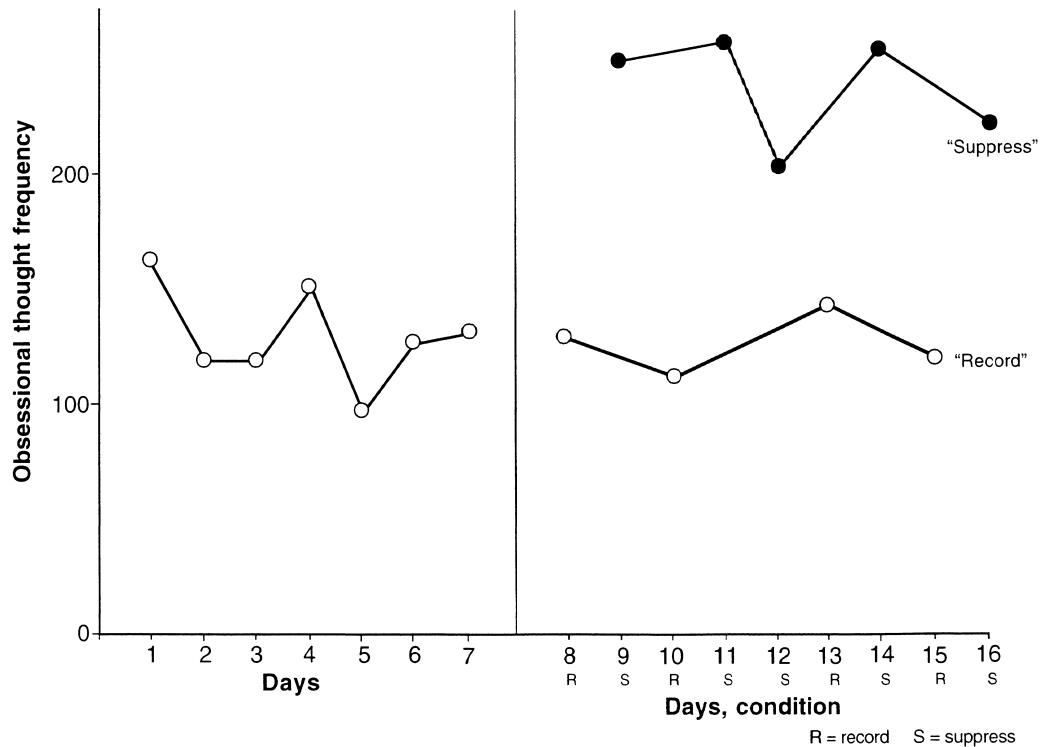
Fig. 2. The results of an alternating treatments behavioural experiment, with suppression days quasi randomly alternating with monitoring days.

identified, including other safety-seeking behaviours and mood. Behavioural experiments are used wherever possible to discover or demonstrate the effects of the patients' anxiety-based reactions to intrusions, with the basis for such experiments being drawn from discussion with the patient. Other examples include the use of mood induction procedures (Clark, 1983) if the patient does not understand the effects of negative mood on their thinking and beliefs. The negative impact of reassurance-seeking and obsessional ritualising can be illustrated in similar ways. Discussion, in which the patient is reminded of the formulation previously identified, provides a detailed alternative account which highlights the way in which ritualistic behaviour is counter-productive in the long term even although it often feels beneficial in the short term (e.g. in helping the patient reduce their immediate discomfort). A helpful metaphor is to compare the obsessional problem to a playground bully. Again, questioning and guided discovery are the preferred mode of discussion. The bully may begin by making relatively small demands for money, and the victim feels relieved once they have bought them off. Does that mean that the victim is now free from any further threat? Why not? What happens next? How is that similar to the demands imposed by OCD? How can one break free of the demands of the bully? Will that feel comfortable at first? How will matters progress? The discussion aims to have the patient conclude that they need to take the offensive against their obsessional problems, challenging their beliefs rather than seeking to be safe from them. Again, the use of

behavioural experiments to demonstrate the effects of reassurance-seeking or ritualising is a helpful development from that discussion. Once the person is, in their heart, convinced that obsessional ritualising is maintaining and/or increasing their problems, systematic and self-initiated response prevention follows naturally. Often such a course of action is suggested by the patient themselves.

