

The Measurement and Acquisition of Skills in Behaviour Change Counselling

Claire Alice Lane

Doctor of Philosophy
Viva passed 14th December 2005
Corrections approved 12th January 2006

coleg meddygaeth
wales cymru
college of medicine



UMI Number: U201852

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI U201852

Published by ProQuest LLC 2013. Copyright in the Dissertation held by the Author.
Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against
unauthorized copying under Title 17, United States Code.



ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed  (Candidate)

Date 23-9-05

STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated.

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

Signed  (Candidate)

Date 23-9-05

STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for photocopying and inter-library loan, and for the title and summary to be made available to outside organisations.

Signed  (Candidate)

Date 23-9-05

Dedication

I would like to dedicate this thesis to my late grandmother Iris Ellen Sheppard. Thank you for your love and for the good times. I hope you are looking down and you can see what I have achieved.

Acknowledgments

Firstly, I would like to acknowledge the support of my supervisor Professor Stephen Rollnick, for his guidance when writing drafts of this thesis. Thank you for enabling me to develop from novice to researcher, and thank you for your friendship during this period.

I would also like to thank all members of the Department of General Practice for their assistance undertaking this work – especially Dr Kerry Hood, who has shown me that it is in fact possible to say ‘stats’ and smile simultaneously. A very special thank-you to Joanne Sloan and Anne Cable for the administration and practical support during the workshops – I greatly appreciate how our teamwork kept everything running smoothly, and I want express my appreciation to you both for ‘carrying’ me through the second workshop when my health was far from good! Thank you also to Dr Gary Rose for coming all the way from the US to assist Steve in the delivery of those workshops.

Thanks also to Michelle Huws-Thomas (nee Boycott) for her initial work towards the development of BECCI, which gave me a springboard from which to work. Thank you to Karen Edwards, Janette Moran and Tom Fowler for giving up their time to be raters in the development of BECCI. I would also like to express my gratitude to Tom Barth, Chris Butler, David Rosengren and Gary Rose for assisting with the content validity stage of BECCI.

I would also like to acknowledge the support and friendship of Susan O’Connell during the writing of this thesis. Your being there has made a huge difference.

Finally, I would like to thank my husband, Dr Graham Feeney, for the advice while writing up, for reading drafts of chapters, and for being there to give me a hug (and far too much chocolate!!!) when I really needed it. I know he didn’t acknowledge me in his thesis, but like the Murphy’s, as they say, *I’m not bitter*.

Summary

Although mortality from diseases such as coronary heart disease, chronic obstructive pulmonary disease, cancer, liver disease and type-two diabetes is decreasing, morbidity and *premature* death is increasing. These conditions are related to a number of risk factors, including health behaviours (smoking, diet, lack of physical activity and alcohol consumption).

In an attempt to modify patients' lifestyles, the delivery of a number of complex psychosocial interventions has been attempted by healthcare practitioners in clinical practice. However, in many cases interventions are not adequately described, and there has been very little information regarding how practitioners were trained, and indeed how well they were able to deliver the intervention. This makes evaluation of the efficacy and effectiveness of these interventions difficult. There is a lack of studies that evaluate which training methods lead to the best levels of skill acquisition.

One intervention that has shown promise in helping patients to make changes to their lifestyles is *behaviour change counselling* (BCC), an adaptation of *motivational interviewing*. As with other complex interventions, the evaluation of skill competence and training methods has been generally poor.

The studies in this thesis aim to tackle the issues of measuring skill acquisition in BCC. An instrument – the Behaviour Change Counselling Index (BECCI) – was developed to measure practitioner skill competence in delivering BCC. The Experiential Practice Experiment was conducted to discover whether the use of simulated patients, rather than role-play with fellow trainees lead to enhanced skill acquisition in BCC. Participants also provided ratings of their practice sessions within their experimental conditions.

There was no significant difference in BECCI scores or ratings of practice sessions between practitioners who practiced skills with simulated patients in comparison to those who performed role-play. There may be a relationship between participants' feelings regarding the practice sessions and BCC skill acquisition, but results were inconclusive.

Contents

<u>Part I – The Background</u>	1
Chapter 1: Introduction	2
1.1 Clinical, non-specialist interventions to change behaviour.....	6
1.1.1 Major trials of lifestyle interventions.....	7
1.1.2 Reviews of lifestyle intervention studies.....	10
1.1.2.1 Smoking Interventions.....	10
1.1.2.2 Physical Activity.....	12
1.1.2.3 Alcohol Consumption.....	14
1.1.2.4 Diet.....	16
1.1.2.5 Multiple Lifestyle Interventions.....	18
1.1.3 Summary.....	19
1.1.4 The integration of behaviour change interventions into clinical practice.....	19
1.2 Behaviour Change Counselling: its origins and characteristics.....	20
1.2.1 What is motivational interviewing?.....	21
1.2.2 How does behaviour change counselling differ from its parent method?.....	24
1.2.3 Evidence that motivational interviewing and behaviour change counselling may be effective in facilitating lifestyle change.....	29
1.2.4 Issues in the evaluation of AMIs.....	33
1.3 The measurement and acquisition of skills in behaviour change counselling.....	35

Part II – The Development of the Behaviour Change Counselling Index (BECCI) **36**

Chapter 2: Introduction **37**

2.1 The Importance of Measurement.....	37
2.2 Existing measures.....	42
2.2.1 Existing measures relevant to the BCC construct.....	43
2.3 A Measure of Practitioner Skill in BCC – Pilot Work.....	46
2.4 Aims of the Study.....	49

Chapter 3: Methods **51**

3.1 Data Used in the Development of BECCI.....	53
3.1.1 Workshop Data.....	55
3.1.1.1 Consent of Research Participants.....	56
3.1.1.2 Collection of the Workshop Data.....	57
3.1.2 Training Course Data.....	58
3.1.2.1 Consent of Research Participants.....	59
3.1.2.2 Collection of the Training Course Data.....	59
3.1.3 Real Consultation Data.....	60
3.1.3.1 Consent of Research Participants.....	61
3.1.3.2 Collection of the Real Consultation Data.....	61
3.2 Analyses.....	62
3.2.1 Validity.....	62
3.2.1.1 Item Piloting and Content Validity.....	63
3.2.1.2 Construct Validity.....	64
3.2.1.3 Face Validity.....	66
3.2.2 Reliability.....	66
3.2.2.1 Internal Consistency.....	67
3.2.2.2 Scale Scoring.....	69
3.2.2.3 Inter-rater Reliability Exercise One.....	69
3.2.2.4 Intra-Rater Reliability	70
3.2.2.5 Inter-rater Reliability Exercise Two.....	70
3.2.3 Internal Responsiveness.....	71

Chapter 4: Results	73
4.1 Validity.....	73
4.1.1 Item Piloting and Content Validity.....	73
4.1.2 Construct Validity.....	79
4.1.3 Face Validity.....	88
4.2 Reliability.....	91
4.2.1 Internal Consistency Phase One.....	91
4.2.1.1 Core Items.....	91
4.2.1.2 Non-core items.....	95
4.2.1.2.1 Item One.....	95
4.2.1.2.2 Item Twelve.....	98
4.2.2 Internal Consistency Phase Two.....	103
4.2.2.1 Core Items.....	103
4.2.2.2 Non-Core Items.....	106
4.2.2.2.1 Item Nine.....	106
4.2.2.2.2 Item Eleven.....	109
4.2.3 Scale Scoring.....	112
4.2.4 Inter Rater Reliability Exercise One.....	112
4.2.5 Intra Rater Reliability.....	113
4.2.6 Inter-rater Reliability Exercise Two.....	114
4.3 Internal Responsiveness.....	115

Chapter 5: Discussion	116
5.1 Data used in the development of BECCI	116
5.2 Validity.....	119
5.2.1 Content Validity	119
5.2.2 Construct validity	120
5.2.3 Face Validity	121
5.2.4 Criterion Validity.....	121
5.3 Reliability.....	124
5.3.1 Internal Consistency.....	124
5.3.2 Inter-rater Reliability.....	126
5.3.3 Intra-rater Reliability.....	127
5.4 Responsiveness.....	128
5.5 Other Limitations.....	128
5.6 Conclusions.....	131

<u>Part III – The Experiential Practice Experiment</u>	133
Chapter 6: Introduction	134
6.1 How do healthcare practitioners learn communication skills?.....	135
6.1.1 Training qualified healthcare practitioners.....	137
6.2 Experiential learning in the training of healthcare practitioners.....	139
6.2.1 The practice and rehearsal of communication skills.....	142
6.3 Review of the literature 1993-2003.....	148
6.3.1 The use of simulated patients/role-play versus no intervention..	150
6.3.2 The use of simulated patients/role-play versus other interactive training methods.....	156
6.3.3 The use of simulated patients/role-play versus didactic methods of training.....	158
6.3.4 The use of simulated patients in training versus the use of role- play.....	162
6.4 Conclusions from the literature review.....	163
6.5 The Experiential Practice Experiment.....	165

Chapter 7: Methods	169
7.1 The Development of the Practice Experiment Rating of Session Inventory (PERSI).....	169
7.1.1 Item Generation.....	169
7.1.2 Item Piloting.....	171
7.1.3 Principal Components Analysis and Internal Consistency.....	171
7.1.3.1 Principal Components Analysis.....	172
7.1.3.2 Internal Consistency.....	174
7.2 The Experiential Practice Experiment.....	175
7.2.1 Design.....	175
7.2.2 Subjects.....	178
7.2.3 Recruitment	178
7.2.4 Randomisation.....	179
7.2.5 Consent.....	179
7.2.6 Procedure.....	180
7.2.7 Data Collection.....	181
7.2.7.1 The Principal Outcome (pre- and post training assessment).....	181
7.2.7.2 Secondary Outcome (participant ratings of practice sessions).....	183
7.2.8 Data Analysis.....	188
7.2.8.1 Analysis of the Principal Outcome.....	188
7.2.8.1.1 Baseline BECCI Score Analysis.....	188
7.2.8.1.2 Final BECCI Score Analysis.....	189
7.2.8.1.3 BECCI Change Scores.....	189
7.2.8.2 Analysis of Secondary Outcomes.....	190
7.2.8.2.1 The Factor of Affect.....	190
7.2.8.2.2 The Factor of Applicability.....	191
7.2.8.2.3 Analysis of Items not Attached to a Factor....	191
7.2.8.3 The Relationship Between Principal and Secondary Outcomes.....	191

Chapter 8: Results	193
8.1 <i>The Development of PERSI</i>	193
8.1.1 Item Generation.....	193
8.1.2 Item Piloting.....	197
8.1.3 Principal Components Analysis.....	198
8.1.4 Internal Consistency.....	207
8.1.4.1 The Factor of ‘Affect’.....	207
8.1.4.2 The Factor of ‘Applicability’.....	210
8.2 <i>The Experiential Practice Experiment</i>	212
8.2.1 Workshop Design.....	212
8.2.2 Demographics.....	215
8.2.3 Analysis of the Principal Outcome.....	216
8.2.3.1 Complications in collecting the principal outcome data	216
8.2.3.2 Analysis of the baseline BECCI scores.....	218
8.2.3.3 Analysis of the follow-up BECCI scores.....	219
8.2.3.4 Analysis of BECCI Change Scores.....	221
8.2.4 Analysis of the Secondary Outcome.....	225
8.2.4.1 Complications in the collection of the secondary outcome data.....	225
8.2.4.2 The Factor of Affect.....	225
8.2.4.3 The Factor of Applicability.....	230
8.2.4.4 Analysis of Items Attached to a Factor.....	235
8.2.4.4.1 Item Four ‘This practice session bore no resemblance to my everyday work’.....	235
8.2.4.4.2 Item Nine ‘The case scenario for this practice session was not believable’.....	240
8.2.4.4.3 Item Twelve ‘I enjoyed this practice session’.....	245
8.2.5 The Relationship Between the Principal and the Secondary Outcome.....	250
8.2.6 Post-debrief comments.....	250

Chapter 9: Discussion	257
9.1 The Development of PERSI.....	257
9.1.1 The generation of items on PERSI.....	257
9.1.2 Psychometric development.....	258
9.2 The Design and Analysis of the Experiential Practice Experiment.....	260
9.2.1 Randomisation.....	260
9.2.2 Participant preferences.....	261
9.2.3 The completion of PERSI questionnaires.....	263
9.2.4 The selection of workshop participants.....	265
9.2.5 The use of parametric tests on abnormally distributed data.....	266
9.3 Analysis of the Principal Outcome.....	268
9.3.1 Hypothesis One.....	268
9.3.2 Hypothesis Two.....	268
9.3.3 Conclusions.....	269
9.4 Analysis of the secondary outcomes.....	270
9.4.1 Hypothesis Three.....	270
9.4.2 Hypothesis Four.....	271
9.4.3 Conclusions.....	275
9.5 The relationship between the principal and secondary outcome.....	276
9.5.1 Hypothesis Five.....	276
9.5.2 Hypothesis Six.....	277
9.5.3 Conclusions.....	277
9.6 Post debrief comments.....	278
9.7 Performance in practice – the missing link.....	281
9.8 Overall Conclusions.....	285

<u>Part IV - Conclusion</u>	287
Chapter 10: Recent Developments and Future Research	288
10.1 Recent developments.....	288
10.1.1 Further systematic reviews of motivational interviewing.....	290
10.1.2 The definition and measurement of MI interventions.....	292
10.1.3 Training practitioners in motivational interviewing.....	293
10.2 Future Research.....	294
10.2.1 The further development of BECCI.....	294
10.2.2 Findings from the Experiential Practice Experiment.....	297
10.3 Conclusion.....	298
Chapter 11: Epilogue	300
11.1 Weaknesses of existing literature.....	300
11.2 Reflexivity within the research process.....	304
11.3 Power calculation.....	309
11.4 Randomisation.....	310
11.5 The complimentary roles of quantitative and qualitative research.....	311
11.6 Summary.....	315

References.....	316
Appendix I.....	337
1. The Behaviour Change Skills Rating Scale	
2. Provisional items and manual from Boycott (2001)	
3. BECCI and user manual	
4. Lane et al. (2005) Measuring adaptations of motivational interviewing: The development and validation of the Behaviour Change Counselling Index.	
Appendix II.....	381
1. Practitioner information/consent form	
2. Case scenario – smoking – actor briefing	
3. Case scenario – smoking – practitioner briefing	
4. Case scenarios constructed by diabetes nurses	
5. Letter from Leeds East Research Ethics Committee	
6. Information sheet – real consultations	
7. Patient consent form – real consultations	
8. Practitioner consent form – real consultations	
Appendix III.....	391
1. Workshop advertisement	
2. Interview schedule	
3. Practice Experiment Rating of Session Inventory (PERSI)	
4. Demographic questionnaire	
5. Block randomisation master list	
6. Letter to workshop participants	
7. Workshop information sheet	
8. Training programmes – day one and day two	
9. Information sheet	
10. Consent form	
11. Registers	
12. Information sheet – on day	
13. Example of a ‘rounds sheet’	
14. Cases 1-3 Patient briefing	
15. Cases 1-3 Practitioner briefing	
Appendix IV.....	419
1. Interview data - Free Node	
2. Interview data – Training Node – positive experiences	
3. Interview data – Training Node – negative experiences	
Appendix V.....	465
1. Histograms – figures AV.1 to AV.7b	
2. Correlation matrices – tables AV.1 to AV.3	
3. Eigenvalue tables – tables AV.4 to AV.6	
4. Descriptives tables AV.7 to AV.15	
5. Skewness and kurtosis – table AV.16	

Part One:

The Background

1.0 Introduction

'Prevention is better than cure.'

Desiderius Erasmus, 1466-1536

When Erasmus made the above statement, he was talking about war, although this quotation can be applied to many other subjects, including ill health.

In the UK the prevention, rather than just the cure of chronic diseases, is a great challenge (Department of Health, 2004). Smoking is the biggest cause of premature death in Great Britain, accounting for approximately 106,000 deaths per year (Action on Smoking and Health, 2004). Obesity can also lead to approximately 30,000 premature deaths per year (National Audit Office, 2001). Alcohol related problems are responsible for up to 22,000 premature deaths per year (Cabinet Office, 2003). These risk factors are closely related to chronic diseases, such as coronary heart disease (CHD), chronic obstructive pulmonary disease (COPD), type two diabetes and cancer, which can cause much suffering as well as premature death. Cardiovascular disease is the biggest killer in the UK, accounting for 39% of all deaths.

2.68 million British people are living with CHD (British Heart Foundation, 2004).

There are approximately 600,000 diagnosed cases of COPD in the UK (British

Thoracic Society, 2001). One in three people will be diagnosed with cancer in their lifetime (Cancer Research UK, 2005). 1.8 million British people are diagnosed with diabetes, although it is estimated that there are more people with the disease who have not yet been diagnosed (Diabetes UK, 2004). Approximately 15% of diagnosed diabetics have type one diabetes (caused by the body not producing its own insulin), and approximately 85% have type two diabetes, which is caused by body no longer responding adequately to the natural hormone insulin, or when production of insulin is too low (Department of Health, 2001). Type two diabetes is escalating and expected to reach three million diagnosed cases by 2010 (Diabetes UK, 2004). The treatment of cardiovascular disease costs the National Health Service (NHS) approximately £14,750,000 per year (British Heart Foundation, 2005). Combined with the amount of money lost due to premature death and illness preventing paid work activities, and informal care costs, cardiovascular disease is estimated to cost the United Kingdom approximately twenty-six billion pounds a year (British Heart Foundation, 2005).

Statistics released by the British Heart Foundation (2005) show that approximately 22% of Britons are overweight and 26% smoke. 40% of men and 23% of women in Britain consume more alcohol than the recommended *daily* benchmarks (more than four units on the heaviest drinking day of the week for men, and more than three for women). 27% of men and 17% of women in Britain consume more than the *weekly* recommended levels of alcohol (21 units a week for men and 14 units a week for women). All these actions are risk factors for chronic disease and premature death. Obese individuals are at higher risk of developing CHD, type 2 diabetes and several cancers including cancer of the prostate, breast and bowel (British Heart Foundation

2004, Cancer Research UK 2005). Smokers are at an increased risk of developing CHD, COPD and several cancers, including cancer of the lung, lip, throat, mouth and stomach (Action on Smoking and Health, 2004). Drinking above recommended limits increases the risk of developing liver disease, high blood pressure and cancer (Alcohol Concern, 2002).

Given that chronic disease can drastically affect an individual's quality of life, and is also associated with great economic costs, it is apparent that a reduction in these risk factors, in turn reducing chronic disease and premature death, would be desirable. Prevention is, in essence, better than cure.

This has led to several non-clinical public health initiatives at government level aimed at preventing damaging health behaviours, such as health warnings on cigarettes (which have become more prominent in recent years), a ban on tobacco advertising, alcoholic drinks are labelled with the number of units per serving, and food is often labelled with the amount of calories, saturated fat, sugar and salt. Public health advertising has also aimed to promote healthier lifestyles, through campaigns such as 'five-a-day' to encourage the consumption of five portions of fruit and vegetables per day and 'thirty minutes a day' to endorse participation in thirty minutes of moderate activity per day. At school level, children between the ages of 5 and 16 are obliged to take part in at least two hours of physical education per week as part of the National Curriculum, and some schools are now introducing initiatives such as breakfast clubs and selling fruit at break times to attempt to encourage a healthy diet in children.

There are also a number of interventions conducted at the medical consultation level. General practice surgeries frequently run coronary heart disease and diabetes clinics, providing ‘secondary prevention’ advice to patients (encouraging them to change their lifestyles to prevent further deterioration of their health). Cardiac rehabilitation is offered to patients who have undergone heart surgery or have recovered from heart attacks, again with secondary prevention in mind. However, the clinical focus is gradually moving towards the ‘primary prevention’ (encouraging patients to adopt healthier lifestyles to prevent chronic illness) of conditions such as CHD (Department of Health, 2000) and diabetes (Department of Health, 2001). There is recognition that *‘Just telling people [that] they are at risk of developing a disease is rarely sufficient to change behaviour’* (Marteau and Lerman, 2001). There are a number of intensive therapies used within a specialist context to promote behaviour change in patients (such as cognitive behavioural therapy, used mainly by clinical psychologists).

What is needed to promote lifestyle change in patients, however, is a range of skills that can be utilised by any primary or secondary healthcare practitioner within a consultation where the subject of lifestyle change is relevant, but there is no need for specialist intervention. One method that may be suitable for this purpose is a lifestyle intervention called *Behaviour Change Counselling* (BCC). The purpose of this study is to investigate whether different methods of practicing BCC skills during training result in differences in practitioner skilfulness in delivering BCC post training.

This chapter sets the background for the studies conducted in chapters two to nine, discussing the evidence of clinical interventions in the period up to the year 2002 (when the research conducted in this thesis began) that have already been attempted to encourage patients to make changes to their health behaviour. It then goes on to discuss BCC in more detail – why it may be more suitable for promoting patient lifestyle changes in general healthcare contexts, and its relation to other methods. Finally, the rationale for the two studies conducted in chapters two to nine is provided.

1.1 Clinical, non-specialist interventions to change behaviour

There are a number of interventions that have been attempted during medical consultations to promote healthier lifestyles. One very simple initiative is implemented via the use of computer systems in General Practice surgeries. When a patient's records are accessed by a member of staff, automatic pop-ups serve as prompts to the GP/nurse, informing them for example that the patient is a smoker (Dr Andrew Grant, 2001, personal communication). A second initiative involves the delivery of structured lifestyle interventions in the daily practice of primary care staff, with the aim of reducing the risk factors associated with chronic disease. These interventions provide the main support for further investigating the delivery of behaviour change counselling as an intervention, and thus the most efficacious ways of helping practitioners to acquire these skills.

1.1.1 Major trials of lifestyle interventions

The World Health Organisation (WHO) funded a European collaborative trial of lifestyle advice and hypertension treatment, which was given to male factory workers aged between forty and fifty-nine years of age across five countries - Belgium, Spain, Italy, Poland and the UK (WHO European Collaborative Group, 1980). The study resulted in an overall reduction of 10.2% in CHD, a 6.9% reduction in fatal CHD, a 14.8% reduction in non-fatal myocardial infarction and a 5.3% reduction in total mortality after six years (WHO European Collaborative Group, 1986). However, the UK trial centre showed little success in the reduction of patient risk factors, and no reduction in CHD. This implies that countries other than the UK may have been providing lifestyle advice in a different manner, or that the inhabitants of Belgium, Spain, Italy and Poland were more receptive to advice about health behaviour change than the British.

The Multiple Risk Factor Intervention Trial (MRFIT) conducted in the USA aimed to reduce the CHD in men at high risk of developing the disease (aged between thirty-five and fifty-seven years). The intervention focussed on the provision of advice on diet and smoking cessation, and participants attended group sessions on these topics (Benfari, 1981). Participants also received anti-hypertensive drugs. The control subjects received usual care. Those who received the intervention showed lower mortality rates from CHD (10.6%), cardiovascular disease (8.3%) and all causes (7.7%) across the 10.5 year period in comparison to the control group who received usual care, although these differences were not statistically significant. There was however, a significant reduction (24%) in deaths from acute myocardial

infarction in the intervention group in comparison to the control group over the 10.5 year follow-up period (MRFIT Research Group, 1990).

Two major trials of lifestyle interventions conducted in the UK were the OXCHECK Study (OXCHECK Study Group, 1994, 1995), and the British Family Heart Study (Family Heart Study Group, 1994, 1996).

OXCHECK studied the effect of patient health checks on cardiovascular disease risk factors, in comparison to those who received usual care. Health checks consisted of a consultation with a practice nurse who identified the patients' risk factors, and then provided lifestyle counselling using a patient centred approach. Very little information is provided about the lifestyle intervention that the nurses were instructed to deliver, other than *Nurses were instructed to counsel patients about risk factors, with the emphasis on ascertaining the patients' views on change and negotiating priorities and targets for reduction* (OXCHECK Study Group 1994: 309). There are no reports of integrity checks of the intervention delivered. Those patients who received the health checks demonstrated statistically significant reductions in mean serum cholesterol (0.19 mmol/l), self-reported saturated fat intake (8.7% less patients used butter or hard margarine, and 7.5% less patients drank full cream milk), systolic (1.9%) and diastolic (1.9%) blood pressure and body mass index (1.4%) than those in the usual care group after three years, although there were no significant differences between groups in diastolic blood pressure equal to or greater than 100 mm Hg or body mass index (BMI) greater than or equal to 30kg/m². There were also no significant differences in smoking or alcohol consumption after three years. The intervention was time consuming in a busy general practice

environment, and the change in lifestyle risk factors was relatively small, which in turn raised questions about its cost effectiveness, (OXCHECK Study Group, 1996, Wonderling et al. 1996).

Similarly, the British Family Heart Study examined the effects of screening and nurse-led lifestyle counselling on CHD risk factors in comparison to an internal (participants enrolled at intervention practices who did not receive an intervention) and an external (participants at practices where no intervention was delivered) comparison group. Again, minimal information is given about the lifestyle counselling provided to patients, other than it was reported to be ‘client-centred’, yet *‘subjects were told which decile of the distribution of risk for CHD they were in relative to other men (or women) of the same age...The risk score was recorded in a booklet, ‘Your Passport to Health’ in which personally negotiated lifestyle changes in relation to smoking, weight, healthy eating, alcohol consumption and exercise could be documented. When appropriate, Health Education Authority pamphlets on each of these subjects were provided’*. (Family Heart Study Group, 1994). As with OXCHECK, there are no reports of integrity checks of the intervention delivery. Those in the intervention group displayed lower weight by 1kg (reduction in BMI by 0.4kg/m²), systolic blood pressure by 7mm Hg, diastolic blood pressure by 3mm Hg, and cholesterol by 0.1 mmol/l, in comparison to controls after one year. There was also a reduction by 4% in smoking in the intervention group who attended a follow-up consultation a year later, but there was an increase in smoking in those who did not attend the follow-up consultation, suggesting that mainly those who had reduced their smoking were attending the follow-up consultation. As with OXCHECK, questions were raised as to whether the extra costs involved in delivering this

intervention in a general practice environment produced great enough changes in patient outcomes to be justified (Family Heart Study Group 1996, Wonderling et al. 1996).

The studies described above show that the provision of lifestyle advice can result in the reduction of risk factors associated with chronic diseases, but these changes tend to be small, and the benefits of such changes may not be apparent until long-term follow-up. A number of reviews have also been conducted into single behaviour lifestyle interventions, which clarify the relationship between the type of lifestyle intervention delivered and patient outcomes.

1.1.2 Reviews of lifestyle intervention studies

1.1.2.1 Smoking Interventions

Systematic reviews of smoking interventions show mixed evidence. Silagy and Ketteridge (1999) conducted a systematic review of thirty-one randomised controlled studies where advice on stopping smoking was provided by physicians. They found that simple advice reduced the rate of smoking cessation among patients by approximately 2.5%, but more intensive interventions were slightly more effective in encouraging smoking cessation than minimal advice-giving (odds ratio 1.44).

A systematic review of smoking cessation interventions delivered by nurses (Rice and Stead 2001) showed that although smoking cessation counselling was more effective in encouraging smokers to quit in comparison to no intervention (odds ratio 1.47) there was evidence to suggest that more intensive interventions (that lasted

more than ten minutes and more than one session of follow-up contact with the patient) were more effective than briefer ones (that lasted for ten minutes or less with one or less sessions of follow-up contact with the patient). Caution should be exercised in the interpretation of the term ‘counselling’ in this review however, as many interventions were actually more about information giving than counselling.

A systematic review of group programmes for smoking cessation (Stead and Lancaster 2002) showed that interventions were more effective in facilitating quit rates in comparison to no intervention (odds ratio 1.91), but there was no evidence to suggest that these programmes were more effective than providing individual counselling.

Rigotti et al. (2002) reviewed seventeen randomised controlled trials into smoking interventions that were conducted with hospitalised patients. They found that psychosocial interventions conducted during the hospital stay that followed up for at least one month post discharge lead to significantly higher quit rates in comparison to control groups who received no intervention (odds ratio 1.82). These interventions produced results at follow-up comparable with nicotine replacement therapy (NRT) which also increased quit rates in these circumstances, although NRT in addition to psychosocial interventions with these patients did not appear to significantly increase quit rates. Longer interventions conducted within the hospitals without follow-up did not result in higher quit rates than shorter interventions (odds ratio 1.07), although interventions that involved a patient follow-up period of less than one month did not show a significantly greater quit rate in comparison to controls (odds ratio 1.09). However, these findings may be misleading in suggesting that

counselling may be as effective as NRT in increasing quit rates. A review into the use of NRT in promoting smoking cessation by Silagy et al. (2000) led the authors to conclude that *'the effectiveness of NRT appears to be largely independent of the intensity of additional support provided to the smoker. Provision of more intense levels of support, although beneficial in facilitating the likelihood of quitting, is not essential to the success of NRT'*, suggesting that NRT may be more effective in helping patients who are motivated to change to stop smoking than counselling alone. Indeed, a more recent trial by Molyneux et al. (2003) conflicts with the findings of the review by Rigotti et al. (2002), as this showed that NRT in addition to brief counselling to hospital inpatients promoted the significantly higher rates of abstinence at twelve month-follow-up in comparison to counselling alone and usual care. There were no significant differences at follow-up between counselling alone and usual care.

