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A qualitative study of mindfulness-based cognitive therapy for relapse prevention of mood disorder.

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A QUALITATIVE STUDY OF MINDFULNESS-BASED COGNITIVE THERAPY FOR RELAPSE PREVENTION OF MOOD DISORDER

Thesis submitted in partial fulfilment of the requirements for the degree of Doctorate in Clinical Psychology (D. Clin. Psy.).

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Ergo quaerimus quomodo animus semper aequali secundoque cursu eat propitiusque sibi sit et sua laetus aspiciat ....hanc stabilem animi sedem Graeci ευθυμιαν uocant.

So we are seeking how the mind can follow a smooth and steady course, well disposed to itself, happily regarding its own condition .... The Greeks call this steady firmness of mind 'euthymia'.

De Tranquillitate Animi, Seneca

Summary of Contents

INTRODUCTION

Overview

Recent years have seen an increasing use of 'eastern' approaches to well-being, such as meditation and yoga, in both private and state sector-managed health settings. Meditation teachers, their students and some scientists have claimed efficacious results over many years, but scientific examination has frequently been hampered by a number of difficulties. From a summary of several scientific commentator's opinions of evidence on the efficacy of meditation (edited by West, 1987) one might conclude that, by the late eighties, the jury was still out. In West's (1987) volume, Smith (1987) suggested that studies might address meditation's effectiveness as a set of skills rather than simply asking 'does it work?'. Shapiro (1987) took this further when he applied perspectives from psychotherapy research to bear on this issue. In this light, research questions then become ones of both outcome and process: can valid and reliable effectiveness be demonstrated, and for which meditation skills and practices?; what features make for effective outcome?; what is the mechanism of change? Is personal development through meditation in some ways similar to change achieved through psychotherapy? The current study focused on the process of change rather than evaluation of outcome.

Meditation is something of a catch-all phrase related to formal practices that attempt to bring the attention under conscious control. Practices include focusing on a single physical object or idea (a 'koan'), focusing on a vocalisation (a 'mantra'), or widening the field of attention to include the body or perceptual field as a whole. One popular form of meditation that has received a great deal of study is that of 'transcendental meditation' (TM) which typically uses a mantra to enable the student to exclude intrusions into his or her field of attention. Recent research has

focused on so-called ' mindfulness meditation', where the emphasis is on increasing mental awareness'.

Much similarity exists between meditation and some techniques aimed at increasing relaxation. Both may instruct the student to focus attention on physical sensations such as breathing. Typically though, the explicit aim is different. Relaxation techniques then instruct one in the exercise of control over the mind and body in such a way as to enhance deeper breathing, lower muscle tone and thoughts consonant with relaxation. Meditative techniques do not make these objectives explicit, although relaxation may be a consequence of practice.

From about the mid-eighties, several centres have started to examine the practice of mindfulness meditation using scientific methods such as placebo controlled, experimenter-blind treatment trials that overcome some of the previous difficulties in this area. While the courses that these centres have developed are not identical, the key concept of mindfulness can be seen to be at their core. Training in mindful awareness is often accompanied by physical and mental 'stress-management' or 'cognitive' therapeutic techniques, usually in a group setting. Some of the scientific evidence for the efficacy of mindfulness meditation in reducing a variety of physical and psychological symptoms is discussed below. Most of the evidence has addressed outcome and little has addressed process. Those studies that have addressed process have proceeded from an *expert* viewpoint rather than that of the meditation student or patient themselves. This study is of the process by which individuals with mental health problems learn to meditate using their own accounts.

Developments in scientific evaluations of meditation have arrived at a time of increasing interest in, and evaluation of, the utility of cognitive-behavioural treatments (CBT) in reducing relapse in individuals with mood disorders. These results and the cognitive models of their effects lead to

resting ways of conceptualising the effects of mindfulness skills. Some ictured psychotherapies such as CBT have been shown to reduce rates of ipse of depression and other disorders. In particular, Teasdale, Williams l others (Teasdale *et al.*, 1995) have attempted to include mindfulness roaches within an information-processing perspective. From this spective, mindfulness meditation can be seen as practising a set of nitive skills, albeit from a different cultural background to that of ventional CBT techniques. Several theories from cognitive psychology e attempted to explain the relationship between attention and affect as a part of the development and maintenance of mood disorder. Two of the st developed theories are interactive cognitive subsystems (ICS; Teasdale arnard 1993) and self-regulatory executive function (SREF; Wells & tthews, 1994). These theories can be used to generate predictions about way in which mindfulness meditation may work against which the orts of participants can be assayed.

The initial proposal for this study (see appendix 1) was to test several dictions by repeating psychometric measures of both cognitions and mood everal points both during and following a course of mindfulness ditation, as well as interviewing participants following the course. wever, the study could not be completed as planned due to staff illness d recruitment difficulties. In response, the researcher developed several alitative methods designed to provide further information about the ocess of learning mindfulness meditation in an adult mental health context. a consequence, the results are used to reflect on the hypotheses and ovide evidence from the experiences of participants in a discursive manner. ualitative techniques have a mixed degree of acceptance among academic ychologists: the writer's own perspective on the methods used here is efly discussed at the conclusion to the introduction.

Mindfulness Meditation in Health settings

Kabat-Zinn's stress reduction program

One of the most widely researched approaches to the use of meditation in a health setting has been developed by Kabat-Zinn and colleagues (Kabat-Zinn, 1982), at the University of Massachusetts Medical Centre. The program consists of eight weekly 2-hour sessions, at which two therapists meet with up to thirty clients, together with a programme of daily homework exercises. The skills taught by the programme are generic and do not target the problems or symptoms related to any single disorder. The main technique practised during the course is that of voluntarily deploying the attention so as to bring 'mindful awareness' to a particular focus such as breathing or other sensations or perceptions. This is practised in several ways over the weeks of the course. One exercise at the beginning of the first session is that of tasting a raisin with 'mindful awareness. Subsequently, attention is brought to focus on feelings arising in the body in a systematic way (the 'body scan'). As the course progresses, longer periods of formal meditation are undertaken both with the group and using an instructional tape at home. Another technique of note is that of using short periods of mindful awareness of the breath during times of stress ('breathing spaces').

In formal practice, the participant sits or lies quietly and attempts to maintain attention firstly on the breath, and then subsequently on the whole of the body and other perceptions and sensations arising. When the attention wanders from the breath to thoughts and feelings that inevitably arise, the participant is encouraged to acknowledge and accept these, "let go of them", and gently redirect attention back to the task. At the weekly meetings, participants' problems and experiences with their practice are shared with one another and with the therapists. Aside from formal instruction in these techniques, therapists aim to help participants acknowledge and accept whatever happens with an attitude of interest and curiosity rather than

prescription. Much emphasis is laid on practising during everyday life so as to live "in the here and now" rather than "operating on automatic pilot".

The seven 'attitudinal foundations' inculcated by the program can be best illustrated from the program's popular manual (Kabat-Zinn, 1990).

1. 'Non-judging' involves "assuming the stance of an impartial witness to your own experience. To do this requires that you become aware of the constant stream of judging and reacting to outer and inner experiences that we are normally caught up in, and learn to step back" (p. 33).
2. 'Patience' involves "that we understand and accept the fact that sometimes things must unfold in their own time" (p. 34).
3. A 'beginner's mind' is "a mind that is willing to see everything as if for the first time" (p. 35).
4. By "developing a basic trust in yourself and your feelings" (p. 36), Kabat-Zinn means both following one's own authority rather than that of a meditation teacher, as well as listening to physical and emotional feelings so as to respond as you decide rather than mindlessly. Although the therapists are supportive and offer guidance, they also stress that each person takes responsibility for themselves.
5. The course trainers attempt to show that the "best way to achieve your goals [is] by backing off from striving for results and instead to start focusing carefully on seeing and accepting things as they are" (p. 38).
6. "Acceptance simply means that you have come around to a willingness to see things as they are" (p.39).
7. The final attitude is that of "letting go, or non-attachment" which is "letting our experience be what it is" (p. 40) without elevating some aspects and rejecting others.

When participants arrive for the program, their need for commitment to its practice and a willingness to 'try it and see' is emphasised. In Kabat-Zinn's words, "You don't have to like it, you just have to do it" (p. 42).

Encouraging evidence for the long-term success of this intervention has been described for several physical and psychological conditions. Ninety chronic pain sufferers showed reductions in symptoms, present-moment pain, inhibition of activity by pain, negative body image and psychological symptoms when compared to a treatment-as-usual group. At fifteen months post-treatment, all but the 'present-moment' pain measure remained significantly reduced (Kabat-Zinn *et al.*, 1985). 22 individuals with anxiety and panic disorders showed reductions on measures of anxiety and depression that were subsequently maintained at three years post-treatment (Miller *et al.*, 1995). What is particularly impressive is that the majority of participants were still practising meditation to some degree after this interval. One of the most successful outcomes using this treatment has been for psoriasis (Kabat-Zinn *et al.*, 1998). Thirty-seven patients currently receiving phototherapy were randomly assigned to the mindfulness-plus-phototherapy condition or the phototherapy alone condition. The rate of skin clearing progressed faster as judged by examining physicians blind to condition in patients that listened to tapes from the program.

Mindfulness-based stress reduction has also been studied in a randomised controlled trial using medical students (Shapiro *et al.*, 1998). Questionnaire measures showed reductions in state and trait anxiety and depression, as well as increases in empathy and spiritual experiences. Astin (1997) performed a similar experimental intervention with undergraduates and found reductions in psychological symptomatology and higher scores on a measure of spiritual experiences. Both these authors and Kabat-Zinn himself (Kabat-Zinn *et al.*, 1992) have suggested that the program provides a powerful cognitive behavioural coping strategy by encouraging alternative appraisals and interpretations of stress.

Roth (1997) has used the approach with both English and Spanish speakers in a U.S. inner city setting. She described how a possible limitation

of mindfulness meditation is that it would be relevant to middle class populations; but that her experience and research evidence suggests that this is not so. Her own description of the process is as follows:

> 'When patients begin the program, beneath the identified causes of suffering, there is often a deep and underlying disconnection from oneself. ...Initial relief from their suffering occurs within the first few weeks of the program. ...During the third and fourth week, patients report experiences of great stillness and peace during meditation' and that 'as their practice continues and deepens patients realise that more is happening than symptom relief. ...Patients begin to experience subtle and profound shifts within themselves' (p.54).

Other empirical evidence about mindfulness approaches

Several other centres have used mindfulness approaches to treat a variety of disorders. Kaplan, Goldenberg and Galvin-Nadeau (1993) used a ten-week mindfulness meditation course in the treatment of 77 patients with fibromyalgia. Following the course, 51% had shown improvements across a range of measures of global well-being (including SCL-90), pain, sleep, fatigue and the experience of feeling refreshed in the morning.

One of the most ambitious studies of meditation attempted to measure whether transcendental meditation and mindfulness training could increase longevity in elderly residents of care facilities (Alexander *et al.*, 1989). Seventy-three subjects were randomly assigned to the two meditation conditions or a third group receiving relaxation training. Differences emerged across a wide range of physical and mental indices, and after three years, survival rates were reportedly greater in the TM and mindfulness groups than in the control group.

One of the earliest reports of the use of mindfulness meditation techniques for psychological conditions (Deatherage, 1975) suggested that five patients receiving short-term psychotherapy "gained insights into their

depressions, anxieties and other neurotic symptoms". The author advised caution when using the technique with psychotic patients.

A substantial mindfulness component is contained within dialectical behaviour therapy (DBT) for borderline personality disorder (Linehan, 1993). The manual states that 'mindfulness skills are central to DBT ... They are the first skills taught ... the only skills that are highlighted the entire year' (p. 63). Clearly, Linehan believes mindfulness skills to be an essential component of therapy for clients with what are widely acknowledged to be demanding and difficult needs.

Mindfulness-based cognitive therapy (MBCT)

As its title suggests, MBCT combines training in mindfulness meditation (based on the stress reduction approach discussed above) with traditional cognitive therapeutic strategies such as diary keeping of positive and negative thoughts. The focus of MBCT is to teach individuals to become more aware of thoughts and feelings, and to cultivate a detached relationship to negative thoughts and feelings. The meditation tapes from Kabat-Zinn's (1990) programme are used throughout the course as homework, together with mood and thought diaries that attempt to help highlight the role thoughts have to play in maintaining negative affect.

A randomised multi-centre trial of MBCT's effectiveness in reducing relapse for depression (Teasdale *et al.*, unpublished) found significant effects when compared to treatment as usual (via G.P.). Risk of relapse decreased by 44% for patients with three or more previous episodes of depression, but relapse was not reduced for patients with only two previous episodes of depression. The authors suggest that this difference arose from differences between the groups in how depression may arise. Specifically, they suggest that in those with at least three depressive episodes, relapse was "to a large extent attributable to autonomous relapse processes involving re-activation of

depressogenic thinking patterns by dysphoria" (p.16). As a consequence, the prophylactic effect of MBCT was greater in this group.

Meta-cognitive Theories of Mood Disorder

Cognitive theories of mood disorder take Beck's key proposal (1967) concerning dysfunctional schema (sets of related beliefs about the self and world) as their starting point. Most subsequent models have concentrated on the contents of appraisals and beliefs rather than aspects of information-processing such as the regulation of cognitive activity and attentional processes. Although Beck's (1967) theory suggested therapeutic strategies at the general level, such as, for instance, addressing faulty beliefs, it suggested little about how change could best be effected in practice. Models of the meta-cognitive processes involved in emotional disorders (Teasdale & Barnard, 1993; Wells and Mathews, 1994) have recently been forthcoming and lead to implications not only for standard cognitive therapy treatments, but also for mindfulness approaches.

Interactive Cognitive Subsystems Theory

This model of emotion-related cognitive processing (Teasdale & Barnard, 1993) has been developed with reference to depression, but might well serve for other emotional disorders. Termed the Interacting Cognitive Subsystems (ICS) framework, this theory attempts to describe the way in which basic sensory information is processed to provide the richness of subjective experience including emotions, moods, thoughts, images and memories. Different aspects of experience are represented in patterns of qualitatively different kinds of mental codes (in *italic*). At the basic level these sensory codes are *acoustic, visual* and proprioceptive (*body-state*): but outputs from these trigger *morphonolexical* (speech) and *object* recognition codes. At an even 'deeper' level, outputs from all these codes trigger meaning codes that can be

specific and *propositional*, or generic and holistic. The latter are termed *implicational* codes because they represent recurring regularities across all the other information codes; they alone are proposed to have direct links to emotion.

One analogy to this distinction offered by Teasdale *et al.* (1995), is that of a poem's ability to convey meaning in comparison to the more prosaic 'propositional' sentence. The poem conveys a meaning as a whole from a combination of 'patterns of specific meanings and sensory contributions from the sounds of the words to visual imagery'. Moreover, according to the theory, feedback from the body, such as tone of voice, facial expression or bodily arousal, make a direct contribution to the evocation of an 'implicational schematic model'.

How are moods, and disorders of mood, to be explained by the ICS account? Implicational schematic models that receive contributions from sensory and proprioceptive sources as well as semantic ones are likely to engender pervasive emotion or mood. Teasdale and Barnard (1993) suggest, from studies of mood-congruent memory, that because an affect-laden implicational schematic model (mood) tends to facilitate the retrieval of mood-congruent information, the emotional state is maintained internally. The persistent, unfocused and pervasive nature of moods is consistent with this account. A schematic representation of how subsystems interact to produce depressed affect is given in figure 1.

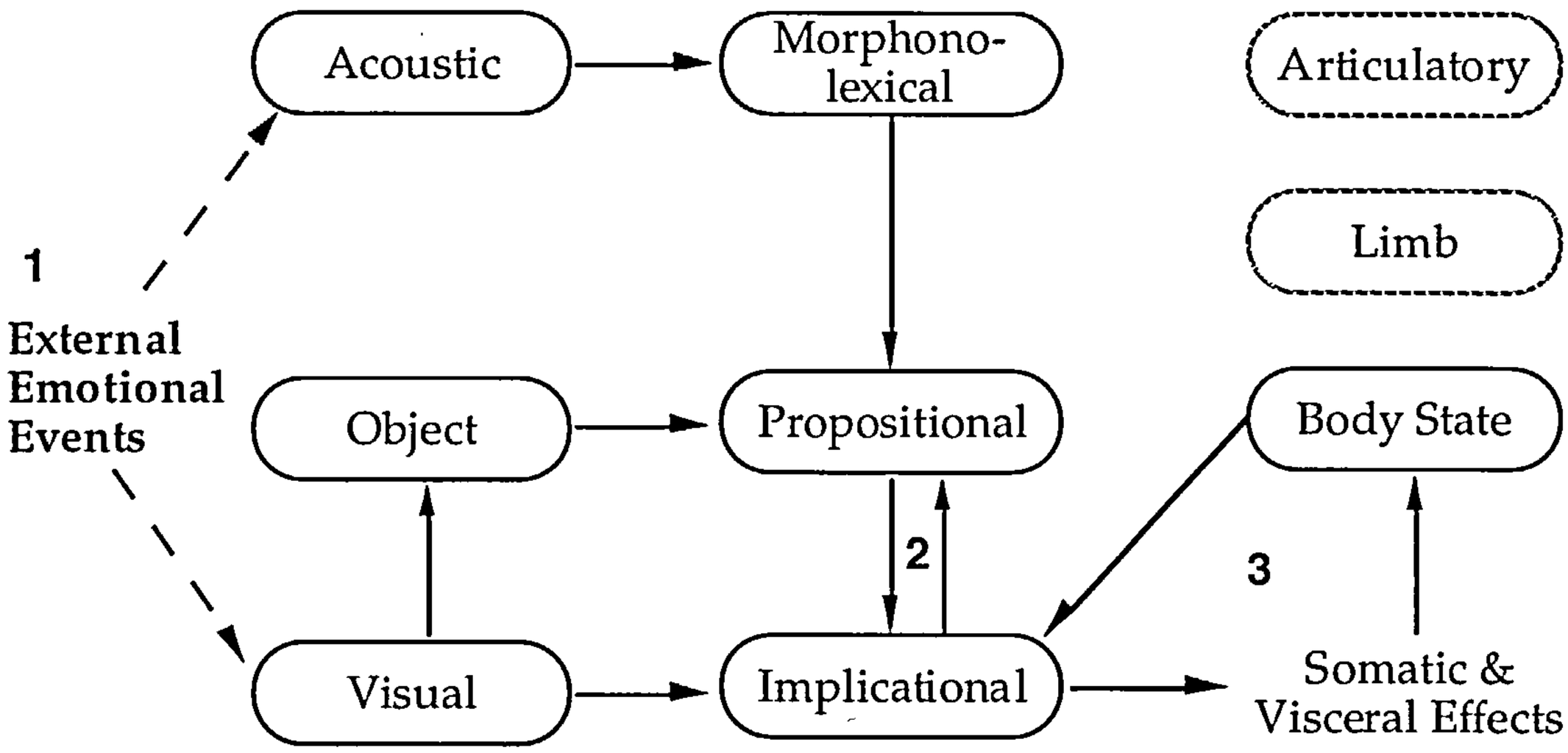

Figure 1. Maintenance of mood by ICS model.

Relevant stimuli (external emotional events) can cause the activation of schematic models using acoustic and/or visual codes. Once activated, the model can be maintained in the absence of continuing input by feedback loops in the implicational/propositional subsystems (2), and the body state/ implicational subsystems (3) - feedback that also involves somatic/visceral cues. In less technical terms, the model explains how a global representation (an implicational code such as 'I am a failure') generates specific propositions related to failure on a present or future occasion. This representation also has negative effects on body posture, facial expression and other bodily responses. Because of repeated experience of mood over sustained periods, the codes for this 'depressed' body state become highly related to depressive representations and a feedback loop is created. It becomes possible for depressed mood to be maintained even in the absence of stimuli by these two feedback loops (2 and 3).