2.6.2. Challenging responsibility appraisals

The assessment, formulation, discussion and behavioural experiments described above will all tend to reveal beliefs focussed on an inflated sense of responsibility for harm. Such beliefs are crucial as they motivate the patients efforts to neutralise, check that they have not caused harm or to undo any harm which they may have triggered. Clearly, because the patient understands the role of such beliefs in their OCD, whilst helpful, will not necessarily result in them being able to resist the urge to neutralise.

Often, more direct responsibility modification strategies are needed. One of the most helpful of these is the pie-chart, in which therapist and patient work together to learn a strategy to deal with one of the commonest assumptions found in obsessional problems. This is a type of 'all or nothing' thinking, summarised by "if one can in any way influence a harmful outcome, then one is responsible for it". Such distortions are particularly difficult to deal with if they concern past events where, with hindsight, it is remotely possible that the patient could have prevented the negative event from happening. The fact that such prevention would have required foresight and unusual reactions to mundane situations is not usually regarded as in any way helpful by the patient. The pie-chart is used as a way of tackling all or nothing thinking, whilst at the same time allowing the therapist to avoid debating the intrusion and thereby buying into the patient's attempt to neutralise and seek reassurance.

The therapist draws a pie-chart which represents responsibility for the negative event in question. The patient is then asked to draw up a list of all possible influenced contributing to such responsibility, *starting with their own actions or failure to act*. All other influences are then listed, with as much time as necessary being taken in order to ensure a thorough list. Once this is completed, the patient is asked to assign proportions of the responsibility to each factor in turn, *starting at the bottom of the list*. This means, of course, that the patient's own contribution is the last one dealt with. Note that the therapist does not seek to reassure the patient; the elements in the list come from the patient, with occasional prompting from the therapist, whose main job is to provide the structure in this discussion. Note also that the aim is not to convince the patient that they are *not* responsible, but rather to draw their attention to the fact that responsibility is multifaceted and characterised by shades of grey rather than black and white. Note also that such a strategy helps counteract the obsessional patients' tendency towards overlooking the role of those alternative explanations for which they do not have any responsibility. This exercise can also can be helpful in making the point that it is seldom possible to prove that one had no influence whatsoever over a past event, and that reviewing such events in great detail will lead to an increase in doubt rather than to certainty that one was not responsible. A helpful way of providing a counterpoint to such a discussion is to ask the patient to consider whether they could, by a reversal of their obsessional behaviour, bring about the feared consequences. Could a washer assassinate someone by deliberately not

washing their hands after going to the bathroom? Would not washing be a good way of committing murder?

2.6.3. Exposure and behavioural experiments

The techniques described above are all designed to help the patient reach the conclusion that they should cease their counter-productive strategies. As cognitive behaviour therapy progresses, the notion of exposure and response prevention becomes self evident, and a more planned and detailed programme is initiated (Salkovskis & Kirk, 1989). Such a programme is discussed with the patient as the logical extension of the previous belief change strategies, with an appropriate combination of explicit aims; (i) to deal with compulsive/neutralising behaviours as a factor which is particularly important in the maintenance of their negative beliefs, (ii) as a way of demonstrating to themselves that the formulation is indeed correct, as it predicts that reducing neutralising will result in decreases both in anxiety and in negative beliefs, (iii) as a confrontation and disconfirmation of their negative expectancies where appropriate (i.e. to help the person to discover that their feared consequences do not occur when they stop their safety-seeking behaviours when such disconfirmation is possible) and (iv) to begin the process of regaining control over those aspects of their life which have come to be dominated by compulsive and neutralising behaviour, that is, to deal with compulsive behaviour as a problem rather than as a way of preventing harm. Exposure tasks are planned and set up with the explicit aim of bringing about such belief changes. Early on, therapist aided tasks are used to reveal and begin the process of challenging the negative appraisals activated by the person not neutralising. Discussions after the task is completed is used to consolidate and extend such belief change, particularly with respect to the patient's perception of the alternative account of their problems.