These reviews suggest that interventions for smoking that involve counselling are more successful than those where brief advice was provided. More intensive interventions may be more effective than briefer advice-giving interventions in some circumstances, although it is difficult to deduce from these reviews exactly what a more intensive intervention involves. NRT may be more effective in preventing smoking than counselling in smokers who are motivated to quit.

1.1.2.2 Physical Activity

Systematic reviews into exercise interventions show that physical activity programmes that encourage exercise to be built into a patient's everyday life are the most effective in being adhered to and maintained long term. Dishman and

Buckworth (1996) conducted a meta-analysis of twenty-seven interventions that promoted exercise through a variety of means, from information and advice giving to structured physical activity programs to specialist interventions, including cognitive behaviour therapy. The mean effect size was 0.34 and the odds ratio was 0.75. They found that programmes that incorporated ‘behaviour modification approaches’ (interventions that took the approach of incorporating more activity by looking at ways to change behaviour) produced the largest effect sizes and programs that were non-supervised and promoted active leisure rather than structured exercise produced larger effect sizes. The effect sizes were larger for healthier participants in the studies in comparison to the less fit, suggesting that participants who had higher levels of fitness may have found it easier to incorporate further activity than those who were less active. Outcomes in the review were measured in a variety of ways, although they relied predominantly on self-report measures, attendance at classes, or reported frequency of activities, rather than objective measures of physical function.

Hilsdon and Thorogood (1996) systematically reviewed twelve randomised controlled trials of physical activity promotion strategies. Five out of seven studies that evaluated home-based exercise programmes reported increased levels of physical activity. Two out of five studies that examined changes in physical activity through attendance at an exercise facility, such as a leisure centre, showed client increases in exercise. They concluded that programs that promoted walking as a form of physical activity and did not require attendance at a specific location (such as a leisure centre) are more likely to lead to changes in activity that are sustained over time. However, again outcome was measured in most studies by self-report measures, rather than actual measures of physical fitness, and many studies recruited

their volunteers via advertising, rather than approaching those who may be less motivated to increase their activity levels.

Riddoch et al. (1998) reviewed twelve trials of physical activity promotion schemes within a primary care context. Most trials showed improvements in the amount of exercise undertaken, although the effect sizes were small. They inferred that although such programmes were unlikely to lead to large changes in patients' behaviour, small changes in large amounts of patients would be beneficial. They also suggested that as no programmes had incorporated theories of behavioural change, this may improve exercise uptake.

It appears therefore, that exercise programmes that promote unsupervised physical activities that can be easily incorporated into the patient's lifestyle, and programmes that include aspects of behaviour change theory may be the most effective in facilitating changes in patients' exercise levels, although most outcomes appear to be measured via self-report questionnaires rather than through measures of physical fitness.

1.1.2.3 Alcohol Consumption

There are three main reviews of brief alcohol intervention with heavy drinkers (rather than specialist therapies for alcohol addiction). Poikolainen (1999) conducted a meta-analysis of randomised controlled trials of brief alcohol interventions. Very brief interventions did not lead to a statistically significant change in drinking between the control and intervention groups. Extended interventions led to a significant decrease in alcohol intake of approximately fifty-one grams per week for

women, and although men showed a tendency to reduce their alcohol consumption by a similar amount following a longer brief intervention, this reduction was not statistically significant. Briefer interventions appeared to work sometimes, but not all of the time, leading the author to question how the interventions differed, and question which aspects of brief interventions are effective. There was a lack of uniformity across studies, and the interventions used often did not describe their content in enough detail.

Wilk et al. (1997) performed a meta-analysis of twelve randomised controlled trials of more than thirty participants, classified as heavy drinkers, who received brief alcohol intervention. Brief intervention was more effective in reducing patient drinking in comparison to no intervention (odds ratio 0.91). Heavy drinkers who received brief intervention were twice as likely to reduce their drinking (although it is not clear from the paper by how much) within twelve months following the intervention compared to those who did not receive it.

Kahan et al. (1995) reviewed eleven studies of brief interventions conducted by physicians with problem drinkers. Brief interventions appeared to be more successful with male drinkers than female drinkers, and there was no evidence to suggest that brief intervention reduced alcohol related morbidity. They contended that on the whole, brief alcohol interventions delivered by physicians were effective in reducing drinking by approximately five to seven standard drinks per week in men, but the results were less consistent for women. Interventions were however, often not clearly described and questions were raised with regard to whether practitioners actually delivered the intervention. They suggested that more research

into the kinds of interventions delivered, the engagement of practitioners in delivering the intervention and the type of patients for whom brief intervention is most effective should be conducted.

These reviews suggest that brief interventions may be effective in reducing alcohol consumption, although it is not clear whether brief intervention works well with *all* patients – many studies do not discuss the content of their interventions, which makes conclusions difficult and gives little explanation for inconsistent findings. The integrity of the intervention delivered is often not assessed. Furthermore, practitioners may also be uncomfortable in delivering this intervention. This point is also made by Babor and Higgins-Biddle (2000: 678-9), who concluded that the cumulative evidence from randomised controlled trials show that '*although clinically significant effects on drinking behaviour ... can follow from brief [alcohol] interventions, the results have not always been consistent across studies.*' They also highlight that training healthcare practitioners in brief intervention needs to focus on how to change practice (by identifying barriers to implementation), rather than simply educating practitioners about how to conduct brief intervention with hazardous drinkers.

1.1.2.4 Diet

Several studies have attempted to facilitate patient changes to different aspects of their diet, usually to increase consumption of fruit, vegetables and wholemeal carbohydrates, and decrease saturated fat and sugar consumption.

Evidence suggests that interventions to encourage healthy eating are generally effective. Roe et al. (1997) conducted a review of seventy-six healthy eating interventions targeted at the general population. Across studies, dietary fat intake was reduced by one to four percent in the general population long term, although this figure was higher for those individuals who were highly motivated to change their diet. Changes were generally small reflected by reductions in blood cholesterol of seven to ten percent across studies, but the most effective interventions were those based on models of behavioural change, and those which focussed on either diet alone, or diet and exercise.

Contento et al. (1995) reviewed two hundred and seventeen studies conducted in the field of nutrition education. They found that educational interventions directed at behavioural change as a goal, which focussed on what patients felt their needs were, were most effective in achieving healthy eating, rather than studies that relied heavily on the dissemination of information and teaching of skills. Outcomes were predominantly measured in by evaluating changes in eating and nutrition behaviours, knowledge and attitudes to diet, although it is not clear in all cases how this was measured – several studies used self-report measures, rather than physical assessments.

The trials reviewed in these two papers suggest that healthy eating interventions are generally effective in triggering small changes to patients' diets, although interventions that focus on behaviour change rather than providing information appear to be more successful. Many studies have relied on self-report rather than objective measures of dietary change.

1.1.2.5 Multiple Lifestyle Interventions

There have been two systematic reviews that have focussed on multiple lifestyle interventions, rather than interventions for specific lifestyle behaviours. Ashenden et al. (1997) conducted a systematic review of studies that examined lifestyle change interventions in a primary care environment – they identified twenty three smoking cessation studies, six trials of alcohol intervention, ten trials to modify dietary behaviour and six trials that target exercise. They found that the provision of advice was more effective at encouraging patients to make changes to smoking behaviour when compared to no advice (odds ratio 1.46), but there were no significant differences between those who received intensive advice in comparison to those who received brief advice. Most studies indicated that GP advice was effective in reducing alcohol consumption, although it was not clear from the studies reviewed how great this reduction was, and which intervention designs were most effective. The authors did not draw any conclusions from studies about advice to improve diet and exercise as outcomes and results varied, and these interventions tended to differ greatly in their nature, and were often imbedded within comprehensive programmes targeting several health behaviours.

In addition to this, Jepson (2000) conducted a comprehensive review of systematic reviews into lifestyle interventions. She concluded that the most effective interventions to aid smoking cessation were NRT and smoking cessation counselling. Brief smoking advice had a small effect on reducing smoking, but there was evidence to suggest that more intensive interventions were slightly more effective. GP advice and behaviour modification approaches were most likely to have an

impact on patient activity levels. Dietary advice given to adults could be successful in facilitating healthy eating in adults, but the most effective interventions were those based on behavioural change. Brief interventions that incorporated ‘motivational counselling techniques’ were the most effective interventions in reducing alcohol consumption, along with pharmacotherapy and drink/drive advertising campaigns.

1.1.3 Summary

In summary, there is mixed evidence with regard to the effectiveness of different lifestyle interventions for specific health behaviours. However, one theme that appears to be common across meta-analyses is that interventions that are targeted at changing behaviour, rather than simply providing information on how and why to change, tended to be the most effective across health behaviours. Many interventions have been poorly defined, and some have been defined as a ‘counselling’ intervention, even though they appear to be more reflective of ‘advice-giving’. Several interventions rely on self-reported changes in behaviour, rather than objective measures.

1.1.4 The integration of behaviour change interventions into clinical practice

The reviews of the literature on lifestyle change in section 1.1.2 have shown that interventions tend to promote small changes in health behaviours, but those which aim to change behaviour, rather than those that provide advice on what changes to make, seem to be the most successful. These interventions require more skill than simple advice giving, and one challenge facing healthcare practitioners is finding effective ways to address complex issues such as behaviour change, without having to increase consultation times or resources. Studies in the alcohol field (Rollnick et

al. 1997, Kaner et al. 1999) have shown that the integration of brief intervention skills by practitioners in primary care is often poor. Studies such as OXCHECK (OXCHECK Study Group, 1994, 1995), and the British Family Heart Study (Family Heart Study Group, 1994, 1996) showed that interventions often lead to small changes in patient behaviour, but this needs to be applicable in the real-world context where finances and the logistics of service delivery impact on the ability to provide lifestyle interventions.

One intervention that may be suitable for this purpose is *behaviour change counselling* (BCC) – a method for consulting with patients which is derived from motivational interviewing but is designed for use in briefer consultations on everyday health care practice. It can be delivered in time frames as brief as five minutes, showing potential to be integrated into everyday consulting in primary care settings, where consultations are generally around eight minutes in length, without special provision.

1.2 Behaviour Change Counselling: its origins and characteristics

BCC is a patient-centred approach (Stewart et al. 1995) that healthcare practitioners may take during a clinical consultation where lifestyle change needs to be addressed. It was first defined by Rollnick et al. (1999: 11) as '*...ways of structuring a conversation which maximise the individual's freedom to talk and think about change in an atmosphere free of coercion and the provision of premature solutions*'. It has more recently been defined as '*[a] patient-centred method, with [the application of] principles and skills linked to the specific subject of health behaviour change and motivational interviewing*' (Rollnick et al. 2002: 278).

BCC is derived from motivational interviewing (MI), a '*client-centred, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence*' (Miller and Rollnick, 2002:25).

1.2.1 What is motivational interviewing?

MI has evolved from the work by psychologist Carl Rogers (1959) on the *client-centred counselling framework*. Rogers developed this framework from his experiences of delivering psychotherapy to his clients. He found that his clients often had improved results if he listened more and allowed them to determine the rate of treatment. This led him to believe that a flexible attitude to treatment was important, as encouraging the client to be self-aware and to make independent choices appeared to help them to understand the problem in hand.

MI is similar to the client-centred counselling framework, in that it '*does not focus on teaching new coping skills, reshaping cognitions or excavating the past. It is quite focussed on the person's present interests and concerns. Whatever discrepancies are explored and developed have to do with incongruities among aspects of the person's own experiences and values.*' (Miller and Rollnick, 2002:25).

Motivation for change is drawn from the client, rather than imposed. However, MI differs from the client-centred counselling framework in that it is purposely directive. '*Motivational interviewing involves selective responding to speech in a way that resolves ambivalence and moves the person toward change*'. (Miller and Rollnick 2002: 25).

One misconception about MI is that it is often viewed as a set of techniques that can be inflicted on a patient, without genuine empathy and understanding (Miller and Rollnick 2002: 33). MI is a clinical skill, rather than a tool. To further define the nature of MI, Miller and Rollnick (2002: 34-42) describe the *spirit* of MI (or a ‘way of being’ with a patient), and present four *principles* (or ‘conventions guiding practice’) behind the method.

MI spirit is divided into three components – collaboration, evocation and autonomy (Miller and Rollnick 2002: 34-35). *Collaboration* refers to the patient and practitioner working together in partnership, not against each other (for example, with the practitioner advocating for change and the patient arguing why change is not a good idea). *Evocation* describes the process of the practitioner eliciting the patient’s goals, thoughts and feelings about behaviour change, rather than providing information as to how and what they should feel about change. *Autonomy* signifies practitioner respect for the patient’s rights as an individual. Patients know their own mind, and should be allowed to choose what to do about their behaviour – there is recognition that any changes the patient does decide to make are entirely their choice, and that the practitioner is not there to force the patient to do anything. Should the patient decide that they do not want to make any changes to their behaviour the practitioner in turn has to respect this decision.

The four principles to be followed while conducting MI are to express empathy, develop discrepancy, roll with resistance and support self-efficacy (Miller and Rollnick 2002: 36-41). *Express empathy* describes how the practitioner should demonstrate understanding of the patient’s perspective. This is mainly achieved

through the use of active, reflective listening techniques, which demonstrate that the practitioner understands what the patient has told them. *Rolling with resistance* is the approach taken to avoid confrontation with a patient. It could be described as ‘going along with what the patient says for a bit’ while demonstrating understanding for resistance as a means of reducing it. As well as eliciting the patient’s motivation to change, the practitioner should *support* the patient’s *self-efficacy* (a person’s belief that they have the ability to do something) and build on the patient’s confidence in achieving change without telling them what to do. *Developing discrepancy* is the most complex of the principles underlying motivational interviewing. It involves the practitioner listening carefully to what the patient says about their personal values, and illustrating how this is at odds with the patient’s current behaviour. This is often achieved by highlighting how the behaviour in question does not fit in with the patients’ perception of how they would like to be.

With the spirit and guiding principles of the method in mind, the practitioner uses a number of skills to encourage the production of patient ‘change talk’ (patient talk about how and why they might change their behaviour). This is accomplished through a variety of means, such as asking permission to talk about the behaviour in question, encouraging the patient to set the agenda for the consultation, assessing a patient’s readiness to change, asking open-ended questions, making summaries, and the skilful use of reflective listening to both express empathy and to direct the patient in producing change talk.

Motivational interviewing is usually conducted within specialist, help-seeking clinical settings, with consultation times ranging from approximately thirty minutes to an hour in length.

1.2.2 How does behaviour change counselling differ from its parent method?

BCC is a method of consulting with patients about lifestyle change, which draws on the skills of MI, a more specialist method of consulting about behaviour change. It is therefore often described as an adaptation of motivational interviewing, or ‘AMI’. The two methods are often interchangeably labelled as MI, although they are somewhat different in nature.

BCC usually occurs within time frames ranging from five to thirty minutes in length, in both opportunistic and help-seeking settings. Like MI, BCC is more than a simple group of techniques and skills to be used – ‘spirit’ is an important factor in the consultation. Rollnick et al. (1999: 32) illustrate this in the following paragraph:

‘We pay a lot of attention to technique and strategy in this book, yet by far the most important thing is the spirit of the method. Put simply, this is a collaborative conversation about behaviour change. Rather than wrestling ... it is more like dancing ... The patient is encouraged to be an active decision maker. The practitioner provides structure to the discussion and expert information, where appropriate, and elicits from the patient views and aspirations about behaviour change. This is not merely a matter of using techniques or strategies, but of approaching the consultation and topic of behaviour change with a set of attitudes that promote patient autonomy.’

Therefore, the most important element of BCC is for the practitioner to build a good rapport with the patient, and convey an accepting attitude. The consultation should be a collaborative effort between the two parties, rather than one person acting as an expert.

A number of skills common to MI are employed by the practitioner during a BCC consultation, all of which should adhere to the spirit of BCC. An understanding of the patient's perspective is obtained through the use of skilful, mainly open questioning and the use of reflective, empathic listening. The practitioner also conveys their understanding of what the patient has said by using empathic listening statements and summaries at key points of the discussion. The practitioner elicits what the patient understands before providing information, and extracts what they have understood from the information provided, rather than simply giving advice. The practitioner helps the patient to articulate how ready they are to make changes to their lifestyle, and uses this as a basis to discuss lifestyle changes with the patient, encouraging the patient to set their own targets for change in line with how ready they feel to make those changes. The practitioner also works alongside the patient to increase their readiness to make changes to their lifestyle.

BCC differs somewhat in its 'spirit' and 'principles' in comparison to MI. BCC spirit has been likened to one of shared decision making (Rollnick et al. 2002: 278). Although the MI spirit points of collaboration, evocation and autonomy clearly form

part of BCC, Rollnick et al. (2002a: 278) argue that BCC consultations often have a ‘task-oriented flavour’ in comparison to MI, with BCC spirit implemented in light of behaviour change tasks, whereas MI spirit is implemented through relationship building with a patient. The principle of ‘developing discrepancy’ is not essential in the use of BCC – it is more important to have a constructive discussion about behaviour change than to contrast how the desired behaviour differs from the client’s current behaviour. A summary of the similarities and differences between BCC and MI (in terms of their context, goals and style) is shown in table 1.1 (adapted from Rollnick et al. 2002a: 274).

Table 1.1: The similarities and differences between MI and BCC in terms of their context, goals and style		
	Behaviour Change Counselling	Motivational Interviewing
Context		
<ul style="list-style-type: none"> • Session Time • Setting 	5-30 minutes Opportunistic or help-seeking	30-60 minutes Mostly help seeking
Goals		
	<ul style="list-style-type: none"> • Demonstrate respect • Communicate risk • Establish rapport • Identify client goals • Exchange information • Choose strategies based on client readiness • Build motivation for change 	<i>BCC goals, plus:</i> <ul style="list-style-type: none"> • Develop relationship • Resolve ambivalence • Develop discrepancy • Elicit commitment to change
Style		
<ul style="list-style-type: none"> • Practitioner-recipient • Confront/challenge • Empathic style • Information 	Counsellor – active expert Seldom Usually Exchanged	Leading partner – partner Never Always Exchanged to develop discrepancy

BCC draws on many of the skills common to MI, but it differs in the way that those skills are used. The differences between BCC and MI in their use of skills is summarised in table 1.2 (adapted from Rollnick et al. 2002a: 274).

Table 1.2: Differences between BCC and MI in their use of skills

Skill	Behaviour Change Counselling	Motivational Interviewing
Ask open ended rather than closed ended questions	Commonly occurs	Essential
Affirmations	Commonly occurs	Essential
Summaries	Essential	Essential
Ask permission	Essential	Essential
Encourage recipient choice and responsibility in decision making	Essential	Essential
Elicit patient information needs	Commonly occurs	Not essential
Provide advice	Commonly occurs	Not essential
Reflective listening statements	Commonly occurs	Essential
Directive use of reflective listening	Not essential	Essential
Variation in depth of reflections	Commonly occurs	Essential
Elicit change talk	Commonly occurs	Essential
Roll with Resistance	Essential	Essential
Help client articulate deeply held values	Not essential	Essential

MI focuses very closely on the strategic elicitation of patient change talk to facilitate behaviour change, strategically using open-questions that encourage change-talk, and producing reflective listening statements that best develop discrepancy, amplify change-talk and resolve ambivalence. MI also focuses ‘systemic change’ (Rollnick et al. 2002a: 278), or the change in values and/or individual identity in line with behaviour changes. BCC however has a much more modest goal – to simply have a constructive conversation about behaviour change, which explores how the patient thinks and feels about change, and encourages them to make changes to their

lifestyle rather than facilitating changes to deeply held personal values. This does not mean however, that practitioners using BCC do not encourage change-talk, develop discrepancy and help to resolve ambivalence. These behaviours can and do occur within BCC consultations, but these behaviours are not essential in BCC whereas they are central to the practice of MI. The primary function of asking questions and using reflective listening in BCC is to elicit the patient's thoughts, feelings and knowledge, to use this information to identify readiness to change, and to help the patient build motivation to make lifestyle changes. Reflective listening is also used in BCC to convey understanding and build rapport between the practitioner and the patient.

Rollnick et al. (2002a: 279) state that *'The principal difference between behaviour change counselling and motivational interviewing ... is the practitioner's conscious and strategic use [in MI] of his or her own responses to elicit and reinforce certain kinds of speech from the client, while reducing other types of client responses.'*

The main difference between the two methods is the intention of the skills used rather than the skills themselves, and it is this difference that essentially makes BCC a separate construct from MI.

1.2.3 Evidence that motivational interviewing and behaviour change counselling may be effective in facilitating lifestyle change

There have been three major reviews of motivational interviewing and its adaptations which show evidence for the method. Noonan and Moyers (1997) reviewed eleven clinical trials of AMIs delivered as interventions for drug and alcohol abuse. Nine of

the eleven trials supported the use of MI as a clinical intervention. The two studies that did not support this were conducted within primary care (Richmond et al. 1995) and gastric medicine (Kuchipudi et al. 1990). However, Noonan and Moyers (1997) argue that the interventions described do not appear to reflect the spirit of MI despite reporting the use of MI skills, which in turn raises questions regarding whether the intervention delivered was really an MI style intervention.

Dunn et al. (2001) conducted a systematic review of brief interventions adapted from MI. They found that eleven out of fifteen AMI studies conducted in the substance abuse field showed significant effect sizes. The most effective studies in this field were those that incorporated MI into a treatment plan by conducting MI sessions with patients before they received usual care. They identified two studies that used AMIs to assist in smoking cessation activities, one of which produced a small but significant effect, and the other showed positive but non-significant effects. MI was found to be effective in HIV risk prevention by increasing condom use and reducing unprotected sex, but was not effective in changing injecting practices or risky sexual behaviour (Baker 1993, 1994). MI to encourage exercise uptake demonstrated small but positive effects. There were not enough studies in the fields of smoking, diet and exercise to generalise, but Dunn et al. (2001) concluded that findings from the drug and alcohol abuse field supported the use of MI as a method of brief intervention in this context.

Burke et al. (2002) conducted a quantitative and qualitative systematic review of twenty-six randomised controlled trials of AMIs. Eleven out of twelve studies showed support for MI in the treatment of alcohol problems. Two studies used MI

as a prelude to other treatments for alcohol abuse, and the remaining ten used MI as a stand alone treatment. There was evidence that MI was more effective in reducing patient drinking when it had been used as a forerunner to further treatment when compared to the treatment alone. Five out of six studies which used MI as a stand alone treatment showed positive effects in comparison to no intervention (Borsari and Carey 2000, Gentilello et al. 1999, Heather et al. 1996, Marlatt et al. 1998, Miller et al. 1993). Two studies that compared MI to a brief informational interview and written information about hazardous drinking favoured the use of MI in changing patients' drinking (Monti et al. 1999, Handmaker et al. 1999). Three studies which compared MI to other lengthier interventions found no significant difference between them (Miller et al. 1993, Heather et al. 1996, Project MATCH Research Group 1997), although it is important to note that all interventions studied resulted in positive changes in patients' drinking.

In the drug abuse field, two studies that compared MI as a forerunner to further treatment with didactic educational sessions showed results in favour of the use of MI (Martino et al. 2000, Saunders et al. 1995). Two studies which compared MI as a prelude to further treatment with more intensive interventions showed that MI was as efficacious as the methods to which it was compared (Booth et al. 1998, Schneider et al. 2000). One study that compared two sessions of MI with fourteen sessions of cognitive behavioural therapy as a stand-alone treatment for substance abuse showed that there were no significant differences between the two treatments, but both groups showed significant reductions in their marijuana use and dependence following both interventions (Stephens et al. 2000).

Just ten studies covered other health behaviours such as treatment adherence, smoking, HIV risk behaviours, diet and exercise, which made conclusions about the efficacy of AMIs to produce changes in these behaviours difficult (Burke et al. 2002: 240).

There were just two trials examining the use of MI in encouraging patients to reduce and/or quit smoking (Colby et al. 1998, Butler et al. 1999). Colby et al. (1998) observed no significant differences in smoking levels between those who received the AMI intervention compared to those who received brief advice, although they did find that those in the AMI group showed significantly decreased smoking dependence and smoked for one day less per week than those who received brief advice. Similarly, Butler et al. (1999) found no significant differences between those who received the MI based intervention and those who received usual care in terms of their abstinence rates, reduction of cigarettes smoked in the previous month and number of quit attempts, those who received the MI intervention progressed to a more advanced stage of change, made longer quit attempts than those in the control groups and smoked less cigarettes in the previous twenty-four hours than controls. Two studies into treatment adherence (Martino et al. 2000, Swanson et al. 1999) indicated that the incorporation of MI sessions as a prelude to treatment may enhance adherence to some aspects of treatment for psychiatric disorders. Two studies of HIV risk prevention (Baker et al. 1993, 1994) did not show significant differences between interventions based on MI and other briefer interventions. There was mixed evidence in the four studies which used AMIs to promote lifestyle changes in diet and exercise. Two studies showed little or no effect of MI on lifestyle changes in comparison to other methods (Harland et al. 1999, Mhurchu et al. 1998), but two

studies indicated that MI was an efficacious addition to a treatment programme (Smith et al. 1997, Woollard et al. 1995).

The evidence presented in these three reviews show that AMIs used in the treatment of drug and alcohol abuse problems appear to be efficacious. There is a paucity of research into other health behaviours, such as smoking, diet and exercise, which make conclusions about the efficacy of AMIs in promoting lifestyle change difficult to draw.

1.2.4 Issues in the evaluation of AMIs

One common factor which made the results of the studies included in the reviews above difficult to interpret was that of the internal validity. Many of the trials reported outcomes in terms of patient behaviour. However, most failed to report exactly *how* MI was delivered to patients, and provided little detail regarding their adaptation of the parent method. In some cases, this raised questions about whether it was considered fair to call the intervention used an adaptation of motivational interviewing (Noonan and Moyers, 1997: 15).

Little detail of the training programmes provided to practitioners was given in most of the studies included in the review. This makes it difficult to establish the effects of training duration, content and format on the skill level of practitioners. As Dunn et al. (2001: 1739) illustrate:

‘Only ten of these studies reported the training time provided to MI interventionists, which averaged fifteen hours. This duration of training is feasible in some settings,

but not in others. Unfortunately, we cannot tell from the reviewed studies what skill levels of MI were achieved by this amount of training. Studies are needed of MI training to better determine optimal training duration and skill levels.'

Noonan and Moyers (1997: 15) also highlight that *'A related question is how best to train clinicians in the MI style ... More research in this area is essential if MI is to be effectively implemented in the treatment community.'*

In addition to information regarding the training programme used to teach interventions to practitioners, there is a lack of objective assessment of practitioner skill level when delivering these interventions. For example, work by Miller and Mount (2001) found that practitioners' self-ratings of MI performance are often higher than those made by an independent assessor. This highlights the importance of the objective measurement of MI performance if reliable conclusions are to be made from its effect on patient outcomes.

Burke et al. (2002: 246) make a number of recommendations for future studies of AMIs, including a careful assessment of the treatment integrity and a clear description of the AMI procedures under study.

1.3 The measurement and acquisition of skills in behaviour change counselling

Reviews into lifestyle change interventions show that the most effective methods are those that aim to change patient behaviour, rather than simply imparting information on how to make changes. However, studies conducted in general practice in the UK have highlighted the importance of being able to integrate such interventions into normal everyday service delivery if such interventions are to be practical to implement. BCC has shown potential in serving this purpose. Reviews into AMIs draw attention to the lack of research conducted into the training process and evaluation of skill.

As a result of the scarce research conducted into the training of AMIs, and the potential of BCC to serve as an effective lifestyle intervention in clinical practice, the work included the first part of this thesis (study one, chapters two to five) will focus on measuring the skill acquisition of healthcare practitioners before and after training in BCC, to establish which skills are acquired, and how much change can be expected after training workshops. The aims of this study can be found in section 2.4, page 49.

The second part of this thesis (study two, chapters six to nine) will examine the training process, and evaluate whether different methods used in training have a differential effect on practitioner skill levels following training. The aims of this study can be found in section 6.5, page 165.

Part Two:

The Development of the Behaviour Change Counselling Index (BECCI)

2.0 Introduction

Before methods of training in BCC can be evaluated, a measure of practitioner skill in BCC needs to be developed. The rationale for this is discussed below.

2.1 The Importance of Measurement

The delivery of complex interventions such as BCC has often been evaluated by focussing on patient outcomes. Studies such as OXCHECK (OXCHECK Study Group, 1995) and the British Family Heart Study (Family Heart Study Group, 1994) reported their results in terms of impact on patient behaviour following the reception of a health check and patient centred consulting from a practice nurse (OXCHECK Study Group 1995: 1100, Family Heart Study Group 1994: 313-314). However, very little information was given regarding the training of the nurses and the type of intervention that was delivered, which draws into question the nurses' ability to deliver the intervention following training, as well as what they actually did deliver within the consultation.

The importance of the measurement of practitioner skills in interventions such as BCC should not be underestimated. Trials of various medications within healthcare are subject to tight controls, to ensure that eligible patients in the intervention group are exposed to a controlled dose of a specific medication previously demonstrated to be active, and to ensure that any differences within the intervention group are not as a result of differing levels of medication. The same strategy should be applied to

interpersonal interventions like BCC, as arguably different levels of BCC could potentially result in different levels of behaviour change in patients.