It is important to notice that, by having two different levels of encoding for semantic information, the ICS account allows for the possibility of memories accessed by "cold" propositional representations that do not engender mood, as well as by "hot" implicational records that engender mood.

Teasdale and Barnard (1993) have used the ICS model to account for several features of depression and the efficacy of CBT. Following Beck's (1967) clinical account, depression involves the activation of 'globally negative models' of oneself , one's future and the world. The models activated in depression differ from those involved in normal low mood in being more extreme evaluations of self and utterly hopeless expectations of the future. Beck (1967) has described several abnormalities of depressed reasoning as "logical distortions". For instance, "Overgeneralisation" involves using one instance, of failure for example, to 'predict' this result in every situation. Essentially, an experience consonant with the already-active depressogenic schema enhances activation of schema, which, in turn, biases judgement of future experiences in a more extreme way than with a non-depressogenic or inactive schema.

The ICS model can also explain thoughts that are unrelated to any external situation - so-called 'stimulus-independent thought'. Information moving between propositional and implicational subsystems in a continuing cycle could maintain these 'internally generated representations'. In a depressed state, the cycle is dominated by negative evaluations, pessimistic expectations and self-blaming attributions that regenerate the same negative schematic models. Also involving characteristic Body-state codes that are associated with depression from previous negative events, the system can reach a logjam Teasdale and Bernard (1993) term 'depressive interlock'. In this configuration, 'negative automatic thoughts' arise unbidden and will provoke intense persistent depressive affect. A series of experimental and

correlational studies by Nolen-Hoeksema (1991) and colleagues have suggested that people who engage in ruminative responses to initial depression take longer to recover and have worse symptoms. The ICS account suggests that ruminative processing constitutes the tendency to establish depressive interlock.

The Self-Regulatory Executive Function Model

Wells and Matthews (1994, 1996) have also proposed an integrative information-processing model of emotional disorder, which attempts to go beyond appraisal and belief-based accounts. Architecturally, the model also represents several sources of information in both low-level processing units and beliefs. While the ICS model focuses on the nature of these units or codes and how information moves between them, Wells and Matthews (1994, 1996) focus on the role of attention and the appraisal of self-relevant information for producing emotional dysregulation. They propose a mechanism called Self-Regulatory Executive Function (S-REF, see figure 2) that monitors and appraises external stimuli, body state information and cognitive state information.

rumination ('active worry') is entered. This involves recycling information congruent with negative self-beliefs with the consequence of depleting resources for other, more adaptive, plans, and primes congruent negative beliefs. The result of both controlled processes at the upper level and automatic processes at the lower level is "the cognitive-attentional syndrome" (Wells and Matthews, 1994, p. 266). This is not a syndrome in the medically understood sense, but consists of heightened self-focused attention, reduced efficiency of cognitive functioning, activation of self-beliefs and self-appraisal and "active worry". The existence of this syndrome as a discrete constellation of mental processes that occur more frequently than its individual parts requires experimental verification at the present time.

Theoretical implications of cognitive models for meditation approaches

From Teasdale *et al.*'s analysis, the following strategies would be predicted to reduce sustained experiences of depressed mood (depressive interlock) and relapse into major depression:

1. Interventions which normalise the patterns of cognitive processing when mild negative affect is present.
2. Promotion of the synthesis of schematic models which differ from formerly depressogenic ones from their fragments of 'implicational' code. This might occur by repeated experience of the cognitive contents of implicational codes without the "heat" of accompanying emotional and body-state information. Altering feedback within the 'sensory loop' from a depressive bodily response would be predicted to help break depressive interlock configurations. For example, experiencing negative thoughts that form part of depressogenic models in the erect and alert posture of the meditator would promote alternative models such as 'coping with difficult thoughts and feelings' rather than one of 'can't cope so must be hopeless' supported by the previously 'defeated' bowed posture and sad expression.

3. Generation of additional codes for depressogenic models that describe them as 'mental states' rather than 'reflections of reality'. After re-experiencing depressogenic codes as in the example above, it becomes possible for meditators to identify their thoughts and feelings as just that, without necessarily accepting them as reality.
4. Change to the bodily effects and behaviours that issue from depression-related models so that these do not 'feedback' to maintain the models, but allow them to subside.

Wells and Matthews' (1994) account of the attentional mechanisms involved in triggering and maintaining disorders of mood suggests several broad strategies:

1. "Attempts should be made to promote a meta-cognitive detachment from thoughts while maintaining objective awareness of them" (1994, p. 305). They conceptualise this as "a type of 'disconnected mindfulness' which does not trigger the full S-REF syndrome. This should also encompass a passive "letting go" of rumination combined with an observation of thought but without active control" (p. 305). Without appearing to be aware of meditation approaches, the authors have almost prescribed something similar to Kabat Zinn's attitudinal precepts of letting go, and non-striving.
2. Communication "to patients that (a) the maintenance of dysfunctional processing is subject to voluntary modification; (b) conscious control is not necessary for the maintenance of self-regulation in most circumstances; (c) faulty knowledge about the social, physical or cognitive self is responsible for maintaining the emotional problem; (d) this knowledge is maintained by particular plans of action associated with the knowledge; (e) it is necessary to modify beliefs about the self and also plans for thinking and behaving" (p. 312).

3. Reduction of self-focus tendencies is predicted to reduce the likelihood of activating the S-REF syndrome and hence the likelihood of relapse.
4. Although the S-REF is not hypothesised to be entirely under voluntary control, Wells and Matthews (1994) suggest that "an excessive degree of automatisation for appraisal and coping may be present in affective disorder" (p. 286). Although they do not make the prediction explicit, this feature suggests that the reduction of automatisation for processes that contribute to dysfunctional affect and behaviour would reduce relapse.

The Reliability and Validity of Qualitative Methods

Two qualitative methods are used in the present study to analyse interview data (grounded theory) and 'think aloud' during meditation (protocol analysis). A brief description of grounded theory is given in the methods section as this is used along 'text-book' lines. However, a few comments on protocol analysis are in order because its use is somewhat atypical in this context.

Protocol analysis

'Think aloud' reports are usually obtained while the participant performs a psychological task. In reviewing the literature, Ericsson and Simon (1996) distinguish articulating material that is in focal attention from reported thoughts and meta-cognitive outputs that are not in focal attention. They conclude that the former can be reported with a high degree of accuracy, and that this does not affect problem-solving speed or accuracy. It is important that verbalisation is *concurrent* with the task and is not retrospective (as this is open to memory influences) or introspective. Think aloud is different to instrospection in that participants are explicitly not asked to supply theories about their cognitive process, simply to report their contents. In cognitive terms, concurrent verbalisations do not make large demands on attentional

capacity if what is reported is simply what currently resides in 'working memory' or moment-by-moment attention. The issue of the validity of this method is a thorny one if a researcher wants to make claims about the *completeness* of these accounts. Clearly, material that is largely below threshold for conscious awareness will be incompletely reported if at all. However, this complaint is irrelevant if the subject of interest is precisely what *is* in current conscious awareness. There are two other potential problems: the first is the difficulty of synchronising verbal report with cognitive processes that may be rapid and complex. There is also the difficulty of reporting contents that are non-verbal in nature (such as emotions, imagery etc.). No convincing *a priori* solutions to these can be proposed except to admit the exploratory nature of the method in this context.

Protocol analysis has largely been applied in the context of problem-solving and other fields of cognitive science. More exceptionally, 'think aloud' techniques have been applied to dreaming (Foulkes, 1978), film watching (Magliano *et al.*, 1996), creative processes in art and writing (Ruscio *et al.*, 1998), and a professional actor's role preparation (Noice and Noice, 1994). Study of the process of protocol analysis (see figure 3; from Someren *et al.*, 1994, p. 38) led this researcher to consider creative ways to overcome difficulties with the psychological model and the coding scheme.

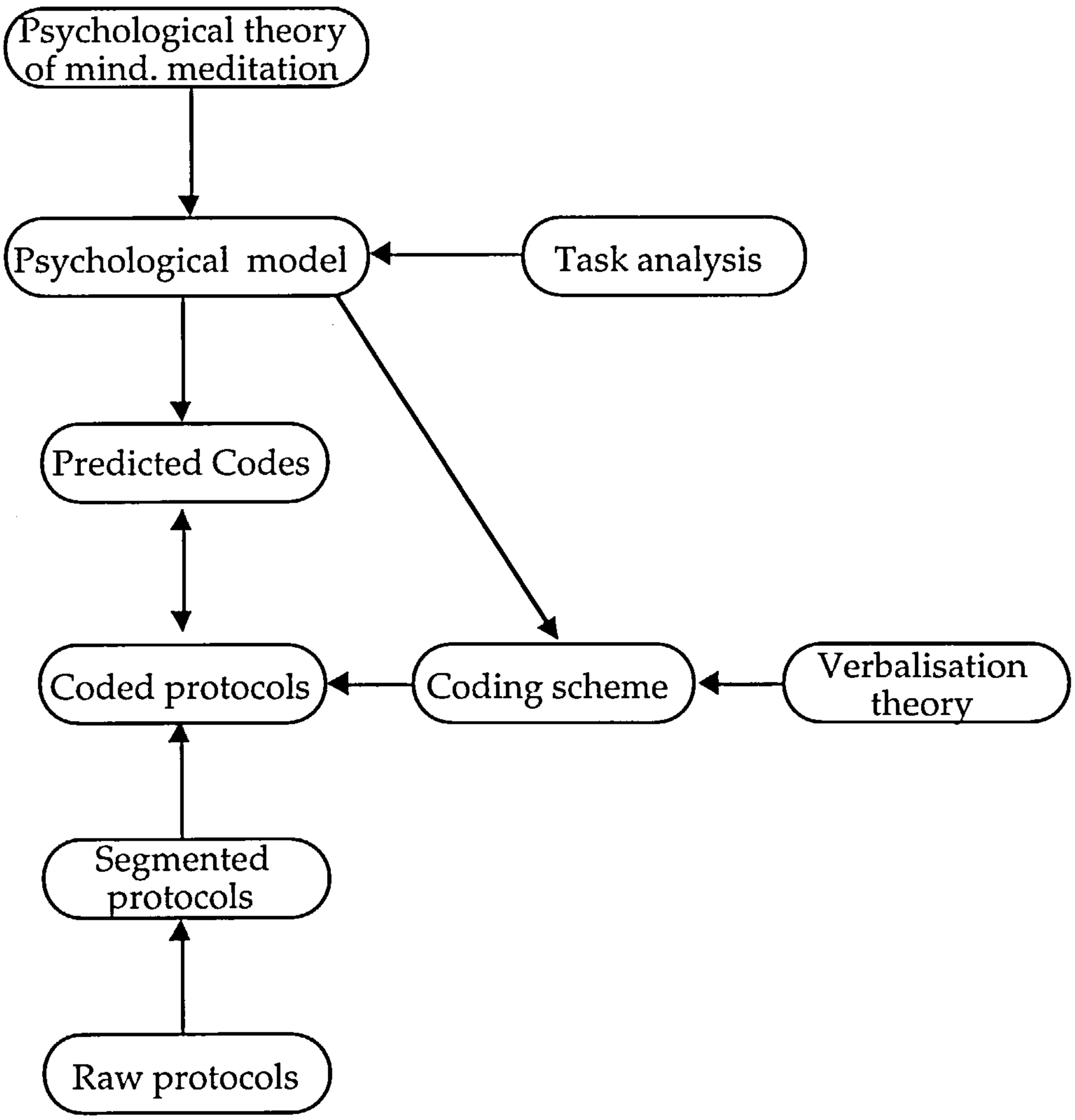

Figure 3. Overview of protocol analysis

Psychological theories of the task of mindfulness meditation are not detailed enough in information-processing terms to allow one to specify a model of how the task will be performed. Instead, ideas from the foregoing discussion suggest a wide list of types of cognitive contents to be possible. It was not possible to make a step-wise model of cognitive processes in the manner of conventional protocol analysis.

Someren *et al*. (1994) point out that the verbalisation theory (which specifies how thoughts will be verbalised) is not usually able to be specific and piloting of protocols is necessary to construct the rules by which a coding scheme may be applied. One such coding scheme based on a psychodynamic

theory (Foulkes, 1978) attempted to make inferences about unconscious processes such as repression and denial to study protocols of dreaming. Cognitive theory was examined as a possible basis of a coding scheme so as to explicitly test the ICS account concerning the codes discussed earlier (see figure 1). However, it was decided, on the basis of piloting, to restrict coding to vocabulary and phrasing that made mental contents as explicit as possible. Rather than using one specific model such as the ICS account, a generic model of psychological states or processes was used to generate the coding system given in the method section. This might be characterised as Jamesian (Principles of Psychology, 1890) in its conventional distinctions between affect, cognition and conation. This was combined with the vocalisation theory demanding explicit phrasing such as the use of a verb such as 'to need', 'want', or 'hope' to code for 'conation/ volition'.

Because of the potential confusion between reporting the contents of current awareness at a given point in time, with reporting one's thoughts about those thoughts, it was decided to attempt to anticipate this difficulty in the task instructions. Following the advice of Someren *et al.* (1994), a 'warm up' task using the 'think aloud' method was used to familiarise participants (see appendix 4).

Validity issues in qualitative research

Good and Watts (1989) draw attention to three key issues in the use of qualitative methods. The first of these is the use of several sources of data within the constraints of time and feasibility. They suggest researchers 'consider what will give them maximum assurance of validity'. Secondly, they suggest that the researcher should be clear whether he or she is doing exploratory reconnaissance or hypothesis testing. Lastly, they advise special care in considering one's personal connection with what one is studying.

Ideally, this involves sufficient familiarity and sympathy with the subject without loss of impartiality and commitment to scientific validity.

The use of multiple methods - or triangulation (Campbell & Fiske 1959) - is incontestably of value in maximising validity. However, the means of comparing the results of different methods deserve further consideration. Self-reported accounts are known to suffer a variety of biases, and where report is of one's cognitive processes, one's conscious access and its reliability are difficult to ascertain (Nisbett & Wilson, 1977). However, formal methods of information gathering such as questionnaires, although systematic, are still based on self-report, and have other potential pitfalls to reliability and validity. Interestingly, quantitative methods, including psychometric instruments, and qualitative ones such as grounded theory have very different approaches to validity and reliability, that may allow for little formal comparison. Rather exceptionally among qualitative methods, protocol analysis does submit the method of coding open verbal responses to formal statistical reliability testing and has considered ways of validation (Ericsson & Simon, 1996).

On the issue of hypothesis testing-versus-exploration, there is a tendency for quantitative data to suit the former and qualitative only the latter. However, this distinction is largely based on a quantitative view of hypothesis testing. Taking a broader view of hypothesis-testing, the generation of interesting questions from one's prior understanding as well as from qualitative data, leads to the testing of these hypotheses by further data collection and analysis. This undermines the distinction drawn by Good and Watts (1989) who appeal to a Popperian notion of hypothesis disconfirmation rather than the marshalling of evidence for several (not necessarily exclusive) points of view. The present study is intended to test hypotheses generated by cognitive accounts of mood disorder and psychotherapy, but by means of exploratory methods. Instead of a disconfirmatory bias, the researcher hopes

to help the reader evaluate the cognitive account of mindfulness meditation using the data.

Good and Watts' (1989) third point about personal considerations is well made. This is not simply a question for the qualitative researcher, however. Quantification does not overcome partiality at a stroke, and many researchers might do well to question their personal relationship with 'the object of study' when this is psychological in nature. Researchers using grounded theory explicitly turn their attentions to consider their personal reactions much as a clinician might. This is not necessarily only a potential source of loss of validity, awareness of one's personal reactions can add to the sensitivity of a method where sensitive interviewing is crucial to rich data-gathering.

Good and Watts' "traditional" scientific perspective can be contrasted with that of the "new paradigm" (e.g. Cooper & Stevenson, 1998), whose supporters propose a radical re-working of scientific objectives and values. Several of its proponents have suggested good methodological practices to ensure 'trustworthiness' (Banister, Burman, Parker, Taylor and Tindale, 1994), even if one does not endorse this approach wholeheartedly. Although this approach spurns traditional notions of validity, reliability and generalisability, replacement terms are somewhat synonymous - 'credibility. dependability and transferability' (Robson, 1993). Banister *et al.* (1994) argue that a qualitative researcher never makes the claim that a study is totally replicable as each piece of work will have key differences. However, Robson (1994) suggests that a clear, well-documented and systematic approach to collecting and analysing data can maximise its dependability. This author had the benefit of a short time-frame in which to conduct initial interviews, analyse them , conduct further interviews and then analyse further. As a consequence the grounded theory and interviewing evolved rapidly and could be easily recalled by the researcher. Were this process to have been

more protracted a research diary would have been useful to record methodological decisions and further points of enquiry. This thesis therefore attempts to lay open the research process and research decisions to the scrutiny of the reader.

'Transferability' in qualitative research can be equated to external validity and addresses the generalisability of findings (Johnson, 1999). Again, part of the solution is to give sufficient detail about particularities of situation and setting that the reader may judge the findings' wider applicability. Another is the use of multiple data sources such as participants drawn from a variety of backgrounds. The grounded theory can also be compared to theories derived from other similar research. However, although there is much written about meditation and students' experience of it, nothing the author is aware of has attempted to subject such reports to qualitative methodological study.

'Credibility' in qualitative research appears to be a general term for the validity of research findings as a whole. As few statistics can be applied, the approach rests on the 'persistent observation' and 'prolonged involvement' of the subject of study (Robson, 1993). To this end, this researcher attended two mindfulness courses over a six-month period. A further contribution to credibility comes from the use of multiple methods such as triangulation.

METHODS

This study obtained data from three sources: open interviews, psychometric questionnaires and a "think aloud" experiment. As discussed in the introduction, although none of these methods offers complete and reliable accounts, the use of multiple data sources can allow the researcher to evaluate interpretations from multiple perspectives and offer supporting (or conflicting) lines of evidence. Such interpretations rely on his or her efforts to remain impartial and reflect on their own reactions and perspectives.

Grounded theory (Strauss & Corbin, 1990) was chosen as the main method of qualitative analysis and applied to the interviews of eight participants in all. The way in which a grounded theory was developed in this study is described below. Quantitative data was available on three participants as a by-product of the study previously proposed for ethical approval. Insufficient numbers of research participants prevented any formal analysis of this quantitative data. It is solely used here as additional information to compare with the theory derived from qualitative analysis. The questionnaires administered are described at the end of this section.

An additional attempt was made to triangulate the theory from the "think aloud" technique (Someren, Barnard & Sandberg, 1994, Ericsson & Simon, 1996). This technique was included as an amendment to the study and received subsequent ethical approval (see appendix 3). Because there is no previous report of this method used in the context of meditation, this method was highly exploratory. The method should be considered as at an early stage of development and, it was hoped, would serve to highlight what could be achieved in future studies rather than as a major contribution in the present study. A concern of the present study was to address the method's reliability and validity as a means of investigating the contents of moment-by-moment awareness in short-term memory.

"Think aloud" method/ Protocol analysis

This method relies on the participant verbalising their mental contents at the time of their occurrence and attempts to access the current contents of short-term or working memory (see introduction). In this study, participants were told to report the content of their moment-to moment awareness following a prompt at pseudo-random intervals of between 10 and 35 seconds. The specific instructions were to "say whatever you are currently aware of out loud" when prompted by an auditory cue - this was the ringing of a bell by

the researcher. Prior to its experimental use, a warm-up exercise was used (see Someren *et al*. 1994) in which the participant was instructed to invent five improvements for a washing machine, and then for a telephone. The method was clarified for participants that failed to report their thoughts in current awareness and instead introspected about the task. The process of 'thinking aloud' was clarified during the warm-up so that no further communication was required from the researcher during the 'think aloud' meditation. Following recommendations of Ericsson and Simon (1996), the researcher was placed out of view of the participant during the procedure and provided the auditory cues.