The importance of the patient assuming responsibility for their own actions (rather than simply complying with the suggestions made by the therapist) is emphasised. This is best achieved by the therapist modelling exposure exercises in the early stages, but rapidly moving to having the patient do things without modelling, then having the patient assume the role of identifying and planning exposure exercises themselves. Subsequently, the patient is asked to plan and execute exposure tasks and to describe their responses without describing the task itself. Doing this removes the reassurance involved in having the therapist know about the details of the task undertaken by the patient. If the task is described, this serves as reassurance, as the patient believes that, had they undertaken something truly dangerous, then they therapist will react, making the absence of a reaction reassuring in itself. Note also that the rationale for the shift of responsibility to the patient is explained and reviewed in detail.

Direct or subtle reassurance-seeking tends to occur in the course of therapy, most commonly without the patient being aware that 'just mentioning' something they did as part of therapy to the therapist is problematic. To deal with this, the therapist first discusses the way that this works "When you mention things like that, are you interested in my reaction? Why is that?". In patients who find it hard to understand why such reassurance is not being offered, a simple discussion strategy can be helpful: "You can have as much reassurance as you need. I'll cancel my remaining appointments for today, and we'll just work on reassurance. In turn, you have to promise me that the reassurance will last for the rest of the year". In this situation, the patient almost invariably points out that it is not possible, and on questioning will say that the

effects of reassurance are only very temporary, often lasting only minutes. The therapist can then ask whether the patient believes that seeking reassurance is actually a helpful strategy. In this way, *the patient tells the therapist* that reassurance-seeking is at best ineffective and at worst counter-productive and anxiety provoking. Again, this discussion is related back to the formulation.

2.6.4. More reappraisal and belief change strategies

Other cognitive therapy techniques are used to help the patient to become more aware of the presence and role of threat and responsibility beliefs. These include modifications (Salkovskis et al., 1998) of the Dysfunctional Thought Record (Beck, 1979). The downward arrow and two column technique are used as appropriate in the context of particular issues arising in therapy (Salkovskis & Warwick, 1988, Salkovskis, 1989b; Salkovskis et al., 1998). The use of the downward arrow is tailored to the specific appraisals the person makes, which can be of the occurrence or the content of the intrusion, or both (Salkovskis et al., 1995). Fig. 3 shows a previously published version of such a downward arrow, in which both the occurrence and content of the intrusions form the focus (Salkovskis & Westbrook, 1987). Both responsibility and 'meta-cognitive beliefs' were identified here.

Therapy would aim (i) to help the patient to understand the way in which an apparently innocuous thought can evoke so much discomfort ("so when you think 'I can't control the bad thoughts', this means you might have to kill yourself because you believe you might have harmed someone" (ii) to challenge the assumptions at each level (see Salkovskis & Warwick, 1988 for examples of this) using 'conventional' cognitive therapy challenges towards the end of

I can't control the bad thoughts
What's so bad about not being able to control them ?

↓

It's not normal to have uncontrollable thoughts
Supposing it's not normal; what would that mean ?

↓

I've got to get them under control otherwise I lose control of my mind and do something awful
Supposing you did lose control; what would be bad about that ?