This has been highlighted in early studies which evaluated the patient centred method. Reviews of this topic (Mead and Bower 2002, Lewin et al. 2001) have highlighted problems in the actual definition of the patient centred ‘construct’ (a ‘mini-theory’ to explain the relationship between behaviours and/or attitudes [Streiner and Norman 1995:151]), which has in turn led to problems in relating patient outcomes with this particular method of consulting. Mead and Bower (2002: 60) argue that:

‘One way of improving the interpretability of future studies would be for the authors to explicitly link their measures of the consultation to one of the two multi-dimensional models of patient centred care that have been proposed.’

The use of these measures however, should be interpreted with caution, as Lewin et al. (2001: 16) explain:

‘It is important to note that none of the included studies used measures explicitly designed to measure patient centredness of the consultation.....This area needs further work in order to develop valid, reliable and appropriate tools to assess the effects of interventions to promote patient centred care on the consultation process.’

Lessons can be learned from the mistakes made by studies of the patient-centred method. Failure to clearly define the ‘construct’ and provide a valid, reliable

measure of assessment will make the evaluation of complex interventions difficult. If the amount of training, definition of the skills taught, and practitioner ability to deliver the intervention is not accounted for, this will limit the generalisability and reproducibility of studies in BCC.

The importance of the measurement of practitioner training and skill has been highlighted by two reviews of controlled trials of AMIs (Dunn et al. 2001; Burke et al. 2002). Dunn et al. (2001) found that the evaluation of the efficacy of AMIs was difficult due to the lack of information regarding the training and skill level of practitioners who delivered the intervention. Of twenty-nine studies, only ten reported the number of hours training given, eleven reported that training was provided but gave no indication of how much training was given, and eight did not mention training at all. No studies mentioned practitioner skill level in delivering AMIs, and how much training produced how much skill in using AMIs. Each AMI was different to the next, making it difficult to compare like with like, leading Dunn et al (2001: 1740) to recommend the development of a standardised coding system, and a description of the intervention taught, as it was difficult to establish whether those practitioners who delivered the interventions incorporated the spirit and principles of MI, or took a technique-driven approach to delivery.

In response to this paper, Rollnick (2001) was in agreement with Dunn et al. (2001), stating that there was a clear lack of evidence with regard to exactly what intervention was used with patients. He recommended that future studies of AMIs should pay great attention to what interventions the practitioners are trained to use, and what actually happens within the consultations delivered as part of controlled

trials of AMIs. He also argued that the training of practitioners with the view of changing their consulting behaviour should be given the same prominence as patient outcomes following the delivery of the intervention. Miller (2001) also commented on the work conducted by Dunn et al. (2001), highlighting the fact that trials that simply claim to have monitored the performance of practitioners do not necessarily mean that practitioners were practicing the skills and spirit of motivational interviewing. He argued that practitioner self-report of using MI skills is not reliable (Miller and Mount 2001), and that the direct monitoring of clinical practice is the gold standard for assessing the skills used as part of a trial.

In addition to the review conducted by Dunn et al. (2001), Burke et al. (2002: 242-43) also highlighted a number of discrepancies in trials of AMIs. They specifically refer to the lack of adequate specification of the intervention used, in that there is often no detail regarding the amount or nature of the training delivered, the background and credentials of the intervention providers, and the nature of the intervention delivered. They also state that there has been no indication of how the intervention was delivered to patients.

It is clear that previous studies of AMIs have often failed to document the training of practitioners, and have provided no reliable measure of the skills that practitioners have been trained to deliver. This in turn makes it difficult to compare studies that have used AMIs as interventions, and raises questions as to whether the AMIs delivered bore any resemblance to the parent method from which they were derived. This has serious implications for studies that report patient outcomes following the delivery of an AMI, because claiming that these interventions resulted in positive,

negative or no behaviour changes on the part of the patient, without any detail on the training and delivery of the AMI could lead to incorrect conclusions about the use of motivational interviewing with patients.

The lack of detail about the AMIs used in the studies reviewed by Burke et al. (2002) and Dunn et al. (2001) reflects the fact that AMIs are *complex interventions*, which the Medical Research Council (MRC) (2000:3) define as:

‘...Interventions ... built up from a number of components, which may act both independently and inter-dependently. The components usually include behaviours, parameters of behaviours (e.g. frequency, timing), and methods of organising and delivering those behaviours (e.g. type(s) of practitioner, setting and location). It is not easy precisely to define the “active ingredients” of a complex intervention.’

Trials of complex interventions *‘require much more preparation and training of the practitioners involved than in conventional trials, to ensure that all consistently provide as close to the same intervention as possible’* (MRC 2000: 10). The MRC recommend the monitoring and assessment by an independent reviewer to evaluate the quality and uniformity of the intervention delivered, and also recommend the use of appropriate outcome measures to assess change in professional behaviour following training (MRC 2000: 11-16), to guard against the inconsistencies such as those found by Dunn et al. (2001) and Burke et al. (2002) above.

It is clear from the evidence presented above, that the use of a valid, reliable measure that evaluates practitioner behaviour change following training in BCC would be

highly desirable when investigating the best way to train practitioners. Such a measure would not only be able to give an indication of the level of BCC skill the practitioner was trained to deliver, but would also provide an indication of which training methods led to the greatest acquisition of skills in BCC.

2.2 Existing measures

Before designing an instrument for the purpose of measuring BCC, it is important to ensure that there is not a suitable tool currently in existence (Boon and Stewart 1998: 172).

There are a great number of instruments available for measuring communication between patients and healthcare providers. Some are used purely as educational assessment tools (Stillman 1977; Kurtz and Silverman, 1996), whereas others are research tools (Roter 1995, Bales 1950, Bensing 1991). Many of the instruments are completed by patients or simulated patients (Cohen et al. 1996) although most are completed by researchers, teachers or other evaluation personnel (Burchard and Rowland-Morin 1990; Callahan and Bertakis 1991). Each instrument specifies whether it is to be scored using videotaped, audio data, or in real time (scored by an observer as the consultation is carried out).

Systematic reviews of measures of communication between healthcare practitioners and their patients (Boon and Stewart, 1998; Elwyn et al. 2001) have revealed that existing instruments have often not been adequately validated and tested for reliability. Mead and Bower (2000) highlighted low concurrent validity between three instruments which claimed to be measuring 'patient-centredness', showing that

caution must be exercised when choosing an outcome measure as different instruments can measure different aspects of the same construct, while giving the impression that they are different instruments which measure one common construct.

Although there are a number of measures available to assess communication within consultations, there are not any that are specific to the skills involved in BCC. Several instruments measure related concepts, such as patient centredness (Henbest and Stewart 1989), and may include items which assess one particular behaviour that occurs in BCC (such as setting an agenda). However, to reliably measure BCC, an inventory of microskills central to the construct of BCC, which reflect spirit, as well as techniques, would be required.

2.2.1 Existing measures relevant to the BCC construct

There are two instruments available that are closely related to the BCC construct (see section 1.2, page 20). The first is the Motivational Interviewing Skill Code (MISC), developed by Miller (2000). This is a research tool that quantifies the motivational interviewing consistent behaviours of both the practitioner and patient. It scores audio-recorded data and requires three passes. The first pass involves global ratings for the practitioner (acceptance, egalitarianism, empathy, genuineness, warmth and spirit), the patient (affect, co-operation, disclosure and engagement) and the relationship between them (collaboration and benefit) on seven-point likert scales. The second pass is conducted to provide actual counts of MI consistent and inconsistent behaviours. The third pass requires the use of two stop watches to measure the amount of talk time occupied by the practitioner and the patient respectively. The MISC was reported to be a practical, valid tool that provided detail

as to whether MI had actually taken place within consultations in a pilot randomised controlled trial (Tappin et al. 2000).

The items on the MISC do reflect several behaviours that occur within the process of BCC. The MISC provides a detailed account of what has happened in the consultation, but there are a number of weaknesses that make it unsuitable for use when assessing consultations where the practitioner is conducting BCC following training. Firstly, scoring consultations is a lengthy process, and three passes would often not be practical or possible for trainers and/or researchers in the training of BCC to conduct, as there are likely to be several consultations from each training workshop to be coded within a relatively short space of time. The MISC manual suggests that for BCC consultations, this could be reduced to one pass (Brief MISC), with the rationale being that BCC is usually conducted in shorter consultations than MI. However, coding three sections concurrently has the potential to reduce rater reliability, because trying to focus on three separate measurements at the same time could possibly lead to errors while trying to mark behaviour counts, code global ratings and operate a stop-watch at the same time. Shortening the MISC to simply include the global ratings would not be suitable for studies of training, as information regarding the acquisition of the microskills of BCC would not be available. Shortening MISC to include the behaviour counts only is also impractical, as BCC consultations are generally much shorter than MI consultations (especially during training), the counts of specific behaviours would appear to be relatively low. It has also been argued that the behaviour counts on MISC only show that the behaviour occurred, and do not give an indication of the how well those actions have been conducted (Boycott, 2001). However, the most fundamental reason why a specific

instrument to score a BCC consultation is desirable, is that BCC has fewer goals and takes a different, somewhat task orientated approach in comparison to MI (see section 1.2.2, page 24), and this needs to be reflected in its measurement.

The second instrument that includes items relevant to BCC is the Behaviour Change Skills Rating Scale or 'BCSRS' (Bonner, in preparation, see appendix I). This instrument is currently in development, and has the aim of assessing dietetics students' communication skills within a consultation (Gillie Bonner 2002, personal communication). It is divided into three sections – the first assesses the overall structure of the consultation, the second scores the use of specific communication skills within the consultation, and the third focuses on the use of specific therapeutic approaches, including motivational interviewing and cognitive behaviour therapy.

There is one item within the structure section that is a core feature of BCC, which deals with agenda setting. The manual (appendix I) states that *'both the patient and dietitian have the opportunity to suggest agenda items'*, which is BCC consistent behaviour. Within the interpersonal skills section, all items could be argued to be reflective of BCC consistent practice, with the exclusion of the provision of frequent positive feedback. However, these behaviours are common to several constructs (such as patient centred consulting and generic counselling skills), rather than being specific to BCC. Within the specific techniques section, there are three items that assess 'motivational techniques', which cover skills and strategies common to MI and BCC (assessing readiness, investigating pros and cons and rolling with resistance). However, these are three strategies that *could* be used within a BCC consultation – failure to employ these strategies does not mean that a practitioner is

not delivering BCC, questioning the validity of assessing practitioner competence in BCC simply by looking at the use of these strategies.

The BCSRS is still currently in development, and although it appears to be reflective of the context within which it will be used, it has not yet been tested for validity and reliability. To accurately measure the acquisition of skill in BCC, more items dealing with specific BCC consistent behaviours would be required, rather than assessing strategies which may or may not be used within a consultation about behaviour change. Therefore, adaptation of the BCSRS to generalise to other healthcare contexts would not be satisfactory to measure BCC, as the items are not specific enough to the BCC construct.

In summary, there are no instruments currently in existence that specifically measure the skills relevant to BCC. A number of general communication assessment tools are available, and some have skills in common with BCC (such as asking open questions), but they are essentially measuring other related constructs, such as patient-centredness (Stewart et al. 1995). The MISC and BCSRS contain features closely related to BCC, but both lack specificity to the BCC construct.

2.3 A Measure of Practitioner Skill in BCC – Pilot Work

As part of her MSc thesis, Boycott (2001) identified the need for a measure of BCC. She argues *'Although it has been postulated that motivational interviewing and its adaptations may have been developed from elaborative inductive models, experiential practice, common sense and hunches, there is now enough empirical*

literature to render it normative. The crucial point for the new BCC framework is how well a checklist can explain its important phenomena. (Boycott 2001: 20).

Boycott (2001) undertook a number of steps to generate provisional items. She undertook a literature search and produced thirty-eight possible items that described the skills used within BCC, which were then circulated to twelve experts in the field of BCC for comment.

The items were refined based on their comments, and a list of twenty items was further subjected to tests of validity and reliability. Boycott (2001) listened to eight model video consultations demonstrating BCC consistent consultations and BCC inconsistent consultations, eight BCC consultations conducted before and after training, and four audio taped thirty minute consultations between midwives and pregnant smokers (Tappin et al. 2000). Each time a behaviour described by an item occurred, the item was ticked. Only items with three ticks or more were retained, leaving fifteen items, which she combined with dichotomous and continuous response formats.

Some initial tests of discriminant, content and construct validity showed that the provisional items could discriminate between a consultation that was highly consistent with BCC, and one which was inconsistent with BCC. Initial tests of internal consistency showed a good relationship between items (Cronbach's Alpha $\alpha = 0.8$), and modest inter-rater reliability between three raters (Cohen's Kappa = 0.6). However, when assessing consultations before and after training, the standardised

response mean demonstrated a low value of just 0.15, drawing the sensitivity of the items into question.

There were a number of methodological flaws in Boycott's work. Firstly, raters were told which model consultations were 'good' and 'bad' examples of BCC before they were scored, which could in turn have lead to rater bias. This is further implied by the relatively low score on the standardised response mean from before to after training.

Secondly, questions can be raised about the datasets used in the development of the provisional items. The data used in the development of the provisional items featured consultations before and after training was collected before and after a twenty-minute training seminar in BCC. Is twenty minutes of training a reasonable amount of time after which to expect a change in practitioner skill in BCC? In addition to this, statistics such as Cohen's Kappa and Cronbach's Alpha were calculated on relatively small numbers of ratings, which draws in to question how reliable the items are in their current state. The checklist had been compared against a minimal number of consultations from a training workshop, even though this was to be the major focal point of use for the checklist. Again, this calls in to question whether it was right for tests of reliability and internal consistency to be conducted on model video consultations of 'good' and 'bad' BCC consultations.

Boycott (2001) has provided a good starting point for the development of an instrument to assess practitioner skill in BCC, with a list of provisional items that appear to have a good relationship with the context that they are hoped to measure.

However, those items have not been subjected to enough rigorous testing of validity and reliability, and it is likely that difficulties would be encountered when trying to provide an accurate evaluation of practitioner competence in delivering BCC.

The reviews by Dunn et al. (2001) and Burke et al. (2002) illustrate how important it is to be able to measure skill acquisition and training when evaluating the efficacy of complex interventions such as BCC. The need for an instrument that can provide a rating of practitioner skill in BCC following training is paramount in helping to document the skill acquisition process. There are several instruments available that measure communication, and two that are closely related to BCC. As pilot work on a BCC specific measure had already been produced by Boycott, this would provide a good initial framework for a study to develop a BCC specific measure.

2.4 Aims of the Study

The aim of this study was to develop the provisional items generated by Boycott (2001) (appendix I), into the Behaviour Change Counselling Index (BECCI), a scale that could provide a valid, reliable assessment of practitioner skill in BCC. The focal point was to be on practitioner behaviour, rather than on BCC as a process, and this was to be measured based on the overall strength of those behaviours, rather than specific counts of BCC consistent actions. The rationale for this was that the new Behaviour Change Counselling Index (BECCI) was to be used primarily as a tool for trainers, or researchers studying the training of healthcare practitioners in BCC. Unlike the MISC, this scale needed to be brief, and easy for trainers to complete, while still accurately measuring skill in BCC. It was considered that the majority of validation work should be performed on consultations using *simulated* patients, as

these are most commonly used during training (Hulsman et al. 1999), and were frequently used in training courses run by the Communication Skills Unit, Cardiff University.

As well as being valid and reliable for its purpose, it was important from both a training and research perspective that BECCI was sensitive to changes in BCC skill following training. Therefore, two workshops in BCC (of 20 participants per workshop) were delivered to train practitioners and collect recordings of simulated consultations (before and after training) to validate BECCI and investigate its responsiveness. In addition to this, data from a BCC training course (which was taught in four one hour sessions over six weeks), and some real consultations (further detail regarding the decision to include real consultations can be found in section 3.1.3, page 60) were utilised to add depth to the development process.

3.0 Methods

The development of BECCI involved the investigation of its validity, reliability and responsiveness. The repetition of the internal consistency analyses were necessary following item amendments. An overview of the development process can be viewed in figure 3.1.

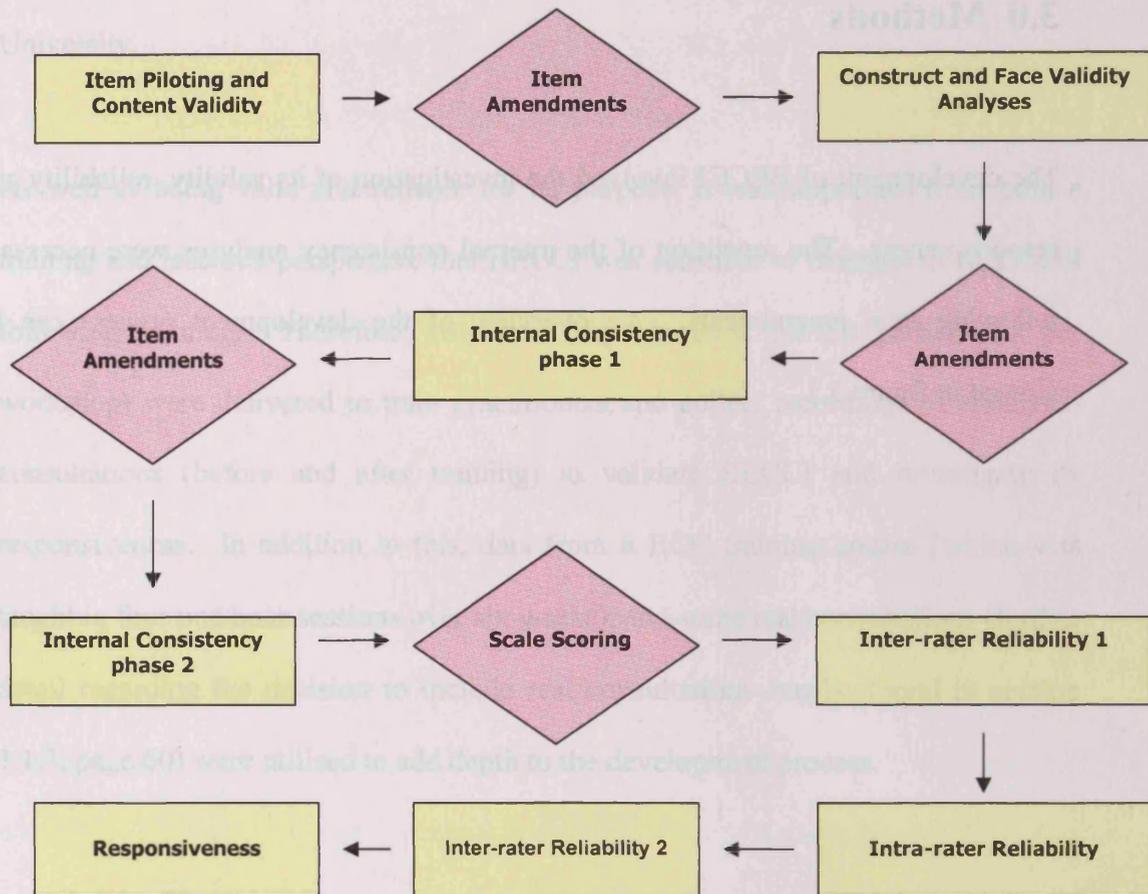


Figure 3.1: The BECCI development process

The yellow boxes show analyses conducted as part of the development process. The pink diamonds show stages where amendments were made to BECCI's items or scoring system. The provisional items (Boycott, 2001) were piloted, and their content validity assessed. Amendments were made, creating BECCI version 1. Construct and face validity analyses were conducted, and changes were made to the items creating BECCI version 2. The scoring format was also modified, creating BECCI version 3. Internal consistency tests were performed and items were changed based on the findings of these analyses (BECCI version 4), which resulted in the final version of BECCI (appendix I). The internal consistency tests were then re-executed, and the scale scoring system established. BECCI was then subjected to inter-rater and intra-rater reliability analyses, and was assessed for responsiveness.

3.1 Data Used in the Development of BECCI

Several datasets were used to develop BECCI. These are summarised in figure 3.2.

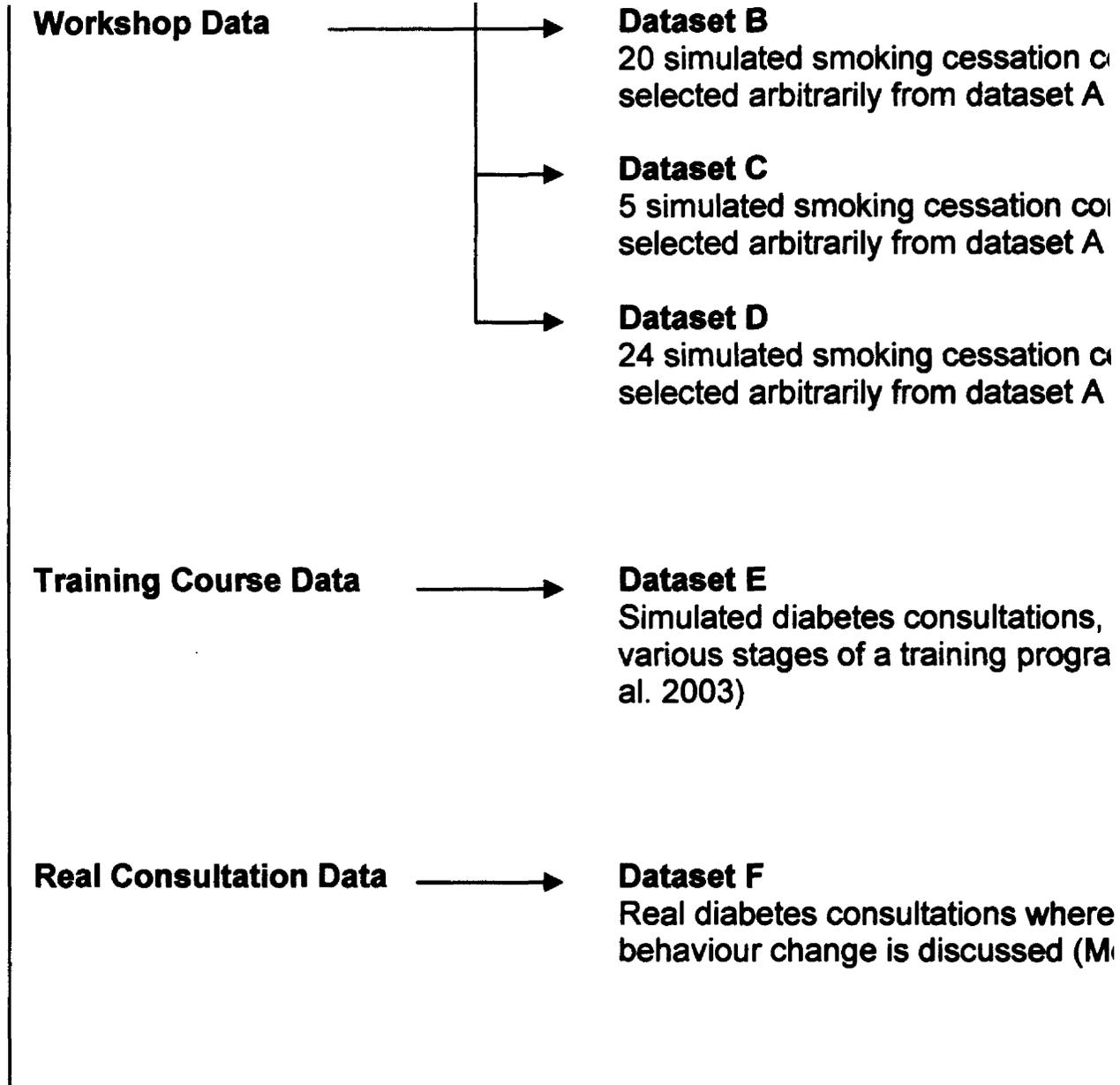


Figure 3.2: Datasets used in the development of BECCI

Data were collected from three sources – two workshops in BCC, a training course and from real practice in diabetes clinics. As well as forming an entire dataset, workshop data were subdivided into smaller datasets (B, C and D) for use at different stages of the development process of BECCI. This is because a smaller number of consultations (which were discussed in great detail in relation to the existing BECCI items) were required for the item piloting and content validity analyses, and an equal number was needed to match the number of consultations from the training course for the intra-rater reliability analyses.

3.1.1 Workshop Data

This data was collected from 37 participants across two two-day workshops in BCC in October 2001. These workshops were run in order to train practitioners and to collect data with which to develop BECCI, specifically with the internal consistency and responsiveness analyses in mind (dataset A – figure 3.2, page 54). Data were collected immediately before and at the end of a training workshop for two reasons. Firstly, to assess the internal consistency of the items, data needed to be as stable as possible, as high acquisition of some skills but not others can lead to unreliable item-total correlations. If the data were collected, for example, after two hours of training, this could potentially lead to high scores on one or two items, but low scores on the others, leading to inconsistency. It was felt therefore that before and after the training workshop were the most stable points at which to collect such data. The second reason for collecting data before and at the end of the training workshop was to investigate the responsiveness of BECCI (or how effective BECCI is at detecting changes in BCC consistent behaviour).

In addition to the analyses mentioned above, it was also necessary to assess the inter-rater reliability of BECCI. It was important to use different scenarios and various stages of training for this exercise to see if this affected the reliability. A sample of twenty-four simulated diabetes consultations was collected for this purpose (dataset E – figure 3.2, page 54), and this was matched by dataset D, which provided an equal number of simulated smoking cessation consultations. This would provide a comparison of the reliability of scores between raters depending on the type of BCC consultation listened to.

As well as the reliability of BECCI, it was important to assess the validity and ensure that BECCI was actually measuring practitioner skill in BCC, and not other related phenomena such as patient centredness (Stewart et al. 1995) or generic counselling skills (Burnard, 1999). Therefore, another two data subsets (datasets B and C – figure 3.2, page 54) were selected arbitrarily from dataset A (figure 3.2, page 54), for the purpose of assessing the content validity of BECCI.

3.1.1.1 Consent of Research Participants

As participants arrived to register for the workshops, they were given information about the development of BECCI (appendix II), which they were asked to read. Following this, they were asked for permission to make audio recordings of their consultations with a simulated patient both before and following the two-day training workshop. It was emphasised verbally that participants were not obliged to take part in the study, they were free to withdraw at any time. Participants were informed that copies of their personal BECCI ratings would be sent to them when the scale had been developed (should they wish to receive this information). Participants gave permission to audio record their consultations and use them in the development of BECCI by signing a consent form (appendix II).

Of the original forty participants who gave consent, one later withdrew from the study, and a further two were eliminated due to non-attendance at the second part of the workshop (leaving thirty-seven participants in the study).

3.1.1.2 Collection of the Workshop Data

It was believed that mainly simulated patient data should be used in the development of BECCI, as they are most commonly used during training. Therefore ten simulated patients (five per workshop) were employed for use throughout the two workshops. All actors received a written briefing of the case scenario about an ambivalent smoker (appendix II), which was to be recorded for use in the development of BECCI. Prior to the start of the workshop, a full briefing meeting was held with the actors to deal with any queries they had about the case and the procedure. Actors were instructed to play the same case before and at the end of the training workshop.

Workshop participants who consented to take part in the study were instructed to see the same actor, playing the same case, before and after training. They were given a written scenario (appendix II) containing information regarding the case and the task.

All participants were given an identification number in order to match up the recordings before and after training, and to identify consultations from any participants who later withdrew from the study, or wanted to receive copies of their BECCI ratings. A list matching participants' names and addresses to their identification numbers was kept separately to the recordings, and was only consulted to identify the identification numbers of participants who wanted to withdraw from the study, and to allocate BECCI ratings to the correct participant for those participants who wanted to receive their scores after the scale had been developed.

Before the workshop, audio recordings of the consultations were made using Sony minidisk recorders, and Sony tape recorders. Participants were put into groups of five to see actors, to ensure that the same participants saw the same actors following training as before. The recording equipment was started one minute before the first group of participants conducted their consultations, and was left running until the final group of participants had completed their consultations. Participants were called in to one large room to see the actors in their groups of five. Each actor was separated into a booth by room dividers, to ensure that the recording of the consultation was audible. Each participant consulted with the simulated patient for eight minutes – they were alerted that their time was coming to an end by a knock on the door at seven minutes. They were asked to leave their consultations when eight minutes had elapsed. This procedure was repeated at the end of the workshop.

3.1.2 Training Course Data

As not all courses in BCC are delivered in the form of workshops (as in section 3.1.1), it was important to use data at different stages of training (rather than simply before and after training) when assessing the reliability of BECCI, because consultations conducted with less training could potentially be more difficult to score than those conducted before and after training, where extreme scores on BECCI would be more likely. Assessing the reliability of BECCI when scoring different case scenarios would reveal if BECCI could reliably detect BCC skills in consultations dealing with health behaviours other than smoking. Data was collected from a training course in BCC run for six specialist diabetes nurses (dataset E – figure 3.2, page 54) and was used to assess the inter-rater reliability of BECCI (along with dataset D). These scenarios (appendix II) involved diabetic patients with

multiple lifestyle factors that they needed to change (with regard to diet and exercise). This also provided an evaluation of the nurses' skill competence in delivering BCC to simulated patients (Lane et al. 2003).

3.1.2.1 Consent of Research Participants

The training course formed part of another study (Lane et al. 2003), which was evaluating the effectiveness of this BCC training course for specialist diabetes nurses. It was hoped that BECCI would be able to provide an overview of changes in skill during different stages of the training course. Permission to use the ratings from the participants in the development of BECCI was granted by the principal investigator (S. Johnson) in the design phase of the study, in return for practitioner scores on BECCI which would assist with the evaluation process. Participants were offered copies of their BECCI scores at the end of the course.