All participants had used the meditation tapes recorded by Kabat Zinn as part of the course homework practice and were familiar with their use. Participants were instructed to use a tape lasting twenty minutes (see appendix 5) just as they would at home and were shown the controls on a hand-held tape recorder.

For the purposes of protocol analysis, the entire response to a single prompt was taken to be a segment. The coding system given below was designed so that each segment could be assigned codes on the basis of its content. This was applied to two protocols by the researcher and research supervisor blind to one another's coding. The kappa coefficient of reliability was calculated from both protocols. The resulting coefficient of 0.7 was formally sufficient but suggests further room for improvement. Codes used by one coder and not the other were entirely drawn from the 'C' category related to cognition. Agreement was reached that cognition would be coded for when explicitly referred to by verbs such as "thinking, analysing or wondering" as well as when mental contents were referred to in quantities sufficient to convince the coder that a thought process had occurred. In addition, both coders noted that "body-related cognitions" occured in both

protocols: it was agreed to create an additional code (C6) specifically for this content.

Protocol Codes

Affect:

A1 explicit reference to any kind of positive feeling or emotion

A2 explicit reference to any kind of negative feeling or emotion

Body/ Proprioception:

B1 explicit reference to awareness of sensation related to breath

B2 explicit reference to awareness of pain from body

B3 explicit reference to awareness of bodily sensation excluding breathing and pain

Cognition:

C1 thought content related to tape or task

C2 thought content related to past

C3 thought content related to the future

C4 thought content not otherwise specified

C5 reported absence of cognition.*

C6 thought content related to bodily state (B1-3)*

Perception/ Sensation: explicit reference to auditory or visual experiences

P1 reported sight or sound external to participant

P2 report of visualisation or perceptual imagery

Conation/ Volition:

V1 explicit reference to wanting, needing or desiring an object or state

* codes added on a post hoc basis

Grounded Theory Method

This approach uses a systematic set of procedures to develop an inductively derived analysis or theory about a **phenomenon.** Some of the key concepts (highlighted in **bold**) of this approach are given in appendix 6. First, the interviews were transcribed from audio-tape. This data is then analysed by isolating observations, sentences or incidents (a process called **open coding**) in an attempt to name and categorise **concepts.** Strauss and Corbin (1990) suggest two procedures as basic to the coding process. These are making comparisons between codes and asking questions about the participants' and

one's own assumptions (p. 62). Subsequently **categories** are formed from the grouping of codes that "seem to" pertain to the same phenomena (p. 65, authors' marks). This is termed **axial coding**. One such category is termed the **core category** and attempts to act as a guide for the analyst to "arrange and re-arrange the categories ... until they seem to fit the story" (p. 127): this is called **selective coding**.

Further groupings, or sub-categories, within these broad categories may be made where codes share qualities or attributes. An emphasis is always placed on "grounding the theory" (p. 133, Corbin & Strauss, 1990) as it arises by going back to the data and checking the theory against participants' accounts. One way of doing this is by using "in vivo" codes (Strauss, 1987, p. 33) - phrases and words used by the participants themselves. Sometimes these can be used to name categories or sub-categories themselves when participants summarise the phenomenon of interest "in a nutshell". Grounded theorists pay particular attention to the context within which phenomena are located.

Throughout this process, attention is directed to making links between categories, identifying "patterns" within categories (Strauss and Corbin, p. 130), and "filling in any missing detail" (p. 141). This thesis used single quotation marks to identify the exact words used by participants. The aim of analysis is not to produce categories which are immutable but that have "conceptual specificity" as well as "conceptual density" (p. 141). The authors suggest that 'the general rule is to sample until theoretical saturation of each category is reached (p. 188).

Strauss and Corbin (1990) stress that the theory should have an account of **process** built into it. By this they mean, attempting to demonstrate and account for progression, change or continuity "sufficient to give the reader a sense of the flow of events that occur with the passage of time". In this researcher's opinion, accounting for process is the methodological

imperative that enables the theory to move farthest down the chain of inductive reasoning. A tentative account of process is advanced later.

Finally, the technology of analysis is worthy of comment. The written records produced by the analyst are invisible in the final report but compose the bulk of his or her thinking. Information can be summarised in the form of **memos** (notes to oneself related to the formulation of theory) and **diagrams** (graphical representations of conceptual relationships). The wealth of codes derived from over 25,000 words of transcribed interviews in the present study led this researcher to extensive use of **code notes.**

Psychometric Questionnaire Data

The use of questionnaires within the qualitative nature of this study alters their purpose somewhat from usual quantitative or even mixed "qual/quant" designs as quantitative data was only fortuitously available. Rather than acting to validate subjective self-report, they were intended for informal comparison with the grounded theory from another vantage-point. Clearly it is possible, and indeed probable, that questionnaire responses would bear out participants' self-reports in some instances and contradict them in others. Neither can be taken as authentic and each can be used to shed light on the other.

Questionnaires were administered both during the first and last weeks of the course, completed in participants own time and returned by mail. The Beck Depression Inventory (BDI, Beck & Steer, 1987) contains twenty-one items related to symptoms and attitudes of depression. Each is rated from 0 to 3 in severity and a cumulative score produced. Although the scale cannot be used to diagnose depression, it has received widespread use as a measure of the severity of depression. The Symptom Checklist (90 item, SCL-90; Derogatis, 1977) measures psychological symptoms across a range of problems including psychosomatization, interpersonal sensitivity,

depression, anxiety, hostility and obsessional-compulsivity. It has received very widespread validation in a variety of clinical groups. Individuals' scores can be compared to norms for psychiatric out-patient samples. The Dysfunctional Attitudes Scale (DAS, Weissman and Beck, 1978) was developed in order to identify depressogenic attitudes. Forty items "elicit information on an individual's dysfunctional beliefs which act as schemas by which he constructs his world" (Weissman & Beck, 1978). The cognitive style questionnaire (CSQ, Roger, Jarvis and Najarian, 1993) assesses the degree of use of four styles of coping including rationalisation, detachment, avoidance and emotion-focused strategies. Studies have demonstrated the scales are sensitive to some psychosocial interventions (Roger & Masters, 1997). The responses to depression scale (unpublished) measures the use of rumination and distraction in the context of low mood states.

Participants

In contrast to quantitative research where representativeness and randomisation are often key concerns, grounded theory studies espouse 'open sampling' such that selection of interviewees is quite indiscriminate. "It is openness, rather than specificity that guides initial sampling choices" (p. 181, Strauss and Corbin 1990). In the present study the interviewer attended two complete mindfulness courses throughout, and proposed interviews to all participants on the second course. Because of the low number at take-up (12 - due to staff illness) and an unusually low retention rate of 5, only three participants finally agreed to attend interview. A single participant from the previous course was recruited via the mindfulness course tutor. These four first phase interviews were left very open as to their structure and content in order to enable participants' experiences and concerns to emerge without censorship or leading questions. Psychometric data was only available for the original three participants.

Following this, an analysis of the four interviews was undertaken within the contextual framework of their exposure to the concepts and practices of mindfulness-based cognitive therapy and in the light of the theoretically driven questions found in the introduction. The products of this analysis, and the questions it prompted were used to guide four second-phase interviews with more experienced meditators. These were recruited from a group that continues to meet to share experiences of meditation and other course-related issues. The categories were re-appraised in the light of further coding from these additional interviews so as to attempt to reach theoretical saturation. A brief summary of data obtained from each of the eight participants is given below (aliases used throughout).

Name	Pam	Jane	Lucy	Mary	Carys	Mark	Robert	Adrian
Interview	1	1	1	1	2	2	2	2
Think Aloud	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Psychometric	Yes	Yes	Yes	No	No	No	No	No

1 - first phase interviews; 2 - second phase interviews

Because of the sampling method employed by grounded theory, it turned out that the initial recruits were all female, and that the subsequent ones were mostly male. This was not intended but probably arose out of service users' needs and the context in which services are provided. A greater number of females both suffer from and are referred for mood disorders so that a greater number of women have attended the courses run from adult mental health services. Participants in phase two of the study were originally subjects in earlier research that contained equal numbers of males and females.

All participants received written consent forms (see Appendix 2) which they received at least a week before giving agreement following an opportunity to ask questions about the study. Two participants did not want to participate in the 'think aloud' meditation (see table above). In the case of

one (Lucy), this was due to time constraints. In the case of the other (Carys), the interview had reminded her of difficult past experiences and she did not want to continue after the interview.

Pam

Pam was a 38 year-old woman with a three-year history of what she termed M.E. (also known as chronic fatigue syndrome). She reported no prior significant physical or mental health difficulties. She had received informal counselling from a medical specialist interested in M.E. Following referral to mental health services for anxiety and depression, the course was suggested to her. At time of interview, she has completed the course three weeks previously. She lives with her second husband. She does not work at present due to her condition and was previously a teacher.

Jane

This 44 year-old female reported a long history of bladder-related health problems, which led to an operation to remove her bladder sixteen months previously. About four months later, she received a diagnosis of major depression: she reported no previous mental health difficulties. She has received therapy from mental health services over the past year. Her therapist suggested her participation in the recent mindfulness course. She lives with her husband, who suffers from quite progressed osteoarthritis. She currently works part-time.

Lucy

This 34 year-old was diagnosed with major depression between twelve and eighteen months ago. She had no previous psychiatric history. The depression followed an acrimonious divorce following which she lives with her nine year-old son. She has received private psychotherapy over about a

year at variable intervals. Following her G.P.'s referral, a mental health service worker suggested she attend the course. She had just completed the course with Pam and Jane at time of interview. She currently works full-time in a management position.

Mary

This 24 year-old was diagnosed with 'M.E.' or chronic fatigue syndrome between twelve and eighteen months ago. She did not report any prior psychiatric history. She has not received any formal psychotherapy, but was referred to mental health services about ten months prior to interview. Following a brief assessment by the service, the course was suggested and she attended it soon afterwards. She does not work at the present time due to her condition, but is trained as a teacher.

Carys

This 59 year-old female was diagnosed with breast cancer about six years previously. Her cancer was treated and remitted two years later. However, her sister has since died from this illness. Subsequently, she was diagnosed with major depression on two occasions about four and two years previously. She has received both medication and psychotherapy from local mental health services on both occasions. She completed the mindfulness course just over two years previously.

Mark

This 54 year-old male was first diagnosed with depression over eight years previously and has received treatment on a number of subsequent occasions associated both with divorce and the death of his mother. He received some behavioural psychotherapy about five years ago; transactional analytic therapy about three years ago; and responded to an advertisement for the

mindfulness course about two years ago. He lives alone and works in full time employment engaged in shift-work.

Robert

This 49 year-old male was first diagnosed with depression in 1989 and subsequently in 1993. He reported more minor episodes of depression for which he did not receive diagnosis or treatment. He lives with his second wife and their three children, and works both as a writer and educator. He responded to an advertisement for the mindfulness course in the local newspaper.

Adrian

This 32 year-old male was diagnosed with paranoid psychosis or schizophrenia by a psychiatrist over six years ago. In the intervening period he reported suffering very frequent paranoid ideation and obsessive-compulsive behaviour that have restricted him to home until about one year ago. He has received therapy from local adult mental health services until about two years ago. His therapist suggested that he took part on the course at the termination of therapy. He lives with his partner and does not work.

RESULTS

Open Interviews and Comparative data.

The four initial interviews (Pam, Jane, Mary and Lucy) were analysed using grounded theory to produce the categories described below. Results from psychometric questionnaires and the 'talk aloud' experiment were compared with the codes and categories of the theory to shed further light on their validity.

Strauss and Corbin (1990, p. 121) strongly suggest that the grounded theorist attempt to conceptualise the central phenomenon as a core category

which encompasses the participants' storylines as "the essential cement in putting together .... all the components in the story". During initial open coding of the interviews, three potential core categories became apparent. These were: the life course of participants' illnesses; features of their depression and other related psychological problems; and aspects of the mindfulness course and participants' progress through it. The first of these three was chosen as the primary phenomenon from repeated viewing of the transcripts, codes and categories. The wider perspective afforded by this choice of core category was felt to reflect the concerns of participants themselves, and served to place the course in the context of their lives.

The core category might be encapsulated by the following statement: 'The main story seems to be about the way participants develop understandings of their mental and physical problems over time, and the role mindfulness practice and other therapies have in helping them manage these problems better'. The core category can be described as *symptom life history* or *'managing my symptoms'* (Pam). The reader will notice that the other candidates for core category may be subsumed within this paradigm more or less successfully.

Giving the analysis this broad focus helped organise the plethora of codes into categories and subcategories. This process was also guided by the action/ interaction orientation of grounded theory (Strauss and Corbin, 1990) which suggests an "analytic ordering [which] looks something like this: A (conditions) leads to B (phenomenon), which leads to C (context) which leads to D (action/ interaction including strategies) which leads to E (consequences)" (p. 124-5). This approach was found to be highly appropriate for the participants' accounts and, it may be commented, is not unlike a clinical case formulation. As analysis progressed it was found that, although participants placed different emphases on different categories, features of

each were present in all accounts. These categories are defined and discussed below, with examples from participants' verbatim accounts.

Categories and Subcategories

1 Pre-conditions
    attitudes
    coping style
2 Change to health and well-being.
    breaking point/ cry for help
3 Distress and depression
    fear and anxiety
4 Context of course
5 Course expectations
6 Initial negative experiences
7 'Coming to terms'
    Group support and identification
    Relaxation
    Discovery/ 'surprise'
    Skills
    Accepting attitude
8 'Bringing it into everyday'.

1 Pre-conditions

This category referred to pre-existing attitudes, coping styles and self-statements suggested either explicitly or implicitly by participants, as the pre-conditions for the development of later problems. A less clumsy and more psychological term would perhaps be "vulnerability" but this was felt to reflect the theorist's view and not necessarily to be that of the participants. In order to remain neutral as to the relationship between pre-conditions and later problems, the name was retained.

Jane's history of unexplained illness led her to state that 'many years of medical negative thinking, many years of being told you're not as bad as you think you are' had taken its toll on her view of herself. Both Jane and Mary

referred to coping by 'total denial' (Jane) as well as 'ignoring or choosing to ignore' difficulties (Mary). Both Pam and Mary were later to suffer the symptoms of M.E., and both describe very active coping styles. Pam described herself before the illness as a 'high performing' individual who could do many things at once with ease. However, she made no links between this coping style and her later difficulties. Mary spoke of a long history of illnesses prior to the onset of M.E. following which 'I expected that I could go back' in 'my usual bull-in-a-china-shop sort of way'. Subsequent to the course, she made links between this coping style and her illness that are discussed under the category of 'Coming to terms'.

All participants made comments about their emotional coping strategies prior to psychological difficulties; these comments covered a wide spectrum of coping style. Mary came to realise that she 'didn't pay attention to actually what I was feeling . . . inside feelings', and her reaction following a road traffic accident was: 'I laughed about it when actually I was really seething and very very angry but I ignored that totally'. Similarly, Jane stated that before her depression 'I was always very optimistic' and that she bottled up negative emotions. In the case of Pam, diagnosis of M.E. brought a 'very positive outlook' and self-reliant style of coping. At the other end of this dimension of coping style, Lucy internalised difficulties - 'I am the problem', 'I'm a terrible worrier'. Clear differences in participants' styles of handling feelings formed part of the pre-conditions to psychological morbidity.

2 *Change to health and well-being*

This category refers to an event or set of events that the participants perceived as causal to subsequent psychological distress. One referred to reaching 'breaking point' (Jane) and another to a point of capitulation after she was refused benefit, at which she finally accepted: 'I needed help, HELP! I have gone all the way through this' (Pam). For Mary this process was more

gradual: she described her descent into what she termed (and was later diagnosed) M.E., following glandular fever, as: 'things were getting worse physically, I was losing energy and that was affecting my ability to think clearly . I didn't know my capabilities'. For Jane, the outcome of an operation to remove her bladder was to precipitate her first depressive episode. In the light of her coping style of denial, her delayed reaction - 'I didn't take it on board for quite a few months' (Jane) shows strong links with the first category.

3 *Distress and depression*

This category refers to a period of significant and long-lasting psychological distress, including low and anxious mood, which was described by every participant whether or not he/she had received a formal diagnosis of affective disorder. Three out of the four described significant fear or anxiety. The unpredictability of her M.E. symptoms led Mary to describe getting 'very very anxious about [social situations] . . . and I would think about that all the time'. Pam also referred to thoughts 'going round and round in your head' and 'you really notice what is happening in your thoughts - you know I am fed up of thinking'. Jane had also noticed the role thoughts played in her depression and stated that 'the first thought that pops into your head as you first open your eyes makes an awful lot of difference to the rest of the day'.

Mornings were also described as difficult by Pam who did not attribute low mood to thoughts, instead 'some days I wake up . . . and just like that the mood seems to go down.' She attributed her depressive thoughts and feelings to a physiological cause, which was, interestingly, also her explanation for the symptoms of M.E. - in her own words, 'my brain's not working properly'. Although she had not experienced depression and anxiety when first suffering M.E., she stated that 'I can't separate the symptoms now' (Pam).

Although functionally rather than biologically expressed, Lucy also located her problems as having an internal origin (related to pre-conditions, see above) about which she could do little.

Anti-depressant medication was discussed by three participants. Two described it as having little or no effect. In contrast, Pam described its effects as 'alleviating mood', which led to her 'doing too much' and then suffering a worsening of symptoms. She described this as a 'vicious circle' that can be seen to be related to her confusion about the symptoms of depression and M.E. described above. She stated that 'I've got the physical side and the mental side fighting one another' suggesting that she perceived the appropriate course of action for 'the mental side' to be activity, but that this compromised 'the physical side' of her symptoms.

4 Context of Course

Grounded theory stresses that it is important to consider the context within which a category is embedded (p.97, Strauss and Corbin, 1990). This category refers to the ways in which the mindfulness course was situated with respect to other therapies. Pam stated that it was part of 'alternative therapies of the .... mind-over-matter type' which were characterised by 'this positive thinking approach'. Although she had not received psychotherapy, her reading of cognitive behavioural material had led her to look into 'the psychology behind it'.

Assumptions about therapies can be seen to be related to models of causality of illness for participants (and professionals too, come to that): Pam originally held firmly biologically based attributions for her illness (see Pre-conditions), that she appeared to have modified by both her reading and her experience of the mindfulness course. However, she retained the view, contrary to that taught by the course, that the approach of 'alternative therapies' including MBCT is based on 'positive thinking'. Interestingly, this

has not prevented her using many CBT-type strategies and developing a non-judging and accepting attitude of 'acknowledging [thoughts] and not be bothered by them' (Pam).

In the case of Jane, the course was explicitly suggested by her therapist with the AMH services as a bridge between termination of one therapy (due to the participant moving area within the community health trust) and attempted re-allocation. As a consequence, the participant understood the course to act therapeutically in a manner similar to that of the therapy she had been receiving. However, she could not give an explicit appellation to its style or content.

5 *Course Expectations*

This category was derived from fewer codes than any other, and initially formed part of a category containing all codes related to the course. However, it became apparent on analysis, that expectations prior to the course did much to influence the participants' progress and gains from the course. To clarify the distinction, this category was formed separately from the process-oriented category of 'coming to terms'.