↓

I couldn't live with the idea that I harmed someone when I could have avoided it
If you had harmed someone and could have prevented it; what would be bad about that ?
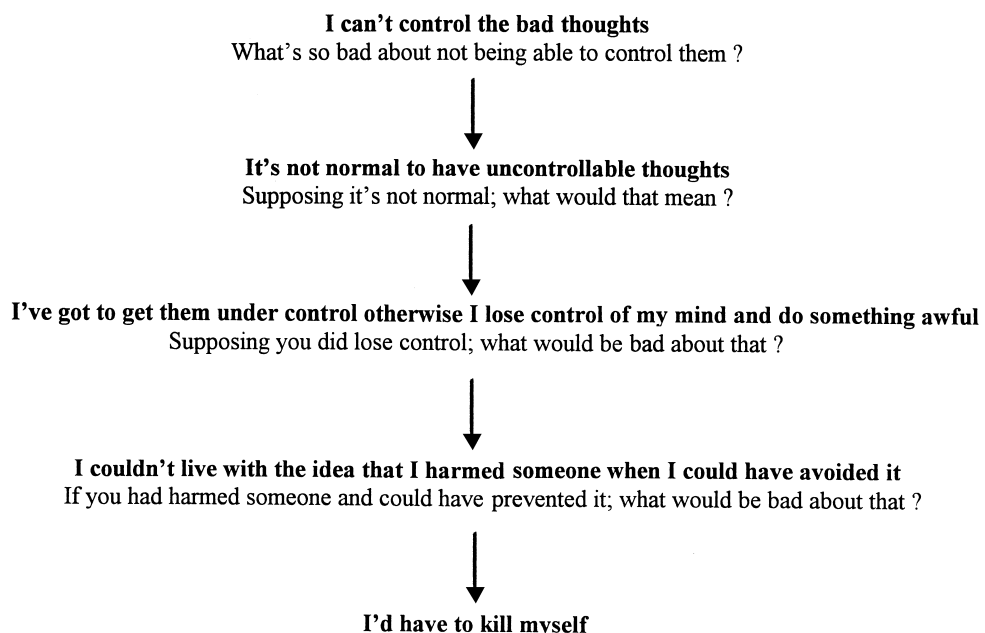
↓

I'd have to kill myself

Fig. 3. Using the vertical arrow to access assumptions, Salkovskis, P.M., & Westbrook, D. (1987). In: H. Dent, *Clinical Psychology: Research and Developments*. London: Croom Helm. Reprinted with permission.

the sequence and (iii) having identified key assumptions on the basis of downward arrows and specific questionnaires such as the Responsibility Attitudes scale (Salkovskis et al., in press), seeking to modify these more directly. Wells (1997, p. 91) identifies a further novel use of the downward arrow. Rather than probing for threat cognitions in the usual way when the person identifies the wish to engage in a safety-seeking behaviour (i.e. by responding to "I've got to check" with "what do you think is the worst thing which would happen if you failed to check at that time"), he probes the consequences of the safety-seeking behaviour itself by responding to "I've got to check" with "what's bad about that". Such a procedure has the effect of highlighting the negative consequences of being obsessional, and can serve as a useful engagement strategy supplementing the procedures described above. Interestingly, rather than examining the patients' beliefs about their thoughts as described here, this procedure examines their thoughts about the consequences of their behaviours.

Although the type of cognitive challenge strategies described here are specific to each patient, the outcomes of the challenge are always referred back to the formulation. In OCD the therapist pays particular attention to the possibility that such techniques and their discussion with the therapist may become a form of subtle neutralising behaviour or may begin to take on characteristics of obsessional reassurance-seeking.

3. Obsessional ruminations

Salkovskis and Westbrook (1989) drew upon earlier work by Wolpe (1958) and Rachman (1971, 1976) to highlight the prevalence and importance of *covert* compulsive behaviour, which appears to be invariably present in some form in obsessional rumination. Obsessions without overt compulsions can be considered as a type of obsessive–compulsive disorder in which avoidance and compulsive activity are almost totally covert and are therefore especially difficult to gain access to and control. Cognitive-behavioural models of obsessional problems thus requires only slight extension, acknowledging the role of mental neutralizing and avoidance behaviours which are difficult to detect and control. The underlying principles of treatment, including the importance of belief change, alternative explanations and the use of behavioural experiments including exposure to the feared thoughts remain.