3.1.2.2 Collection of the Training Course Data

This training course followed a context-bound training format (Rollnick et al. 2002b). Context-bound communication skills training is a process where simulated patients are sent into the practitioners' clinical practice. The consultation is then recorded, and these consultations are used as a focus during the following training seminar. The course took place over a period of 6 weeks, and involved an initial briefing meeting, two training seminars, and a final briefing meeting.

Data collection took place in the time between briefing meetings and training seminars, when the practitioners were visited by simulated patients. Initially, a twenty-minute briefing meeting was held with the nurses, where they helped to

construct two cases that they would expect to see in their everyday clinical practice. Two simulated consultations were created using this information (appendix II). Two actors, with experience of playing diabetes patients, were selected from a pool used in the routine training of medical students. Scenarios were sent to them two weeks before they were required to play each case. The actors visited each participant in their usual clinical setting in between training workshops where they played the case constructed by the nurses in the briefing meeting. Consultations were no longer than fifteen minutes in length. Scenario One was performed twice – once before training seminar one, and once following training seminar one. Scenario Two was also performed twice – once before training seminar two, and once following training seminar two. These consultations were recorded using a Sony minidisk player, operated by the simulated patient.

3.1.3 Real Consultation Data

The collection of a sample of real consultations was viewed as highly desirable, as many trainers and assessment bodies (such as the Royal College of General Practitioners in the UK) are choosing to use real rather than simulated consultations as an assessment of communication skills in practice, as some recent research has suggested them to be a more reliable reflection of what happens in everyday practice (Pieters et al. 1994). In addition to this, the reliability of scoring real consultations using BECCI would be of great value to the research community as this would be able to give an overview of BCC skills performance in everyday practice, as well as competence in BCC during training.

To this end, a collaboration was established with a UK diabetes researcher with an interest in the use of the emerging BECCI scale to examine her own data (Moran, 2003), to investigate the inter-rater reliability of BECCI when scoring real consultations (Dataset F – figure 3.2, page 54).

3.1.3.1 Consent of Research Participants

Participants were asked to read a patient information sheet about the study (appendix II), and if they indicated that they would like to participate, they were asked to sign a consent form (appendix II). Practitioners who took part in the study were also asked to sign a consent form (appendix II).

Permission to use this data collaboratively was granted by the principal investigator (Moran 2003) and by the Leeds East Local Research Ethics Committee (appendix II).

3.1.3.2 Collection of the Real Consultation Data

Dataset six contained twenty consultations (nineteen consultations conducted by doctors, one conducted by a nurse) with real diabetic patients, where the subject of behaviour change was raised within the consultation. The consultations of the patients who agreed to participate were audio-recorded using a Sony tape recorder.

3.2 Analyses

Following data collection, analyses of the validity, reliability and responsiveness of BECCI were conducted. The steps of analysis undertaken (figure 3.1, page 52) are discussed in turn below.

3.2.1 Validity

'Validating a scale is really a process whereby we determine the degree of confidence we can place on inferences we make about people based on their scores on that scale.'

Streiner and Norman (1995: 146)

A measure can potentially be highly reliable, but bear little or no resemblance to the real world context that it is designed to assess (Streiner and Norman, 1995: 144). An example of this has been shown by the work of Moran et al. (2001), who found that a measure obtained the highest levels of reliability when it was reduced to simply two items per domain, but this measure did not provide a good overall picture of what the instrument was trying to measure.

Therefore, the provisional items for BECCI (Boycott 2001) were initially subjected to a number of tests to investigate their content, construct and face validity. By taking this robust approach to validity from the outset, this increased the likelihood that the items were guided by the knowledge of the construct, in turn making them more reflective of the concept they are designed to measure (Murphy and Davidshofer 1998:166).

3.2.1.1 Item Piloting and Content Validity

The *content validity* (the notion that an instrument is measuring the attributes that should be measured [Murphy and Davidshofer 1998: 148]) of BECCI was evaluated in order to assess whether the items were indeed representative of BCC. To both pilot the provisional items (appendix I) generated and selected by Boycott (2001), and to assess their content validity, the items were used to independently score the 20 simulated consultations in dataset B (figure 3.2, page 54) by two researchers with academic knowledge of BCC (the author of this thesis and a colleague). The researchers consulted the existing manual (appendix I) for guidance in scoring the items. Following each consultation, a structured discussion was held by the researchers, focusing on the following questions:

1. What did the practitioner do that was practicing BCC?
2. What did the practitioner do that was not practicing BCC?
3. Are the items reflective of the spirit and microskills of BCC used within this consultation?
4. Are there any items that could be improved to better reflect the spirit and microskills of BCC within this consultation?
5. How well does the manual aid the process of scoring?

Following the scoring process and discussions about items, changes were made to the items to be included on BECCI (version one – figure 4.1, page 78). Following these changes, the new items were used to score dataset C (figure 3.2, page 54) to assess how reflective they were of the consultations rated. The manual was also revised to

reflect the changes to the items, and to improve the instructions on the completion of items (appendix I).

3.2.1.2 Construct Validity

The *construct validity* (the confirmation of links between specific behaviours and abstract constructs) of BECCI (version 1 - figure 4.1, page 78) was assessed using a *construct explication technique* (Murphy and Davidshofer 1998: 157). This process involves investigating the relationship between specific behaviours and abstract constructs. BCC is related to four other main constructs – *patient centredness, brief advice, generic counselling skills in healthcare, and motivational interviewing*.

Patient centredness is a way of consulting with a patient that is concordant with patients' values, needs and preferences, which allows the patient to take an active role in decisions regarding their health and care. *Brief advice* is a way of imparting expert knowledge directed at a patient problem, that is sensitive to the patient's information needs. *Generic counselling skills in healthcare* describes the use of microskills often used in counselling contexts, such as the use of reflective listening and summaries, within healthcare contexts. They are generally used to understand the patient, and to help them with specific problems rather than to focus on behaviour change. *Motivational interviewing* is described in section 1.2.1.

It was important to establish that the items on BECCI (version one – figure 4.1, page 78) were measuring BCC and not these other constructs.

Following a literature review of the main constructs related to BCC (which generated a list of the principal features of those constructs), the items on BECCI (version one - figure 4.1, page 78) were cross-checked against these constructs. Notes were made about how the items did and did not relate to each of those constructs. Items were then given a score ranging from zero to three (a score of zero being not at all related to BCC, a score of three being centrally related to BCC) for each of those constructs. Any items that did not receive a score of three for the BCC construct were omitted or re-worded.

BECCI version one (figure 4.1, page 78) was then circulated to six collaborating BCC experts, who have defined the main components of BCC (Rollnick et al, 2002), to gain a consensus as to whether the items were coherent with the construct of BCC. These experts were asked to rate the importance of these items in relation to BCC on a scale from zero to sixteen, which would demonstrate sensitivity between items and would indicate if the items should be weighted in the scoring process to better reflect BCC (Professor Ian Russell, 2001, personal communication). They were also invited to comment on the items.

3.2.1.3 Face Validity

Finally, the face validity of BECCI was assessed. Face validity refers to how practical and realistic the measure is for the rater to complete (Murphy and Davidshofer 1998: 155). The following questions were asked in relation to the face validity of the items on the BECCI version two (figure 4.2, page 87):

1. Do the items on BECCI display a good reflection of practitioner skill in BCC?
2. Is BECCI in a format that is easy to understand in both research and training contexts?

Each question was considered in turn, and amendments were made to BECCI that made the items more reflective of BCC, and the format easier for raters to complete (BECCI version three, figure 4.3, page 90).

3.2.2 Reliability

'The concept of reliability is a fundamental way to reflect the amount of error, both random and systematic, inherent in any measurement.'

Streiner and Norman (1995: 104)

Now that the changes had been made to the items resulting in BECCI version three (figure 4.3, page 90) which was now considered valid for use, they were subjected to a number of tests of reliability, to establish if they were consistently measuring the features of BCC.

3.2.2.1 Internal Consistency

Internal consistency refers to the items on a measure displaying *homogeneity*, or tapping different aspects of the same trait from different angles to a similar extent (Streiner and Norman 1995: 60-61). The items on a measure should not be too highly correlated with each other, as this would indicate that these items measuring the same behaviour, which would in turn add little value to the scale total. Equally, a low correlation between items would indicate that an item may be measuring a different construct to the others. The items on BECCI version three were therefore examined to establish whether the items were moderately correlated with each other, and that each item correlated with the total scale score (Streiner and Norman 1995: 60).

BECCI version three (figure 4.3, page 90) was tested for internal consistency against dataset A. The consultations were split into two groups for analysis – baseline (before training) and final (after training), to ensure that the data was not distorted by intervention effects. Items were separated into ten ‘core’ and three ‘non-core’ items for analysis. Core items were those items that had to be completed for every consultation. Non-core items were those items that could be scored as ‘not applicable’, reflecting those elements of BCC that do not take place in all consultations, but that it is necessary to assess when they do occur. As non-core items were not scored in every consultation, they were analysed separately from the core items.

Core items were assessed by calculating the inter-item correlations, item-total correlations, Cronbach’s Alpha (Cronbach 1951), Cronbach’s Alpha when item

deleted and a single factor solution, using the software package SPSS version 11 (SPSS Inc. 2001). Cronbach's Alpha is a statistic that tests the extent to which a set of items can be considered to be measuring a common construct. It yields a value between zero and one, and good reliability is reflected by an alpha coefficient of between 0.7 and 0.9. Inter-item and item-total correlations should display several values of 0.2 and above – failure to do so may indicate that the items are not measuring a common construct. As there were not enough cases for a full *principal components analysis* (a process that examines patterns of correlations, and the groups together the items that explain most of the variation in scores), a single factor solution, where one *factor* (a common component) is extracted for analysis, was performed. This would further highlight whether the items on BECCI were reliably measuring a common construct.

Non-core items were analysed using descriptive statistics (overall scale mean, item means and inter-item correlations) when the non-core item was 'applicable', 'applicable but removed' and 'not applicable'. Removing the item when it was applicable would show any differences in the descriptive statistics, which could be reflective of that item not measuring consistently (scoring too high or too low) in relation to the other items. If there were major differences in the scores on a non-core item if it was 'applicable' compared to when it was 'not applicable', this could possibly demonstrate that this item should be a core item, causing it to score inconsistently.

Changes were made to the items based on these results, providing the changes did not adversely affect the validity, and the final version of BECCI (figure 4.4, page

102) was created. Following this initial analysis, the internal consistency tests were re-run on the amended scale, using the methods outlined above.

3.2.2.2 Scale Scoring

Following internal consistency testing, a reliable scoring system was to be developed, based on the findings of the internal consistency tests.

3.2.2.3 Inter-rater Reliability Exercise One

Inter-rater reliability refers to the consistency of scoring between raters. Two raters used BECCI version four (figure 4.4, page 102) to score datasets D and E (figure 3.2, page 54) independently. One rater was the author of this thesis, who has a good academic understanding of BCC, features that would be expected of any person who wanted to use BECCI in a research context. The other rater was an administrator with an interest in BCC, and was selected to test the suggested preparation exercises mentioned in the BECCI manual (appendix I) for those who did not have academic experience of BCC (as many trainers may not have).

Each consultation had ‘one pass’, meaning it was listened to just once before it was scored. Raters were permitted to consult the manual during the scoring period. Both researchers were blinded to the stage of training at which each recording had been made, and their results were concealed from each other to avoid bias.

Reliability was estimated by calculating an intraclass correlation coefficient or *ICC* (Streiner and Norman 1995: 111), using SPSS version 11 (SPSS Inc. 2001) to

calculate the variance components, using analysis of variance. The following formula was used to calculate the ICC:

$$\text{ICC} = \frac{\text{Variance (consultation)}}{\text{Variance (consultation) + Variance (error)}}$$

An ICC would result in a value between zero and one, with a score of 1.0 being perfect agreement and zero being no agreement whatsoever.

The data were analysed within their respective datasets to establish whether the type of BCC consultation had an effect on the inter-rater reliability of BECCI version four (figure 4.4, page 102).

3.2.2.4 Intra-Rater Reliability

Intra-rater reliability refers to the consistency of scoring within raters across time. To this end, the procedure described in section 3.2.2.3 was repeated by the same researchers ten weeks later. Again, data sets D and E (figure 3.2, page 54) were used and results were analysed using ICCs (Streiner and Norman 1995:111).

3.2.2.5 Inter-rater Reliability Exercise Two

Although inter-rater reliability had been tested between two raters who worked within the same department and had a good fundamental knowledge of BCC, it was important to test inter-rater reliability with another individual who was working in a different location, and had not received training in BCC (other than the

recommended readings/viewings highlighted in the BECCI user manual). There was also the opportunity to test the inter-rater reliability for rating real consultations using BECCI version four (figure 4.4, page 102).

Dataset F (figure 3.2, page 54) was scored independently by three researchers using BECCI version four (figure 4.4, page 102). Each consultation had one pass. Raters were permitted to consult the manual during the scoring period. All raters were unaware as to whether the practitioners had received any previous training in BCC.

Reliability was estimated by calculating intraclass correlation coefficients (Streiner and Norman 1995: 111). SPSS software, version 11 (SPSS Inc. 2001), was used to calculate the variance components.

3.2.3 Internal Responsiveness

Internal responsiveness (Husted et al. 2001: 460) refers to how able a measure is to reflecting changes in the attribute being measured (so for example, how able BECCI is to detect changes in BCC following training). The standardised response mean (SRM) is one statistic recommended for calculating internal responsiveness (Husted et al. 2001), and is shown below:

$$\text{SRM} = \frac{\text{Mean of change scores}}{\text{Standard deviation of change scores}}$$

Scores of 0.2, 0.5 and 0.8 or above show small, moderate and large levels of responsiveness respectively (Husted et al. 2000: 461). This statistic was calculated using dataset A (figure 3.2, page 54), as this dataset had been generated with this test in mind, gathering BECCI scores with the same test scenario before and after training.

4.0 Results

The development of BECCI took place over a number of stages (figure 3.2, page 54). These results are presented in sequential order, starting with the validity analyses (item piloting and content validity, construct validity, face validity), then with the reliability analyses (internal consistency, inter-rater reliability, intra-rater reliability) and finally with responsiveness.

4.1 Validity

4.1.1 Item Piloting and Content Validity

Two raters listened to twenty simulated smoking cessation consultations (workshop data, Dataset B, figure 3.1, page 54), and used the provisional items (Boycott 2001) (appendix x) to score those consultations. Following each consultation, a structured discussion was held in relation to the items.

The first points of discussion paid attention to what behaviours were consistent with BCC, and which actions deviated from BCC in each consultation. This information is presented in the table 4.1.

Table 4.1: BCC consistent and inconsistent behaviour

BCC Consistent Actions	BCC Inconsistent Actions
<ul style="list-style-type: none"> • Asked if it was OK to talk about smoking • Conveyed respect for patient choice • Spoke about positives and negatives of change • Spoke about the positives and negatives of 'staying the same' • Acknowledged why change may be difficult • Asked questions (mainly open, but some closed) which encouraged the patient to talk further about their current behaviour and status quo • Regular use of empathic listening statements throughout the consultation, not just when the patient spoke about change • Summaries were used at key points of the consultation to provide an overview of what has been said, not just about change • Ideas of how to change were brainstormed mainly by the patient with some ideas given by the practitioner • Decisions on which changes to make were made by the patient 	<ul style="list-style-type: none"> • Did not ask permission to talk about smoking • Gave patient lots of information about why they should give up smoking • Told the patient what they had to do to give up smoking • Tried to 'solve' the patient's problems in giving up (e.g. Nicotine replacement will get rid of the cravings) • Little acknowledgement that quitting smoking was the patient's choice • Asked few questions, or mainly closed questions resulting in 'yes' or 'no' answers • Practitioner did most of the talking

The provisional items (Boycott 2001) were then critically discussed in relation to the behaviours considered to be BCC consistent above. The extent to which items were considered to be reflective of BCC consistent behaviour is shown in table 4.2. Items shaded in blue are items consistent with BCC, but require changes to more accurately reflect the construct. Items shaded in yellow are items not consistent with BCC.

Table 4.2: Items on Boycott's Behaviour Change Checklist, and their reflectiveness of BCC consistent behaviour

Item	Rater Comments
1. The patient is invited to talk about behaviour change	BCC consistent behaviour. Note that it is the practitioner who performs the action.
2. The practitioner negotiates with the patient which behaviour to talk about	Did not occur within the consultations heard because there was only one topic to discuss. Item is BCC consistent for multiple behaviours.
3. Patient talks about behaviour change	Consistent with BCC but does not account for status quo talk.
4. Patient talks about the positive aspects of behaviour change	Consistent with BCC but does not account for status quo talk. Repetitive of item three.
5. Patient talks about the negative aspects of behaviour change	Consistent with BCC but does not account for status quo talk. Repetitive of item three.
6. Practitioner asks open questions to elicit how patient feels about change	Consistent with BCC, but does not account for closed questions that encourage the patient to explain in more detail, or questions asking about the patient's current behaviour.
7. Practitioner uses reflective listening to elicit how the patient feels about change	Empathic listening is better terminology, with an emphasis on statements, as questions are often misinterpreted as empathic listening. BCC consistent empathic listening occurs throughout the consultation, not just when the patient talks about change.
8. Practitioner uses summaries to convey understanding of what the patient says about change	Consistent with BCC, but ignores the fact that summaries can be made to bring together what the patient has said at key points in the consultation, which include summaries of status quo talk/other lifestyle factors etc.
9. Practical solutions are discussed in the consultation? (Yes/No)	BCC consistent. Not all consultations involve discussion of solutions, but when this activity takes place, it needs to be assessed.
9a. Practitioner encourages discussion of a range of possibilities	Does not reflect the two way process of brainstorming solutions. Makes it sound like practitioner has to initiate this process, where it could be initiated by the patient.
9b. Patient selects suitable options	Not reflective of BCC – patient may simply decide what to do rather than 'selecting', which implies a generated list of options.
10. Practitioner acknowledges challenges facing the patient (affirmation)	It would be more reflective to say 'challenges about behaviour change' – no need to put 'affirmation' in brackets
11. Practitioner conveys respect for patient choice about behaviour change	BCC consistent, but needs to focus on a specific practitioner behaviour rather than implication (which is harder to measure), so it would be better to say 'actively conveys respect'.
12. Across the whole consultation, the practitioner's talking time takes up what percentage?	Consistent with BCC, but easier to fill out if given a description (e.g. most of the time) was given for the response format rather than a percentage. Are more concerned with how much the patient speaks.

In line with the findings of the content validity exercise, the following changes were made to the provisional items (Boycott 2001) (appendix I).

- Item one was better worded to reflect the practitioner behaviour in inviting a patient to talk about change.
- Item three was removed, to avoid overlap with other items.
- Two new items were added dealing with positive and negative status quo talk to include this dimension of the BCC process.
- Item six was reworded to ‘Practitioner asks questions to elicit how patient feels about change’ to account for the skilful use of different forms of questions consistent with BCC.
- Item seven, was changed to ‘Practitioner uses empathic listening statements when the patient talks about the topic’, which better reflected the fact that active listening in BCC should take the form of statements, and show understanding throughout the consultation, not just when the patient talks about change.
- Items nine, nine (a) and nine (b) were replaced with the single item ‘Practitioner and patient brainstorm solutions’, which better reflected the process of generating ideas about how the patient could change.
- Item ten was reworded to ‘Practitioner acknowledges challenges about behaviour change that the patient faces’, to remove the word ‘affirmation’ which was not required to understand the item, and to highlight that

affirmation should take place when the patient is talking about behaviour change.

- Item eleven was changed to ‘Practitioner actively conveys respect for patient choice about behaviour change’ to make this easier to measure, and to better reflect that respect should be overtly conveyed in BCC.
- Item twelve was changed to simply ‘Across the whole consultation, the patient speaks for’ and the response format was changed to ‘most of the time, about half the time, and less of the time’. This made the item easier to complete than having to highlight a specific percentage, and highlighted that it is the patient who should be active within the consultation.

These changes resulted in the creation of *BECCI version one*, which can be viewed in figure 4.1.

- 1. Practitioner invites the patient to talk about behaviour change**
Yes/ No/ Uncertain/ Not Applicable
- 2. Practitioner negotiates with the patient which behaviour to talk about**
Yes/ No/ Uncertain/ Not Applicable
- 3. Patient expresses concerns about current behaviour**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 4. Patient talks about the benefits of current behaviour**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 5. Patient talks positively about change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 6. Patient talks negatively about change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 7. Practitioner asks questions to elicit how the patient feels about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 8. Practitioner uses empathic listening statements when the patient talks about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 9. Practitioner uses summaries to bring together what the patient says about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 11. Practitioner acknowledges challenges about behaviour change that the patient faces**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 12. Practitioner actively conveys respect for patient choice about behaviour change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 13. Across the whole consultation, the patient speaks for:**
Most of the time/ About half the time/ Less of the time
- 14. Practitioner and patient brainstorm solutions**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 15. Patient is actively making decisions about how to change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent

Figure 4.1 BECCI version one

4.1.2 Construct Validity

Following the consultation of key texts, the principal features of the major constructs related to BCC (motivational interviewing, brief advice, generic counselling in healthcare contexts and patient centeredness) were elicited. This information is summarised in table 4.3.

Table 4.3: Behaviour change counselling and its related constructs:

main features and skills		
Construct	Main Features	Main skills
Behaviour Change Counselling	<ul style="list-style-type: none"> • Demonstrate respect • Communicate risk • Provide information • Establish rapport • Identify client goals • Exchange information • Choose strategies based on client readiness <p>(Rollnick et. Al. 2002a: 274)</p>	<ul style="list-style-type: none"> • Open ended questions • Affirmations • Summaries • Ask permission • Encourage choice and responsibility in decision making • Reflective listening statements • Variation of depth in reflections • Elicit change talk • Roll with Resistance <p>(Rollnick et. Al. 2002a:274)</p>
Motivational Interviewing	<p>All those in behaviour change counselling plus:</p> <ul style="list-style-type: none"> • Develop relationship • Resolve ambivalence • Develop discrepancy <p>(Rollnick et. Al. 2002a: 274)</p>	<p>All those in Behaviour change Counselling, plus:</p> <ul style="list-style-type: none"> • Directive use of reflective listening • Help client articulate deeply held values <p>(Rollnick et. Al. 2002a: 274)</p>
Generic Counselling	<ul style="list-style-type: none"> • Unconditional positive regard • Empathic understanding • Warmth and genuineness • Concreteness • Immediacy <p>(Burnard 1999: 73-80)</p>	<ul style="list-style-type: none"> • Attending and listening • Open-ended questions • Reflective listening statements • Empathy building • Summarising • Encourage client to identify, examine and/or release emotion <p>(Burnard 1999: 104-141)</p>
Patient Centredness	<ul style="list-style-type: none"> • Exploring both the disease and the illness experience • Understanding the whole person • Finding common ground regarding disease management • Incorporating prevention and health promotion • Enhancing the doctor patient relationship • Being realistic <p>(Weston and Brown: 1995: 21)</p>	<ul style="list-style-type: none"> • Balance open and closed questions • Avoid 'cut offs' • Elicit information from patient • Explores symptoms, avoiding one dimensional views of sickness • Exchange information • Empower patient • Collaborate with patient • Negotiate with patient • Enhance patients' self esteem • Generate a feeling of empathy, security, comfort, supportiveness and encouragement • Encourage patient to talk but keep them focussed <p>(Stewart et. Al. 1995: 233-7)</p>
Brief Advice	<ul style="list-style-type: none"> • Demonstrate respect • Communicate risk • Provide information <p>(Rollnick et. Al. 2002a: 274)</p>	<ul style="list-style-type: none"> • Open ended questions • Affirmations • Ask permission • Encourage choice and responsibility in decision making • Provide advice <p>(Rollnick et. Al. 2002a: 274)</p>

Chapter Four: The Development of BECCI – Results

Following this task, the items on BECCI version 1 (figure 4.1, page 78) were subjected to a construct explication exercise and were cross-checked against BCC and its related constructs. Each item was then given a centrality rating ranging from zero to three for each construct, with zero being not at all related to BCC, and three being centrally related. This information is shown in table 4.4.

Table 4.4: The relationship between items on BECCI and related constructs						
Item	B C C	M I	B A	P C	G C	Rationale
Practitioner invites the patient to talk about behaviour change (if applicable)	3	3	1	1	1	Although BA, PC and GC invite the patient to talk, it is not limited to the topic of behaviour change.
Practitioner negotiates with the patient which behaviour to talk about (if applicable)	3	3	0	1	1	BA does not entail negotiation. Although PC and GC involve negotiation, it is not restricted to behaviours – it could be illness or bereavement for example.
Patient expresses concerns about current behaviour	3	3	1	1	1	In BA, a patient would normally express concerns which would in turn lead to BA, but this would rarely be explored further. In PC and GC, concerns expressed are not limited to current behaviour.
Patient talks about the benefits of current behaviour	3	2	0	1	1	MI is more about eliciting change talk than status quo talk. BA does not require patient to explore this. PC and GC encourage patient to explore their status quo, but this is not limited to health behaviour.
Patient talks positively about change	3	3	0	1	1	BA does not require patient to explore reasons for change. PC and GC encourage patient to explore, but this is not limited to change.
Patient talks negatively about change	3	2	0	1	1	MI is more about eliciting positive rather than negative change talk. BA does not require patient to explore reasons for change. PC and GC encourage patient to explore, but this is not limited to change.
Practitioner asks questions to elicit how the patient feels about the topic	3	2	2	2	3	MI uses more empathic listening than questions. Questions form part of BA. PC uses questions to explore how the patient feels, but is not limited to them.
Practitioner uses empathic listening statements when the patient talks about the topic	3	2	0	0	3	MI uses empathic listening more directly. PC does not require the use of empathic listening. BA is information providing, rather than listening.
Practitioner uses summaries to bring together what the patient says about the topic	3	3	1	0	3	PC does not require the use of summaries. BA may start with a summary of the patient's situation.
Practitioner acknowledges challenges about behaviour change that the patient faces	3	3	0	1	1	BA does not usually explore challenges with patients. GC and PC frequently acknowledge patients' challenges, but this is not restricted to the topic of behaviour change.
Practitioner actively conveys respect for patient choice about behaviour change	3	3	2	1	1	BA does involve conveying respect, but this is not restricted to behaviour change.
Across the whole consultation, the patient speaks for:	3	3	0	2	3	BA does not incorporate much patient talk. PC encourages the patient to talk, but involves more practitioner regulation.
Practitioner and patient brainstorm solutions (if applicable)	3	3	0	3	2	BA does not incorporate brainstorming solutions. GC is often used simply to talk about problems, rather than to solve them.
Patient is actively making decisions about how to change behaviour (if applicable)	3	3	1	1	1	BA may lead to patients deciding to follow the advice given, but again this is not restricted to behaviour change. PC involves the patient taking an active role, but the consultation may not necessarily be about behaviour change. GC does not necessarily require a patient to make decisions, and these decisions need not be about behaviour change.

The construct explication exercise revealed that all items were centrally related to BCC, and provided a detailed picture of how similar constructs are related to BCC. Many items were also centrally related to MI. It is believed that this is because BCC is derived from MI. A minimal number of items were centrally related to brief advice (BA), generic counselling (GC) and patient-centredness (PC). They share some features with BCC, but these features are not restricted to the topic of behaviour change.

Following this exercise, the items were circulated to six collaborating experts in BCC, who were asked to rate the items in terms of their centrality to the BCC construct, and to make comments on the items on BECCI. Four participants replied. Their replies were collated, and items were amended based on these suggestions.

Table 4.5 shows the item centrality ratings.

Item	Rating (0-16)
Practitioner invites the patient to talk about behaviour change (if applicable)	16, 16, 14, 16
Practitioner negotiates with the patient which behaviour to talk about (if applicable)	12, 12, 12, 10
Patient expresses concerns about current behaviour	14, 14, 16, 12
Patient talks about the benefits of current behaviour	6, 14, 14, 8
Patient talks positively about change	12, 14, 14, 12
Patient talks negatively about change	6, 14, 14, 8
Practitioner asks questions to elicit how the patient feels about the topic	14, 16, 16, 16
Practitioner uses empathic listening statements when the talks about the topic	10, 14, 0, 16
Practitioner uses summaries to bring together what the patient says about the topic	14, 14, 12, 14
Practitioner acknowledges challenges about behaviour change that the patient faces	10, 8, 12, 12
Practitioner actively conveys respect for patient choice about behaviour change	16, 12, 12, 14
Across the whole consultation the patient speaks for:	6, 12, 16, 4
Practitioner and patient brainstorm solutions (if applicable)	8, 14, 12, 12
Patient is actively making decisions about how to change behaviour (if applicable)	14, 16, 14, 14

Items were rated on a scale from zero (not at all related to BCC) to sixteen (highly related to the BCC construct). Participants were asked to score the items on this scale, as it would demonstrate whether some items were more central to BCC than others, and whether the items would therefore need weighting in relation to each other during the scoring process. Most participants felt the items were highly related to BCC, and for this reason it was decided that ratings on the individual items should not be weighted on the total scale score. Where lower ratings were given, the raters

made comments corresponding to that item. Table 4.6 summarises all comments made by these experts regarding the construct validity of the items on BECCI.