All participants made comments about their expectations of the course but in different ways suggesting a continuum from having few expectations to one of expecting a 'cure' (Lucy). Mary's attitude of 'I was willing to try anything . .. I thought well, OK, let's just try this, and I went along with quite an open mind' was concordant with her initial experience of the course. Two participants reported very high expectations: one said 'what I expected was this is going to be it, this is going to help me' (Lucy), and another 'this is going to help me now, this is going to solve all my problems (Jane). Lucy was only able to restate her expectations at the end of the course -'I really wanted it to work, I really thought this would help me, but it didn't'. Jane reported that she was disabused of this idea and soon became 'more realistic'. Also

stressing a realistic attitude, Pam reported, 'I suppose I want to get better, but I don't really think that this course is going to make my M.E. disappear'.

6 *Initial negative experiences*

All the participants referred to a period early in the course, which they found challenging, and sometimes negative. Lucy stated that the homework was 'too much like hard work' and that she 'just felt I wasn't able to do what I was supposed to do'. Expecting the course to help her control her mind, she found 'my mind would still wander a lot and I would get very fidgety after a while'. As a consequence of both her expectations and initial experiences, her practice and enthusiasm dwindled. Jane also found early sessions difficult; finding it 'very confusing at the start' with 'times that I gladly would not have gone'. Pam provided some insight into this potentially difficult period, remembering 'deadly silences' that almost provoked her not to come back. She also reported thinking 'I am only doing this because I am depressed, the whole of the first week they [homework exercises] were all negative experiences'. She reported thinking during the homework exercises themselves: 'oh dear, I'm not breathing' and 'my thoughts aren't working right'.

Mary did not report negative experiences *per se*, but did discuss early concerns with 'driving to get it right' which provoked anxiety. Subsequently, she 'realised that wasn't really the point, the goal isn't getting ten out of ten for your body scan, the goal is letting it happen and looking at what happens'. Participants differed in the extent to which they altered their perspective in this direction.

7 *'Coming to terms'*

This category was labelled with a phrase taken from Pam's account, but might have used a phrase from Jane - 'Stop, and start thinking'. Mary

similarly reflected that she learnt 'with the mindfulness . . . to stop and look and say, OK, *I know* what has happened'. However, the category not only includes experiences from the mindfulness course itself, but also input from psycho-therapeutic counselling and the reading and thinking of participants themselves. Lucy stated that 'I went back to see my therapist today because I did realise that she does me more good than anyone else'. Her therapeutic gains were attributed to her re-examination of her childhood history and family relationships. In the light of her perception that help comes from external sources rather than her own resources, it is interesting to note that this participant 'really wanted it [meditation] to work . . . but it didn't'. In contrast, the other participants who claimed benefits from the course did so in terms of how they had drawn from their own resources - one stated: 'I've started letting myself learn from things that I have done wrong or ..... done unhelpfully [laughs]' (Lucy). Similarly, Jane spoke of the wisdom of 'allowing yourself to be well'.

Subcategories

i) Group support and identification.

All participants reported finding the 'familiar faces' (Pam) of the group a supportive and learning experience, despite some concerns to the contrary. One reported that: 'They are all ordinary people you know, they are you and me . . . that helped enormously' so that Jane felt 'really really comfortable even on the first session'. Mary was in a previous group but similarly found that 'support was built up as people started to share their experiences, you actually got drawn in and became sort of interested in what was happening for other people and you'd think Ah! Yeah! Mm, that has happened for me'. For this individual, it appears that the group helped facilitate discovery (see below). One individual (Jane) mentioned that their 'confidence' in the therapist helped them attend the group.

ii) Discovery/ 'surprise'

Of the three participants who described therapeutic gains, all described one or more points of discovery often with a sense of surprise. Jane said of her experience of mindfulness meditation that 'it clarified a lot of things for me' and 'I had a deeper understanding of what was going on . . . what was causing the depression'. She reported that this 'wasn't always easy' and 'brought additional problems' related to retrieving childhood memories.

Mary described a process of discovery starting with the very first exercise of paying mindful awareness to the act of eating a raisin. This 'opened her mind even more [than she expected] and was quite ..... scary in a way, because it was realms I had never entered before' (Mary). Later on in the course she made the discovery - 'which I didn't realise until doing mindfulness' - that the sensations she felt in social situations of 'getting really hot and starting shaking' were anxiety-related. This led to her taking action in the form of breathing spaces (see skills below).

Having described difficulties initially with the homework exercises, Pam reported that she 'just found a way of doing it by, [pause] if I could actually feel it [pause] if I put my hand there [pt. touched abdomen]'. She found it hard to identify what had changed to enable her to access the exercises but reported 'I think I adapted to it'.

Only Lucy had not adjusted her initial expectations, nor found any surprises or insights as the course progressed. Instead her perspective was that she still 'wanted it to work'. She expected that the course would amount to an intervention that would alter herself, allowing her to concentrate and alter her thoughts in such a way that she no longer experienced negativity.

iii) Relaxation

Participants reported one of the benefits of listening to tapes to be calmness or relaxation, although this is explicitly not their stated aim. Jane reported that 'it calmed me down a lot' and created 'a space of calmness'. Lucy reported her stated aim as relaxation, and her intermittent experience of this led to her re-commitment to practice at the end of the course. Unfortunately, as relaxation was not consistently forthcoming, she soon stopped this practice. At the time of interview, Lucy intended to return to her practice 'when I feel more relaxed', concerned that worries would prevent the relaxing effect she sought. Although several of Pam's codes suggested competing understandings of mindfulness (see attitudes), she reported, following the 'talk aloud' meditation: 'You know, it's supposed to be relaxing, and I don't find it relaxing at all'.

iv) Skills

The explicit focus of homework exercises throughout the course is on use of the meditation and yoga tapes, as well as the use of breathing spaces. Also covered are cognitive therapeutic strategies such as thought catching and recording. Interestingly, participants described very different experiences of their success and failure in acquiring skills in these areas. For instance, Pam found the yoga tapes immediately useful as a 'graduated exercise program', supplementing what she was already doing as part of the cognitive-behaviourally oriented approach for M.E. that she had read about. In contrast, Jane reported that she 'didn't get on with the yoga at all'. She admitted that, outside of the sessions, 'she didn't even attempt to do it' as it was 'just painful'.

Similar divergence was reported for use of breathing spaces. Jane reported 'I didn't get the point at all', and found the practice very confusing. Another reported that 'through the breathing exercise they give you . . . you

know something's bothering you, you can't eradicate what's there, but you can acknowledge it so it can't take you over, it can't just happen automatically. You have a choice' (Mary). Developing the use of breathing spaces led to a subsequent reduction in anxiety for her.

Pam's use of the breathing space differed from Mary. Previously familiar with some cognitive behavioural literature, she described 'counting to ten and pulling yourself together'. Her interpretation of much of the course was one of helping her address negative thinking by 'reminding yourself that it is not your fault' and mentally reciting 'thoughts aren't facts . . . even the ones that tell you they are'. She described mindfulness as 'going into yourself and exploring it' although felt it a 'weird title'. Mary also reflected on 'analysing what happens' during meditation, but suggested that this was in fact 'another trap I fell into later'. Instead, the skill is one of 'just looking at what happens, not taking it to pieces trying to understand what's going on'.

Mary commented on the way using diaries to record positive and negative experiences or thoughts on successive weeks was 'quite revealing'. 'I found myself focusing on little things that you sort of half acknowledge, that if you look at them they are what actually make the day'. She also described how 'looking for the bad things . . . actually influences your mood' in a way that wasn't pleasant to do, but did powerfully demonstrate the influence of her thoughts on her mood to her. Subsequently she has started using a strategy of 'looking for the good things' that is perhaps linked with her attitude of 'acknowledgement' discussed below.

Mary described her outcome from meditating thus: 'it's a useful time to sit and lie and OK, the .... course teaches you to recognise what's in your head or acknowledge the fact .... OK I've got a problem, and if it comes back again, you look at it again, and if it comes back again - this is the way I do it - let's look at it properly . . . . why are you feeling scared, why are you feeling

uncomfortable about it? I don't analyse it in a way, but I just sort of break it up a bit, so by saying I feel scared about it, I feel angry about it, just to myself . . . it just disperses it'.

v) Accepting attitude

Many of the codes applied to products of the course did not address skills directly; instead these tapped a change in attitude towards acceptance, flexibility, and 'living in the moment' (Pam). In keeping with the cognitive perspective that Pam had developed both before and during the course, she aimed to 'acknowledge [thoughts] and not be bothered by them'. For her, however, this remained a 'self-management technique' rather than a more encompassing change of her attitude to life such as that suggested by Mary: 'during the eight weeks I realised that it was possibly my attitude and the way I was running myself that led finally to the way I am'. Instead, 'through the mindfulness and acknowledging what is going on in the moment, be it birds singing or walking along . . .. you can start to enjoy life as it is happening rather than looking to the past or the future' (Mary).

Jane also spoke of an attitude of trusting in the moment and reflected on the challenge this presents: 'mindfulness is like if you live this moment, the future generally takes care of itself. It's a bit frightening at times . . . . does everything just fall into place?' This attitude 'wasn't rigid in any way, don't put on any limitations, don't put yourself under pressure'. Previously, she had avoided meditating in the mornings as they were difficult (see sub-category above). However, her attitude changed so that 'after about the fifth session, I thought I will try it in the morning and just see . . . I might derive some benefit for the rest of the day'. She reported that the practice did help and became more regular as a consequence, so linking this attitude to her developing skills.

The issue of 'acceptance ', and just what this entailed, provoked several comments. In the context of her medical difficulties, Jane said: 'the acceptance area is the hardest thing to accept, I struggle very strongly with that - I thought well I can't accept this; I don't want to accept what my life could be, you know, its um [pause] to me it was too terrifying, I struggle hard with that bit'. Both participants suffering from M.E. also spoke about accepting their conditions. Mary said that she had learnt to alter her expectations so that 'its how you can be, not how you'd like to be'. Pam also said that 'nine days out of ten I do use the mindfulness and do accept it. I choose and I know what the consequences are going to be, but some days ..... I am still anxious and depressed [laughs]'. Humour was a part of all of the interviews but is difficult to code and interpret. In several instances, it could be described as introducing a "distance" between the participant and their difficulties.

8 'Bringing it into everyday'

This phrase was used by Pam and describes codes related to their generalisation of skills and practice to everyday living. She also described driving mindfully on the way to the interview, aware that she was late, but avoiding the stress of worrying about this, by paying attention to the sights around her. Since the course, she described tending to 'do it on a bad day . . . . it will be a good day when I've skipped it'. In contrast, Jane reported missing out the formal practice on days that she felt her mood was poor, and that 'I don't do mindfulness automatically'. Mary continued to practice daily for several months following the course in June, and only lost her routine over a Christmas period and subsequent viral infection. She reported that around 'Autumntime, hang on I can almost predict what I am going to feel after doing something just by being aware of how I feel two days before; just because everyday I dipped into myself and thought OK, so this is how I am feeling now'. This category might also contain codes that were contained by

the 'skills' section with which it is closely associated. In one sense, any practice of formal or informal mindfulness after the end of the course might be considered evidence of generalisation. The use of breathing spaces was mentioned by several participants as a useful skill in everyday living.

ADDITIONAL RESULTS

Questionnaire Data

Three participants completed questionnaires at the start and finish of the course. A full set of results is given in appendix 7 and for present purposes, results will be chosen to illustrate points of agreement and disagreement with the grounded analysis for each participant.

Pam's pre-course psychometric results bear out clinically significant somatic symptoms (SCL-90), obsessive thinking and checking behaviour (SCL-90), and depression (SCL-90, BDI) together with some anxiety (SCL-90). However, following the course, none of these ratings had altered significantly (> 1 sd.) despite her self-reported improvements. Indeed, the participant examined her questionnaire responses to compare them and made the written comment, 'this doesn't show any major improvement during that period - BUT I am much better now ...!' Results on the Cognitive Style Questionnaire suggested that her coping style had altered to become more avoidant and more emotion-focused despite her report of attempting to 'live for what you are doing now' and 'being more aware instead of over-reacting'. Despite her report of cognitive strategies such as 'thoughts aren't facts' and 'reminding yourself that it is not your fault', her Dysfunctional Attitude Scale score had risen from 96 to 132. The reasons for the disparities between this participant's account and psychometric results are unclear.

Jane's pre-course questionnaire results also bear out her description of her own problems. Her SCL-90 results suggested clinically significant somatic symptoms, obsessive compulsive symptoms, interpersonal

sensitivity, depression and psychoticism. Her BDI score was 38 which is one of severe depression. The CSQ and RDQ suggested an extreme use of emotion-focussed coping and rumination respectively. Her DAS score of 198 suggested a highly salient set of depressive attitudes at this time. Following the course, her results bear out her own stated improvement. Her BDI had fallen by 12 points to now place her in the moderate range of depression. She had improved significantly (> 1sd.) across a range of SCL-90 scales and her global severity index had fallen significantly from 2.02 to 1.14. The mean in one out-patient sample was 1.36 (sd. = .56). In line with her reported change in coping so as to 'accept and cope with that for the moment', her use of emotion-focused coping and rumination did reduce significantly (CSQ and RDQ respectively). Her use of avoidant coping also reduced non-significantly while that of detachment increased non-significantly. Although her DAS score remained high (160) this did represent a significant fall from pre-course levels. The 'wider perspective' scale (EQ) identified several responses that had altered over the course. Jane became more able to 'view things from a wider perspective', 'actually see that I am not my thoughts' and 'observe unpleasant feelings without being drawn into them'. These reponses support Jane's report of aquiring *skills* such as learning to identify negative thoughts - 'this is only a thought in your head, it isn't you' - as well as a change in *attitude*.

Lucy's pre-test results suggested the presence of less severe psychological symptoms than for the previous participants. Her pre-course BDI score of 17 is indicative of mild to moderate depression. The SCL-90 produced scores for obsessive compulsive and depression symptoms in the clinical range. However, at the end of the course, all these scores had reduced to at or below clinical cut-offs. Her BDI produced a score of 10 and the global severity index had fallen from 0.822 to 0.49. Lucy did state that 'I'm on the mend' and attributed this to news of a new job rather than to the course. In keeping with this, results on the measures of coping, dysfunctional attitudes

and wider perspective did not suggest any change. This is in keeping with Lucy's own acknowledgement that she did not practice the course skills nor had adopted an attitude of mindfulness.

'Talk aloud' protocols

Pam, Jane and Mary produced meditation protocols that were analysed with the coding system described earlier. The protocols lend some support to the experiences and pre-conditions reported by participants during interviews; as well as the skills they claimed to use in their practice and everyday living.

Pam's protocol made frequent use of the code V1 related to conation or volition. At interview, this participant had talked of the battle between body and mind as she wanted to participate in daily activities more fully but was prevented from doing so. Interestingly, a sense of desire was present in the protocol - e.g. segment, 'I wish I could have as much energy as those girls outside' [audible talk from window]. The most prominent codes were those referring to the breath or thoughts related to the tape (B1 and C1) as well as thoughts related to the past (C2). The participant referred in one segment to 'having a bit of pastitis'. She later explained that this was a chain of thoughts about the past that were associated with negative feelings. In keeping with her report that 'you really notice [thoughts], you really notice what is happening in your thoughts', this protocol was characterised by frequent reference to thinking (C1-6) and 'analysing what I was doing'. At its conclusion, the tape suggests 'sitting with majesty [with the] the beauty of a mountain'. Pam had previously expressed her preference for 'visualisation' rather than tapes of the 'just sitting there doing it' variety. Her propensity for visualisation was borne out by her immediate report 'I am the mountain'.

Jane reported frequent pain and other bodily sensations (B2 and B3). In common with Pam, attention on the breath was almost never present without attendant cognition and/or volitional commentary. She reported

'trying to regulate my breathing' and 'trying to concentrate on keeping my fingers still'. In contrast with Pam, this participant reported positive affect that became more frequent as the meditation progressed. This substantiates her report of tapes having the effect of relaxation. She commented 'after a while, I tend to relax and let it (the breath) flow' and afterwards, 'It took a lot of tension out of me'. There was evidence of the skills she spoke of in the interview also. At one point she reported back-ache and subsequently 'trying to send thoughts to it - breath it in and then breath it out'. She also practiced bringing her attention back to her breath by 'trying to dislodge my thoughts and put myself back with my breathing'.

Mary completed the course prior to Pam and Jane, and so had a history of meditational practice of about six months. Segments receiving a 'Breath' code (B1) did not generally receive codes for cognition or conation (C and W). In keeping with this evidence, she reported at interview that she had previously fallen into the 'trap' of 'analysing what happens'. Mary also referred to back pain as present both at the beginning and during the meditation. On the first occasion this was noted but not acted upon. Subsequently she practiced 'breathing into the pain', just as Jane had done. Following the meditation, she reported that 'my back was hurting quite a lot so I was always brought back to that'. This substantiates her report that a mindful approach has helped become 'aware of how I am feeling while doing it [meditation]'.

DIAGRAMATIC MODEL

The diagram shown in figure 4 represents the general process that emerged from the initial interviews and can be used to aid thinking about testing the theory's validity and exploring its limitations, as well as guiding further interviews.

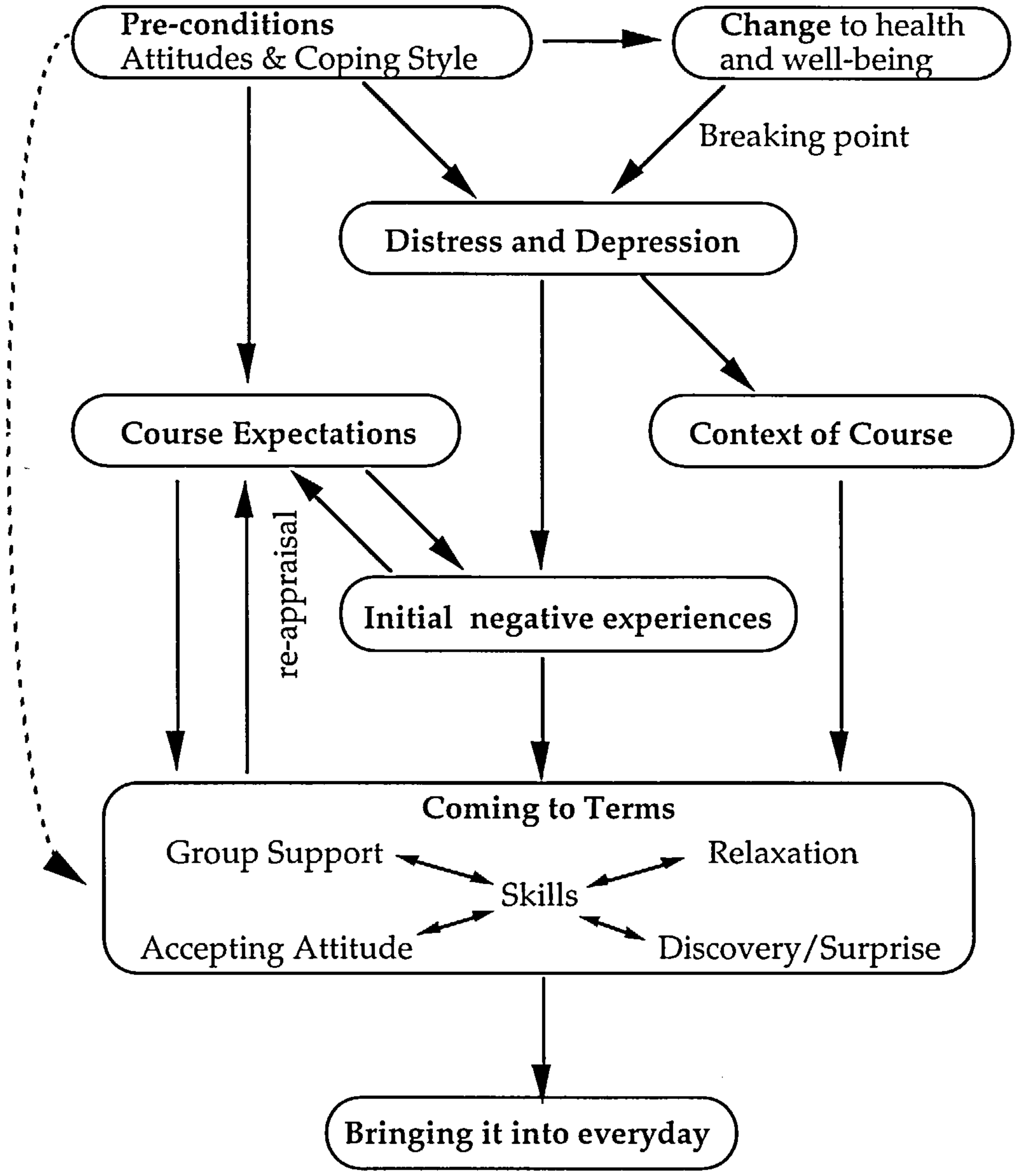

Figure 4. Diagram of categories after initial interviews

Constructing the diagram highlighted a potential confusion between aspects of process inferred as occuring over time for participants, and links made between categories during the discovery of grounded theory. Although the diagram was intially undertaken to attempt to highlight the latter, it was found that the diagram had a greater utility (and readability) when used to describe the former. As an example of where a connection could be made following analysis of the codes used for two categories, pre-conditions has been linked to 'coming to terms'. However, it became apparent that the

diagram's extreme inter-relatedness would have resulted in a confusing representation had all the possible links been illustrated.