The general structure and emphasis of cognitive-behavioural therapy for ruminations is very similar to that described above. Salkovskis and Westbrook (1989) described the adjunctive use of loop tapes. The loop tape is used to elicit the patient's intrusion; emphasis is placed on identifying responsibility appraisals and how they link to urges to neutralise identified at this point. Response prevention is initiated as a set of behavioural experiments with a cognitive rationale along the lines described above for overt response prevention, usually by helping the patient to challenge their appraisal of the intrusions, using techniques such as the pie-chart. In session, habituation begins with a rating of discomfort, the tape played for the first time and any difficulties in response prevention identified and dealt with and discomfort is rerated. The process is repeated until patient and therapist agree that the procedure is being properly carried out, and anxiety/discomfort or the urge to neutralise is at least beginning to show signs of decreasing. Homework is set up with charts and full instructions. Belief modification continues during this phase at every opportunity. The patient is asked what they make of any

changes which are occurring and how this fits with each of the two alternatives. Subsequent sessions involve different thoughts and moving the practice from regular sessions in the patients own home at set times to using the tape in situ where possible.

Subsequently, the natural occurrence of intrusive thoughts can be used as a cue for the use of the tape. The patient keeps a record of thoughts and other intrusions which occur together with the appraisals made during response prevention. Part of the response prevention recording is picking up on particular beliefs and modifications of these.

The formulation and the patient's beliefs about their thoughts should be very clear at this stage, and guide the further conduct of therapy. Discussion and behavioural experiments should weave together the notion of the alternative explanation ("my problem is worry") and behavioural experiments designed to reinforce this idea. Examples would be imagery or thought restructuring, catastrophising imagery or verbal exercises as a demonstration as a way in which these ideas increase discomfort and distress; pie-charts which tackle the idea of responsibility; thought experiments in which the person thinks up ways of bringing about the event which they fear they may be responsible for; pros and cons of being obsessional and not being obsessional; cumulative probability downward arrows.

In the treatment of obsessional thinking, factors which previously triggered anxiety and discomfort may continue to occur. However, therapy has the effect of modifying the meaning of intrusive thoughts to the kind of level experienced by most other (nonobsessional) people. No direct attempt is made to decrease the number of intrusive thoughts experienced, and any intention on the part of the patient to bring about such a reduction is challenged on the basis of the beliefs which drive it. However, a fortunate and desirable side effect of cognitive-behavioural therapy is that the patient usually experiences a decrease in intrusions, probably because they are no longer considered important and therefore lose their priority of processing. Note that the 'normal' person does not constantly seek to control thoughts; control tends to be indirect, because there are no serious negative consequences of failing to control symptoms.

4. Conclusion

Since the early work of Rachman and colleagues, cognitive-behavioural approaches have been systematically developed and refined. These developments have systematically incorporated and extended previous experimental findings and therapy techniques in ways which promise the development of treatment which is quicker, more efficient and more complete. The addition of cognitive elements has also had an invigorating effect on theory development and clinical research into the psychopathology of OCD. Such research has already established that beliefs directly and indirectly related to responsibility are high in obsessional patients relative to controls (Freeston & Ladouceur, 1993; Rheaume, Ladouceur, Freeston, & Letarte, 1994). Recently, the Oxford group have analysed data on responsibility assumptions and interpretations in obsessional patients, anxious controls and community volunteers; in this study, not only were responsibility beliefs higher in obsessional patients than in controls, but these were also strong predictors of obsessional symptoms (Salkovskis et al., submitted for publication). The effect of responsibility manipulations on systematically increasing and decreasing obsessional behaviours has also been demonstrated (Ladouceur et

al., 1995; Lopatka & Rachman, 1995; Ladouceur, Rheaume, & Aublet, 1997; Shafran, 1997). The parallel between covert neutralising and overt rituals has been established (Rachman, Shafran, Mitchell, Trant, & Teachman, 1996), as has the effect of neutralising on increasing discomfort and decreasing resistance to further neutralising (Salkovskis, Westbrook, Davis, Jeavons, & Gledhill, 1997). Numerous studies have demonstrated the 'paradoxical' effect of thought suppression on the occurrence of intrusions in both the short term (Wegner, Schneider, Carter, & White, 1987; Clark, Ball, & Pape, 1991; Salkovskis & Campbell, 1994) and the long term (Trinder & Salkovskis, 1994).