Table 4.6: Raters' comments – construct validity

- Information exchange is one strategy that is central to the BCC construct, and there was no single item dealing with this issue.
- For item fourteen 'Practitioner and Patient Brainstorm Solutions', one comment was that the term 'brainstorm' implies a problem-solving model, which is not what BCC is.
- It was suggested that item seven 'Practitioner asks questions to elicit how the patient feels about the topic' included the word 'thinks'. The reason being that questions in BCC are not confined just to asking how the patient feels – they can be used for gaining an understanding of their opinions.
- It was suggested that item two 'Practitioner negotiates with the patient which behaviour to talk about (if applicable)' is too narrow as an agenda setting item, as it implies that there should only be an agenda setting process when there are multiple behaviours to discuss. There may be other issues important to the patient, and unless the practitioner asks the patient whether there are any other matters they would like to discuss, they will not know about them. Should the agenda-setting item be a 'not applicable' item?
- Questions were raised regarding the necessity to assess patient talk time. A better reflection would be to highlight practitioner talk time in comparison to the patient.
- The term 'empathic listening' would be better than 'empathic listening statements'.
- The point was made that the exploration of the positives and negatives of both current behaviour and status quo ('the four sides of the change equation') may not occur within all BCC consultations, but that does not make them less like BCC.

The raters comments were evaluated, resulting in changes to BECCI version one.

- An item dealing with information exchange was added (item nine, figure 4.2, page 87), and items seven and two (figure 4.1, page 78) were reworded as items five and two) on BECCI version 2 (figure 4.2, page 87) to better reflect BCC based on the raters' comments.
- Items three, four, five and six were collapsed into two new items, dealing with change talk and status quo talk respectively (items three and four, figure 4.2, page 87).
- A new item was devised from the item on patient talk time, which was 'Compared to the practitioner, the patient speaks', accompanied by an answer format ranging from 'not at all' to 'a great extent' (item eleven, figure 4.2, page 87).
- Item fourteen (figure 4.1, page 78) was reworded to 'Practitioner and patient exchange ideas about how the patient could change current behaviour – if applicable' (item twelve, figure 4.2, page 87) to better reflect BCC, and look less like a 'problem solving model'.

It was decided however, that the term 'empathic listening statements' would remain on BECCI, as this is a feature central to the BCC construct (Rollnick et al. 1999: 29-30).

The changes made during the construct validity phase of the study resulted in *BECCI version two* (figure 4.2).

- 1. Practitioner invites the patient to talk about behaviour change (if applicable)**
Yes/ No/ Not applicable
- 2. Practitioner negotiates with the patient which behaviour to talk about**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 3. Patient talks about current behaviour or status quo**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 4. Patient talks about change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 5. Practitioner asks questions to elicit how the patient thinks and feels about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 6. Practitioner uses empathic listening statements when the patient talks about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 7. Practitioner uses summaries to bring together what the patient says about the topic**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 8. Practitioner acknowledges challenges about behaviour change that the patient faces**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 9. Practitioner provides information that is sensitive to patient concerns and understanding**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 10. Practitioner actively conveys respect for patient choice about behaviour change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 11. Compared to the practitioner, the patient speaks:**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent
- 12. Practitioner and patient exchange ideas about how the patient could change current behaviour**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent/ Not applicable
- 13. Patient is actively making decisions about how to change**
Not at all/ Minimally/ To some extent/ A good deal/ A great extent/ Not applicable

Figure 4.2 BECCI version 2

4.1.3 Face Validity

Face validity was considered in relation to two research questions, which are described in turn below.

Question 1: Are the items on BECCI version two a good reflection of practitioner skill in BCC?

The items were looked at critically as a reflection of practitioner skill. Although all the items were centrally related to BCC, there were three items (item numbers three, four and fourteen – see BECCI version two, figure 4.2) that were measuring patient behaviours. This flouted face validity, as it would essentially not be justified to measure practitioner competence in BCC by rating patient behaviours. Patient behaviour is an important part of the BCC process – BCC is after all a two-way interaction, and the MISC (Miller, 2000) does take patient behaviours into account. However, BECCI was primarily to be used as a training tool, to evaluate practitioner behaviour before during and after training. It was therefore decided that these items measuring patient behaviours should be reworded to reflect practitioner behaviour, in turn opening up an opportunity for a sister instrument measuring patient behaviours in BCC consultations to be developed. Item three was therefore reworded to ‘Practitioner encourages patient to talk about current behaviour or status quo’, and item four was reworded to ‘Practitioner encourages patient to talk about change.’

Question 2: Is BECCI version two in a format that is easy to understand in both research and training contexts?

It was agreed that the items on BECCI version two (figure 4.2, page 87) would be understandable to trainers and researchers alike. However, BECCI version two was presented on two pages – not convenient for a trainer who would ideally like an instrument that was on one page to save time and resources. There was also no standard response format on BECCI, which posed an increased risk of rater error, as response formats differed from item to item (Professor Ian Russell, 2001, personal communication).

As a result of these findings, the response formats were changed to Likert-like scales, ranging from zero or ‘not at all’ to four or ‘a great extent’. This resulted in a standardised scoring system across items, and it also used less physical space.

The changes made in the face validity phase of the study led to the production of *BECCI version three* (figure 4.3).

1. Practitioner invites the patient to talk about behaviour change (if applicable)	not at all 0	1	2	3	a great extent 4
2. Practitioner demonstrates sensitivity to talking about other issues	not at all 0	1	2	3	a great extent 4
3. Practitioner encourages the patient to talk about current behaviour or status quo	not at all 0	1	2	3	a great extent 4
4. Practitioner encourages the patient to talk about change	not at all 0	1	2	3	a great extent 4
5. Practitioner asks questions to elicit how the patient thinks and feels about the topic	not at all 0	1	2	3	a great extent 4
6. Practitioner uses empathic listening statements to bring together what the patient says about the topic	not at all 0	1	2	3	a great extent 4
7. Practitioner uses summaries to bring together what the patient says about the topic	not at all 0	1	2	3	a great extent 4
8. Practitioner acknowledges challenges about behaviour change that the patient faces	not at all 0	1	2	3	a great extent 4
9. Practitioner exchanges information that is responsive to patient concerns and understanding	not at all 0	1	2	3	a great extent 4
10. Practitioner actively conveys respect for patient choice about behaviour change	not at all 0	1	2	3	a great extent 4
11. Compared to the practitioner, the patient speaks:	not at all 0	1	2	3	a great extent 4
12. Practitioner and patient exchange ideas about how the patient could change current behaviour (if applicable)	not at all 0	1	2	3	a great extent 4

Figure 4.3 BECCI version three

4.2 Reliability

4.2.1 Internal Consistency Phase One

Following the tests of validity, BECCI version three (figure 4.3) was tested for internal consistency, using Dataset A (see figure 3.2, page 54).

4.2.1.1 Core Items

The inter-item correlations are shown in tables 4.7 and 4.8. Correlations range from -1.0 to 1.0, with zero reflecting no correlation between items, -1.0 signifying a perfect negative correlation between items, and 1.0 showing a perfect positive correlation between items. Inter-item correlations should typically display several values of between 0.2 and 0.7 (Dr Kerenza Hood, personal communication, 2002) as correlations below this range indicate a negative relationship or no relationship between items, and values higher than this range imply that the items may be measuring the same phenomenon. Inter-item correlations outside of the range 0.2-0.7 are highlighted in blue in tables 4.7 and 4.8.

Item	3	4	5	6	7	8	9	10	11
2	-0.20	0.20	0.14	0.02	0.01	0.10	0.06	0.30	-0.09
3		0.10	0.40	0.12	0.14	0.20	0.03	-0.20	0.34
4			0.02	0.43	0.20	0.53	0.10	0.01	-0.04
5				0.40	0.20	0.30	0.04	-0.05	0.30
6					0.44	0.51	0.04	0.22	0.32
7						0.40	-0.09	0.35	0.10
8							0.42	0.20	0.11
9								-0.01	-0.10
10									-0.30

Table 4.8: Inter item correlations (final) – Internal consistency Phase 1

Item	3	4	5	6	7	8	9	10	11
2	0.01	0.10	0.00	0.10	0.20	0.34	-0.20	0.30	0.10
3		0.23	0.10	0.21	0.20	0.30	-0.10	0.21	0.10
4			0.60	0.40	0.02	0.52	0.30	0.24	-0.21
5				0.01	-0.20	0.20	0.03	-0.10	-0.54
6					0.20	0.30	-0.10	0.24	0.14
7						0.40	-0.24	0.60	0.10
8							0.10	0.60	-0.20
9								-0.05	-0.05
10									0.20

The results in table 4.7 and 4.8 show several values between 0.2 and 0.7 at baseline and follow-up, indicating that most items are correlating sufficiently with each other. Item nine and item eleven show several correlations below 0.2, including negative correlations, in both the baseline and final consultations. This implies that items nine and eleven are not correlating sufficiently with the other items on BECCI.

The score for Cronbach's Alpha in the baseline consultations was $\alpha = 0.62$, and $\alpha = 0.60$ in the final consultations. Cronbach's Alpha should yield a value of between 0.7 and 0.9 for internal consistency to be inferred (Dr Kerenza Hood 2002, personal communication), as a score higher than this range implies that the items may be measuring the same aspect of a construct, and a score below this range suggests that the items are not correlating well enough to be measuring the same construct.

Item-total correlations should be between the range of 0.2 and 0.7 (Dr Kerenza Hood 2002, personal communication), to ensure that items are not correlating too highly or too little with the scale total. An item total correlation of greater than 0.7 would suggest that more than one item is measuring the same aspect of that particular

construct. An item total correlation of less than 0.2 would imply that the item is not measuring the same construct as the other items.

The item-total correlations and Cronbach's Alpha (if item deleted) scores can be found in table 4.9. The cells shaded in yellow indicate that Cronbach's Alpha increases if the item is deleted. The cells shaded in blue show item-total correlations outside of the range 0.2-0.7.

Item Number	BASELINE		FINAL	
	Item-total correlation	Alpha if Item Deleted	Item-total correlation	Alpha if Item Deleted
2	0.11	0.63	0.24	.58
3	0.16	0.62	0.25	.57
4	0.37	0.59	0.48	.53
5	0.37	0.59	0.01	.68
6	0.57	0.51	0.32	.55
7	0.40	0.57	0.34	.55
8	0.69	0.51	0.63	.46
9	0.10	0.66	-0.09	.66
10	0.16	0.63	0.58	.46
11	0.13	0.63	-0.03	.61

The results in table 4.9 show that items two, three, nine, ten and eleven in the baseline consultations, and items five, nine and eleven in the final consultations are displaying item total correlations of less than 0.2. Cronbach's Alpha would increase with the omission of items two, nine, ten and eleven in the baseline consultations, and items five, nine and eleven in the final consultations.

The results of the single factor solution can be found in table 4.10. Items should load onto the factor with a score of at least 0.2 to show that it is correlating with the other items. Items that did not load onto the factor with a score of at least 0.2 are

highlighted in green. The factor extracted accounts for 26.67% of the total variance in the baseline consultations, and 26.77% of the variance in the final consultations.

Table 4.10: Factor loadings of core items – internal consistency phase 1

Item Number	Baseline Factor Loading	Final Factor Loading
2	0.12	0.36
3	0.23	0.32
4	0.57	0.56
5	0.35	0.19
6	0.68	0.36
7	0.49	0.45
8	0.84	0.86
9	0.29	0.00
10	0.20	0.64
11	0.20	-0.11

Item two in the baseline consultations, and items nine and eleven in the final consultations are not loading sufficiently onto the single factor extracted, implying that these items may be measuring different constructs in relation to other items.

The results in tables 4.7 to 4.10 show that the item on information exchange (item 9) consistently fails to correlate with the rest of the items. It is believed that this is because information exchange was not occurring in every consultation (but when it did, it needed to be assessed). The item was therefore given non-core status (meaning it could be scored as ‘not applicable’). Item 11 (dealing with practitioner talk time) was found to be having a consistent negative weighting effect. As it was an important element of BCC (and therefore important to record), it was removed from the scale, but remained on the checklist as an ordinal indicator, so that this information was available for both trainers and trainees.

4.2.1.2 Non-core items

The non-core items (items one and twelve) were tested separately to the core items to ensure that their scores would not adversely affect the total BECCI scale score. To this end, the descriptive statistics were analysed, to assess whether there were differences in values for the mean of the non-core item, the inter item correlations, and the overall mean of the BECCI scale based on whether the item was ‘applicable and present’, ‘applicable and removed’, or ‘not applicable’.

4.2.1.2.1 Item One

The breakdown of consultations in dataset A (figure 3.2, page 54) that scored item one as either ‘applicable’ or ‘not applicable’ can be viewed in table 4.11.

Table 4.11: Breakdown of ‘not applicable’ items for item 1 ‘Practitioner invites the patient to talk about behaviour change’		
	N of cases (baseline)	N of cases (final)
Applicable	31	32
Not Applicable	6	5

Table 4.11 shows that in most cases, item one was applicable. This suggests that item one may possibly be more suitable as a core item, as the patient was being invited to talk about behaviour change, even though the scenario used stated that the patient was referred to a stop-smoking service, a help-seeking rather than opportunistic environment.

The overall scale mean of items on BECCI version three were calculated when item one was 'applicable', 'applicable but removed' and 'not applicable'. These results are shown in table 4.12.

Test	Mean (Baseline)	Mean (Final)
Applicable	21.81	26.25
Applicable (item removed)	20.10	24.22
Not applicable	12.50	22.60

As shown in table 4.12, the overall scale mean was considerably lower at baseline when item one was scored as 'not applicable'. This did not appear to be such a problem in the final consultations, although these consultations tended to score item one as 'not applicable' because the patient went straight into the interaction, rather than the practitioner simply not inviting him or her to talk about behaviour change. This again suggests that the mean score across core items on BECCI version three is consistently lower when the item one is 'not applicable'.

Table 4.13 shows the spread of mean scores, minimum scores and maximum scores on individual core items when item one is 'applicable', 'applicable but removed' and 'not applicable'.

Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	1.98	0.68	2.67	2.39	0.75	3.56
Applicable (item removed)	2.01	0.68	3.52	2.42	0.75	3.56
Not applicable	1.25	0.18	2.67	2.26	0.40	3.40

Table 4.13 shows that the individual item means in the final consultations are similar regardless of the status of item one, although the mean and minimum scores on core items are slightly lower when item one is not applicable in the baseline consultations, again suggesting that item one may be more suitable as a core rather than a non-core item.

Table 4.14 shows the mean, minimum and maximum inter-item correlations for item one when it is ‘applicable’, ‘applicable but removed’ and ‘not applicable’.

	BASELINE			FINAL		
Test	Mean	Min	Max	Mean	Min	Max
Applicable	0.07	-0.41	0.69	0.11	-0.52	0.66
Applicable (item removed)	0.06	-0.41	0.69	0.13	-0.51	0.66
Not applicable	0.05	-0.79	0.92	0.12	-0.72	1.00

The scores in table 4.14 show that similar inter-item correlations are found regardless of whether item one is ‘applicable’, ‘applicable but removed’ or ‘not applicable’, suggesting that item one is scoring consistently in relation to the other items.

Overall, the results in tables 4.12 to 4.14 imply that item one should be a core, rather than a non-core item, as in most cases it was applicable in the scoring, and those consultations where the patient was not invited to talk about behaviour change that were scored as ‘not applicable’ showed a tendency to score much lower on other items on BECCI version three as a whole. The definition of ‘not applicable’ for item one was therefore changed from ‘not applicable if the patient approaches the provider [in a help seeking context] such as a stop smoking service’, to ‘not

applicable if the patient goes straight into the interaction (about behaviour change) without giving the practitioner a chance to invite them to talk about behaviour change'. The manual was revised to reflect these changes, which better assessed the role of 'invitation' in BCC (appendix I).

4.2.1.2.2 Item Twelve

The breakdown of consultations that scored item twelve as either 'applicable' or 'not applicable' can be viewed in table 4.15.

Table 4.15: Breakdown of 'not applicable' items for item 12 'Practitioner and patient exchange ideas about how the patient could change current behaviour'		
	N of cases (baseline)	N of cases (final)
Applicable	13	15
Not Applicable	24	22

Table 4.15 shows that similar proportions of consultations are scored as 'applicable' and 'not applicable'. Slightly more consultations are scored as 'applicable' following training, which is likely to be a reflection of the skills used following training enabling the practitioners to reach the point of exchanging ideas of how change can be achieved.

Table 4.16 shows the overall scale mean (for core items on BECCI version three) when item twelve was 'applicable', 'applicable but removed' and 'not applicable'.

Table 4.16: Overall Scale Mean for item 12 <i>'Practitioner and patient exchange ideas about how the patient could change current behaviour'</i>		
Test	Mean (Baseline)	Mean (Final)
Applicable	17.38	25.67
Applicable (item removed)	16.00	23.72
Not applicable	20.42	24.26

The results in table 4.16 show that the mean score on items across the scale as a whole is similar regardless of whether item twelve is 'applicable', 'not applicable' or 'applicable but removed' in the final consultations. This suggests that item twelve is showing consistency in relation to other items and its removal is not adversely affecting the mean score across items following training. The mean score across items in consultations where item twelve is 'not applicable' is however, slightly higher in the baseline consultations, which in turn suggests that the discussions regarding ways the patient could change were more BCC consistent following training. It is therefore deduced from this data that item twelve is showing consistency in relation to other items.

Table 4.17 shows the mean, minimum and maximum scores on individual items on BECCI version three when item twelve is 'applicable', 'applicable but removed' and 'not applicable'.

Table 4.17: Item Means for Item 12 <i>'Practitioner and patient exchange ideas about how the patient could change current behaviour'</i>						
Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	1.58	0.46	3.15	2.33	1.06	3.72
Applicable (item removed)	1.60	0.46	3.15	2.37	1.06	3.72
Not applicable	2.04	0.75	3.50	2.43	0.47	3.36

The results in table 4.17 show that the mean, minimum and maximum scores on individual items are similar regardless of whether item twelve is 'applicable', 'applicable but removed' and 'not applicable', which again suggests that item twelve is scoring consistently in relation to the other items.

Table 4.18 shows the mean, minimum and maximum inter-item correlations on core items if item twelve is 'applicable', 'applicable but removed' and 'not applicable'.

Table 4.18: Inter-item Correlations for Item 12 <i>'Practitioner and patient exchange ideas about how the patient could change current behaviour'</i>						
Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	0.14	-0.51	0.73	0.14	-0.56	0.67
Applicable (item removed)	0.12	-0.51	0.61	0.15	-0.56	0.67
Not applicable	0.08	-0.34	0.60	0.10	-0.58	0.63

The results in table 4.18 show that mean, minimum and maximum inter-item correlations on individual items are similar regardless of whether item twelve is 'applicable', 'applicable but removed' or 'not applicable' in the final consultations, suggesting that this item is scoring consistently in relation to the other items following training. These consultations do appear to have a slightly higher minimum

score on individual items when item twelve is ‘not applicable’ at baseline, thought to be reflecting the discussion of change strategies being more BCC consistent following training, as inferred from the mean scores across items shown in table 4.17. It is therefore assumed that item twelve is demonstrating consistency in scoring in relation to the other items.

The descriptive statistics shown in tables 4.16 to 4.18 show similar values on items regardless of the status of item twelve following training, and any slight differences at baseline could be explained by a lack of training in the discussion of change strategies. It was therefore inferred that item twelve was displaying internal consistency in relation to the other items and it remained unchanged.

As a result of the changes made during internal consistency phase one, *BECCI version four* was created, which can be viewed in figure 4.4 overleaf.

Practitioner invites the patient to talk about behaviour change (if applicable)	not at all 0	1	2	3	a great extent 4
Practitioner demonstrates sensitivity to talking about other issues	not at all 0	1	2	3	a great extent 4
Practitioner encourages the patient to talk about current behaviour or status quo	not at all 0	1	2	3	a great extent 4
Practitioner asks questions to elicit how the patient thinks and feels about the topic	not at all 0	1	2	3	a great extent 4
Practitioner uses empathic listening statements to bring together what the patient says about the topic	not at all 0	1	2	3	a great extent 4
Practitioner uses summaries to bring together what the patient says about the topic	not at all 0	1	2	3	a great extent 4
Practitioner acknowledges challenges about behaviour change that the patient faces	not at all 0	1	2	3	a great extent 4
When the practitioner provides information, it is sensitive to patient concerns and understanding (if applicable)	not at all 0	1	2	3	a great extent 4
Practitioner actively conveys respect for patient choice about behaviour change	not at all 0	1	2	3	a great extent 4
Practitioner and patient exchange ideas about how the patient could change current behaviour (if applicable)	not at all 0	1	2	3	a great extent 4
Practitioner speaks for approximately:-					
More than half the time <input type="checkbox"/>		About half the time <input type="checkbox"/>		Less than half the time <input type="checkbox"/>	

Figure 4.4: BECCI version four

4.2.2 Internal Consistency Phase Two

As BECCI version three (figure 4.3, page 90) was amended, resulting in BECCI version four (figure 4.4, page 102), the internal consistency tests were re-executed to confirm that the items were displaying good internal consistency following these changes.

4.2.2.1 Core Items

The inter-item correlations can be found in tables 4.19 and 4.20. Inter-item correlations outside of the range 0.2 to 0.7 are highlighted in blue.

Table 4.19: Inter-item correlations at baseline – Internal Consistency Phase 2

Item	2	3	4	5	6	7	8	10
1	0.20	0.50	0.24	0.50	0.35	0.24	0.47	0.40
2		0.12	-0.01	0.12	0.01	-0.16	0.10	0.30
3			0.46	0.24	0.20	0.07	0.00	0.25
4				0.11	0.24	0.20	0.20	0.10
5					0.10	-0.10	0.10	0.21
6						0.56	0.35	0.40
7							0.38	0.42
8								0.35

Table 4.20: Inter-item correlations (final) – Internal consistency phase 2

Item	2	3	4	5	6	7	8	10
1	0.50	0.10	0.02	0.20	0.10	-0.10	0.21	0.23
2		0.20	-0.10	0.31	0.10	0.11	0.20	0.28
3			-0.26	0.20	0.20	-0.10	0.23	0.21
4				-0.14	0.30	0.26	0.20	0.03
5					-0.20	-0.22	-0.18	0.01
6						0.10	0.40	0.28
7							0.34	0.44
8								0.64

Tables 4.19 and 4.20 show several inter-item correlations of 0.2 and above, indicating that the items are correlating sufficiently with each other. Item two in the baseline consultations, and items four, five and seven in the final consultations appear to have several correlations less than 0.2, which may indicate the items are not measuring the same construct as the other items.

The score for Cronbach's Alpha in the baseline consultations was $\alpha = 0.71$, and $\alpha = 0.63$ in the final consultations. The item-total correlations and Cronbach's Alpha (if item deleted) scores can be found in table 4.21. The cells highlighted in yellow indicate that the Cronbach's Alpha would increase with the removal of that item. The cells highlighted in blue show item total correlations outside of the range 0.2 to 0.7.

Table 4.21: Item-total correlations and Cronbach's Alpha (if item deleted) scores of core items – internal consistency phase 2

Item Number	BASELINE		FINAL	
	Item-total correlation	Alpha if Item Deleted	Item-total correlation	Alpha if Item Deleted
1	0.62	0.64	0.30	0.61
2	0.11	0.74	0.34	0.60
3	0.36	0.69	0.19	0.62
4	0.30	0.70	0.12	0.64
5	0.23	0.71	-0.02	0.65
6	0.50	0.66	0.33	0.60
7	0.39	0.68	0.31	0.60
8	0.45	0.67	0.59	0.54
10	0.56	0.65	0.60	0.50

The results in table 4.21 show that item two in the baseline consultations, and items four and five in the final consultations are displaying item total correlations of less than 0.2. Cronbach's Alpha would increase with the omission of item two in the baseline consultations, and items four and five in the final consultations.

The results of the single factor solution can be found in table 4.21. The factor extracted accounted for 32.55% of the total variance in the baseline consultations, and 27.70% of the total variance in the final consultations. Factors with values of less than 0.2 are highlighted in green.

Table 4.22: Factor loadings of core items – internal consistency phase 2

Item Number	Factor Loading (Baseline)	Factor Loading (Final)
1	0.79	0.27
2	0.19	0.28
3	0.50	0.26
4	0.35	0.18
5	0.39	-0.10
6	0.54	0.42
7	0.45	0.46
8	0.55	0.81
10	0.56	0.80

The results in table 4.22 show that item two in the baseline consultations and items four and five in the final consultations have factor loadings less than 0.2, which could point to these items not measuring the same construct as the other core items.

Overall, the results in tables 4.19 to 4.22 show that item two in the baseline consultations, and items four and five in the final consultations were displaying inconsistency. These items displayed low inter-item and item-total correlations, indicating that they were not correlating with the scores of the other items in the scale. The single factor solution showed a low factor loading for item two (baseline)

and item four (final) in relation to the other items, and a negative loading for item five (final), which can point to the items not measuring a common construct.

However, these inconsistencies could be explained for each item by lack of training at baseline, and the intervention effect in the final consultations (which are described in more detail in chapter five, pages 124-5). Therefore, it was felt that on balance, it was acceptable to regard the core items on BECCI version four (figure 4.4) as measuring one common construct, and the core items remained unchanged.

4.2.2.2 Non-Core Items

The overall scale mean, item means and inter-item correlations were analysed to test BECCI's non-core items (nine and eleven).

4.2.2.2.1 Item Nine

The breakdown of consultations that scored item nine as either 'applicable' or 'not applicable' on BECCI version four can be viewed in table 4.23.

Table 4.23: Breakdown of 'not applicable' items for item 9 'Practitioner exchanges information that is sensitive to patient concerns and understanding'		
	N of cases (baseline)	N of cases (final)
Applicable	19	11
Not Applicable	18	26

The information in table 4.23 shows that fewer cases were applicable in the final recording of the consultations. This is likely reflective of the training the participants

received taking them away from an advice-giving approach, and moving towards a more BCC consistent approach.

Table 4.24 shows the overall scale mean for items on BECCI version four when item nine is ‘applicable’, ‘applicable and removed’ or ‘not applicable’.

Table 4.24: Overall Scale Mean for item 9 <i>‘Practitioner exchanges information that is sensitive to patient concerns and understanding’</i>		
Test	Mean (Baseline)	Mean (Final)
Applicable	19.42	27.36
Applicable (item removed)	17.32	24.27
Not applicable	20.17	25.00

The results in table 4.24 show that the mean score across items is similar regardless of the status of item nine, indicating that item nine is showing consistency in relation to other items and its removal is not adversely affecting the mean score across items. The mean score across items in consultations where item nine is ‘not applicable’ is not greatly different in comparison to consultations where it is ‘applicable’, suggesting that the score across items is not greatly affected if this item is scored as ‘not applicable’.

Table 4.25 shows the mean, minimum and maximum scores on individual items on BECCI version four, when item nine is ‘applicable’, ‘applicable but removed’ or ‘not applicable’.

Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	1.94	1.05	3.00	2.74	1.55	3.55
Applicable (item removed)	1.92	1.05	3.00	2.70	1.55	3.55
Not applicable	2.24	1.38	3.22	2.78	1.88	3.81

The results in table 4.25 show that the mean, minimum and maximum scores on individual items are similar regardless of the status of item nine, suggesting that item nine is scoring consistently in relation to the other items.

Table 4.26 shows the mean, minimum and maximum inter-item correlations for individual items on BECCI version four when item nine is 'applicable', 'applicable but removed' and 'not applicable'.

Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	0.20	-0.25	0.65	0.14	-0.69	0.70
Applicable (item removed)	0.20	-0.25	0.65	0.09	-0.69	0.70
Not applicable	0.21	-0.44	0.75	0.14	-0.25	0.71

The results in table 4.26 show that there are similar mean, minimum and maximum inter-item correlations regardless of the status of item nine. This suggests that item nine is scoring consistently in relation to the other items.

Overall, as the results in tables 4.24 to 4.26 show that scores on the items are similar regardless of whether item nine is present, absent or not applicable, item nine

therefore appears to be displaying internal consistency in relation to the other items on BECCI version four, and will remain unchanged.

4.2.2.2.2 Item Eleven

The breakdown of consultations that scored item eleven as either ‘applicable’ or ‘not applicable’ can be viewed in table 4.27.

	N of cases (baseline)	N of cases (final)
Applicable	13	15
Not Applicable	24	22

The results in table 4.27 show there are similar numbers of cases where item eleven is ‘applicable’ and ‘not applicable’ in the baseline and final consultations. There are slightly less numbers of cases that are applicable, which is to be expected, as practitioners may not have got as far as discussing strategies for change with their patients within the eight minute timeframe.

Table 4.28 shows the mean score across items on BECCI version four if item eleven is ‘applicable’, ‘applicable but removed’ or ‘not applicable’.

Table 4.28: Overall Scale Mean for Item 11 <i>'Practitioner and patient exchange ideas about how the patient could change current behaviour'</i>		
Test	Mean (Baseline)	Mean (Final)
Applicable	16.92	26.33
Applicable (item removed)	15.77	24.27
Not applicable	20.29	25.14

The results in table 4.28 show that the mean score across items appears to be slightly higher if item eleven is scored as 'not applicable' in the baseline consultations, but similar regardless of its status in the final consultations. This implies that at baseline, discussion regarding changes that could be made may have been delivered in a more instructive way, rather than in the way of exchanging ideas consistent with BCC. It is therefore inferred that item eleven is scoring consistently in relation to the other items.