A further discovery, as the diagram was constructed, was that the subcategory of skills might perhaps be placed in a central role within the category of coming to terms. The group could be said to offer a safe place in which to learn skills, and other individuals to learn from. The development of skills led to discoveries, and experiences of relaxation and calm, as well as promoting a change in attitude. Pursuing this line of thought, it may be that skills are also the essential element in successfully bringing mindfulness into everyday life.

Although the diagram was largely constructed from the accounts of three relatively 'successful' participants, it is interesting to compare the model with the account in which little benefit was claimed (Lucy). The diagram makes sense of the plausible relationship between this participant's attitudes before the course, her expectations of it and her subsequent largely negative experience of participation. Her attitude of 'receiving a treatment' coupled with expecting to be cured, can be seen to have led to her failure to develop her skills and an accepting attitude. In turn, of course, despite good intentions, she has yet to bring mindfulness into her everyday life.

Areas highlighted for further investigation

Following the method of interviewing described earlier, subsequent interviews attempted both to validate the categories analysed from the initial interviews as well as to explore areas referred to by one or more participants but without sufficient depth or 'saturation' for their use in the analysis. These included difficulties on reaching the end of the course and what happened next; the role of Kabat-Zinn's video teaching and books; and the notion of keeping a thread [with the course] alive. Following the course, some participants' continuing use of skills and practice was related to a sense of

commitment. Participants who had completed courses more distantly than those above were felt to be ideal candidates for interviewing on these issues.

Subsequent Interviews

Four subsequent interviews were conducted along similarly open lines to the initial ones. Although the interviews followed the concerns of participants as these arose, the interviewer queried category-related issues in a neutral way so attempting to validate aspects of the theory, as well as provide more "saturation" or detail. For instance, several participants had previously mentioned their initial expectations and how these had been appropriate to the course subsequently or not. This led the interviewer to explicitly ask about participants' expectations if they did not contribute these, and to ask them to compare their expectations with subsequent experience and comment on whether or not they felt their own expectations had been appropriate. Also, the accounts of recent 'finishers' led the researcher to identify termination of the course as both a potentially difficult moment as well as a decision point for participants. 'One of the fears' of Jane was 'the end - it seemed a bit final'. She concluded that, 'I have got to face up to everything and move on'.

Up until the present point, the emphasis has been on good coverage of the categories and the use of as many participants as possible in constructing the categories. However, it was felt to be more useful to use the additional material to illustrate the categories more richly with longer excerpts and to let participants 'talk for themselves'. It is hoped that these lengthier quotations help illuminate the links between categories.

1 Pre-conditions

Robert reflected on his history thus: 'It's probably going right back to childhood I can trace periods of depression, ... I seem to remember my father

having periods like that, so it may even be genetic'. Whatever the underlying cause, Robert felt himself to be perpetually at risk from some underlying predisposition, and was relieved when one professional normalised depression as a world-wide problem' experienced by many people of all backgrounds and cultures. He equated this diathesis with his tendency to think in negative ways especially when spending periods alone. Mark also described himself as 'vulnerable by nature', and described how periods of low mood had occurred throughout his life, stating: 'I was definitely in a world of my own making, certainly I was living inside my own head'. Subsequently, this identification with his own thoughts was one of the areas he was to address through mindfulness training. This is highly similar to what Jane also described in the earlier results.

Adrian did not suggest any specific reasons for his psychotic breakdown other than in terms of the long-term stress of work. However, he did state that 'it must have been something about me that made this happen'. He had rejected the psychiatrist's biological explanation as this did not explain to him how he experienced the impact of his thoughts and feelings, and the helpful effects of discussing these with others. He alluded to the idea that he was previously unaware of his thoughts and feelings when stating how 'I needed to become more aware of what my thoughts were', and, 'progressively, I have been able to get in touch with emotions and stuff a lot easier' through psychotherapy. Although the nature of Adrian's difficulties differs from the depression and chronic fatigue of the earlier participants, it is still possible to identify pre-existing self-statements (although implicit such as those above) referring to the pre-conditions for later problems.

Carys largely understood her first depressive episode as a response to breast cancer, and her second as a response to her sister's death. Following the course, she said 'the last bout [of depression] came from nowhere really and I think I understood what we were doing in the groups now'. In trying to

clarify what had caused this depression, she became visibly upset because it reminded her of difficult periods. Although she felt unable to continue on this theme, she did agree that she had identified her negative style of thinking as the cause of this depression.

In the sample as a whole, some statements refer to 'nature'-based explanations; others refer either to learned styles of coping; and yet others to events perceived as outside the participants' control. Importantly, these explanations are not mutually exclusive in participants' accounts. Although Robert appealed to a genetic explanation of his lifelong tendency to depression, he also felt that his tendency to a negative thinking style was influential and, importantly, that he could do something about this.

2 *Change to health and well-being*

The life changes described by earlier participants were largely medical or quasi-medical (M.E.). Carys also described how her experience of breast cancer and radiotherapy in particular, brought difficulties both because of the pharmaceuticals' side-effects and because of treatment complications. However, for others, life events were largely psychosocial in nature.

Mark alluded both to a 'mid-life crisis' and to the fact that 'the marriage was like a traumatic event' as the causal conditions for what he described as his deepest bout of depression. A 'mid-life crisis' was also the term used by Robert., interestingly, these were the only male participants to suffer depression without co-morbidity. Robert described how this 'cataclysmic event' came 'out of the blue'.

The third male participant, Adrian, described how 'things went really wrong ... about ten years ago when I had to give up my job ..... mentally things had got out of hand and I hadn't been able to deal with it very well'. He then described derealisation and depersonalisation experiences together with hallucinations for which he received no treatment. Although he did

suggest some biological or inherited vulnerability, he felt that the main cause was the work stress he had suffered for several years.

Gender differences are worthy of comment in this category. Although the sole presence of females in the initial sample and three males in the subsequent sample was purely coincidental, it does appear that males tended to prefer psychosocial explanations in contrast to the mixed explanations of females given earlier.

3 *Distress and depression*

To continue Adrian's story: he described how, following the psychotic break, 'the paranoia that came afterwards was horrible and a constant level of stress and anxiety that was always with me'. He lived with paranoia, barely leaving the house for the next seven years, and described the 'infectious ... moods you get into', noting that these probably also affected his partner's mood.

Other participants described distress and depression very much in the same way as previous participants - 'I suppose fairly classic depression symptoms like sleep, appetite and sex drive and irritability' (Robert). Mark gave some detailed descriptions of the depressed state for him: 'I found that mundane things got much harder to do, and I found myself getting caught in a trance-like state. It might be doing something like washing the dishes or [pause] and finding myself switched off in a mindless state'. Both Mark and Adrian described 'thought overload', with Robert adding ' you seem to have this motor that's over-running all the time inside you'. As for the previous participants, insistent, unbidden thoughts were identified as a key part of experiencing depression.

Anti-depressant medication was also discussed in both a positive and negative light. Carys felt that her recovery was due to the effects of medication, psychotherapy and the mindfulness course acting together. Adrian stated that he 'went to see a clinical psychologist and I was offered

anti-depressants [pause] but I felt they weren't taking me seriously about the things I was talking about'. He was later offered medication again, but noted:

> 'if you want to be completely demoralised then see a psychiatrist, he said you have had a psychotic breakdown, it will probably happen again, there is nothing you can do about it, there is no point in talking about it, counselling isn't going to help you . . . we saw him about three times to get the full impression and that was it, I thought bye bye medical profession'.

Mark said they were 'not very effective' and that he would 'get symptoms like I thought I was having a heart attack, you know, anxiety symptoms', and so discontinued treatment.

4 Context of course

We saw how previous participants had located the treatment both among 'alternative therapies' and as an adjunct to psychotherapy. All the current participants, except one, had heard about the course from mental health specialists from whom they had received therapy. As an example, Adrian heard about the course through his psychotherapist and so perceived the course as a set of techniques for addressing his thoughts and feelings. However, he also placed meditation in the context of 'personal growth' about which he had read some literature. It was this reading that had guided his expectations of meditation prior to the course and have influenced his continuing use of meditation (see 'spiritual development' below). Although Carys also came to the course through her involvement with mental health services, she continued to see what she had learnt as 'more of a technique .... I've always done those relaxation things using tapes'.

The exception was Robert, who heard about the course through answering a newspaper advertisement. He said that 'I had no preconceptions about what it was. I suppose in the back of my mind I thought it might be counselling in a more one-to-one sense than it actually proved to be' - a statement which links to his expecations of the course.

5 *Course Expectations*

When Carys was asked what she expected when she first came, she said 'I don't think I expected what I got anyway [laughs], it was quite relaxed, the atmosphere, I was a bit wary of going at first . . . I didn't know what to expect, but I didn't feel uncomfortable, I thought I might have'. The other participants did not report anxiety; a fact which was somewhat surprising in the case of Adrian, given his history of paranoid symptoms. His prior knowledge of the course trainer as his psychotherapist had prepared him for the group, and he described having a familiarity in theory, though not in practice, with meditation methods.

When Robert was asked about his expectations, he replied:

> 'I suppose I thought well I've got this problem, and I want to find a solution that isn't based on medication, if at all possible, so I'll give it a go and I went along with an open mind and just thought it is worth a try basically, but I had no preconceptions about what it was'.

In summary, there was a diversity of expectations that nevertheless, led each of the participants to continue with the course and practice periodically until the present time. Interestingly, Carys suggested, as if addressing future participants, that it was most helpful to try and suspend judgement and not even look for benefits.

6 *Early negative experiences.*

In contrast to the more recent participants, none of the current participants described negative experiences of a degree sufficient for them to consider discontinuing. Mark did find that 'sometimes I would go the group feeling OK and somebody would say something that would strike a chord and I could go away feeling worse .... and as time went by I would recognise it as it was happening'. He went on to note that 'if you can feel safe in a group then

it is really helpful'. His experience of the group as a safe place allowed him to notice negative feelings without finding them too difficult to bear.

Whether early groups differed from subsequent ones is difficult to ascertain, as the sample of participants was highly selective and self-selected at that. It is probable that those most likely to continue had fewer initial aversive experiences with the group and the range of practices prescribed. Alternatively, the passage of time may have influenced the recovery of memories now not congruent with the hedonic tone associated with the outcome of the course and subsequent experiences of its practice.

7 *'Coming to terms'*

Because these participants had completed the course up to thirty months previously, fewer details were remembered and they tended to make general statements about what they had learned at the time. Speaking, in a way, for all the participants who have continued to use the monthly mindfulness group, Mark said: 'I think the thing that strikes me is that the program is bearing fruit for everybody, I don't think there is anybody who has not benefited, and it is <u>now</u> that it is showing for a lot of them'; implying a lengthy passage of time for some.

A similar theme of delayed benefit emerged from Carys, who said of the group sessions 'I quite enjoyed doing them, but I don't think I appreciated then what benefits they could [pause]'. It was later at the monthly classes that she began see the application the techniques could have, during a period of depression following the course. She said 'I think the [first] depression was more linked to specific things, but the last bout sort of came from nowhere really, and I think I understood when we were doing the groups now [monthly group], whereas the first group, I didn't understand what the teacher was saying'. It is important to note that this perceived delayed effect is not due to her lack of practice that is later remedied: Both Carys and Mark

had completed the practice using tapes and diaries. Mark stated that when he later needed skills from the course at a difficult time (see termination):

> 'the programming of the program kicked in. Its like Jon Kabat Zinn says, you weave your umbrella thing and obviously I'd woven it, not umbrella - parachute. So I guess that night I needed the parachute and it was there'.

i) Group support and identification

All participants reported positive effects from the support and understanding that the group provided. Given that participants were selected from the continuing group this is unsurprising. However, at the time of attending the course, Adrian was still suffering frequent and powerful paranoid feelings. He reported 'so this was the my first real practical thing with a group of people, doing it [meditation] - and I think this was the most important fact, that it was done with a group of people'. Mark added: 'I think the group dynamics worked quite well' and gave a description which links with his attitude to the course and with overcoming negative experiences:

> 'I think I had problems like everybody else, but if I remember correctly, somebody said whatever happens is part of it, and I took that on board, and I dare say we discussed this in the group as well, 'cos somebody would say this isn't working for me and, oh yeah, I am having that trouble, so there's a kind of interaction in the group and you work through that'.

ii) Discovery/ 'surprise'

In correspondence with the previous reports of points of discovery or understanding, most of the participants discussed aspects of the course that 'stuck in the mind'. Echoing several participants, Mark stated 'I think the obvious one that sticks in the mind is the raisin one at the beginning. ... it really makes you aware of how you can focus and how unfocused you are. So that was really useful'. When asked about any surprises or discoveries he had made, Robert stated that 'the key thing overall has been that often what goes

through your mind are just mental phenomena, they are just thoughts not necessarily truths'.

In addition to these points of understanding reached during the course, several described points of discovery either at the termination of the course or subsequently. Discussing termination, Robert said 'I think we all felt that the carpet had been pulled from under us'. Mark described his point of crisis at the end of the course thus:

> 'Its strange, that was so vivid, really incredibly difficult to describe the intensity of what I was feeling. It was as though I'd suspended all the problems I had had, anxiety and [pause] you know how your mind churns over problems, It was as if it had held them in abeyance for eight weeks, and then all of a sudden poof, I was lying in bed and I thought its OK, its OK to feel these things, and I think that was the thing about it, its OK to feel whatever you feel, they are not going to swamp the person'.

During the course, Carys 'wasn't having problems at the time': however, in the following months, several life events brought physical and emotional ill-health. It was during this time that Carys 'used the little tips that [the therapist] had given me, and I was using the tapes so I was able to keep it under control'.

Adrian was alone in reporting 'involuntary spasms, moving about, almost involuntary shaking' accompanied by 'a rushing sound in my ears like lots of blood rushing in my head' on several occasions while listening to the tapes while lying down. 'And the next time it got worse, well not worse, there became more of it, and I didn't know what was happening to me' . He later read in some literature that this is 'part of the process' and 'found out it is called tension release' though subsequently 'started to die away' and now 'hardly ever happens at all'. While understandably anxious about whether to carry on, he reported 'what really amazed me was that after the session, I could think so clearly I couldn't believe it'. Following this one-off experience he now views it 'as if a blockage has cleared and won't be there again'. His

was the only experience of this nature, and is not easy to subsume within any category as they stand. It may be that were a wider collection of participants' experiences to be garnered, experiences such as these would be described in such a way as to code them and categorise them in a way that related them to the grounded theory.

iii) Relaxation

Although the exercises are not intended *primarily* as relaxation exercises, it was noted by earlier participants that some (especially the 'body scan') had this effect. All the present participants reflected to some degree on how a relaxing or a diversionary effect could be helpful - most added that it is not their primary aim. Robert described his experiences with the body scan tape as 'perhaps too relaxing' although he noted that this is a benefit when you are depressed because of a difficulty in relaxing and falling asleep. Adrian described how he used to experience many intrusive thoughts prior to sleep, but now meditates regularly before falling asleep as this reduces their frequency and intrusiveness. He described how at first he would fall asleep while meditating; but that, after a time, this decreased and is opposite to his aim of increasing awareness of his thoughts and feelings before he sleeps. Mark may have been commenting partly on a relaxing effect when he said 'part of me was using it as a diversion to escape from what I was experiencing' - something he was later able to acknowledge and learn from as discussed above. Finally, as the interview with Carys progressed, she realised that her meditational practice has different effects depending on her posture: 'I think the lying down one, I think I take as a bit of relaxation, rather than the other one [using the stool] which Is doing meditating ..... and I think that when I am feeling a bit stressed I use the stool more, which is something I haven't noticed before'.

iv) Skills

It was more difficult for participants to reflect on the explicit content of the course after a long period and most made more general comments about the aspects they had benefited from, and the skills they continued to use. Carys said 'I use those little tips like using my breathing while I am waiting for the kettle to boil', suggesting some degree of generalisation to everyday life. When asked how she thought the breathing space worked, she said 'the only thing I can think of is that my mind sort of wanders, that I am thinking of something else without actually being conscious of thinking about that'. Carys also described a similar benefit from using the tapes: 'Because sometimes I don't sort of realise I might be thinking of something I don't realise, so when I sit down and do the tapes, I can actually work out what is worrying me, so that helps put it in perspective'.

Some of the comments of previous participants, and in particular their humour, was noted as, perhaps, introducing a "distance" from their problems. In more experienced meditators, this concept could perhaps be said to have reached the status of a skill of 'stepping back' or creating 'separation'. In Robert's words:

> 'Its almost like you are outside of yourself looking at your mind working, its just that little separation, it doesn't happen all the time, but you can just step away, and that is intriguing, its like your mind watching your mind watching your body, its one step removed'.

Similarly, Mark described how this skill helped at times of 'mind overload':

> 'Its as if there is a switch in the mind now that goes, hang on, stop, be mindful, and we will start with this bit first. Its like an automatic correction that instead of getting bogged down with the mind trying to [pause] . . .., its the ability to step back from that and hold the mind there. Just sort it out, just do one thing, I think that is the thing it does, it give focus all the time. Because it is easy to be swamped by whatever is on the mind.
> I: And that ability remains even in periods of lowness?

C: It does, yes. I don't know what it does. Its so powerful, yet it is so simple. Its as if I have got two eyes. One is the one that interacts all the time, is automatic. And there is another one that I can go into and its almost at the back here so that I am looking at myself, but its very intimate if you like, the border between it is very thin. And it is a very small eye, but a very powerful eye and it holds everything. And I can go to that point through mindfulness or meditation and hold or be with whatever happens. ... I lost my father last year so there was a lot of grief. And I was able to meditate with that grief and actually see it or feel it come up and allow it to come out, 'cos one of the problems I had was bottling things up. So I feel myself getting rather unhappy about losing my father, so I was able to sit quietly, allow it to come up and have a good cry. .... Its been a very valuable grief and a very pure one, and I now find that when I think of my father there is less a sense of loss and grief, and more a sense of honouring him'.