Although the effectiveness of therapeutic interventions based on a particular theory does not provide evidence in support of that theory, the failure of such interventions, assuming that they were properly conducted, would call the theory into serious question. In fact, cognitive treatment has been shown to be at least as effective as behavioural treatment (Van Oppen et al., 1995), and integrated cognitive behavioural treatment has been found to be effective in the treatment of obsessional ruminations (Freeston et al., 1997). The value of conducting integrated cognitive-behavioural treatment (as opposed to exposure and response prevention with a behavioural emphasis) is currently under investigations in two studies from the Oxford group. Most importantly, there is no sign of any slowing of the pace of development in theoretical, experimental and treatment work in obsessional problems. There can be no doubt that the pace of development in scientific approaches to the understanding and treatment of OCD is the responsibility of Jack Rachman.

4.1. A personal note: Jack Rachman

My first face-to-face contact with Jack Rachman was when I was a trainee having a tutorial with him in 1978. "Before we get down to this tutorial", he said "I have something much more important to discuss. There is a horse running in the 4.15 at Newbury which I strongly suggest that you should back...". In clinical science, it is clear that Jack not only knows the form, but that he knows how to pick the winners in the paddock. I believe that this is because he has been involved in the training of so many winners; he even built some of the racecourses.

Acknowledgements

References

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Beck, A. T. (1979). *Cognitive therapy of depression*. New York: Guilford Press.

Beech, H. R., & Liddell, A. (1974). Decision-making, mood states and ritualistic behaviour among obsessional patients. In H. R. Beech, *Obsessional states*. London, UK: Methuen and Co. Ltd.

Clark, D. M. (1983). On the induction of depressed mood in the laboratory: evaluation and comparison of the Velten and musical procedures. *Advances in Behaviour Research and Therapy*, *5*, 27–49.

Clark, D. M. (1986). A cognitive approach to panic. *Behaviour Research and Therapy*, *24*, 461–470.

Clark, D. M., Ball, S., & Pape, D. (1991). An experimental investigation of thought suppression. *Behaviour Research and Therapy*, *29*(3), 253–257.

Freeston, M. H., & Ladouceur, R. (1993). Appraisal of cognitive intrusions and response style: replication and extension. *Behaviour Research and Therapy*, *31*(2), 185–191.

Freeston, M. H., Ladouceur, R., Gagnon, F., Thibodeau, N., Rheaume, J., Letarte, H., & Bujold, A. (1997). Cognitive-behavioral treatment of obsessive thoughts: a controlled study. *J. Consult Clin. Psychol.*, *65*(3), 405–413.

Hodgson, R. J., & Rachman, S. (1972). The effects of contamination and washing in obsessional patients. *Behavior Research and Therapy*, *10*, 111–117.

Ladouceur, R., Rheaume, J., Freeston, M. H., Aublet, F. et al. (1995). Experimental manipulations of responsibility: an analogue test for models of obsessive–compulsive disorder. *Behaviour Research and Therapy*, *33*(8), 937–946.

Ladouceur, R., Rheaume, J., & Aublet, F. (1997). Excessive responsibility in obsessional concerns: a fine-grained experimental analysis. *Behaviour Research and Therapy*, *35*(5), 423–427.

Lopatka, C., & Rachman, S. (1995). Perceived responsibility and compulsive checking: an experimental analysis. *Behaviour Research and Therapy*, *33*(6), 673–684.

Meyer, V. (1966). Modification of expectations in cases with obsessional rituals. *Behaviour Research and Therapy*, *4*, 273–280.

Rachman, S. J. (1971). Obsessional ruminations. *Behaviour Research and Therapy*, *9*, 225–238.

Rachman, S. (1976). The modification of obsessions: a new formulation. *Behaviour Research and Therapy*, *14*(6), 437–443.