Table 4.29 shows the mean, minimum and maximum scores on individual items when item eleven is 'applicable', 'applicable but removed' and 'not applicable'.

Table 4.29: Item Means for Item 11 <i>'Practitioner and patient exchange ideas about how the patient could change current behaviour'</i>						
Test	BASELINE			FINAL		
	Mean	Min	Max	Mean	Min	Max
Applicable	1.69	0.85	2.85	2.63	1.47	3.53
Applicable (item removed)	1.75	0.85	2.85	2.70	1.47	3.53
Not applicable	2.25	1.63	3.13	2.79	2.00	3.91

The data in table 4.29 shows that the scores on individual items are similar regardless of the status of item eleven in the final consultations, but commensurate with the findings of the overall scale scores in table 4.28, these consultations do appear to have a slightly higher minimum mean score on individual items when the item is ‘not applicable’ at baseline, thought to be reflecting the discussion of change strategies being more consistent with BCC following training. It is therefore assumed that item eleven is demonstrating consistency in scoring in relation to the other items.

Table 4.30 shows the mean, minimum and maximum inter-item correlations on individual items when item eleven in ‘applicable’, ‘applicable but removed’ and ‘not applicable’.

Table 4.30: Inter-item correlations for item 11 <i>‘Practitioner and patient exchange ideas about how the patient could change current behaviour’</i>						
	BASELINE			FINAL		
Test	Mean	Min	Max	Mean	Min	Max
Applicable	0.17	-0.43	0.83	0.18	-0.42	0.76
Applicable (item removed)	0.14	-0.43	0.60	0.16	-0.42	0.76
Not applicable	0.20	-0.29	0.58	0.12	-0.49	0.62

The results in table 4.30 show that the inter-item correlations are similar regardless of the status of item eleven, suggesting consistency in scoring.

Overall, although there appears to be a little inconsistency in the scoring of item eleven, this inconsistency can be explained by the lack of training in BCC at baseline. Item eleven is therefore assumed to be consistently scoring in relation to the other items on BECCI version four and will remain unchanged.

As no further changes were made to the non-core items on BECCI version four (figure 4.4, page 102), BECCI version four therefore became the final version of BECCI, and is referred to simply as *BECCI* (appendix I) in the remainder of this chapter.

4.2.3 Scale Scoring

It was decided that as the items displayed internal consistency, it would be reliable to derive an overall BECCI score by calculating a mean score across items. Such a score would then correspond with the Likert scale formats on BECCI to ease interpretation (for example, a score of zero would reflect BCC being carried out ‘not at all’, and a score of four would indicate that BCC had been carried out to ‘a great extent’).

As both the core and non-core items were displaying internal consistency, it was concluded that missing and non-core items scored as ‘not applicable’ should be replaced with the mean value across the completed items.

4.2.4 Inter Rater Reliability Exercise One

Now that the items were displaying internal consistency and a scoring system had been developed, investigations were conducted into the reliability of BECCI when being used by more than one rater.

Variance components were generated using SPSS version 11 (SPSS Inc. 2001), to generate intraclass correlation coefficients (ICCs). The variance components can be viewed in table 4.31 below.

Consultation Topic	Variance Component	Estimate
Smoking	Variance (consultation)	33.30
	Variance (rater)	2.54
	Variance (error)	9.08
Diabetes	Variance (consultation)	62.44
	Variance (rater)	3.37
	Variance (error)	4.55

ICCs of $R = 0.79$ for Smoking Cessation and $R = 0.93$ for Diabetes consultations were calculated from the variance components generated above. This shows that BECCI is displaying a consistently good level of reliability between raters, and that the level of reliability is slightly higher for this set of diabetes consultations, than for the selection of smoking cessation consultations.

4.2.5 Intra Rater Reliability

As well as the reliability of scores between raters, the reliability of scores within raters across time was investigated. As in the inter rater reliability exercise, SPSS version 11 (SPSS Inc. 2001) was used to estimate the variance components. These are shown in table 4.31.

Consultation Topic	Variance Component	Estimate Rater 1	Estimate Rater 2
Smoking	Variance (consultation)	14.24	18.22
	Variance (time)	-0.19	-0.40
	Variance (error)	7.48	12.57
Diabetes	Variance (consultation)	24.41	51.54
	Variance (time)	5.04	1.94
	Variance (error)	5.75	7.71

The ICCs calculated for rater one were $R = 0.66$ for smoking cessation, and $R = 0.90$ for diabetes. Rater two's scores generated ICCs of $R = 0.6$ for smoking cessation and $R = 0.87$ for diabetes. These results show that BECCI has a moderate to good level of reliability across time. As with the inter-rater reliability results, the diabetes consultations appear to be more reliable than the smoking cessation consultations.

4.2.6 Inter-rater Reliability Exercise Two

As in inter-rater reliability exercise one (section 4.2.4, page 113), the variance components were generated for three raters scoring the real consultations in Dataset F (table 4.32) using SPSS version 11 (SPSS Inc, 2001).

Component	Estimate
Variance (consultation)	12.293
Variance (time)	2.342
Variance (error)	4.5

The corresponding ICC was $R = 0.73$, demonstrating good reliability between the three raters when scoring real consultations.

4.3 Internal Responsiveness

The mean change score was 0.68 with a standard deviation of 0.38. Therefore, the standardised response mean was calculated as 1.76, showing that BECCI displays a high level of responsiveness to change. The results also show that there is a clear shift in practitioner performance following training in BCC, and that BECCI is sensitive enough to be able to detect this change.

5.0 Discussion

This chapter illustrates the methodological strengths and weaknesses encountered in the development of BECCI, and discusses the implications and limitations of the results found in chapter four.

The work on BECCI, conducted in this thesis and by Boycott (2001), resulted in a publication describing its development and validation (Lane et al. 2005), which can be found in appendix I.

5.1 Data used in the development of BECCI

The development of BECCI followed a process that differs slightly from the traditional stages in the development of a measure of skill (in the generation of items). This was because a provisional list of items had already been developed (Boycott, 2001), and the most logical way to proceed was to build on this data, rather than generating a list of items from a new literature search. It could be argued that items not reflective of BCC could have influenced which items were selected on BECCI. However, Boycott (2001) was careful to state how the items had been generated (through literature searches, observed BCC behaviour and expert consensus), which are the steps that would have been taken in the current study had there been no list of provisional items on which to build. It is also important to note that at an early stage in the development of BECCI, the validity of items were re-assessed, resulting in several additions, modifications and the deletion of items as a result, in the attempt to make BECCI as reflective of BCC skills as possible.

It is acknowledged that BECCI was developed using audio data rather than video data. This format was chosen as audio data is often easier to collect in a training workshop context rather than video data, despite some professional bodies such as the Royal College of General Practitioners collecting videotaped data to assess communication skills. However, recent research by Weingarten, Yaphe, Blumenthal, Oren and Margalit (2001) has shown that there is little difference in ratings of practitioners' patient-centredness skills when rating them in both audio and video format using a validated rating scale (Henbest and Stewart, 1989). BCC is also defined in the literature by the description of verbal behaviours (Rollnick et al. 1999, Rollnick et al. 2002a), rather than the related concept of body language, or non-verbal communication.

This is not to dismiss non-verbal behaviour in BCC consultations as unimportant. Communication is a process that incorporates both verbal and non-verbal behaviours and if the non-verbal behaviour does not match the verbal aspect of a BCC consultation, this is likely to result in the patient feeling that the practitioner is not being genuine. It is therefore suggested that should a researcher or trainer wish to assess non-verbal communication alongside BCC practice, it would be advisable to use a validated measure to assess these behaviours such as PONS (DiMatteo et al. 1980), as this is a separate (though related) construct to BCC.

BECCI was developed using data from mainly simulated consultations in training, the primary context in which BECCI will be used. The use of real patients in assessing the validity and reliability of BCC within this project was minimal, for the

simple reason that it is rare to incorporate real patients into training during the practice and rehearsal of new skills, and it could be argued that it would not be ethical to do so. In hindsight, this may have limited the situations in which BECCI can be reliably used. Although the main purpose of BECCI was to assess practitioner skill in BCC before and after training, Burke et al. (2002, 2003), have argued that often what is needed is an indication of how well the AMI has been delivered. BECCI can go as far as to show practitioner skill *competence* in BCC with simulated patients, but the lack of real-patient data to assess the internal consistency of BECCI leaves the question about whether BECCI can also reliably assess practitioner *performance* in BCC with real patients unanswered.

To answer this point, a small set of real consultations was used to assess the inter-rater reliability of BECCI. They generated a good intraclass correlation coefficient of agreement between three raters. This is a promising result, but may simply reflect the fact that practitioners used a very low level of BCC, making the consultations easier to score, as was discovered in the analysis of the simulated diabetes consultations (see section 5.3.2 for more detail). It was decided that this set of consultations should be used for the assessment of inter-rater agreement rather than internal consistency, because the research team had no knowledge of the amount of previous training in AMIs these practitioners had received. In retrospect, all practitioners exhibited equally low levels of BCC consistent behaviour, which may have made them suitable for internal consistency analyses. However, there were only nineteen consultations within the sample, which would have raised questions about whether this was enough data on which to make assumptions about the internal consistency of BECCI when assessing real consultations. A larger sample of real

consultations, with contextual information regarding the practitioners' prior training in AMIs would be preferable in assessing the internal consistency of BECCI when assessing practitioner performance in BCC with real patients. It is therefore believed to be safer to hold back from making premature claims about BECCI's reliability when assessing real consultations, until a substantial sample of real consultations, preferably recorded by practitioners who have received the same amount of training in BCC is available. As a precaution, other studies that wish to report scores on BECCI related to *performance* should only do so following the execution of internal consistency tests on stable, real patient data.

5.2 Validity

Within the development of BECCI, several changes were made to items to better reflect BCC. Studies of the content, construct and face validity were undertaken to achieve this task.

5.2.1 Content Validity

Although Boycott (2001) had already assessed a number of provisional items for content validity, it was important to investigate this factor further to ensure that they were tapping the traits that best illustrated the content of BCC. The tests of content validity revealed that many of the items generated by Boycott (2001), although closely related to the construct of BCC were not assessing the behaviours most reflective of BCC practice. This highlights the importance of the rigorous, critical analysis of items - the subtlest of differences can result in a better indication of exactly which behaviours reflect BCC.

5.2.2 Construct validity

Construct validity assessments revealed that although BCC shares many characteristics with the related constructs of motivational interviewing, generic counselling, brief advice and patient centredness, they are in essence all different constructs in their own right. Most importantly, the construct explication exercise revealed that BCC is not the same as motivational interviewing, a distinction often not recognised by healthcare practitioners and researchers (Dunn et al. 2001).

The fact that experts in the field assessed the centrality of items on BECCI to the BCC construct has its advantages and disadvantages. The items are likely to be very reflective of the BCC construct as it currently stands. However, as BCC becomes more widespread and used in clinical practice, it might evolve into a method that could potentially be somewhat different to the BCC that is measured by BECCI. The construct validity of BECCI should therefore be re-assessed as the use of BCC becomes more widespread, and new innovative practices become associated with the construct.

5.2.3 Face Validity

Face validity is often a step taken for granted in the development of outcome measures, as it is viewed almost as a ‘common sense’ approach taken all the way through the development of a measure (Murphy and Davidshofer, 1998: 155; Streiner and Norman 1995: 58-9). However, mistakes can easily be made with regard to validity in the development of a measure, as was shown in this study where items measuring patient behaviours were included on BECCI, when it was the practitioner behaviours that were of interest. This study emphasises how important it is to take the step of looking at a measure as it is being developed and questioning whether what has emerged is valid for the context in which it will be used.

5.2.4 Criterion Validity

One form of validity that was not assessed during the development of BECCI is ‘criterion validity’ (Streiner and Norman 1995: 147-50). Criterion validity is the correlation between a measure with the existing ‘gold standard’ measure of a construct (concurrent validity) or patient outcomes (predictive validity).

There was no other gold standard measure of BCC at the time that BECCI was developed. However, one possible comparison would have been between BECCI and the MISC (Miller, 2000). It was felt that MISC concentrated on very different aspects of the consultation in comparison to BECCI, providing a measure on the practitioner-patient interaction process during MI, rather than just skill in BCC. It would have been possible to correlate the global ratings on MISC with scores on BECCI, although these items concentrated on the spirit of MI rather than skills, which is the focus of BECCI.

In hindsight, this was perhaps poorly considered. Analysis of the process of interaction within a BCC consultation using MISC would have provided a valid comparison and additionally would have further highlighted the similarities and differences between BCC and MI. It would also have further validated BECCI, because given that the constructs of BCC and MI are so closely related, one would expect to find that higher scores on BECCI would have reflected the higher scores in the spirit ratings of MISC. It would also be expected that higher scores on BECCI would reflect higher behaviour counts on the MISC, but without this comparison, these assertions remain unproven.

However, a new instrument that assesses practitioner performance and competence in MI has recently been developed (Moyers et al. 2005). The Motivational Interviewing Treatment Integrity Scale (MITI) may provide a better comparison with which to compare scores on BECCI as it focuses purely on practitioner behaviours within an MI consultation. Further research on the advantages and disadvantages, similarities and differences between BECCI and MITI in scoring MI and BCC consultations would provide an interesting indication as to which measures should be used in a particular context, and would highlight any changes that could benefit these instruments.

Other possible criteria with which to compare scores on BECCI would be qualitative methods of interaction analysis, such as discourse analysis (Nunan 1993) or conversation analysis (ten Have, 1999). These methods examine the language used within an interaction, and relate them to the social context within which they occur.

Comparing the findings from discourse or conversation analytical studies of consultations with scores on BECCI could, for example, highlight how reflective the items are of language that conveys a collaborative relationship between the practitioner and the patient. It may also further highlight some important linguistic patterns in BCC that have not been identified by BECCI.

As BECCI appeared to be clearly reflecting the behaviours of interest within a training context, this type of analysis was felt to be non-essential within the scope of this study. However, analysis of language within MI has recently proven to be valuable in understanding how the MI process may help patients to change their behaviour. Armrhein et al. (2003) conducted a discourse analytical study of MI consultations, and found a relationship between client commitment language within the consultation and behavioural outcomes following the consultation. This finding implies that in the future if studies of BCC relate practitioner scores on BECCI to patient outcomes, analysis of linguistic data alongside scores on BECCI would be valuable to establish whether BECCI is tapping into specific practitioner behaviours in the BCC process that are correlated with patient behaviour change.

Finally, the predictive validity of BECCI was not assessed. This would require an analysis of the relationship between scores on BECCI and an external outcome, for example a patient who consults with a practitioner who achieved high scores on BECCI would in turn make a reduction in their smoking. At this stage in the development of BCC as a complex intervention, this was deemed inappropriate for the task in hand, which was overall to establish the best way to train practitioners to acquire skills in BCC through training. However, future studies that evaluate the

efficacy of BCC as an intervention to promote lifestyle change would be well advised to evaluate the predictive validity of BECCI to examine this relationship further.

5.3 Reliability

Three methods of testing the reliability of BECCI were employed during the study – internal consistency, inter-rater reliability and intra-rater reliability.

5.3.1 Internal Consistency

While the overall levels of reliability were acceptable following the changes made in phase one of the internal consistency tests, BECCI did display low internal consistency scores (for item four ‘the practitioner encourages the patient to talk about change’ and item five ‘the practitioner asks questions to elicit how the patient thinks and feels about the topic’) in the follow-up consultations after the second phase of internal consistency tests. This was reflected by a Cronbach’s Alpha of less than 0.7 and a negative value in the factor solution. However, this could be explained by the training intervention; the workshops focussed mainly on understanding the patient’s views rather than just concentrating on change, and on using empathic listening rather than always asking questions. It is believed that as a result of this, practitioners talked less about how the patient felt about change, and asked fewer questions. As is often the case when a person learns new skills, it takes time to practice them and get the balance right, and this instability was reflected by the internal consistency data.

There was also a low factor loading for item two in relation to the other items at baseline. This can be explained by the lack of training in addressing separate issues at baseline, and was reflected by a change in the factor loading in the final consultations, following training in agenda setting/other factors affecting behaviour change.

Streiner and Norman (1995: 64) recommend the removal of items should they reduce the value of Cronbach's Alpha or not correlate with a factor. However, it is important to interpret these analyses within the context in which the data has been collected, as these can pinpoint valid reasons as to why the items may have been displaying inconsistency (Dr Kerenza Hood, 2002, personal communication). This is particularly important when developing an instrument using data that may be unstable, such as data collected within a training workshop context. For this reason, contextual information about the skills in which the group were trained was always drawn on when interpreting the internal consistency results on BECCI.

5.3.2 Inter-rater Reliability

Two inter-rater reliability exercises were conducted in the development of BECCI – the first tested the reliability of scores between two raters who scored simulated consultations. The second examined the reliability of scores between three raters when scoring real consultations.

BECCI demonstrated good levels of inter-rater reliability during the first inter-rater reliability exercise. The data was divided into two categories of consultation for analysis – smoking and diabetes – and although both demonstrated good levels of reliability, there were differences in the intraclass correlation coefficients, with a inter-rater agreement coefficients of 0.79 for the smoking consultations and 0.93 for the diabetes consultations. One possibility is the difference in sample size – as the diabetes sample is smaller than the original smoking sample (from which an equal number of consultations were selected), so there could be less variability. Another possibility is due to a difference in skill level between the two groups of practitioners. The diabetes consultations were conducted by practitioners who were less skilled in BCC than those in the smoking cessation consultations. Both raters commented that they found it easier to score consultations at either end of the spectrum (rather than when it was a ‘close call’ around the centre of the scale), which may indicate that their scoring was slightly less reliable when the scores were not at the extreme points of the scale.

The second inter-rater reliability exercise demonstrated a coefficient of 0.73 between three raters when scoring real diabetes consultations in which health behaviour change was discussed. This again indicates that the training exercises provided were

adequate, as a good reliability coefficient was generated. This exercise also provides some evidence that BECCI may be reliable in the scoring of real consultations in terms of between rater agreement. However, it should be noted that these consultations generally showed a very low level of practitioner performance in BCC, and the previous exercises in inter- and intra-rater reliability have indicated that consultations that are at extreme ends of the likert scales on BECCI may be more easy to score, which in turn affects the reliability of BECCI. Further studies using BECCI to assess real BCC consultations in practice should bear these preliminary findings in mind and re-conduct the internal consistency and reliability analyses to ensure that BCC is reliably measured in these consultations.

5.3.3 Intra-rater Reliability

Although there was good agreement between raters in the first inter-rater reliability exercise, there were slight differences in ratings across time for those two scorers. The results from rater one produced coefficients across time of 0.66 for the smoking consultations, and 0.90 for the diabetes consultations. Rater two produced coefficients of 0.60 for the smoking scenarios and 0.87 for the diabetes scenarios. This again reflects the differences in the scoring of the two different types of consultations found in the inter-rater reliability exercise, with the diabetes case proving more reliable across time in comparison to the smoking cessation case. The differences between rater one and rater two across time were relatively small, although the ratings across time are slightly lower for rater two, who had less academic knowledge of BCC than rater one. However, as the ratings were similar, it was concluded that the training exercises in BCC for rater one had been adequate for reliable scoring on BECCI.

5.4 Responsiveness

BECCI also demonstrated excellent responsiveness to change from before training to after training in BCC, which again demonstrates its suitability for the training context in which it will be used. Trainers can be assured that BECCI is sensitive enough to show clear differences in practitioner skill level following training, and as well as showing areas in which the trainee can improve their practice in BCC.

5.5 Other Limitations

In addition to the lack of criterion validity testing and internal consistency testing with real patient data, five other limitations associated with BECCI have been identified.

The first is the lack of development of a standardised training programme for coders. Although the self-guided learning activities described in the manual (appendix I) proved to be adequate for the raters used in the development of BECCI. However, this has only been put to the test with three raters so far. There is little evidence that these activities are sufficient for all raters who wish to use BECCI. Therefore, the development of a training workshop and assessment of the coders themselves is highly desirable, and is planned in future work using BECCI.

Another limitation that has bearing on outcomes from BECCI is that no ‘cut-off’ point for acceptable delivery of BCC skill has been established. It was anticipated that BECCI would be used for descriptive purposes, but in reality research teams

who wish to evaluate the efficacy and effectiveness of BCC as an intervention may wish to train practitioners to a stage of competence that would be considered to be good delivery of BCC. Such work has not been carried out in this initial work, but the question of what is a good level of BCC delivery as measured by BECCI is an important one, that at this stage remains unanswered. Further discussion on this subject to establish what is considered to be good BCC delivery as measured by BECCI is warranted. A practitioner BECCI score of at least 3.0, which would reflect a practitioner scoring between three (a good deal) and four (a great extent), may be a good standard at which to deliver BCC as part of a controlled trial.

Another limitation, closely related to the two factors mentioned above, is the fact that *generalisability theory* (Streiner and Norman 1995: 129) has not been incorporated into the analysis of this data. The application of generalisability theory is an attempt to reduce the influence of error on measurement. It is usually used in contexts where serious decisions are likely to be made about the meaning of an individual's scores on a measure, for example, unless a medical student reaches a particular standard as measured by the instrument, they will fail the module. It is not anticipated that BECCI would be used in contexts such as these, which is why this method was not employed in the development of BECCI. In hindsight however, the application of generalisability theory would have been useful, as studies of BCC that wish to train practitioners to a certain level of proficiency in the method may benefit from knowing how many raters provide the most reliable overview of an individual's level of skill in BCC. Failure to do so may result in a practitioner being given unnecessary further training (or indeed less training than is required) to reach the required level of competence in BCC delivery. It would therefore be recommended that studies that

wish to use BECCI in this manner investigate the generalisability of BECCI scores further.

Finally, BECCI could be considered to be limited in the sense that it only reports practitioner behaviour that is *consistent* with BCC. Although it could be argued that more BCC consistent behaviour should result in less BCC inconsistent behaviour, recent work by Miller and Mount (2001) has discovered that prison officers trained in an AMI did show an increase in MI *consistent* behaviour. However, they did not decrease in MI *inconsistent* behaviour as measured by the MISC. BECCI could potentially be missing this information regarding practitioner performance. However, it is also important to note that MISC relies heavily on actual behaviour counts as measurement, whereas the Likert scales on BECCI give an overview of BCC consistent behaviour overall, in relation to BCC inconsistent behaviour. It is therefore concluded that it is unlikely that BECCI is excluding the analysis of BCC inconsistent behaviour, as BECCI measures BCC consistent behaviours across the consultation as a whole, rather than individual counts of those behaviours.

5.6 Conclusions

Overall, BECCI is an instrument that appears to measure BCC validly and reliably. BECCI can now be used to assess practitioner skill level within a training context – a step that is required in the diffusion of complex interventions in research (MRC, 2000).

BECCI outlines the core features of BCC, providing a clear description of the AMI studied as suggested by Burke et al. (2002, 2003). BECCI is also able to give an indication of how much skill can be acquired after a certain amount of training as recommended by Dunn et al. (2001).

BECCI would benefit from future studies involving real rather than simulated patients, as this would allow BECCI to be a measure of treatment integrity as suggested by Burke et al. (2002, 2003), rather than just a measure of skill competence before, during and after training. A standardised, validated training programme for coders, established levels of competence to deliver BCC to a good standard and the application of generalisability theory would be beneficial for studies that wish to evaluate the efficacy and effectiveness of BCC as an intervention, and these issues need to be addressed by further research.

Chapter Five: The Development of BECCI – Discussion

However, BECCI is considered valid and reliable for the context in which it is intended to be used. The next phase of this study will now utilise BECCI in attempting to establish which factors in the training process facilitate the greatest amount of skill acquisition in BCC.

Part Three:

The Experiential Practice Experiment

6.0 Introduction

Chapters two to five focussed on the importance of measuring skill acquisition in BCC, and to this end, BECCI was developed. As highlighted by Noonan and Moyers (1997), it is equally important to evaluate the training process in teaching practitioners to deliver complex interventions. Should the delivery of a complex intervention such as BCC be shown to be effective in promoting patient behaviour change, replication of the practitioner training programme would be highly desirable.

One question raised in regard to training practitioners in complex interventions is which training methods are most successful in helping practitioners to learn the skills that they are being trained in? There is a wealth of different methods available. Those methods which facilitate the greatest changes in practitioner behaviour and result in a complex intervention being delivered most effectively would be seen to be the best methods to use.

This chapter examines how healthcare practitioners learn communication skills, and reviews the literature concerning the use of simulated patients and role-play in the acquisition of communication skills. Drawing on this evidence, hypotheses are outlined for an experimental comparison of different methods in MI.

6.1 How do healthcare practitioners learn communication skills?

Knowles (1990) illustrates that adults often have different approaches to learning to children. Education for healthcare professionals has often taken the ‘pedagogical’ approach used in schools – the learner is a passive recipient of what the expert (or teacher) decides they should learn and how they should learn it. He argues that an ‘andragogical’ approach, where the learner is the expert in what and how they should learn, is more suited to adults, who have greater life experience than younger people (Knowles, 1990: 57-65). The differences between the andragogical and pedagogical model are summarised in table 6.1.

	Pedagogy	Andragogy
The need to know	Must learn what the teacher tells them in order to pass. Do not need to know how what is learned will apply to their life	Need to know why something needs to be learned before it can be learned.
The learner's self-concept	A learner is a dependent personality	A learner is responsible for their own decisions and is capable of self-direction
The role of experience	Personal experience has little value as a resource for learning	Personal experience provides a rich resource for learning. People have different experiences from each other. Experience can lead to habits, bias and prejudice which can have an impact on learning.
Readiness to learn	Teacher tells the person they must learn in order to pass	Readiness to learn stems from what a person needs to learn in order to manage real life situations.
Orientation to learning	Subject-centred (the acquisition of subject matter content)	Life-centred, problem-centred or task-oriented. The learning should have a purpose.
Motivation	By external forces, such as grades, promotion, pleasing the teacher, pleasing colleagues/parents	By internal forces (such as self-esteem, job satisfaction, quality of life) and external forces.

Knowles' model illustrates how learning that holds meaning in everyday life, has purpose and takes the experience of the learner into account is more likely to be successful than the pedagogical approach taken to the education of children, because adults have much greater responsibilities, more experience of life and different motivation to learn in comparison to children. In medical education, pedagogy is sometimes appropriate (for example, in the acquisition of knowledge about physiological processes). However, one factor which appears support the andragogical model is communication skills teaching. 'Experiential learning' (Kolb 1984), or learning by doing is one approach often taken. There are two main interpretations as to what this actually means in practice (Fenwick 2000: 243-44). On the one hand, it is viewed as non-classroom based, informal learning from experiences in everyday life. On the other, it is the linking of formal education strategies with everyday life experience.

Kurz et al. (1998: 39-41) present evidence from twelve studies which illustrate that although didactic methods of teaching medical students (such as lectures and handouts) often improve knowledge about communication skills, it is experiential methods of learning that lead to the effective use of these skills in practice. They refer to two main studies that illustrate this – Rutter and Maguire (1976), who demonstrated that medical students, who attended a course in patient history-taking, reported that those who had conducted a practice interview took approximately three times as much relevant and accurate information as those who only attended lectures. Evans et al. (1989) found that medical students who attended three two-hour workshops (which included experiential methods such as role-play, group discussion, analysis of videotaped consultations and feedback on performance) in addition to

five one hour lectures (which covered useful communication skills in medical interviewing) demonstrated better history taking skills than those who attended the lectures alone.

In addition to this, Aspegren (1999) conducted a review of forty-two studies in the teaching of communication skills in medicine. It was concluded that experiential methods were preferable in the teaching of communication skills.

The evidence from these studies indicate that the incorporation of experiential learning methods into the training of practitioners when preparing them to deliver a complex intervention such as BCC is desirable. However, it is also crucial to assess *which learning methods* result in changes in consulting behaviour of healthcare professionals in clinical practice to evaluate which teaching methods may be most appropriate to facilitate the incorporation of skills in BCC into practice.

6.1.1 Training qualified healthcare practitioners

Although much learning in professional practice is conducted through the means of formal educational courses and qualifications specific to their area of practice, most learning has to fit around tight work schedules, and many practitioners therefore continue their professional development by attendance at educational meetings and workshops, which can range from an hour in length to several days.

The effectiveness of educational meetings and workshops in changing practitioner behaviour has been evaluated by Thompson O'Brien et al. (2001), who conducted a systematic review of thirty-two randomised controlled trials and non-equivalent

group trials of training qualified health professionals through the modes of workshops and educational meetings. They divided their analysis into the comparison of didactic methods (such as lectures with or without question and answer sessions) and interactive methods, which involved trainee participation in activities such as role-play, and case discussion (Thompson O'Brien et al. 2001: 3).

Thompson O'Brien et al. (2001) found that attendance at educational meetings and workshops resulted in an improvement in professional practice in twenty-four out of thirty-two studies reviewed. Six out of seven studies that use didactic measures of teaching resulted in no significant differences in practitioner behaviour after training. Sixteen out of nineteen studies that used a mixed didactic and interactive format demonstrated a change in practitioner behaviour following these workshops and meetings (eleven of which generated moderate or moderately large effect sizes), and seven out of eight studies which used a purely interactive format resulted in a significant change in practitioner performance following training (six of which had a moderate or moderately large effect sizes).