In this lengthy quote, the links between his former coping style, the skills and attitudes invoked by his practice of mindfulness and their application to this major loss are made poignantly clear.

Adrian's description of the benefits his meditational practice produced, gave a prominent role to thoughts in a similar way to that of previous participants.

'The thoughts that I would have would become less sticky, would leave me easier. So yes, I would have the occasional paranoid thought, which sometimes would run into a chain of thoughts - imagine .... - so a little paranoid line of thought would happen. And they did happen fairly regularly. They don't happen much now. And what I am finding is that by the time I am getting to just after the beginning of it, I am thinking, right that is a paranoid thought and its [pause] let's move on to the next thought, and I don't get dragged by it'.

v) Accepting Attitude

The distinction between skills and attitudes became a difficult one to make within the accounts of more experienced participants. Robert encapsulated both elements of skill and attitude within his description:

'It's definitely been important for me. It's like the program has integrated itself into my consciousness, my whole being in a

> sense. It's a bit like riding a bike, once you've explored and discovered this mindfulness thing, it is with you for the rest of your life. And I think you can call on it to a greater or lesser degree depending on the time, but it is there, sort of engrained'.

The sense of permanence to the change in attitude echoes that of Mark in the previous section.

Carys said very little during the interview that could be explicitly coded as related to her attitude to life as she mostly viewed the training in terms of the techniques or 'tips' it gave her. At its end, the interviewer asked:

> 'Just to come back to the course, you'd been going along with it fine but said maybe the message hadn't sunk in. Maybe now you can put into words what that message is, what you have taken on board'.
> C: 'I think it is being aware of what is happening around you; from the inside as well; sort of taking notice of actions as well; how you are feeling'.

vi) 'Warning bells'

This new sub-category refers to participants' developing awareness of personal indicators of a worsening of their mental state, and was referred to by several participants. It is an explicit aim of the training that awareness of "warning signs" is increased. Although Mary did not refer to warning signs explicitly, she gave a very relevant description of developing an ability to predict the status of her M.E. symptoms using formal mindfulness practice (see 'Bringing it into Everyday' above).

Robert reported:

> 'I've always felt the biggest challenge [to meditating] comes when you are feeling pretty low, because its at those times it is less easy to meditate. I find there's less motivation to do it, and [pause] but the need to do it is greater. When things are bad its important to do it, I think, because it reconnects you with the whole program and the whole ethos behind it, which you can easily forget if you start to go down.
> I: So how do you spot that - when you start to go down?
> P: I suppose they are personal to some extent. I think the triggers are sluggishness, disturbed sleep . ....
> I: So does that bring you back to meditating pronto or?

> P: Not pronto, at least not always. Its a prompt to do something,certainly.....whereas before I would have simply been dragged along, dragged down by it, and I would have felt more hopeless.

He has gained some understanding of his personal signs or 'triggers' and although he does not always take action, he now feels that there are some 'strategies for dealing with it, which gives you some control over what is happening to you'.

The category title itself was taken from Carys's report: 'I think I can hear warning bells so something is not quite right, I am starting to feel a bit tense or tired, one of my greatest warning signs is waking up in the middle of the night'. When this happens, Carys described making 'real efforts to do the tapes.... maybe three nights in a row'. Linked to the variance in the amount of her practice, Carys also described how 'I do tend to notice that if I haven't been doing them [tapes], my concentration does waver a bit and I find myself having sat for a couple of nights without doing anything and I get more tired doing nothing that something so it jolts me back again'. Carys actually notices her warning signs by using breathing spaces regularly and then takes action by meditating with the tapes in a sitting position.

8 Bringing it into Everyday

The distinction between formal practice and the everyday application of mindfulness also became blurred in the accounts. As time passed since the end of the course, all participants reported using the tapes infrequently, but perhaps sitting for periods of silence, or using natural pauses in the day's routine, to practice. Several mentioned breathing spaces much as previous participants had done. For several, an attitude of mindfulness had permeated everyday activities: Carys described how her everyday activity of going for a walk had changed - 'I used to walk for hours and not see things, and now I'll sort of consciously say, I'll stop in half an hour and look around, or I'll just go

to the top and stop and have a look around and see what is there, which makes it much more pleasurable as well.'

One noteworthy example of the 'everyday' application of mindfulness to a car crash when going to see his father in hospital was described by Mark:

> 'There was traffic everywhere. I sat there. I said right, I am going to do some breathing now, as I sat there, and I just had a few mindful breaths, it just came into my mind automatically, do some mindful breaths now. So I sat there and there is all this stuff, I could hear cars squealing behind and people pulling up behind and I had a few breaths and got out of the car. And my first thought was I wonder if she is OK and I very calmly got out of the car and said I am sure you are probably as shook up as I am. I just dealt with the situation quite calmly and rationally, yeah, I was shook up and everything but being with it as well. And that is a total about face, because there was a time, when I would have hit the ceiling, I would have been ranting and raving .... and afterwards I thought, it can really work, can't it?'

Further Categories

9 *'Keeping a thread alive'*

Following this phrase from Lucy, this category was enlarged upon by later participants. It refers to the sense of a continuing link to the course through meeting people or keeping meditational practice regular (Robert mentioned 'reconnecting' in the quote in the preceding section). Many followed up the course by reading books on meditation including those of John Kabat Zinn. Others described the value of the continuing group in keeping in touch with what the course meant to them. It is interesting to ask 'keeping a thread to what alive?'. In the context of therapy, one might expect either the therapist or the therapy group to have become important threads. However, neither of these aspects is necessarily present, nor are they explicitly referred to by participants. It seems to be a more abstract sense to which they refer. Were more interviews to take place, this category could usefully receive more attention.

This category refers to the investment of influence or power in the personality of Kabat Zinn (or other individuals). In the earlier interviews, Jane had described how his voice had a special status for her. 'I like listening to him, I like his voice, And its odd, because I am now reading the second book that he wrote and err [pause] Mindfulness Meditation for Everyday Living. But I read the book sort of listening to him talking as I am reading. There's certain passages, and the way he has written you can sort of hear his voice saying it ... I can hear his voice'. Subsequently, she said that seeing him on video-tape was important because although the message was the same 'it was coming from him . ... I found him quite inspiring. Its his voice, it builds confidence into you'.

The extent to which aspects of the personality of Jon Kabat Zinn (or other trainers) are important to participants was very variable. Robert also reported reading his books 'from cover to cover - it pretty much covers everything'. Subsequently, his reading has moved onto the books of Barry Long (another writer on related practices). Mark commented in a very similar way to Jane: 'I think its Jon Kabat Zinn's voice as well, listening to him, he's got a kind of voice, its difficult to describe, but he's very relaxed, being introduced to him for the first time [pause] it is inspiring, yes, and he helps too, because meditation, its kind of abstract isn't it, and he's kind of there and saying this is OK, that is OK'.

11 'Spiritual development'

This phrase was taken from Mark, but could equally apply to codes from Robert and Adrian too. In some ways linked to the previous category, several participants described how the course had led them to an interest in 'what you could call the spiritual side of living' (Robert). Mark reported that 'I've become a Buddhist now, because of this', and 'its a personal development and

a spiritual development' that had entirely grown out of his participation in the course. Adrian has developed a wider interest in meditational practices and concluded his interview:

> 'that moves on to where I am now really, mantra meditation stuff, and yeah, I do try and do that every day. But I certainly think it was useful going through the process, because my development has increased through all of this'.

Additional Results from Meditation Protocols

In the light of concerns about the method's validity, Mark reported that he was able to achieve very much the same state of mind as in his own practice despite 'talking aloud'. After the meditation, he described it as follows: 'The end product is ending up in a spot with total awareness of everything from the body outwards, whatever happens outside can be irrelevant'. His protocol bears out this description as he moved from the breath to parts of his body; then to 'an awareness picture of my whole body'. Segments in this protocol were characterised by frequent body/ proprioception codes mostly related to his breath, and subsequently his body. Although these were sometimes accompanied by codes related to thoughts, these thoughts were described by verbs including 'focusing' and 'exploring', without any affective or conative content. In this respect, his protocol substantiates his reports that he is able to 'hold or be with' whatever happens during meditation without judgement or cognitive elaboration. As if to demonstrate the superficiality of the coding system, his final segment proved almost impossible to code: 'OK, Its like I am centred in one point and I am totally aware of everything'. This verbal report can be linked with the category of spiritual development.

Both Mark and Adrian's protocols were characterised by their use of one and, on occasions, two codes for each segment. Although it is impossible to ascertain whether their current mental contents were more elaborate than that reported, this provides some evidence that experienced meditators

restrict the contents of awareness more successfully than novices. Although not following the tape as rigorously as Mark, Adrian's protocol required only single codes and was similarly characterised by its absence of affect or conation/ will codes. He simply observed his thoughts, several sounds in the room and several bodily sensations throughout the meditation. Although this appears unexceptional, the meditation took place during a period of some anxiety for Adrian: he reported that he had felt unsettled and 'not his usual self' following several days away from home - the first trip away in many years. Following the meditation he reported its effects as beneficial and said he was surprised and pleased that he had felt able to sit for the duration of the tape.

Robert's account was also characterised by an absence of feeling and will-related codes. However, the majority of segments contained 'cognition' codes related to thinking about the tape or task or the subject of meditation. For instance, he reported 'Don't usually say anything in meditation, its a rather strange thing to do' and 'I was waiting for you to do that'. Unfortunately, the talk aloud' task appeared to have disrupted the usual pattern of his meditation. Afterwards, he reported:

> 'Its because I knew you were expecting something off me, its normally more passive, more centred. Its made me realise that I would like to do more regular, slightly more sustained meditation. I really must do that. It reminds me of things I've forgotten and puts me in touch with the program which is good'.

This final quote serves to illustrate both the pitfalls of the 'talk aloud' technique as applied to meditation, and that interviewing participants frequently prompted them to renew their practice or develop new understandings of their experiences both of depression and meditation.

Revisiting the diagram

While stressing the provisional nature of this exercise, it is illuminating to try to map out the new categories and links provided by both these data and revisiting the previous data. Figure 5 illustrates how these 'discoveries' can be used to develop the previous diagram. Categories that describe development subsequent to the course stressed a sense of ongoing discovery for participants and lend a sense of unforseen (and unforseeable) possibilities for the future. Not only is the diagram provisional in this sense, but in another: it has seen no confirmation by the participants themselves. Follow-up interviews would have made this feed-back possible, but where unfortunately not feasible in this context or time-frame.

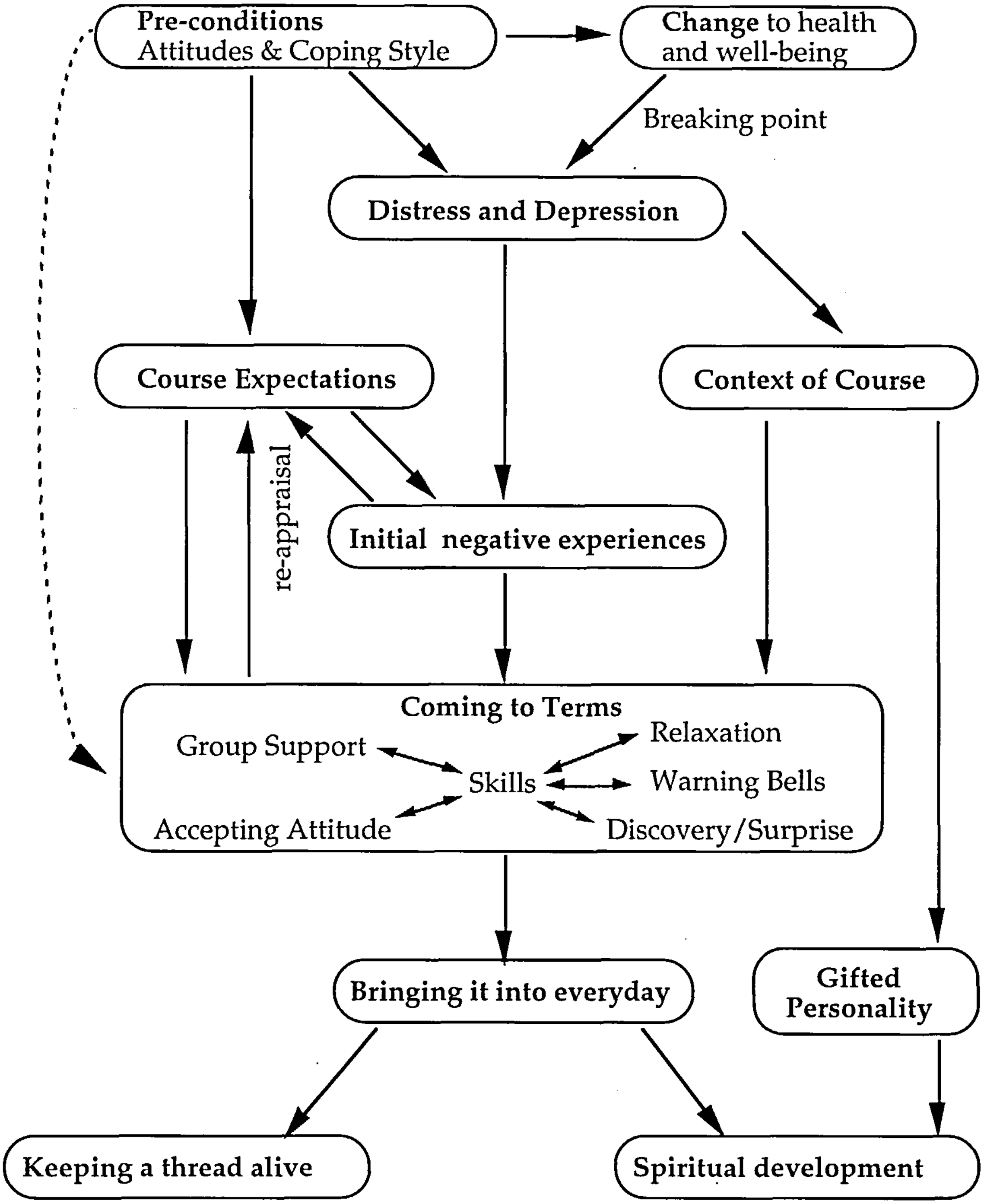

Figure 5. Diagram of the categories after subsequent interviews

DISCUSSION

The study set out both to explore participants' accounts of mindfulness meditation in the mental health context and shed light on psychological theories of mood disorder. Grounded theory was used to describe the process by which participants had come to need the help of services, how this

was situated within their lives, and the consequences of practices and understandings related to the course. Their descriptions of the course have the potential both to substantiate some of the perspectives discussed in the introduction, as well as to uncover fresh perspectives, pitfalls and processes.

One of the concerns of the researcher was to reflect on the reliability and validity of the methods used. This is a frequent and damaging criticism of much quantitative work on meditation (and, hardly less so, of psychopathology). In what ways is the grounded theory shown to be 'trustworthy' and what are its weaknesses? The study piloted use of the 'think aloud' method in this context for the first time. How reliably can protocols be coded, and can the results be said to represent participants' mental activity with any validity? Several criteria for reliability and validity discussed in the introduction are applied to the results.

Although many accounts of meditation's psychotherapeutic action are available, the introduction located the course within an information-processing framework. How supportive of cognitive explanations are participants' responses? Examples from the categories related to the course can be seen to be supportive of some of the hypotheses formed in the introduction.

Finally, and to this researcher rather unexpectedly, several points of similarity with other approaches to psychotherapy emerged. Participants described stages somewhat akin to those of psychotherapy and also a sense of connection ('thread') or relationship with this approach to meditation.

Reflexivity in the Research Process

The role played by the researcher's personal assumptions and other cultural assumptions presents potential problems for any qualitative research. This researcher is no exception both in terms of possessing assumptions about meditation, psychology and psychotherapy, as well as about scientific process

in research. While familiar with meditation, the researcher had no experience of the course and had an open, if sympathetic, stance towards it. Over time, both personal and research-related experiences have contributed to a positive outlook on its effects in this context, while retaining some skepticism about claims of its universal and unqualified success. Hopefully, this perspective has been consonant with a stance on participants' self-report that is accepting though not overly credulous. One's own psychological paradigm must be acknowledged as an influence on the process of constructing narrative from participants' accounts. Although the theories and the intervention itself, explicated in the introduction, are located within a cognitive-behavioural framework, the researcher has attempted to ground the theory in the experience of participants so as then to compare the theory with this perspective. Furthermore, other psychotherapeutic perspectives were also considered and are discussed towards the end of this section.

Finally, with regard to scientific method, the researcher attempted to give his perspective on the possible role of qualitative methods based on self-report. Clearly these influence the way in which methods were applied and the results interpreted. While not espousing an entirely supportive view of qualitative methods, the researcher has attempted to suspend judgement in adopting an open and engaged stance with the subject of study and the methods used.

Lessons from the Grounded Theory

What are the lessons from the theory that may be learned for future courses and their trainers? Obvious enough that it perhaps is easy to overlook, it is important to note the generic nature of the course and the diversity of difficulties participants brought to it. The evidence described in the introduction attested well to the wide range of difficulties for which mindfulness approaches might be indicated. Previously unreported, we

might note anecdotal evidence of benefit for two participants' symptoms of 'M.E.' or chronic fatigue syndrome, as well as those of paranoia in one case. Some categories from the theory suggest this may be so for at least two reasons. First, the skills taught are generic so may be applied to several foci of thought and feeling. Second, all the participants' accounts suggested a common pathway through distress and depression (see figures 4/5): Many strategies within the training attempt to diffuse 'vicious circles' of thinking and feeling which disrupt cognitive processes and so probably contribute to mood disorder.

It is important to note that therapeutic gains appear not to be restricted to those with fewer or less severe problems. Although psychometric data is only available for three participants, this together with self-report do not lend credibility to the idea that participants require a currently low level of depressive symptomatology. Several participants describing substantial levels of distress and recording high levels of symptoms on questionnaire measures made good progress. However, it may be that symptoms other than depression do militate against good outcome. It was only after several months of psychotherapeutic involvement that Adrian felt able to attend and his previously high levels of paranoia may have precluded this at an earlier time.

A clear message from several participants was that their initial expectations were important to later insight and practice. Those with open and flexible expectations described fewer barriers and initial negative experiences than those with rigid, and highly optimistic ones ('It will cure me'). Some participants adjusted unrealistic expectations during the early sessions, perhaps having to own, painfully at first, the fact that an externally imposed solution would not remove their distress. This process of re-appraisal was linked to their 'coming to terms' with their life situation, thoughts or feelings. Although only a single case, it is striking that the only

participant (Lucy) not to report coming to terms in any sense, retained a highly unrealistic set of expectations about mindfulness meditation. This substantiates the opinions of some mindfulness tutors (Salmon *et al.*, 1998).

The category of 'coming to terms' was at the heart of the final diagram (see figure 4) ,and contained both participants' internalisation of the course (its skills, attitude etc.), and their personal experiences related to their attendance and practice. Making a diagram helped develop the researcher's perspective on the role of skills as possessing a central role in this category. While owning this perspective, he must acknowledge that other interpretations are very possible from the data. However, without skills development, discoveries or surprises (from which the participant learns) based on meditation are logically very unlikely. Several explicitly mentioned how group support and an accepting attitude helped enable skills acquisition. Finally, its key role is suggested by the connections to the category of 'bringing it into everyday' to which these gains are linked. The use of breathing spaces, micro-moments of mindful awareness learnt in formal practice, as well as an ongoing formal meditation practice are all described by several participants. Skills are not the only element of the course generalised into everyday experience: some still reported using the tapes for relaxation, and others described how they reminded themselves of attitudes suggested by the course trainers. In the longer time-frame of the later participants, the attitude of mindfulness, rather than specific practices, could be said to have gained in relative importance as these respondants made fewer references to explicit skills. However, some did describe how it became automatic to take a moment of mindful awareness in difficult situations. At this point, a distinction between skills and attitude is perhaps redundant.