Rachman, S. (1983). Irrational thinking with special reference to cognitive therapy. *Advances in Behaviour Research and Therapy*, *5*(1), 63–88.

Rachman, S. (1993). Obsessions, responsibility and guilt. *Behaviour Research and Therapy*, *31*(2), 149–154.

Rachman, S. (1997). A cognitive theory of obsessions. *Behaviour Research and Therapy*, *35*(9), 793–802.

Rachman, S. (1998). A cognitive theory of obsessions: elaborations. *Behaviour Research and Therapy*, *36*(4), 385–401.

Rachman, S. J., & de Silva, P. (1978). Abnormal and normal obsessions. *Behaviour Research and Therapy*, *16*, 233–248.

Rachman, S. J., Hodgson, R., & Marks, I. M. (1971). The treatment of chronic obsessional neurosis. *Behaviour Research and Therapy*, *9*, 237–247.

Rachman, S., Marks, I. M., & Hodgson, R. (1973). The treatment of obsessive–compulsive neurotics by modelling and flooding in vivo. *Behaviour Research and Therapy*, *11*(4), 463–471.

Rachman, S., De Silva, P., & Roper, G. (1976). The spontaneous decay of compulsive urges. *Behaviour Research and Therapy*, *14*(6), 445–453.

Rachman, S., Shafran, R., Mitchell, D., Trant, J., & Teachman, B. (1996). How to remain neutral: an experimental analysis of neutralization. *Behaviour Research and Therapy*, *34*(11-12), 889–898.

Rheaume, J., Ladouceur, R., Freeston, M. H., & Letarte, H. (1994). Inflated responsibility in obsessive–compulsive disorder: psychometric studies of a semiidiographic measure. *Journal of Psychopathology and Behavioral Assessment*, *16*(4), 265–276.

Richards, H.C. (1995). The cognitive phenomenology of OCD repeated rituals. Poster Presented at World Congress of Behavioural and Cognitive Therapies, Copenhagen, July 1995.

Richards, H. C. (1997). Why isn't once enough? Paper presented at 25th Anniversary conference of the BABCP, Canterbury, 1997.

Roper, G., & Rachman, S. (1976). Obsessional–compulsive checking: experimental replication and development. *Behaviour Research and Therapy*, *14*(1), 25–32.

Roper, G., Rachman, S., & Hodgson, R. (1973). An experiment on obsessional checking. *Behaviour Research and Therapy*, *11*(3), 271–277.

Salkovskis, P. M. (1985). Obsessional–compulsive problems: a cognitive-behavioural analysis. *Behaviour Research and Therapy*, *23*, 571–583.

Salkovskis, P. M. (1989a). Cognitive-behavioural factors and the persistence of intrusive thoughts in obsessional problems. *Behaviour Research and Therapy*, *27*, 677–682.

Salkovskis, P. M. (1989b). Obsessions and compulsions. In J. Scott, J. M. G. Williams, & A. T. Beck, *Cognitive therapy: a clinical casebook*. London: Croom Helm.

Salkovskis, P. M. (1991). The importance of behaviour in the maintenance of anxiety and panic: a cognitive account. *Behavioural Psychotherapy*, *19*(1), 6–19.

Salkovskis, P. M. (1996a). The cognitive approach to anxiety: threat beliefs, safety-seeking behaviour, and the special case of health anxiety and obsessions. In P. M. Salkovskis, *Frontiers of cognitive therapy* (pp. 48–74). New York: Guilford.

Salkovskis, P. M. (1996b). Cognitive-behavioural approaches to the understanding of obsessional problems. In R. Rapee, *Current controversies in the anxiety disorders*. New York: Guilford.

Salkovskis, P. M., & Campbell, P. (1994). Thought suppression in naturally occurring negative intrusive thoughts. *Behaviour Research and Therapy*, *32*, 1–8.

Salkovskis, P. M., & Harrison, J. (1984). Abnormal and normal obsessions: a replication. *Behaviour Research and Therapy*, *22*, 549–552.