This review supports the claims made by Kurz et al. (1998), Aspegren (1999) and Knowles (1990), because those workshops and meetings that used interactive (including experiential) learning methods clearly resulted in the incorporation of more clinical skills than didactic methods of teaching. However, it must also be noted that Thompson O'Brien et al. (2001) stress that interactive methods of teaching are most effective when attempting to influence behaviours that are 'easier' to change when trying to facilitate the incorporation of more complex skills (such as those used in BCC):

'Studies that used small group discussion and practice sessions to enhance skills were more likely to be effective in improving practice. This latter finding was not consistent across all studies, as at least eleven [out of twenty-seven studies] comparisons that used interactive or mixed activities reported small effects or non-significant differences between groups, especially if the behaviour to be changed was complex.' (Thompson O'Brien et al. 2001:8)

6.2 Experiential learning in the training of healthcare practitioners

The review by Thompson O'Brien et al. (2001) highlights the fact that experiential learning is often most effective in facilitating skill acquisition, but the question about which experiential methods produce the most potent changes in practitioner behaviour to deliver complex interventions (such as BCC) is one that currently remains unanswered. Aspegren (1999: 566) highlights this as an issue in the teaching of communication skills:

'The effect of each of these [experiential] methods in medical education is documented, mostly in open effect studies. The literature search yielded several studies of comparison between instructional and experiential methods.....but there was no study that compares the outcome of the different experiential methods.'

Based on previous studies in learning communication skills, Kurz et al. (1998: 41) outline what they refer to as the *'essential elements of experiential communication skills learning'*. These are:

9.5.2 Hypothesis Six:

There will be a relationship between ratings of the affective aspects of the practice sessions during training and scores on BECCI following training

There was a significant moderate relationship between scores on the factor of affect and follow-up scores on BECCI in the experimental group for practice session three only. This is unexpected considering the fact that the control group were increasing in their ratings of affect compared to the experimental group who were tailing off in their ratings of affect in practice session three. This relationship between higher scores on 'affect' in practice session three and higher follow-up scores on BECCI could be reflective of differences observed between groups at baseline. The experimental group were scoring significantly lower on BECCI at baseline in comparison to the control group, but were achieving scores that were not significantly different from the controls at follow-up. It is possible that those in the experimental group who experienced more positive emotions during their final practice session improved more at follow-up than controls.

9.5.3 Conclusions

There appears to be no relationship between ratings of applicability to clinical practice and skill level in BCC following training. There was a significant relationship between ratings of 'affect' and skill level in BCC at follow-up in the experimental group only. This may imply that there is a relationship between the affective elements of practice sessions and behavioural outcomes following training, and further research needs to be conducted to establish whether this is the case, as this may be an important factor in increased skill acquisition.

9.6 Post debrief comments

Contrary to the expectation from the review of the current literature, there seemed to be many more positive than negative comments about the role-play. Basford and Downie (1990), Rollnick et al. (2002b), Swink (1993), Turner (2005) and Middleton (2005), found great practitioner resistance to conducting role-plays during training. Again, this finding from the Experiential Practice Experiment could be due to the skill of two highly experienced trainers, who took time to reassure nervous workshop participants about role-play. Another possibility is that the practitioners in the workshops choose to be there and were therefore likely to be motivated to learn and practice the skills.

Those in the experimental group made mainly positive comments about the use of simulated patients. It is interesting to note experimental subjects who commented on the use of simulated patients sometimes made comparisons to previous experiences conducting of role-plays – would they still have made the same comments had they experienced role-play within this workshop? As Kneebone (2005:551) describes:

'...there is clearly a strong affective element to any learning experience...Most clinicians, for instance, can give examples of inspirational teaching that profoundly affected their professional development. Equally, however, most can also tell of occasions where they were humiliated in front of patients and peers. Such experiences often endure in the memory for decades.'

Many of those in the control condition commented that they liked the combination of actors at baseline and follow-up with role-play during the workshop. They also enjoyed coaching each other, receiving informal feedback from their partners on the way back to the training room following each practice session, and also observing how another professional would conduct the same consultation. Not all comments were positive however, as some participants complained about the artificiality of role-play compared to their baseline and follow-up assessments with a simulated patient, being more nervous in front of other trainees, and that it was difficult to play the role of the patient, reflecting the experiences of Kurtz et al. (1998: 70) who highlight these as major complaints by trainees in the practice and rehearsal of communication skills.

One comment from the experimental group was that they would have liked to receive some feedback from the simulated patient following their practice sessions. Others commented on the practice sessions with actors being more realistic than having to swap roles and play the patient. Many liked the anonymity of consulting with an actor rather than a fellow trainee.

A good clear brief was important for both training approaches and comments were made about how the practice sessions were obviously well thought out, rather than spontaneous. This supports the work of trainers in healthcare such as Basford and Downie (1990: 65), who recognise how the provision of a clear brief and a rationale as to why certain skills are being practiced can enhance the learning experience for trainees, and increase motivation to take part in skills practice sessions.

Many practitioners felt daunted about being audio-recorded as part of the experiment, but anxiety reduced over time for some with regard to this. This was one issue that was also raised in the interviews conducted to aid in the design of the training workshop and development of PERSI (Lane et al., in preparation), which may shed some light on the feelings of ‘performance anxiety’ by some practitioners in the workshop:

‘I think it is the fear of humiliation. It’s the fear of somebody listening to what you are saying and thinking ‘my God, it’s awful – do these people really work with the public.’ I think [the feeling of being judged or assessed] - that’s probably part of it.’

Comments such as these support the findings of Kurz et al. (1998: 70) who identify that complaints about the ‘unreality’ of practice sessions and audiotaped simulated consultations are often more about fears of being criticised by others. More research needs to be conducted in order to try to mitigate the feelings of anxiety about audio-recordings and practice sessions during training, as this in turn could lead to increased practitioner engagement and motivation.

Finally, another interesting issue mentioned about the recording of the baseline and follow-up consultations was that practitioners may have been ‘performing’ for the recording procedure, rather than just consulting as they would in everyday practice. One practitioner mentioned that he was ‘saving his best bit until last’ but the recording stopped before he could perform this behaviour, despite all participants in the experiment being told to ‘just have a go’ rather than worrying about what should be included on the tape. This may provide some indication as to why recorded

consultations with announced simulated patients in clinical practice have been found to be unreliable in comparison to real patients in assessing ‘performance’ in practice, as opposed to ‘competence’ in using communication skills (Pieters et al. 1994, Ram et al. 1999).

9.7 Performance in practice – the missing link

Although the work in this thesis deals predominantly with the training and measurement of BCC, the links that this training may have with professional practice are absent from this study. Reviews such as Thompson O’Brien et al. (2001) Kurtz et al. (1995) and Aspegren (1999) clearly indicate that the use of experiential methods in training (such as simulated patients and role-play) leads to the greater integration of those skills into clinical practice. However, other studies have hinted that skills acquired in training are not necessarily transferred into clinical practice. Pieters et al (1994) compared scores on consultations with simulated patients following training with consultations conducted in everyday practice. Scores were often higher in the simulated consultation than they were if the real consultations. They concluded that:

‘[Practitioners] know how to carry out a good consultation, but they do not show this competence in practice. There is a need for discussion about where the focus of the vocational training programme should be: on competence or performance.’

that facilitated this process. These included training factors, trainee factors, and work-environment characteristics. Training factors that facilitated the transfer of learning were the incorporation of stimuli common to the workplace environment, the theoretical principles of the skill to be learned, variability of stimuli (which allowed the trainee to apply the new skills in a variety of work situations), and training delivered in a number of different segments is more likely to assist in the integration of skills into everyday work practices than a one-off session of training. Other factors include motivation to learn, ability to learn, and personality factors. Environment characteristics included how workplace policy influenced practice, whether colleagues supported changes in practice, and whether there were incentives to change practice.

This supports the findings of Heaven (2001), who found that nurses that received ongoing support through the medium of clinical supervision following a communication skills training course incorporated more skills into their practice than those who received training only, although the number of skills retained was relatively low in comparison to the number of skills taught. Heaven recommended that feedback on actual clinical practice may improve the number of skills transferred into practice, and that a reduction in the number of skills taught in a given training session may also improve the number of skills retained in clinical practice.

Lane et al. (in preparation) worked closely with a group of cardiac rehabilitation professionals following the delivery of a training programme in BCC, to assist with the facilitation of skills into clinical practice. The research team helped the staff to identify what the barriers were to implementing BCC skills in practice, and assisted them in restructuring their service. They were also encouraged to support each other through these changes. Going beyond simple sessions of training has enabled these practitioners to incorporate the skills learned into their everyday practice, and increased their motivation to use BCC skills.

Miller and Mount (2001) concluded that one training workshop in motivational interviewing (which incorporated the use of simulated clients) did not sufficiently change practitioner behaviour over the long term in clinical practice, as most practitioners showed an increase in MI consistent behaviour, (and no reduction in MI inconsistent behaviour) immediately following training, and lost the MI consistent behaviour at follow-up four months later. Conversely, a recent randomised controlled trial of different methods in teaching motivational interviewing (Miller et al. 2004) has shown that practitioners do increase their use of motivational interviewing skills across time following a training workshop, although this practice of skills is greatest in those who receive feedback or coaching following the workshop. However, caution must be exercised when generalising from these results, as many practitioners did not supply tapes of their clinical practice at follow-up, meaning that tapes that were submitted were likely to be examples of the practitioners' best practice (Miller et al. 2004: 1059). Miller et al. (2004) also felt that the skill retention following training may have differed from the Miller and

Mount (2001) study because the earlier study involved the training of practitioners who were sent for training by their supervisors. In the Miller et al. (2004) study, participants were self-selecting and attended the training out of personal choice, which again highlights the importance of practitioner motivation and engagement in training outcomes.

This finding is also supported by work conducted by Beich et al. (2002), McCambridge et al. (2004) and Jacobsen et al. (2005), all of which have examined the attitudes of General Practitioners in delivering lifestyle interventions. All three studies recommend that steps should be taken to understand practitioners attitudes to lifestyle interventions. Jacobsen et al. (2005: 4) illustrate this point particularly well:

'If the medical profession and those responsible for overall health policy wish to make general practitioners change their behaviour towards their patients, it is important that they understand the aims, values and working conditions of general practitioners that underlie their present attitudes and behaviour.'

Grimshaw et al. (2001, 2002) have reviewed a number of studies regarding the changing of practitioner behaviour in practice, in recognition that training does not necessarily result in changes in clinical practice. This has led to the recommendation that trainers should incorporate elements of behavioural theory, including the exploration of barriers to change clinical practice (Flottorp and Oxman, 2003), into their training programmes to engage practitioners (Eccles et al. 2005), and that process evaluations during training should be conducted to elicit what strategies encourage practitioners to make changes in their consulting behaviour.

9.8 Overall Conclusions

Overall, the Experiential Practice Experiment has evaluated the effects of using two methods to practice and rehearse skills in BCC during training, and established that there was, in essence, no significant difference between the use of simulated patients and role-play in these training workshops. Although application of BCC skills in practice is the ultimate goal, experiments such as these reveal much information about optimal training practices, which can then in turn be incorporated into studies of the implementation of skills in clinical practice (Rethans et al., 2002).

In contrast to the findings of Papadakis et al. (1997), this experiment showed that practitioners who conducted role-play did not rate the affective aspects of their practice sessions significantly differently from those who consulted with simulated patients. There was also no significant difference between groups in their ratings of applicability of practice sessions to clinical work. Ratings of the affective features of practice sessions may be related to skill acquisition. The results from the Experiential Practice Experiment were inconclusive, and further research needs to be conducted to establish whether this relationship exists.

Part Four:

Conclusion

10.0 Recent Developments and Future Research

While the development of BECCI and the Experiential Practice Experiment were in progress, a number of publications were released which bear direct relevance to this work. This concluding chapter discusses these recent developments in relation to the studies conducted in this thesis, and then makes recommendations for future research in relation to BCC skill acquisition.

10.1 Recent developments

In November 2004 the UK government brought the issue of preventing damaging lifestyle behaviours to the fore by launching the 'Choosing Health' white paper (Department of Health, 2004), with the aim of improving the lifestyles of the UK population. There are a number of initiatives to be employed to promote 'health as a way of life', based on the needs of 'informed choice', 'personalisation' and 'collaboration between agencies' defined by the general public. There is recognition that lifestyle changes are often not easy for an individual, and support is often as important as the provision of information. Initiatives that offer support include the introduction of a 'health direct' telephone service, NHS health trainers, and the provision of training and support programmes for NHS staff to develop their skills in assisting patients with lifestyle changes.

In addition to this, a recent review of behavioural risk factor interventions within a primary care context (Goldstein et al. 2004) identified a number of interventions that

could be used by general practice staff to assist patients in making changes to their lifestyles. They recommended that behavioural interventions should be supportive in nature, tailored to patient needs, encourage active participation, and include systemic elements to prompt both practitioners and patients to address lifestyle issues. Goldstein et al. (2004:73) also highlight the importance of being able to integrate an intervention into the delivery of primary care services:

'Intensive face-to-face intervention modalities will have limited impact if they cannot be delivered consistently to large segments of the target population.'

BCC is an intervention that shows promise in assisting practitioners in light of the 'Choosing Health' white paper (Department of Health, 2004), as it is one intervention that healthcare practitioners may find useful in helping patients to change their lifestyle, and it has the potential to fit into daily practice without special provision. It also fits well within the guidelines for behavioural interventions suggested by Goldstein et al. (2004). As BECCI is able to provide an indication of practitioner skill level, this will prove useful should any healthcare practitioners receive training in BCC, as this will in turn highlight the areas in which further training is required, as well as providing an overview of the practitioners' skill competence. Training programmes that use skills practice should be the most effective in helping practitioners acquire skills in BCC, regardless whether that entails the use of simulated patients or role-play with colleagues (providing the practitioners are enthusiastic about learning BCC), as demonstrated by the experiential practice experiment.

10.1.1 Further systematic reviews of motivational interviewing

In addition to the reviews conducted by Noonan and Moyers (1997), Dunn et al. (2001) and Burke et al. (2002) discussed in section 1.2.3, three further reviews of AMIs have been conducted. The most recent systematic review and meta-analysis of MI interventions by Rubak et al. (2005) showed a significant, moderate effect on body mass index, total blood cholesterol, systolic blood pressure, blood alcohol concentration and standard ethanol content (although not for cigarettes per day and HBA_{1c}). They concluded that MI was superior to traditional advice-giving in facilitating patient behaviour change, and that MI consultations with doctors and psychologists were no more effective than those with other healthcare practitioners. Additionally, Burke et al. (2003) conducted a meta-analysis of thirty controlled trials of AMIs. They found that compared to no treatment, AMIs displayed moderate effect sizes for interventions targeted at drug abuse, alcohol misuse, diet and exercise. AMIs were equivalent to other active treatments for these problems, although the comparison treatments tended to be longer in duration than AMIs. The meta-analysis did not find support for studies that used AMIs as an intervention for smoking or HIV risk behaviours. In their concluding remarks, Burke et al. (2003: 858) argue that:

'Future research should ... include: (a) clearer descriptions of the AMI under study, (b) more careful assessment of treatment fidelity and integrity, and (c) greater uniformity and comparability of AMI treatments across studies.'

This is echoed by Britt et al. (2004: 153-4), who conducted a review of MI in healthcare settings. They conclude that although AMIs hold promise in promoting

health behaviour change, there is a lack of controlled studies evaluating the efficacy of AMIs with health problems. They also highlight that:

'The challenge is to develop MI interventions that are usable in health consultations (which tend to be brief), are teachable and are sufficiently specific to enable proper evaluation.'

This issue has also been raised in relation to complex interventions involving practitioner communication skills. A recent systematic review by Griffin et al. (2004) investigated the relationship between interventions aimed at changing practitioner communicative behaviour and health outcomes in patients. It was found that many interventions were poorly described in terms of the skills used and the basis on which these interventions were developed. Some interventions did, however, appear to be related to positive patient outcomes. Griffin et al. recommended that these studies should be replicated, and the methods and development of the interventions should be described more precisely.

10.1.2 The definition and measurement of MI interventions

The importance of defining the intervention delivered has been taken on board in one recent study. McCambridge and Strang (2003) created a brief intervention for drug use, which draws closely on BCC for use with young people. They have described the process by which the intervention was developed, and provided details of the content of the intervention used. This has aided the interpretation of the results generated in the cluster randomised trial of this intervention (McCambridge and Strang, 2004), which resulted in moderate to good effect sizes in the reduction of cigarette smoking, drinking alcohol and cannabis use among those who received the intervention in comparison to a control group. This study suggests that a BCC style intervention may be effective in promoting changes in drug use with young people, and the efficacy of this intervention can be tested by other parties, as the details of exactly what the intervention entailed were documented.

Another recent study (Tappin et al., 2005) found that MI conducted by community midwives with pregnant smokers from a socially deprived area of Glasgow did not significantly increase smoking cessation among heavy smokers. The investigators in this study took care to provide continuing training and support to the midwives. All interviews were audio-recorded and analysed using the MISC, which showed that good quality MI was delivered. This study shows that these women did not significantly decrease their smoking, despite receiving an intervention that was reflective of MI. Questions regarding the integrity of this intervention can be ruled out in the light of these findings, so other questions are raised regarding the suitability of this type of intervention for this group of clients. One factor that is not clear from the publication is how much commitment language was exhibited by these

patients, bearing in mind the findings of Armrhein et al. (2003) that the production of client commitment language leads to more positive patient outcomes.

BECCI relates closely to the recommendations of Burke et al. (2003) and Britt et al. (2004), as it can assist researchers to measure skill competence following training in BCC, providing an indication of practitioner ability to deliver BCC at different stages of the training process. In addition to this, as BECCI enables specific definition of the particular AMI (BCC) under study, it will be useful in the comparison of studies using BCC as an intervention. With further development, BECCI may provide a good reflection of practitioner skill use in BCC during interactions with real, as well as simulated patients, potentially providing an evaluation of performance as well as competence. Studies such as those by McCambridge and Strang (2003, 2004) and Tappin et al. (2005) highlight how the description of the intervention used and quality control are useful in the interpretation of the findings of those studies. BECCI is a tool that can assist in this process.

10.1.3 Training practitioners in motivational interviewing

The EMMEE study, conducted by Miller et al. (2004) investigated the effects of five different training methods on the acquisition of skills in MI. Participants were assigned to either a two-day workshop only, workshop plus coaching, workshop plus feedback, workshop plus coaching and feedback, or a waiting list control group who were given self-guided learning tasks (which included reading texts and viewing audio-visual materials about MI) before being allowed to attend a two-day workshop six months later. The two-day workshops comprised of 50% demonstration and didactic teaching, and 50% skills practice. The trainers emphasised that the

workshops were the 'starting point' and that it would take time to develop MI proficiency in clinical practice.

The four groups that received the workshop training demonstrated significantly greater skill in MI in comparison to controls. This supports the findings from the Experiential Practice Experiment and reviews such as Thompson O'Brien et al. (2001) and Aspegren (1999), in that the practice and rehearsal of skills aids skill acquisition. The EMMEE study however shows the limitations of the Experiential Practice Experiment, as the results at follow-up show a reduction in skill level in the twelve months following training if participants did not receive either coaching or feedback. This suggests that stand alone two-day workshops are simply the first step in acquiring skills in MI and its adaptations. Further activities such as coaching and/or feedback after training workshops appear to be essential to maintain and improve the skills learned over time.

10.2 Future Research

10.2.1 The further development of BECCI

The development of BECCI has resulted in an instrument that can summarise the key features of BCC, and evaluate practitioner skill competence in using those skills with simulated patients. It has shown that the two-day workshop in BCC, used in the Experiential Practice Experiment, produced mean improvements of two to five points in a practitioner's total score across items. However, what is lacking is a description of the level of competence that needs to be attained before a practitioner is

considered to be delivering BCC to a good standard. This needs to be discussed and defined before practitioners are trained to deliver BCC as part of a controlled trial, to ensure that the quality of the intervention delivered is subjected to fair scrutiny. Benchmarks have been set on the MITI (Moyers et al. 2005), which describe whether the practitioner has conducted MI to a minimal, intermediate or high extent, and this is a feature that would also be useful in relation to BECCI scores. Once a benchmark score on BECCI has been set for BCC delivery, the next question that needs to be answered is how much training is required to enable practitioners to deliver BCC to that standard? These issues are beyond the scope of this thesis, but need to be addressed in future research into the training and acquisition of skills in BCC.

Scores on BECCI should also be compared to an external criterion. As discussed in section 5.2.4, one possible criterion with which to compare BECCI would be with scores on the MITI (Moyers et al. 2005). Not only would this show how well correlated the two measures are, but this could potentially further define the similarities and differences between BCC and other AMIs. It would also be valuable to compare scores on BECCI with qualitative data collected from BCC consultations, such as discourse analysis (Nunan 1993) or conversation analysis (ten Have, 1999), to verify that BECCI is reflective of the language used to convey the relationship between the patient and the practitioner.

Another innovative idea is that BECCI could be integrated into the BCC training process to assist in the learning process. Training exercises where trainees can use the MITI (Moyers et al. 2005) to assess practitioner behaviours in an observed role-play situation have been devised, to enhance trainee understanding of MI consistent

and inconsistent behaviours (Asgeir Helgason and Gerado Flórez Menéndez, 2005, personal communication). This in turn raises questions about whether BECCI could also be applied as a learning tool. One practitioner has indeed commented that having a copy of BECCI to refer to helped her to incorporate BCC skills into her clinical practice (Michelle Huws-Thomas, 2002, personal communication). This area warrants further investigation to establish whether BECCI could play a useful role in the teaching of BCC skills.

Finally, one more element that is needed to complement BECCI is a ‘sister-instrument’ that analyses patient behaviour within a BCC consultation. Patient behaviour within a consultation can be of great importance when evaluating outcomes following BCC interventions. This was recently highlighted by the work of Armrhein et al. (2003) who discovered a predictive relationship between client commitment language and behavioural outcomes following MI interventions. Do some aspects of BCC encourage certain patient behaviours within a consultation, which in turn predict patient outcomes? This is an important area of research that should be undertaken to further investigate influences on patient outcomes following a BCC intervention.

10.2.2 Findings from the Experiential Practice Experiment

The Experiential Practice Experiment showed that both role-play with colleagues and consultations with simulated patients resulted in equal skill acquisition in BCC following a two-day workshop. However, as discussed in chapter nine (section 9.7) the practitioners who attended the workshop in which the Experiential Practice Experiment was conducted attended out of choice, rather than being told they must attend. This indicates that practitioners may have been motivated to learn BCC. This is an important issue, as was highlighted by the studies by Miller and Mount (2001) and Miller et al. (2004), who found better outcomes in MI delivery from workshop participants who attended out of choice in comparison to participants who were sent for training by their line manager. The biggest question arising from the Experiential Practice Experiment is therefore how can trainers and/or researchers engage practitioners in learning BCC skills? Grimshaw et al. (2001, 2002) recommend that elements of behavioural theory are integrated into training programmes to help achieve this end. Other initiatives include pre-training activities, such as interactive CD ROMs about challenging behaviour change consultations in clinical practice (Professor Stephen Rollnick, 2004, personal communication). The work by Miller and Mount (2001) and Miller et al. (2004) implies that there may be a link between practitioner engagement and skill implementation following training. Further research that addresses issues surrounding practitioner engagement in training content is, therefore, highly desirable.

Finally, the Experiential Practice Experiment did not investigate the practitioners' use of BCC skills following training. Did their performance in BCC skills improve as they practiced them in their clinical work? Did they in fact use them in their

clinical work at all? How able were practitioners to implement BCC in their everyday practice? As a result of their systematic review and meta-analysis, Rubak et al. (2005) recommend that future studies should focus on how MI can be incorporated into clinical practice in primary and secondary care contexts. It could after all be argued, that training practitioners in BCC is not effective if practitioners are not able or willing to transfer those skills into their daily work and make use of them.

10.3 Conclusion

In summary, the development of BECCI has provided trainers and researchers with a valuable resource to evaluate practitioner competence in BCC. Future research should focus on the internal consistency of BECCI when used with real as opposed to simulated patients. Validation with external criteria would also provide constructive additional information about BECCI's ability to measure the construct of BCC, and its relationship to other AMIs. An instrument that measures patient behaviours during a BCC consultation could provide important information about what practitioner behaviours are most helpful in encouraging patients to make changes to their lifestyle.

The Experiential Practice Experiment has shown that the use of simulated patients does not lead to enhanced BCC skill acquisition in comparison to conducting role-play with fellow trainees, in a two-day workshop where practitioners chose to attend. Two important issues need to be addressed in light of these findings – the engagement of practitioners, and the transfer of BCC skills into clinical practice.

These two factors address the *efficacy* of BCC as an intervention i.e. how reasonable it is to conduct in daily practice.

To reliably evaluate how *effective* BCC is in promoting lifestyle change in patients, BCC should first be proven to be efficacious. Eliciting why practitioners may be initially resistant to learning skills in BCC, and encouraging practitioners to highlight the challenges they face in integrating BCC skills into their daily work following training may provide the first step towards building the bridge between training workshops and the real world of clinical practice.

11.0 Epilogue

The aim of this chapter is to impart new considerations and interpretations of the work presented in this thesis, which developed following further reflection in the period following submission, and from useful discussion points that arose within the viva. The rationale for this is that undertaking a PhD is a course of training in research, and it was felt by both myself and my examiners that rather than to make changes to the original text, an epilogue would best express the process of undertaking a PhD and how I have developed as a researcher. It is hoped that this chapter will be helpful to other students undergoing a PhD study, and will illustrate that the discussions and interpretations from a research project occur over a period of time and are rarely final. It is indeed unusual to get everything 'right first time', and I have personally found the period between submission and the viva to be of great educational value.

Claire Lane, January 2006

11.1 Weaknesses of existing literature

On re-reading the literature reviewed in chapter six, it was felt that although these studies had been described, they were not perhaps critiqued as well as had been intended, and to some extent this made it appear that the quality of the studies was not taken into account when conclusions were drawn. This in turn resulted in several marginal notes on the author's copy of the submitted document and as anticipated, it was also an issue raised by the examiners during the viva.

Some of the studies reviewed used small sample sizes, with the study conducted by Madan et al. (1998) containing only six participants in each group for comparison, and Zraick et al. (2003) randomising just eighteen students. Just two studies (Cornuz et al. 2002 and Krijver et al. 2001) conducted a statistical power calculation, although it is important to note that significant differences were unlikely to have been produced should the study have been underpowered. Questions are however raised regarding how representative the findings from these small samples would be to the general population.

Bias is a major factor that could have made the practice and rehearsal of communication skills appear to produce more favourable outcomes in terms of skill acquisition within the studies reviewed. Most investigations relied on 'convenience samples' of allocated medical students, rather than the randomisation of participants to experimental conditions. This may in turn have resulted in an imbalance between the groups in terms of their skills and characteristics. Several studies did not test their groups for differences at baseline (Sasson et al. 1999, Littlefield et al. 1999, Johnson and Kopp 1996, Haist et al. 2003, Colletti et al 2001, Carney et al. 1995, Kleinman et al. 1996, Rabin et al. 1994, Blue et al. 1998, Zraick et al. 2003), raising questions as to whether the skill levels between groups were significantly different before training, and whether both groups demonstrated equal amounts of change following training. Only one study analysed their non-randomised groups for equivalence in demographic characteristics at baseline and controlled for this in the analysis (Haist et al. 2003). The study by (Seim and Verhoye 1995) was particularly notable, in that the simulated patient used to assess between group differences was

not blinded to the participants' conditions, although the consistency of the simulated patient across consultations in the assessment exercise and student competence was independently rated by two scorers, who were blinded to the students' experimental conditions. Several other studies (Colletti et al. 2001, Haist et al. 2003, Sasson et al. 1999, Kleinman et al. 1996, Blue et al. 1998, Luce 2001, Zraick et al. 2003) gave no indication as to whether the simulated patient assessors/other assessors were blinded to the students' experimental conditions, and whether this in turn may have affected outcomes.

The measurement of outcomes was indeed another area within these studies that was unclear. Most studies gave little or no indication regarding the validity, reliability, internal consistency and responsiveness of the instruments used to this end (with the exception of Abraham et al. 2001, Colletti et al. 2001, Fallowfield et al. 2002, Kruijver et al. 2001 and Cornuz et. al 2002). This was particularly apparent in the study by Zraick et al. (2003), who found no improvement in communication skills by speech and language therapy students following either a didactic or interactive course in communication skills that incorporated the practice and rehearsal of skills with simulated patients. They commented that the skills demonstrated by the students were of a low standard and questioned the sensitivity of their measurement tool in relation to this, implying that it had not been tested to this end. Indeed, the dichotomous instrument appeared to assess whether the student had completed verbal tasks, rather than giving an indication of how well specific behaviours had been performed. Similarly, the instrument used by Johnson and Kopp (1996) assessed communication skills through just five dichotomous items, rather than providing a rating of how well a particular behaviour had been executed. It appears that a

clinician could be considered by some measures of practitioner-patient communication (such as the RIAS, Roter 1995) to be communicating to a low standard, yet still scoring highly on communication should they perform these behaviours. This suggests that the validity of assessing changes in 'communication skills' through this method is questionable.