Triangulation of methods

The use of quantitative data to substantiate qualitative results was mostly unsuccessful. There was poor agreement with psychometric results overall, though the qualitative description of symptoms and of change of symptoms partly fitted with psychometric results. Psychometric attempts to validate changes in attitudes or coping style met with unequivocal failure. It is unclear why self-report at interview and by the questionnaire method should produce these disparities. There may of course, be the motivation to please the interviewer, but this hardly less applies to questionnaire responding. Alternatively, the validity of some instruments may be lacking; either in general, or when used in meditation research. The author takes the position of healthy skepticism towards both methods, and would suggest that neither can make strong "truth" claims at the present time.

Although estimation of the formal agreement between qualitative methods is not possible without quantification, 'think aloud' protocols were broadly supportive of participants' descriptions of their meditation experiences. This was most interesting at a more micro-analytic level. For instance, processes of responding to pain or other intrusion described in the interview were experienced and described in the 'think aloud' experiment.

Comments on protocol analysis

In this study, protocol analysis was piloted in a very simple form and demonstrated several methodological attributes; a) data can be collected during meditation ; b) protocols can be coded reliably according to a simple system and; c) 'think aloud' codes may validly reflect the current contents of awareness during meditation. The latter point is supported by the fact that they partially corroborate retrospective accounts of meditation. As discussed above, comparisons between the protocols of beginners and experts

suggested that mindfulness meditation is, in part, a cognitive skill that can be directly studied by this method.

Several caveats should be added to these attributes. The method requires careful preparation both in terms of instructions and 'warming up' or practice. Even under these conditions, some respondents may find the method intrusive thereby undermining its validity. Also, the coding system's reliability was improved by maximising the explicitness of codes.

Although it proved impossible to use an explicit cognitive theory to produce a coding system on a priori grounds, some evidence was gleaned in support of cognitive explanations. More experienced meditators' cognitions occurred less frequently in combination with affect and conation suggesting that attentional processes can be trained to rehearse alternatives to schematic models so altering them; or alternatively, in terms of Wells and Matthews' theory (1993), by inhibiting S-REF processing.

Reflecting on trustworthiness

In the light of comments in the introduction, how successful were attempts to ensure dependibility,transeferability and credibility? Radical qualitative researchers assert that it is for the reader to judge whether a clear, well-documented and systematic approach to collecting and analysing data has been described. However, at least some of the onus falls on the researcher to demonstrate these qualitites. This author acknowledges that estimating the dependability of qualitative research from publication or thesis is more problematic than some theorists admit. In this light the author attempted to take a clear and transparent approach to reporting method and results.

On the issue of transferability, the study attempted to use multiple data sources, although not all sources were obtained for all participants. The difficulty of triangulating results from different methods has been discussed and probably lends little to the trustworthiness of the study. The most

significant contribution probably comes from the way in which the theorist interviewed further participants after coding the initial interviews. This would perhaps have been a greater contribution if it had been possible to return to the same participants. On the other hand, using other more experienced participants enabled the theory to be developed past the point of concluding the course and increased the sample. Though qualitative researchers stress that sample size is not the key to generalising one's results, over-reliance on a very small number of participants does bring risks of false conclusions. In the current context, three of the initial participants had completed the same course and two suffered the same illness. By collecting more widely, a breadth of courses and clinical problems were included that probably help us to generalise the findings.

Credibility requires the persistent engagement of the researcher with the context under study. In the time-frame of this research (about one year) and the subsequent failure of a quantitative methodology, this could not have been improved upon. However, with hindsight, a qualitative study could have interviewed participants both before the course and at several points afterwards. This would have increased the credibility of the findings related to process and would have allowed the researcher to confirm and clarify categories formed as the theory developed.

Testing cognitive theories of mood disturbance

The introduction described several hypotheses relevent to the course from both the ICS and S-REF theories. To what extent are these supported by the results? The ICS account (Teasdale & Barnard, 1993) suggested that interventions should attempt to allow the experiencing of mild negative affect without depressive cognitions 'taking over' producing the conditions for depressive interlock. Some of the participants' statements, related to their developing skills, illustrate how they were able to experience tolerable levels

of affect while being aware for example that:- 'you know something is bothering you, you can't eradicate what's there, but you can acknowledge it so it can't take you over, it can't just happen automatically, you have a choice' (Mary).

Furthermore, there was some evidence that thoughts and attributions formerly composing depressive schematic models were synthesised into non-depressogenic ones. Mary also described how when difficult thoughts and feelings arise in meditation, 'you recognise what is in your head and acknowledge the fact ....OK I've got a problem ..... let's look at it properly .... why are you feeling scared? .... I don't analyse it in a way, but I just sort of break it up a bit, by saying I feel scared about it....it just disperses it'. This account is consistent with the breaking of one schematic model and the reconstruction of another with the fragments of implicational code without the emotional 'heat'. The theory also suggested the crucial role of body-state information in contributing to depressive interlock. One code was illuminating in this respect and only occured to the participant during the interview. Carys noticed that using a sitting position during times of stress was 'doing meditation' in contrast to lying down which was 'a bit of relaxation'. Body-state information is probably not accessed consciously, but Carys has become aware of a difference even though the meditations' instructions are precisely the same in the two positions.

The ICS account (Teasdale & Barnard, 1993) suggested that possessing a thoughts-as-thoughts perspective rather than a thoughts-as-reality perspective helps alter depressogenic schemas because it generates non-depressogenic implicational codes. Several participants reported that they often used the phrase 'thoughts aren't facts' when difficult thoughts arise, and that this and related "distancing" practices helped identify 'negative thinking' (Pam). Although it is difficult to explain what occurred at moments of 'discovery' or 'surprise' they are conceivably points at which key changes

were made to schematic models by adding or subtracting implicational codes, thus making a key difference to the maintenance of affect. Mark described how, following the course, a flood of problems threatened to overcome him - 'and I thought its OK, its OK to feel whatever you feel, they are not going to swamp the person'.

The last hypothesis from the ICS account was that by altering the behavioural and cognitive consequences of depressive mood and thought, they would be allowed to subside rather than be maintained by feedback. Just such a cognitive mechanism is implied by both Mary and Mark in the quotations above in which allowing or accepting thoughts and feelings lead to their dispersal. Before leaving the ICS account, it is worth noticing that some of the reports consonant with its predictions arise in the context of anxiety and anger, suggesting that the model may have a broader applicability than to depressive affect alone.

From Wells and Matthews' S-REF model (1994), several hypotheses were made concerning how mindfulness might have therapeutic effects. One of the most important was the promotion of meta-cognitive detachment while maintaining awareness. The utility of developing this skill was commented upon by almost all participants and appears to be a key to the process of mindfulness. In those beginning to learn meditation, this appeared to be the development of 'distance' from problems. In more experienced meditators, this skill had developed to the point of being able to consciously step back from problems and view them without affective consequences. The S-REF theory predicts that this distance is best achieved by passively 'letting go' of difficult thoughts and feelings. Wells and Matthews (1994) describe how this can be an effective way out of ruminating - something that Adrian's account of not getting dragged by chains of paranoid thoughts substantiated succinctly (see page 63).

Wells and Matthews (1996) suggest several messages that should be communicated to patients (given in introductory hypotheses). The veracity of these messages and their value might be disputed even amongst cognitive therapists. At the very least, it would seem likely to be important that they are not simply accepted by patients but verified through personal experience. Both Wells and Matthews and the mindfulness course propose that voluntary modification of thoughts and feelings is possible: Mary's description of 'having a choice', on the previous page, suggests that she at least found this to be borne out by her experience. Wells and Matthews also propose that patients be informed that faulty knowledge about the social, physical or cognitive self may be responsible for maintaining the problem. Wells and Matthews' should perhaps avoid this value judgement of participants' knowledge as 'faulty' in respect of the latter point. However, many participants did suggest ways in which they had come to understandings about themselves in relation to depression, anxiety and M.E. It is important to stress that these understandings arose out of their personal experiences of meditation, rather than a didactic approach as the course does not explicitly examine the beliefs of participants that may maintain their difficulties. One of the best examples was Mary's description of how she came to label one set of physical responses as anxiety, rather than presuming they were part of her condition of M.E., following her use of breathing spaces in public places.

Other therapeutic messages concerned the need to alter plans of action related to dysfunctional S-REF activity. Again the course does not make explicit what it is that participants 'should do'. Instead, its message is one of being able to choose more effectively between plans of action rather than responding mindlessly and automatically. Adrian's change of plan of action following a car crash was the most striking (!) example that he was able to put into practice following a short breathing space.

Because the S-REF was hypothesised to tend to keep attention on negative events, encouraging a strategy shift towards allowing the natural decay of S-REF activity is suggested as helpful. This appears to be similar to the discussion above about 'letting go'. It is unclear whether Wells and Matthews are advocating patients redirect their attention away from negative thoughts and feelings or that they allow and observe whatever arises to occur, *noticing that it also subsides*. While the course stresses this more passive approach, some of the participants' statements are indicative of active attempts to change mental contents and achieve mental and physical relaxation.

Self-focus is a central concern of the S-REF model and predicted to maintain the syndrome. Mindfulness might be expected to act to increase self-focus and this may have contributed to some participants' reports of negative early experiences with meditation. Jane's reports of thinking 'I am only doing this because I am depressed' and 'my thoughts are not working right' are prime examples of the way negative self-focus can produce difficult experiences at least at first. This was not a universal report as Mark described how the course had held his problems 'in abeyance for eight weeks', during which time he felt that the course and its homework had served to distract him from thinking about his problems. It is unclear then whether mindfulness practice serves to decrease self-focus.

Automatisation was discussed in the introduction as a process that might contribute to the maintenance of mood disorders. It is unclear from participants' accounts whether they felt their thoughts, feelings and actions to be processed in a particularly automatic manner. They did report that mindfulness helped them become more aware of these, which may indicate a change from an automatic to a controlled mode of information-processing.

Other implications for cognitive theories

Much of the foregoing discussion has implied that depressogenic schemas are neutralised by some of the strategies and skills learnt through mindfulness training. However, a competing account of cognitive treatment mechanisms suggests that the acquisition of compensatory skills may be as important as schema-related change (Hollon *et al.* 1988; Barber and De Rubeis, 1989). Hollon *et al.* (1988, p. 238) suggest that "compensatory skills might involve behavioural or cognitive self-management skills that do not affect basic inference generation but which do modify its consequences". Barber and Rubeis (1989) have suggested that post-CT patients are still likely to make depressogenic appraisals, but that they then modify these in the light of more benign appraisals using cognitive therapeutic skills like thought-answering. Some of the reports of participants can be seen as evidence of compensatory skills. However, as we have seen, these form a small part of the participants' accounts of how therapeutic gains were accomplished.

Teasdale *et al*'s (unpublished) quantitative outcome study suggested that participants with a history of several depressive episodes were more likely to benefit, because of the therapy's impact on their depressogenic schemas. Carys' statement that 'the last bout [of depression] came from nowhere really and I think I understood what we were doing in the groups now' can be understood in this light.

Mindfulness meditation and other psychotherapeutic orientations

In many respects, the grounded theory that emerged is similar to that which would arise from a variety of psychotherapeutic interventions. Psychological distress is brought into the therapeutic context, new skills and perspectives enable a process of change which, in successful cases, produce improvements as these are generalised beyond the therapy setting. In many contexts, the process of change could be described within a number of therapeutic

orientations. However, although the introduction couched this course within a cognitive behavioural framework - one that was explicit in its development - it is not the only framework that has been applied to meditation. Delmonte (1978) discusses how mindfulness meditation might be described within personal construct theory. He suggests that there is 'a suspension of habitual cognitive construing' (p.49) leading to "recourse to preverbal construing with the consequent liberation of more vegetative and somatic constructs .... emotions such as fear, anger, anxiety, sexual arousal, or 'no thought, if the preverbal material has been worked through" (p. 50). While some did report these emotions, it is unclear whether this was in the manner of 'preverbal construing'. Adrian's experiences of 'involuntary shaking' and 'tension release' were understood by him to be something like 'the working through of preverbal material'.

Perhaps the most common formal psychological perspectives to have been applied to meditation have come from psychodynamic therapists (Jung, 1958; Kutz *et al.*, 1985). Jung (1958) incorporated meditative concepts into therapy claiming it "a royal road to the unconscious" (p.508), and subsequent therapists have often restated the idea that meditation can facilitate uncovering processes. One of the few attempts to substantiate this claim (Kutz *et al.*, 1985) used a ten week meditation program with twenty patients already undergoing lengthy dynamic psychotherapy. Both analysands and therapists reported reduced anxiety and depression. Therapists reported developments in insight for patients - somewhat surprisingly, the patients themselves were not asked to comment. We have seen many instances of insight in the present study from participants themselves. Whether this development should be seen as supportive of a psychodynamic view is a moot point: Commenting on Kutz *et al.* (1985), Kokoszka (1986) criticised their attempt to make psychotherapeutic concepts absolute. The psychodynamic

interpreter's privileged position concerning insights into his or her patients have been criticised on numerous occasions and do not need rehearsing here.

MBCT and Process Issues

It was noted earlier that the grounded theory of MBCT suggested that participants' experiences mirrored process issues common to many individual psychotherapies. In a summary of the literature, Walbourn (1996) concentrated on the four broad variables of therapeutic relationship, cognitive insight, emotional experience and client expectations. How are these relevant to MBCT? Received wisdom regarding the therapeutic relationship is that empathy, warmth and genuineness are necessary but not sufficient for client change. However, studies are variable in their findings with respect to Roger's conditions (Rogers, 1957). While they are related in some way to client change, "their potency and generalisability are not as great as some thought" (Mitchell *et al.*, 1977, p. 483). While several comments of the participants supported the view that a supportive environment made a contribution, very few comments about therapist qualities were forthcoming suggesting that this was not the primary vehicle of change. Observations from the multi-centre outcome research on MBCT (Williams, personal communication) suggest that therapeutic outcome may not be dependent on 'Rogerian' qualities in the therapist. It may be that a firm (but fair) taskmaster is the therapeutic style best suited to meditation training. A position that some Zen masters have taken much further than others.

In contrast, many of the statements of participants concerning their expectations of MBCT and their modification after initial experiences are firmly in keeping with studies of the role of client expectations in psychotherapy. Summarising the literature, Walbourn (1996) states that "clients who are motivated and have realistic expectations .... are more likely to benefit from therapy than are clients who are referred under duress and

those who have misconceptions about the process" (p.140). He adds that socialising clients to therapy is important to reducing dropout and fostering participation. Some of the participants' statements clearly referred to a process of socialisation to therapy.

Cognitive insight (or interpretation) has been felt by many therapists to be the key condition for therapeutic change. The crucial point to make about MBCT in this regard is that few techniques such as interpretation, confrontation or reframing are employed. It is startling then, that participants made frequent reference to new understandings about their conditions and claimed considerable therapeutic benefits from these insights. We have already seen how cognitive accounts of mindfulness suggest how the process of cognitive change may be possible.

The role of emotional expression or 'catharsis' in therapy has a long history and a role in many schools of psychotherapy. In the same way as for insight, MBCT does not use any explicit techniques to promote emotional expression although the injunctions about recognising feelings and 'letting go' could be seen as rather passive ways of addressing repressed feelings. Some participants did report becoming more aware of their feelings and the influence these had over their behaviour. However, these descriptions might be better described as cognitive insights related to feelings rather than instances of catharsis per se. Mark's description of his experience at the end of the course (see termination) could be seen as catharsis, but what was important to him was that he had felt potentially overwhelming feelings but within the meditative context, which allowed him to experience them as bearable. It is in this way that MBCT may have beneficial effects on affect.

Reflections on the research process and limitations of the study

From a previously skeptical and inexperienced position, this researcher came to have a better working knowledge of qualitative techniques, particularly

grounded theory and protocol analysis. In the opinion of the researcher, the use of formal methodological procedures lend a credibility to their research findings that he had not previously appreciated. Statistical reliability checks and the formality of coding in protocol analysis lend particular credibility to the talk aloud methodology.

The quantity of discussion afforded to reliability and validity of grounded theory indicates the degree of personal difficulty felt by the researcher with respect of this methodology. Open reporting and clear indications of how 'trustworthiness' can be assessed go some way to allaying these concerns. However, *in the absence of other methods*, doubts must remain as to the verifiability of qualitative techniques that afford a researcher such great, and arguably unasailable, 'discretionary powers'.

It is the possible abuse, albeit inadvertant, of the researcher's position that is the greatest criticism of this study. It is hard to refute the argument that a different researcher would have arrived at an entirely different theory on the basis of similar interviews.

Some comment is due on the sample recruited to the study as this biased it (intentionally) towards those with successful outcomes. Moreover, the more experienced participants were likely to also be the most successful. This method was chosen because the intent was to study the process by which success with mindfulness meditation could be achieved. It would have been equally valid, and clinically useful, to have recruited across the full range of therapeutic success, including those who dropped out.

The lack of concordance between qualitative and quantitative data was notable - if only for three individuals. The lack of quantitative data on other participants is regretable as this disparity cannot be examined in any depth. Had this disparity been appreciated during the interview period, it would have perhaps been possible to address this disparity with the individuals concerned. This may have shed light on how participants translate their own

experiences into questionnaire responses. In addition, review of the questionnaires during interview may have uncovered material that did not emerge because of response sets such as wishing to present positive self-attributes. This possibility should not be overstated, however, as all participants described difficult and painful personal experiences with openness, sincerity and, for some, deep emotion.

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Appendices

Appendix 1

RESEARCH ETHICS COMMITTEE (WEST)

APPLICATION FORM FOR ETHICAL APPROVAL

All questions must be answered **Answers should be Typewritten**	**15 Copies of All Documents must be enclosed**

Please retain the order and form of all questions if a word processor is used. Copies of Questionnaires/Interview Schedule should be attached.

1 TITLE OF PROJECT
The effects of mindfulness training practice on mood and depression.

2 Name of Researcher(s):	Oliver Mason
Appointment - NHS/University:	NHS
Address for Correspondence:	NWCPC, School of Psychology 43 College Road Bangor, Gwynedd
Telephone Number:	

3 OBJECTIVES OF THE STUDY

To identify process factors both within and between participants that predict improvements in mental health during mindfulness training.

ANY QUESTIONS RELATING TO THE CONDUCT OF THE FINDINGS OF THE COMMITTEE SHOULD BE ADDRESSED TO THE CHAIRMAN, DR. D.R.PRICHARD, CONSULTANT PHYSICIAN, GWYNEDD HOSPITALS NHS TRUST, YSBYTY GWYNEDD, BANGOR LL57 2PW. TEL. 01248 384341

4 Outline of Study Design

A single group of participants will complete questionniare measures both before and after the intervention allowing within subject comparisons. Furthermore, the participants will complete daily records of homework completion and mood so enabling the examination of homework completion on subsequent mood using time-series analysis. Finally, the participants will complete a semi-structured interview designed to identify those for whom the training has proved effective in teaching its core skills, as well as feedback regarding those skills which are regularly used and/ or judged effective.

5 Scientific Background to Study (give a brief account of relevant research in this area with references)

Please submit a full protocol in addition to the application form.