Salkovskis, P. M., & Kirk, J. (1989). Obsessional disorders. In K. Hawton, P. M. Salkovskis, J. Kirk, & D. M. Clark, *Cognitive behaviour therapy for psychiatric problems: a practical guide*. Oxford: Oxford University Press.

Salkovskis, P. M., & Kirk, J. (1997). Obsessive–compulsive disorder. In D. M. Clark, & C. G. Fairburn, *The science and practice of cognitive-behaviour therapy*. Oxford: Oxford University Press.

Salkovskis, P. M., & Warwick, H. M. (1985). Cognitive therapy of obsessive–compulsive disorder: treating treatment failures. *Behavioural Psychotherapy*, *13*(3), 243–255.

Salkovskis, P. M., & Warwick, H. M. C. (1988). Obsessional problems. In C. Perris, I. M. Blackburn, & H. Perris, *The theory and practice of cognitive therapy*. Berlin: Springer Verlag.

Salkovskis, P. M., & Westbrook, D. (1987). Obsessive–compulsive disorder: clinical strategies for improving behavioural treatments. In H. R. Dent, *Clinical psychology: research and developments*. London: Croom Helm.

Salkovskis, P. M., & Westbrook, D. (1989). Behaviour therapy and obsessional ruminations: can failure be turned into success? *Behaviour Research and Therapy*, *27*(2), 149–160.

Salkovskis, P. M., Richards, H. C., & Forrester, E. (1995). The relationship between obsessional problems and intrusive thoughts. *Behavioural and Cognitive Psychotherapy*, *23*, 281–299.

Salkovskis, P. M., Rachman, S. J., Ladouceur, R., Freeston, M., Taylor, S., Kyrios, M., & Sica, C. (1996). Defining responsibility in obsessional problems: *Proceedings of the Smith College Women's Room - after the Toronto Cafeteria*.

Salkovskis, P. M., Westbrook, D., Davis, J., Jeavons, A., & Gledhill, A. (1997). Effects of neutralizing on intrusive thoughts: an experiment investigating the etiology of obsessive–compulsive disorder. *Behaviour Research and Therapy*, *35*(3), 211–219.

Salkovskis, P. M., Richards, C., & Forrester, E. (1998). The cognitive behavioural approach to understanding obsessional thinking. *British Journal of Psychiatry*, *173*, 53–63.

Salkovskis, P. M., Forrester, E., Richards, H. C., & Morrison, N. (1998). The devil is in the detail: conceptualising and treating obsessional problems. In N. Tarrier, A. Wells, & G. Haddock, *Treating complex cases: the cognitive behavioural therapy approach* (pp. 46–80). Chichester: Wiley.

Salkovskis, P. M., Wroe, A., Gledhill, A., Morrison, N., Forrester, E., Richards, C., Reynolds, M. & Thorpe, S. (in press). Responsibility attitudes and interpretations are characteristic of obsessive compulsive disorder. *Behaviour Research and Therapy*.

Shafran, R. (1997). The manipulation of responsibility in obsessive–compulsive disorder. *Br. J. Clin. Psychol.*, *36*(Pt 3), 397–407.

Teasdale, J. D. (1983). Negative thinking in depression: cause, effect on reciprocal relationship? *Advances in Behaviour Research and Therapy*, *5*, 3–26.

Trinder, H., & Salkovskis, P. M. (1994). Personally relevant intrusions outside the laboratory: long-term suppression increases intrusion. *Behaviour Research and Therapy*, *32*(8), 833–842.

Van Oppen, P., de Haan, E., Van Balkom, A. J. L. M., Spinhoven, P. et al. (1995). Cognitive therapy and exposure in vivo in the treatment of obsessive compulsive disorder. *Behaviour Research and Therapy*, *33*(4), 379–390.

Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology*, *53*, 5–13.

Wells, A. (1997). *Cognitive therapy of anxiety disorders*. Chichester: Wiley.

Wolpe, J. (1958). *Psychotherapy by reciprocal inhibition*. Stanford, CA: Stanford University Press.