Mindfulness or attentional control training has been developed as a stress reduction package for patients with chronic physical and mental health difficulties (Kabat-Zinn 1990). There is evidence of its effectiveness in improving symptom ratings from chronic pain sufferers (Kabat-Zinn et al. 1985) as well as patients with anxiety (Kabat-Zinn et al. 1992). Recent results from research in Bangor suggest its efficacy in reducing the relapse rates of depression-prone individuals compared to treatment-as-usual. This has lead to its clinical use in patients suffering symptoms of depression in addition to those of other physical and mental disorders. The non-specific approach of the training makes its effectiveness likely to generalise to a wide-range of disorders within which management of one's thoughts and feelings serve to ameliorate (or exacerbate) severity and chronicity. However, it is unclear how and for whom the training is able to produce benefits. Several factors are suggested by both theories of mood/cognition applied to mindfulness (eg. Teasdale et al. 1995) and clinical observation. These include:

(1) The experiential basis of the training as well as the observation of therapists suggest that self-directed practice or homework is essential to progress.

(2) One mechanism suggested by the differential activation hypothesis (Teasdale) is that reductions in symptomatology follow an individual developing an ability to respond more effectively to the initial depressive thoughts and feelings.

(3) The training aims to increase non-judgemental self-awareness so diverting patients from a maladaptive orientation towards the goal of symptom reduction towards one of noticing thoughts, physical and emotional feelings so as to manage them better. There has been no attempt to date to validate whether the training achieves this objective and whether this is a significant factor in improving outcome at the end of training.

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Teasdale, J., Segal, Z. and Williams, J.M.G. (1995) How does cognitive therapy prevent depressive relapse and why should attentional control (mindfulness) training help? *Benavioural Research and Therapy, 33,* 25-39.

6 PREVIOUS RESEARCH EXPERIENCE (to include Curriculum Vitae)

1991-92 Research Assistant, University of Nottingham, Perception and cognitive psychology.

1994-97 PhD. , University of Oxford, Individual differences, neurocognition and psychophysiology of psychoses and related disorders.

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7. COURSE BEING UNDERTAKEN AND EDUCATIONAL INSTITUTION (if applicable)

Doctorate in Clinical Psychology, University of Wales, Bangor.

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8 ACADEMIC SUPERVISOR (if relevant)

Dr. Isabel Hargreaves
NWCPC
School of Psychology
43 College Road
Bangor
Gwynedd

---

9 CLINICAL SUPERVISOR (if relevant)

Name **Contract Address**

As above

Tel.....

---

10 STEERING/ADVISORY GROUP ARRANGEMENTS

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11 SAMPLE

a)

Please provide a detailed description of the study sample covering selection, number, age, stability viability if appropriate, inclusion and exclusion criteria.

Bangor's Adult Mental Health Team, 26 College Road, regularly runs mindfulness training for individuals' deemed suitable for this intervention. These include individuals with affective and anxiety disorders as well as physical health symptoms such as chronic pain or debilitating illness (with a consequent deterioration in mental health). *The group used in the present study would be that already recruited by the AMHT for this intervention.* The group has a maximum size of around twenty. The age range is from 18 to 65, and excludes individuals with known organic brain damage, dementia, and current substance abuse including alcohol. No additional criteria are to be applied for inclusion in the study beyond those that have already been deemed suitable by the team.

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b)

How are subjects selected?

All participants have already been deemed suitable for the intervention as above, and so are to be included by consent in this study. Participants are to be given full information about the study as well as a chance to ask any questions before giving consent. Individuals who do not wish to take part in the study will in no way have their participation in the intervention group affected.

---

c) What is the likely harm/benefit for the subjects?

There is no harm likely to result from participation in the study.

---

d) **Do you anticipate using patients/clients, students or colleagues as controls?** **YES/<u>NO</u>**
If YES, please give details.

The participants act as their own controls in the case of within-subject comparisons and can be compared to each other in the case of between-subject comparisons. There are therefore no control partipants.

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e) **Please give details of any pilot/exploratory study you intend to conduct:**

Pilot studies using questionnaires of this sort have already been conducted with groups that have undertaken this type of intervention.

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f) **To your knowledge, are the subjects in this study involved in any other research investigation at the present time? If so, please give details.**

No

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g) **If payments or rewards are to be made to subjects, give amount and details and indicate to which subjects payments apply.**

None

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12 DISCLOSURE OF PAYMENT/REWARD TO INVESTIGATORS

i Is any payment being made, to investigator or department/unit, in respect of this project? YES/<u>NO</u>

If NO.....go to question 13

If YES.....go to question 12.ii

ii Is the payment?

a) a block grant? YES/NO

b) based on the number of subjects recruited? YES/NO

If there is a <u>block grant</u> is the payment made in order to?
If YES state sum

a) pay a salary (-ies) YES/NO £.....

b) fund equipment YES/NO £.....

c) fund technical/laboratory YES/NO £.....

d) reward time/effort involved YES/NO £.....

e) other reason: (state nature)? YES/NO

..... £.....

If payment is based on <u>number of subjects recruited</u>
(per capita/payment, state total sum payable for each subject completing the study £.....

State number of subjects agreed .....

iii Are the subjects informed, as part of the consent procedure?

a) the name of the sponsor? YES/NO

b) that the investigator/department will be receiving payment YES/NO

iv Does the investigator(s) have any personal involvement (e.g. financial, share-holding etc) in the sponsoring company?

13 INFORMED CONSENT

a) How will written consent be obtained? Written/Verbal

A combined information sheet and consent form is essential and a copy should be attached. (A duplicate copy MUST be available for the subject).

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b) In exceptional circumstances, if verbal consent only is to be obtained, state why.

i How will this be recorded?

ii How will it be witnessed?

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c) How will subjects be invited to participate?

All attenders recruited to the group will be asked if they wish to participate in writing, with a full explanation that consent or subsequent withdrawal does not affect treatment.

---

d) When the research has been explained to subjects,how much time will be allowed for them to consider and consult relatives and others before giving consent?

At least two weeks

---

e) Is the ability to withdraw at any time without detrimental effect to subsequent treatment and care indicated?

Yes

---

14 CONFIDENTIALITY AND ANONYMITY

a) How are confidentiality and anonymity to be ensured?

All data to be anonymised and stored without personal identification. This will be achieved by anonymous codes for all written and computer-stored data. The code information is to be kept separately from all data.

---

b) Are you aware that you need to comply with the Data Protection Act?

YES

---

c) If audio/video taped recordings are made, what is going to happen to them when the research is complete?

N/A

---

d) If relevant, how will consent for access to patients' records be obtained?

N/A

---

e) How is the research instrument to be administered and by whom?

Both postally and in person by the named researcher.

---

f) How is the research instrument to be collected and by whom?

Both postally and in person by the named researcher.

---

15 ACCESS/CONSENT OF OTHERS CLINICALLY INVOLVED

a) Has access been agreed? YES/NO
If YES, where, when and by whom?

Sarah Houghton, occupational therapist,
Adult Mental Health Team, 26 College Road, Bangor.
Dr. Tony Francis, Consultant Psychiatrist,
Ysbyty Gwynedd, and Adult Mental Health Team, Bangor.

---

b) Will the consent of clinical colleagues be obtained? YES/NO
If YES, which?

Sarah Houghton, occupational therapist,
Adult Mental Health Team, 26 College Road, Bangor.
Dr. Tony Francis, Consultant Psychiatrist,
Ysbyty Gwynedd, and Adult Mental Health Team, Bangor.

---

c) Is observation to be used as a method?
Please describe how?
Has consent been obtained and from whom?

NO

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16 STATISTICAL ADVICE

If appropriate, have you had statistical advice in preparing the protocol/questionnnaire? If so, from whom?

Professor Mark Williams, Director,
Institute of Medical and Social Care Research,
University of Wales.

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17 MULTI-CENTRE STUDIES

If this is a multi-centre study, have other Ethics Committees been approached?

N/A

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18 RAISED EXPECTATIONS

Have you considered the possibility that you may be raising expectations or focusing attention of fears, worries, sensitive areas, providing new knowledge or be in conflict with other advice?

Please describe what steps are being taken to meet any needs that may arise and describe any arrangements for post interview/questionnaire counselling/contact.

The study involves no additional intervention to that made by the training supplied by the Adult Mental Health Team.

The training has follow-up for participants available at monthly intervals for an indefinite period. This, together with the possibility of contact with the Team is able to meet any needs that may arise.

---

19 What problems may hinder successful completion of the study?

Too few participants due to poor group attendance and/or drop-out.

Consent Form

Title: The Effects of Mindfulness Training on Mood and Depression.

Investigator: Dr. Oliver Mason, Trainee Clinical Psychologist.

The purpose of this research is to see how helpful mindfulness training is and to see which parts of the training are most helpful. This research forms part of an ongoing research interest into mindfulness training at the University of Wales. Mindfulness refers to our awareness of what we are doing, thinking and feeling right now. All of the participants in your group have been asked to take part in this research.

You will be asked to complete one set of questionnaires at the start and end of the training. These take about forty minutes to complete. In addition, you will receive a diary to record thoughts, feelings and moods as they occur on a daily basis. Whether or not you continue with the training to its conclusion, you will be asked to take part in an interview to discuss those parts of the training that have been most (and least) helpful.

There is no payment for taking part in this study but your transport costs for any interviews will be refunded.

There is no known risk with the treatment you will receive. You are free to discuss your results during the interview and, by arrangement, at any other time. I can be contacted at North Wales Clinical Psychology Course, 43 College Road, Bangor (tel. 01248 382205). All the information collected by this research is completely confidential. Any information kept by the investigator is completely anonymised by a code known only to the investigator. Once the study is completed this information will be destroyed. Any published material will not lead to anyone identifying the participants.

Participation in this research is <u>completely voluntary</u> .
Refusal to take part or withdrawal at any stage does not affect your participation in the mindfulness training or subsequent care in any way.

Complaints

In the case of any complaints concerning the conduct of research please contact the Chief Executive, Mr. John Mullen, Gwynedd Community Health Trust, Bryn y Neuadd Hospital, Llanfairfechan, Gwynedd LL33 OHH and Professor C.F. Lowe, Head of School, School of Psychology, University of Wales, Bangor, Gwynedd LL57 2DG.

I agree to participate in this study. I have been given a copy of this form and have had a chance to read it.

Signed: Date:

c.c. Oliver Mason, Clinical Trainee

August 19, 1998

Dr. Isabel Hargreaves
North Wales Clinical Psychology Course
University of Wales
Bangor
Gwynedd LL57 2DG

Dear Colleague

The effects of mindfullness training practice on mood and depression

Your research proposal (referred to above and on the attached sheet) has been reviewed by the School of Psychology Research Ethics Committee and they are satisfied that the research proposed accords with the relevant ethical guidelines. If you wish to make any substantial modifications to the research project please inform the committee in writing before proceeding. Please also inform the committee as soon as possible if research participants experience any unanticipated harm as a result of participating in your research.

You should now forward the proposal to the Research Ethics Committee of Gwynedd Hospitals NHS Trust Research Ethics Committee West. They expect one of the investigators to make an oral presentation in support of the proposal at their meeting. You will be contacted by their committee with details as to the date and place of the meeting at which your proposal will be considered.

You may not proceed with the research project until you are notified of the approval of the GHA ethics committee.

Yours sincerely

Kath Chitty
Coordinator - School of Psychology Research Ethics Committee

RESEARCH ETHICS COMMITTEE (WEST)

PWYLLGOR MOESEG YMCHWIL (GORLLEWINOL)
AWDURDOD IECHYD GOGLEDD CYMRU

Ffôn/Tel : (01248) 384877 (direct line)

Ffacs/Fax : (01248) 370629

Room 1/178
Ysbyty Gwynedd
Bangor
Gwynedd LL57 2PW

Certificate of Confirmation of Ethics Approval

Name of Lead Researcher : Dr O Mason

Date of Ethics Review : 16.7.98

Title of Study : The effects of mindfulness training on mood and depression

I confirm that all requirements have now been received for the study mentioned above. The research therefore has this Committee's full ethics approval.

If, during the course of the study, there are protocol changes, serious adverse events, or major subject recruitment problems, you are required to notify the Committee as soon as possible .

It is also requested that you provide an annual interim report on the conduct and progress of the study, plus a final report within three months of completion .

The Committee wishes you every success with your research.

Signed : .....Liz James.....

Dr.D.R.Prichard , Chairman .

Date : 6.8.98

c.c. Dr. Isabel Hargreaves

5 January 1998

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Dear Dr. Mason

The effects of mindfulness training practice on mood and depression

Further to your letter of December 9 proposing changes in the protocol for the above-named project, I confirm that these changes have been considered on behalf of the School's Research Ethics and approval given.

Our reviewer suggests that in submitting to Gwynedd Research Ethics Committee (West) you may wish to consider giving an estimate of the sample size you are anticipating.

Yours sincerely

Kath Chitty

Kath Chitty
Coordinator - School of Psychology Research Ethics Committee

Athro a Phennaeth yr Ysgol

NORTH WALES HEALTH AUTHORITY
RESEARCH ETHICS COMMITTEE (WEST)

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22nd January 1999

Dr O Mason
NWCPC
26 College Road
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Dear Dr Mason

Re : The effects of Mindfulness Training on mood and depression

Thank you for your correspondence of 14 January 1999.

The Committee is pleased to approve the proposed addition as described.

Yours sincerely

pp Dr DR Prichard
Chairman, Ethics Committee (west)

Appendix 4

Instructions for warm-up task: Improving technical devices*

The instruction for the task read as follows:

This task consists of inventing improvements for household items. I shall give you the name of a household item and your task is to invent five improvements of this device. Say out loud what you are thinking as you do the task.

The devices used were the washing machine, telephone and iron.

The participant is prompted to report thoughts if these are not forthcoming. The task is repeated with a second device for all participants.

* Following Someren et al. 1994.

Appendix 5. Tape Protocol used in think aloud procedure

Bells

Coming to this period of sitting meditation practice with the firm intention to bring mindfulness and discernment to each moment. Sitting in a posture which for you in this moment embodies feelings of dignity and self-reliance and wakefulness and stability and when you are ready bringing your attention to settle on the breath. Feel it flowing in and out of your body, focusing on feeling your belly, as it expands gently on the inbreath and recedes gently on the outbreath. Or on the feeling of the air flowing past your nostrils, or on being in touch with your breathing wherever you find it most vivid. And just keeping your attention on the breath for the full duration of each inbreath and the full duration of each outbreath. Riding the waves of your own breathing as a raft would ride up and down on the waves of the seashore. Fully in touch with the sensations at the belly or at the nostrils or wherever else you are following it. Breath by breath moment by moment. Allowing the breath to remind you over and over again to be fully present, to be right here right now

---------- 60 seconds* ----------

If at any time you find that you attention has waned or has wandered off the breath entirely, noting where you mind has gone and what it is preoccupied with once you come to notice it, and then gently, and without condemning yourself for it, and without even clinging to the contents of your thoughts or feelings or rejecting or suppressing it just letting go and bringing your attention back to the breath and doing this over and over again each time the mind loses it focus momentarily and moves away from the breath.

---------- 30 seconds ----------

Staying fully in touch just this breath going in just this breath going out . Using your breath as an anchor to keep your breath right here in the present moment

---------- 120 seconds ----------

And if you feel comfortable with it, at a certain point expanding your field of awareness around the breath until it includes a sense of the body as a whole sitting here breathing. Opening to the full spectrum of feelings associated with your body as you sit here. Awareness filling the body. Allowing whatever sensations arise to be held in awareness moment by moment watching them come and go without reacting them. As best you can just observing the play of any and all perceptions, sensations, thoughts and feelings along with your breath as you sit here fully in touch with this moment.

---------- 60 seconds ----------

And here too continually bringing your focus back to the body as a whole sitting and breathing each time it fades or is carried off by the stream of thoughts or feelings or sensations that runs through the mind.

---------- 240 seconds ----------

Perhaps reminding yourself from time to time that you are not trying to get anywhere or feel anything special not even relaxation. You are simply allowing yourself to be where you already are and to feel whatever is here to be felt in this moment. Observing and accepting whatever is here simply because it is already here, part of your experience in this moment regardless of whether it is pleasant, unpleasant or neutral.

---------- 60 seconds ----------

Giving full care and attention to each moment . A continual seeing and letting be, seeing and letting go.

---------- 240 seconds ----------

And in the last few moments of the sitting re-committing yourself to being fully awake and focused, fully in your body; sitting with the majesty , the beauty, the stability of a mountain. And also perhaps committing yourself to bringing mindfulness to the various situations and activities you will encounter today so that you can respond consciously rather than automatically to the various events and occurrences in your life and perhaps find a way to live all your moments with greater harmony and effectiveness including those in which you are faced with obstacles and challenges.

---------- 30 seconds ----------

And as the tapes comes to an end you might also want to congratulate yourself for the discipline and the effort it takes to practice in this way and for the commitment to devote some time each day to nourishing your own being through non-doing and wakeful stillness.

---------- 15 seconds ----------

Bells

* timings are approximate

Appendix 6. Definitions from Grounded Theory

(source: Strauss and Corbin, 1990)

Phenomena: The central idea, event, happening, incident about which a set of actions or interactions are directed at managing, handling or to which the set of actions is related.

Concepts: Conceptual labels placed on discrete happenings, events, and other instances of phenomena.

Open Coding: The process of breaking down, examining, comparing, conceptualising and categorising data.

Category: A classification of concepts. This classification is discovered when concepts are compared one against another and appear to pertain to a similar phenemenon.

Core Category: The central phenomenon around which all the other categories are integrated.

Axial Coding: A set of procedures whereby data are put back together in new ways after open coding, by making connections between categories. This is done using a coding paradigm involving conditions, context, actio/ interactional strategies and consequences.

Selective Coding: The process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development.

Process: The linking of action/interactional sequences.

Memos: Written records of analysis related to the formulation of theory

Diagrams: Visual representations of relationships between concepts.

Code Notes: Memos containing the actual products of the three types of coding, such as, conceptual labels, paradigm features, and indications of process.

Appendix 7. Summary of Psychometric Results

Scale	Norms	Pt. 1		Pt.2		Pt.3	
	mean (sd.)	Pre	Post	Pre	Post	Pre	Post
Symptom Ratings							
BDI - depression[1]	23 (10)	21	25	38	26	17	10
SCL- 90[2]							
Somatization	13 (10)	30	31	17	11	6	4
Obsess. - Compulsive	15 (9)	36	39	31	20	16	9
Interpers. Sensitivity	13 (8)	9	11	18	5	7	4
Depression	25 (12)	31	32	44	29	16	11
Anxiety	16 (8)	20	18	15	6	16	6
Hostility	7 (6)	3	10	13	6	4	4
Phobic Anxiety	6 (6)	3	6	1	3	1	1
Paranoid Ideation	7 (6)	7	1	8	2	3	1
Psychoticism	10 (7)	6	13	16	7	5	2
Global Severity Index	1.36 (0.69)	na.	na.	2.02	1.14	0.82	0.49
Attitudes (DAS)[3]							
Dysfunctional attitudes	143 (31)	96	132	198	160	143	137
Coping Style							
CSQ[4] - Rational	25 (9)	19	24	19	15	9	11
CSQ[4] - Emotion-focused	19 (8)	13	21	32	25	24	25
CSQ - Detachment	17 (9)	12	14	10	12	6	6
CSQ - Avoidant	16 (6)	10	17	22	26	16	15
RTD - Rumination	na.	56	53	65	53	47	39
RTD - Distraction	na.	43	31	19	20	17	10

[1] norms from mixed psychiatric out-patient sample (Beck and Steer 1987)

[2] scores from the symptom checklist are reported in raw form and not converted into standardised scores; norms from female psychiatric out-patient samples.

[3] norms for group with major depression during episode. Mean dropped to 113 in remission (Silverman et al. 1984).

[4] from normative population sample

na. not available.