The systematic review by Thompson O'Brien et al. (2001) indicated that the use of interactive training rather than didactic methods produced better skill acquisition outcomes than didactic methods, although the effect sizes were much smaller when the behaviour taught was complex. This was borne out in the studies by Haist et al. (2003) and Johnson and Kopp (1996), who showed that although more clinical skills appeared to be acquired following the use of simulated patients, there was no significant difference between groups in their communication skills following training, suggesting that these skills are either more difficult to measure or more difficult to acquire.

The conclusion from the literature reviewed in chapter six (pages 164-5) stated that '*... the use of simulated patients and role-play is superior to no training, other interactive methods of training alone and didactic methods of training alone in most cases*'. This made it appear that the author had simply accepted the findings from these studies, regardless of the poor quality of many of them. A better summary would have been that there is *some limited evidence* that the practice and rehearsal of communication skills is beneficial in the acquisition of these skills, demonstrated by well designed studies such as Krijver et al. 2001, Cornuz et al. 2002 and Fallowfield et al. 2002. Most studies appear to indicate that outcomes are better in

communication skills training programmes where skills practice has taken place. However, these findings could be drawn into question, as many seem to have been biased in their design, and have given no indication as to differences that may have been present between groups at baseline. Many have relied on convenience samples, rather than carrying out a power calculation, randomising participants and designing their studies to this end. The quality of assessments made within most studies is unclear. Several studies have not provided any information regarding the validation and sensitivity of their assessment instruments. There was often no indication as to whether the assessors were blinded to participants' experimental conditions (which could in turn affect the accuracy of their scoring).

There is a need for well designed experiments in this field to better test this hypothesis, and the Experiential Practice Experiment is one study that attempted to achieve this end.

11.2 Reflexivity within the research process

This was an interesting issue raised within the viva, and referred to how one's own perspectives within a research team are affected by other members of the team. An individual's views and actions are frequently influenced by the views and actions of others, and all individuals are to some extent shaped by the environment of which they are part (Cialdini 1993). This of course has the advantage that differing opinions can be beneficial in interpreting the data generated from a study. Conversely however, the influence of other opinions can in turn to interpretations being somewhat 'blinkerred', or indeed directed in such a way that different angles of understanding the data are not considered. To what extent were the positions and

interpretations in the design and analysis of the Experiential Practice Experiment and the development of BECCI a reflection of the author's creativity, and how much of the work was influenced by her colleagues?

Four main other people played a key role in helping the author conduct the research reported in this thesis. Overall supervision was provided by Professor Stephen Rollnick, who also assisted in the design and delivery of the BCC workshops that generated data for the development of BECCI and the Experiential Practice Experiment. Pilot work conducted by Ms Michelle Huws-Thomas (nee Boycott) resulted in a list of provisional items (Boycott 2001) that were utilised in the development of BECCI. Finally, Dr Kerenza Hood provided assistance with the statistical methods utilised in the development of BECCI and the Experiential Practice Experiment.

Professor Stephen Rollnick has co-written the key texts on motivational interviewing (Miller and Rollnick, 1991; 2002). To what extent did this in itself have a bearing on the author's positions on motivational interviewing and its adaptations? It is indeed true that it was through contact with Professor Rollnick that the author became familiar with MI and BCC. However, as this method was initially one which was new, the literature was consulted directly by the author, and personal conclusions were drawn before the decision was made to choose BCC as a topic for PhD study. Indeed, many of the texts consulted were not authored by either William Miller or Stephen Rollnick, and there were several studies that showed no obvious effect in favour of AMIs. It was through reading these papers that it became apparent that this was a method that had often been evaluated by looking at patient outcomes, with

little or no attention paid to the skills used by the practitioners who delivered the AMI. Professor Rollnick has predominantly acted as a guide, by eliciting ideas for the development of the project from the author, and providing assistance rather than advice on how to achieve objectives.

To what extent was the development of BECCI influenced by the work carried out by Michelle Huws-Thomas? On re-reading the thesis, it was considered that the list of provisional items (Boycott 2001) may appear to have been taken as given, and that they were worked from without receiving due consideration as to whether they were the best starting point for the development of BECCI. This was however, not the case. As mentioned above, a great number of texts on motivational interviewing and its adaptations were consulted prior to the development of BECCI, and in essence, steps had been taken to be as familiar as possible with the BCC construct. In line with this literature, Boycott's items appeared to be displaying traits corresponding to BCC. The fact that the items were further assessed for validity and changes were made to those items in light of those investigations reflects the critical appraisal of the items. One of the initial exercises was a study into the content validity of the existing items, which involved a list of features associated with good and bad BCC, drawn directly from simulated consultations collected as part of this PhD research. Investigation conducted by the author showed that the provisional items did appear to be tapping traits associated with the BCC construct, and that these items needed further work to best reflect BCC. For this reason, it is felt that the use of the provisional items (Boycott 2001) in the development of BECCI were more a useful starting point, rather than a direct influence on the final product.

One factor that did have an effect on the design of the Experiential Practice Experiment was the compliance of the trainers with regard to incorporating the experiment into the workshop they were going to deliver. One issue that was of interest was the use of the negative modelling of skills as well as positive modelling during training, and whether this would lead to enhanced acquisition of the specific microskills modelled (as illustrated by the work Baldwin 1992). The use of a 2 x 2 factorial experimental design (Trochim, 2004) had been intended to measure this dynamic in addition to the effect of the use of simulated patients on skill acquisition. However, Dr Gary Rose was not willing to incorporate this aspect into the training process. He felt this would make the workshop more disorganised, and it would restrict his creativity as a trainer to a great degree. He was also initially not happy to incorporate role-play into the workshop (he wanted to use exclusively simulated patients) as he anticipated that participants would not find this to be a valuable learning experience. However, a compromise was reached between the author and Dr Rose, where he agreed that role-play would be easy to incorporate within the workshop without too much disruption, and it was agreed not to incorporate the positive and negative modelling effects into the experimental design. This could be argued to have influenced the way in which the data were collected, as minimisation of disruption to trainers and participants was at the heart of the experimental design. However, when conducting research, contextual factors must be taken into account. Failure to acknowledge them in the design of a study can potentially lead to difficulties in collecting data – in this case, it could have affected the quality of the modelling of good and bad practice, and would have made conclusions from this aspect of the experiment difficult to draw. This is a factor often found in the evaluation of complex interventions, especially with regard to putting actions into

practice (MRC 2000: 5), and qualitative studies such as that by (Kaner et al. 2003) have indicated that forcing individuals to adopt specific practices within their professional work is unlikely to result in compliance.

Finally, it is important to acknowledge the help received from Dr Kerenza Hood. The viva examiners were keen to gain an insight as to the extent to which the design of the studies and analysis of the data were influenced by her input. Dr Hood has been a helpful aide throughout the period of PhD study. Rather than asking for instructions on how to analyse the data, the author has always endeavoured to find out how to do this for herself. Dr Hood has provided assistance in grasping concepts, checking interpretation of results, and directing the author to explore several different approaches of analysing data and reach her own conclusions about which method to use. She has consistently encouraged the author to develop her own ideas and perspectives. As a result, the author consulted the literature on statistical methods and drew her own conclusions regarding the strengths and weaknesses of each, making the decision about which approaches to take.

Much guidance and elicitation of the author's perspective has occurred during this research project. However, it is acknowledged that in research as a career, this is often not the case. A PhD is typically a piece of research conducted by an individual, and the minimal influence from others is reflected in this account. However, in a project where a researcher is part of a team, there is likely to be much more reflexivity resulting from having several individuals within that team, which can indeed be helpful at times, yet a hindrance at others.

11.3 Power Calculation

Another interesting point that arose within the viva was the power calculation used within the Experiential Practice Experiment. The experiment was powered based on what was considered to be a significant difference in BECCI scores before and after training. However, whether these expected differences in BECCI scores were the most reliable from which to derive a sample size power calculation to detect the between group differences is questionable.

Previous work by Papadakis et al. (1997) demonstrated that a sample size of seventy-four students did not demonstrate a significant difference in the scores between students who consulted with simulated patients in comparison to those who conducted role-play. Although no information was given regarding the sensitivity of the outcome measure used, these results suggested that should any significant differences in skill acquisition exist between groups, the differences are likely to be small. To this end, it is important to highlight the fact that a type-two error may have occurred in the Experiential Practice Experiment when accepting the null hypothesis that there is no significant difference in BCC skill acquisition between those participants who practiced with simulated patients during training in comparison to those who conducted role-plays with fellow trainees.

It was concluded from the results of the Experiential Practice Experiment that there were no significant differences between groups, based on an expected difference of 0.7 on a practitioner's BECCI score across items. This does not mean however, that there was no significant difference between these two methods of skill practice within this training workshop. It may have been safer to calculate statistical power

based on a much smaller difference score, although one factor to be considered is to what degree should a difference in scores between two groups should be considered to be significant? To power the study to show between group differences of 0.1 in BECCI scores for example, would require at least 3000 participants!

What the results from the Experiential Practice Experiment have shown, is that in practitioners who have chosen to attend a BCC workshop, there was a significant improvement in BCC competence following training in practitioners who consulted with simulated patients during training and those who consulted with fellow trainees during training. 0.7 is a small difference in practitioner scores, and is less than the expected difference of 1.3 calculated from scores before and after training. Confidence can be drawn that a self-selecting two-day training workshop, that utilises skill practice either through the use of simulated patients or the use of role-play between trainees, can help to produce significant changes in practitioner competence in BCC skills following training.

11.4 Randomisation

Another challenging topic within the viva was the fact that there were significant differences in BECCI scores between groups in the Experiential Practice Experiment at baseline, and reasons as to why this may have occurred.

Three possibilities to this end were discussed in chapter nine (namely type one error, randomisation error and failure of recording equipment). At the time of writing, it was believed that these differences in scores at baseline were likely to be as a result

of the failure of the recording equipment. However, on reflection there were only five occurrences at baseline where the recording equipment failed (two in the control group and three in the experimental group). Although it is impossible to be certain that these consultations would not have made a difference, this was a small number of consultations that affected the control and experimental groups in equal numbers, and was not likely to have differed the results greatly.

Nearly twenty percent of participants (eight participants in the control group and seven participants in the experimental group) declined to take part following randomisation, which may have in turn resulted in an unequal balance of skill level between groups at baseline. Ways in which this could have been avoided are discussed in chapter nine. It is important to note that despite differences in skill level at baseline, there were no significant differences between groups at follow-up, or in the amount of change made by those participants, suggesting that all participants made similar amounts of change, and demonstrated similar levels of skill competence following training regardless of the groups that they were allocated to. Therefore it does not appear that major bias has been introduced by the extent of participant attrition after randomisation, but it indeed remains possible.

11.5 The complementary roles of quantitative and qualitative research

Both the development of BECCI and the Experiential Practice Experiment incorporated quantitative and qualitative approaches to research, each bringing different qualities to the project. The differing yet complementary natures of these two methods were not discussed previously in this thesis, and for this reason they shall be discussed here.

Quantitative research methods are *deductive* in nature, providing an analysis of patterns and trends in numerical data. They are primarily (though not exclusively) designed to test differences in the measurement of defined phenomena, and to test hypotheses that have been generated. They are judged to be objective in nature, although design issues such as bias can in turn affect their validity. The populations tested are expected to be representative of the general population, so that generalisations can be made.

Quantitative data are often used to generate *descriptive* data (for example, in cross-sectional studies), to provide an overview of patterns within the data and assist with the generation of hypotheses. Relationships between specific variables can also be observed through quantitative data (such as studying relationships between variables over time in cohort studies). Analyses in investigations such as case-control studies and randomised controlled trials are conducted by comparing a group (or groups) that are not exposed to a particular independent variable (usually described as the 'control' group), with a group that is exposed to the variable of interest (the 'case' or 'intervention' group).

As quantitative data are in the form of numbers, there is the opportunity to collect vast amounts of data, which has both positive and negative consequences. A large sample size means greater statistical power and greater confidence in generalisations, yet large volumes of data can be difficult to manage and risk being subjected to error (through loss of paperwork or incorrect inputting for example). Quantitative data can show differences and relationships between variables, and provide results

representative of the population. However, the biggest fundamental weakness is that quantitative analysis alone does not explain why these differences exist, especially within social science research.

Conversely, qualitative research is *inductive*, investigating a phenomenon in depth, providing data from which hypotheses can be generated (sometimes in conjunction with descriptive quantitative data). Qualitative data comprise detailed information usually generated from a relatively small number of cases in comparison to quantitative data. These generate understanding of phenomena, but they are not necessarily generalisable – rather they are reflective of the cases studied. Sampling is often approached purposively, attempting to obtain a range of perspectives from specific populational groups. The data are usually descriptive, taking the form of spoken or written data, and contains personal perspectives and accounts of specific events.

Unlike quantitative data, qualitative data are used to derive meanings and generate theories through individual accounts, narratives or descriptions. This is advantageous, in that a wealth of understanding about specific situations is derived. However, the collection and analysis of qualitative data is time consuming. The biggest drawback of qualitative analysis is that although it can lead to in depth knowledge about specific instances of the phenomena under study, these data are not generalisable, and it does not test the assumptions that arise. It can however, assist in the interpretation of the findings from quantitative analysis, by providing explanations and suggestions as to why significant differences in quantitative data do or do not appear to exist.

It is easy to see how these two methods of data collection and analysis are complementary to each other – with one essentially generating hypotheses and assisting in interpretation, and the other testing hypotheses. Studies are widely using both approaches to data collection and analysis in social science research for this very reason. Some research teams are indeed finding innovative ways in which to combine qualitative and quantitative research methods (Onwuegbuzie and Leech 2005, Dixon-Woods et al. 2005).

During the development of BECCI, qualitative data were used in the generation and adaptation of items, looking at BCC consistent and inconsistent practice and appraising the existing items to establish whether they were accurately reflecting BCC. Quantitative methods were then used to establish whether the items were consistently measuring BCC and were able to give a reliable overview of practitioner skill competence in BCC. This shows the complementary nature of qualitative and quantitative methods within this context, working hand in hand to generate and test items to create a valid, reliable measure of BCC skill.

Both qualitative and quantitative methods were also used in the development of PERSI, again with the qualitative research conducted to develop the items themselves, and the quantitative aspects relating to the stability of the items to accurately measure attitudes.

Participants were also invited to make comments following the experimental debrief in the Experiential Practice Experiment. These comments were recorded and

transcribed to assist in the interpretation of the quantitative data. These comments showed some interesting and unexpected findings regarding participants' reactions to conducting role-play with fellow trainees, and more in-depth qualitative work to this end (such as interviews) could generate more interesting hypotheses to test in relation to the use of role-play in training.

11.6 Summary

Overall, the experience of conducting the doctoral research in this thesis has been an enjoyable, though sometimes difficult and frustrating experience. Much learning has occurred at different stages. It is often an assumption that most learning occurs during the planning, execution and analysis of an individual's first extensive research project. However, it was found that as much learning occurred during writing-up, the post-submission period, and the viva examination. The opportunity to reflect and then to discuss this piece of work has been invaluable, and these are activities that will certainly be incorporated into work carried out following the completion of this PhD.

References

1. Abraham A, Cheng, TL, Wright JL, Addlestone I, Huang Z & Greenberg L (2001) Assessing an educational intervention to improve physician violence screening skills. *Pediatrics*, 107, E68.
2. Action On Smoking and Health (2004) Basic Facts Two: Smoking and Disease. <http://www.ash.org.uk/html/factsheets/html/basic02.html>
3. Alcohol Concern (2002) Factsheet 8: Health Impacts of Alcohol. http://www.alcoholconcern.org.uk/files/20030819_153746_healtheffects.pdf
4. Altman D (1991) *Practical Statistics for Medical Research*. London, Chapman Hall.
5. Anderson M, Stillman PL & Wang Y (1994) Growing use of standardized patients in teaching and evaluation in medical education. *Teaching & Learning in Medicine*, 6, 15-22.
6. Anderson P & Jane-Llopis E (2004) How can we increase the involvement of primary health care in the treatment of tobacco dependence? A meta-analysis. *Addiction*, 99, 299-312.
7. Armrhein PC, Miller WR, Yahne CE, Palmer M & Fulcher L (2003) Client commitment language during motivational interviewing predicts drug use outcomes. *Journal of Consulting and Clinical Psychology*, 71, 862-78
8. Ashenden R, Silagy C & Weller D (1997) A systematic review of the effectiveness of promoting lifestyle change in general practice. *Family Practice*, 14, 160-75.
9. Aspegren K (1999) BEME Guide No. 2: Teaching and learning communication skills in medicine - a review with quality grading of articles. *Medical Teacher*, 21, 563-570.
10. Babor T & Higgins-Biddle J (2000) Alcohol screening and brief intervention: Dissemination strategies for medical practice and public health. *Addiction*, 95, 677-86.
11. Baker A, Heather N, Wodak A, Dixon J & Holt P (1993) Evaluation of a cognitive behavioural intervention for HIV prevention among injecting drug users. *AIDS*, 7, 247-56.
12. Baker, A, Kochan N, Dixon J, Heather N & Wodak A (1994) Controlled evaluation of a brief intervention for HIV prevention among injecting drug users not in treatment. *AIDS Care*, 6, 559-70.

References

13. Baldwin TT (1992) Effects of alternative modeling strategies on outcomes of interpersonal-skills training. *Journal of Applied Psychology*, 77, 147-54
14. Baldwin T & Ford J (1988) Transfer of training: A review and directions for research. *Personnel Psychology*, 41, 63-104.
15. Bales RF (1950) *Interaction process analysis: A method for the study of small groups*. Reading MA, Addison-Wesley.
16. Basford P & Downie C (1990) How to use role play. *Nursing Times*, 86, 65.
17. Beich A, Gannik D & Malterud K (2002) Screening and brief intervention for excessive alcohol use: Qualitative interview study of the experiences of general practitioners. *British Medical Journal*, 325, 870-5.
18. Benfari R (1981) The Multiple Risk Factor Intervention Trial: The model for the intervention. *Preventive Medicine*, 10, 426-42.
19. Bensing, J. M. (1991) Doctor-patient communication and the quality of care. *Social Science and Medicine*, 32, 1301.
20. Beullens J, Rethans J, Goedhuys J & Buntinx F (1997) The use of standardized patients in research in general practice. *Family Practice*, 14, 58-62.
21. Blue AV, Stratton TD, Plymale M, Degnore LT, Schwartz RW & Sloan DA (1998) The effectiveness of the structured clinical instruction module. *American Journal of Surgery*, 176, 67-70.
22. Bonner G (in preparation) The Behaviour Change Skills Rating Scale, London Metropolitan University.
23. Boon H & Stewart M (1998) Patient-physician communication assessment instruments: 1986-96 in review. *Patient Education and Counselling*, 35, 161-76.
24. Booth R, Kwiatkowski C, Iguchi M, Pinto, F & John D (1998) Facilitating treat entry among out-of-treatment injection drug users. *Public Health Reports*, 113 (S1), 116-128.
25. Borgiel A, Williams J, Hobbs N & Hutchison B (1999) Evaluating the effectiveness of 2 educational interventions in family practice. *Canadian Medical Association Journal*, 161, 965-70.
26. Borsari B & Carey K (2000) Effects of a brief motivational intervention with college student drinkers. *Journal of Consulting and Clinical Psychology*, 68, 728-733.

References

27. Boud P, Keough R & Walker D (1996) Promoting reflection in adult learning. In Edwards R, Hanson A & Raggatt P (Eds.) *Boundaries of adult learning*. London, Routledge.
28. Boycott M (2001) *Behaviour Change Counselling (Rollnick, Mason and Butler 1999): Development of a Checklist Department of Psychology*. MSc Thesis. Bath, University of Bath.
29. Bradley P & Postlethwaite K (2003) Simulation in clinical learning. *Medical Education*, 37 (supp. 1), 1-5.
30. British Heart Foundation (2004) Coronary Heart Disease Statistics: Factsheet. www.bhf.org.uk/news/uploaded/fact_sheet2.pdf
31. British Heart Foundation (2005) Heartstats website. <http://www.heartstats.org/homepage.asp>
32. British Thoracic Society (2001) Campaign launched to help smokers spot early warning signs of chronic lung disease. <http://www.brit-thoracic.org.uk/article13.html>
33. Britt E, Hudson S & Blampied N (2004) Motivational interviewing in health settings: A review. *Patient Education and Counselling*, 53, 147-55.
34. Brunner E, White I, Thorogood M, Bristow A & Curle D (1997) Can dietary interventions change diet and cardiovascular risk factors? A meta-analysis of randomized controlled trials. *American journal of Public Health*, 87, 1415-22.
35. Burchard K & Rowland-Morrin P (1990) A new method of assessing the interpersonal skills of surgeons. *Academic Medicine*, 65, 274.
36. Burke B, Arkowitz H & Dunn C (2002) The efficacy of motivational interviewing and its adaptations: What we know so far. In Miller WR & Rollnick S. (Eds.) *Motivational Interviewing: Preparing people for change*. New York, Guilford Press.
37. Burke B, Arkowitz H & Menchola M (2003) The efficacy of motivational interviewing: A meta-analysis of controlled clinical trials. *Journal of Consulting and Clinical Psychology*, 71, 843-61.
38. Burnard P (1999) *Counselling skills for health professionals*. Cheltenham, Nelson Thornes.
39. Butler C, Rollnick S, Cohen D, Russell I, Bachmann M & Stott N (1999) Motivational consulting versus brief advice for smokers in general practice: A randomized trial. *British Journal of General Practice*, 49, 611-616.

References

40. Cabinet office (2003) *Strategy Unit Alcohol Harm Reduction Project: Interim Analytical Report*. HM Government.
http://www.number10.gov.uk/files/pdf/interim_report.pdf
41. Callahan E & Bertakis K (1993) A comparison of physician-patient interaction at fee-for-service and HMO sites. *Family Practice Research Journal*, 1993, 2.
42. Campbell E, Weeks C, Walsh R & Sanson-Fisher R (1996) Training medical students in HIV/AIDS test counselling: Results of a randomized trial. *Medical Education*, 30, 134-141.
43. CANCER RESEARCH UK (2005) Cancerstats: Incidence - UK. March 2005.
www.cancerresearchuk.org/aboutcancer/statistics/statsmisc/pdfs/cancerstats_incidence_apr05.pdf
44. Carney PA, Dietrich AJ, Freeman DH, JR & Mott LA (1995) A standardized-patient assessment of a continuing medical education program to improve physicians' cancer-control clinical skills. *Academic Medicine*, 70, 52-8.
45. Catell RB (1966) The scree test for the number of factors. *Multivariate Behavioural Research*, 1, 245-76
46. Cialdini (1993) *Influence: The psychology of persuasion* (rev. ed.). New York, Morrow.
47. Cohen D, Colliver J, Marcy M, Fried E & Swartz M (1996) Psychometric properties of a standardized patient checklist and rating scale form used to assess interpersonal and communication skills. *Academic Medicine*, 71 (suppl), S534-6.
48. Colby, S, Monti P, Barnett N, Rohsenow D, Weissman K, Spirito A, Woolard R & Lewander W (1998) Brief motivational interviewing in a hospital setting for adolescent smoking: A preliminary study. *Journal of Consulting and Clinical Psychology*, 66, 574-8.
49. Colletti L, Gruppen L, Barclay M & Stern D (2001) Teaching students to break bad news. *American Journal of Surgery*, 182, 20-23.
50. Contento I, Balch G, Bronner Y, Lytle L, Maloney S, Olson C et al. (1995) The effectiveness of nutrition education and implications for nutrition education policy programs and research: A review of research. *Journal of Nutrition Education*, 7, 277-418.

References

51. Cornuz J, Humair JP, Seematter L, Stoianov R, Van Melle G, Stalder H & Pecoud A (2002) Efficacy of resident training in smoking cessation: a randomized, controlled trial of a program based on application of behavioral theory and practice with standardized patients. *Annals of Internal Medicine*, 136, 429-37.
52. Cronbach LJ (1951) Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
53. Dahl J (1984) Structured experience: a risk-free approach to reality-based learning. *Journal of Nursing Education*, 23, 34-7.
54. Dancey C and Reidy J (2002) *Statistics without maths for psychology: Using SPSS for Windows*. Harlow, Prentice-Hall.
55. De C Williams A, Nicholas M, Richardson P, Pither C & Fernandes J (1999) Generalizing from a controlled trial: the effects of patient preference versus randomisation on the outcome of inpatient versus outpatient chronic pain management. *Pain*, 83, 57-65.
56. De Haes J, Olschewski M, Fayers P, Visser M, Cull A, Hopwood, P. & Sanderman R (1996) *Measuring the quality of life of cancer patients with the Rotterdam Symptom Checklist: A manual*. Groningen, Northern Centre for Healthcare Research (NCH), University of Groningen, The Netherlands. <http://www.med.rug.nl/nch/rscl.pdf>
57. Delvaux N, Merckaert I, Libert Y, Conrard S, Boniver J, Etienne A, Fontaine O, Janne P, Klastersky J, Melot C, Reynaert C, Scalliet P, Slachmuylder J & Razavi D (2005) Physicians' communication with a cancer patient and a relative. *Cancer*, 103, 2397-2411.
58. Department Of Health (2000) *Coronary Heart Disease National Service Frameworks*. HM Government.
59. Department Of Health (2001) *National Service Framework for Diabetes: Delivery Strategy*. HM Government.
60. Department Of Health (2001) *National Service Framework for Diabetes: Standards*. HM Government.
61. Department Of Health (2004) *Choosing Health: Making healthy choices easier*. HM Government.
62. Diabetes UK (2004) *Diabetes in the UK, 2004: A report from Diabetes UK*. http://www.diabetes.org.uk/infocentre/reports/in-the-uk_2004.doc
63. DiMatteo M, Taranta A, Friedman H & Prince L (1980) Predicting patient satisfaction from physicians' non-verbal communication skills. *Medical Care*, 18, 376-87.

References

64. Dishman R & Buckworth J. (1996) Increasing physical activity: A quantitative synthesis. *Medicine and Science in Sports and Exercise*, 28, 706-19.
65. Dixon-Woods M, Argawal S, Jones D, Young B & Sutton A (2005) Synthesising qualitative and quantitative evidence: A review of possible methods. *Journal of Health Services Research & Policy*, 10, 45-53
66. Duffy F, Gordon G, Whelan G, Cole-Kelly, K & Frankel R (2004) Assessing competence in communication and interpersonal skills: The Kalamazoo II report. *Academic Medicine*, 79, 495-507.
67. Dunn C, DeRoo L & Rivara F (2001) The use of brief interventions adapted from motivational interviewing across behavioral domains: A systematic review. *Addiction*, 96, 1725-42.
68. Eagles JM, Calder SA, Nicoll KS & Walker LG (2001) A comparison of real patients, simulated patients and videotaped interview in teaching medical students about alcohol misuse. *Medical Teacher*, 23, 490-493.
69. Eccles, M, Grimshaw, J, Walker A, Johnston, M & Pitts N (2005) Changing the behaviour of healthcare professionals: The use of theory in promoting the uptake of research findings. *Journal of Clinical Epidemiology*, 58, 107-12.
70. Elwyn G, Edwards A, Hood K, Robling M, Atwell C, Russell I, Wensing M, Grol R, et al. (2004) Achieving involvement: process outcomes from a cluster randomized trial of shared decision making skill development and risk communication. *Family Practice*, 21, 337-46.
71. Elwyn G, Edwards A, Mowle S, Wensing M, Wilkinson C, Kinnersley P & Grol R (2001) Measuring the involvement of patients in shared decision-making: a systematic review of instruments. *Patient Education and Counselling*, 43, 5-22.
72. Epstein R, Franks P, Fiscella K, Shields C, Meldrum S, Kravitz R & Duberstien P (2005) Measuring patient-centred communication in patient-physician consultations: Theoretical and practical issues. *Social Science and Medicine*, 61.
73. Errek HK & Randolph DL (1982) Effects of discussion and role-play activities in the acquisition of consultant interview skills. *Journal of Counseling Psychology*, 29, 304-8.
74. Estrada CA, Isen AM & Young MJ (1997) Positive affect facilitates integration of information and decreases anchoring in reasoning among physicians. *Organizational Behavior & Human Decision Processes*, 72, 117-135.

References

75. Evans BJ, Stanley RO, Burrows GD, Sweet B (1989) Lectures and skills workshops as teaching formats in a history taking skills course for medical students. *Medical Education*, 23, 364-70.
76. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A & Eves R (2002) Efficacy of a Cancer Research UK communication skills training model for oncologists: A randomised controlled trial. *Lancet*, 359, 650-656.
77. Family Heart Study Group (1994) Randomised controlled trial evaluating cardiovascular screening and intervention in general practice: Principal results of British family heart study. *British Medical Journal*, 308, 313-20.
78. Fenwick C, Vassilas C, Carter H & Haque M (2004) Training health professionals in the recognition, assessment and management of suicide risk. *International Journal of Psychiatry in Clinical Practice*, 8, 117-21.
79. Fenwick T (2000) Expanding conceptions of experiential learning: A review of the five contemporary perspectives on cognition. *Adult Education Quarterly*, 5, 243-272
80. Flottop S & Oxman A (2003) Identifying barriers and tailoring interventions to improve the management of urinary tract infections and sore throat: A pragmatic study using qualitative methods. *Biomed Central - Health Services Research*.
81. Frederikson L & Bull P (1992) An appraisal of the current status of communication skills training in British medical schools. *Social Science and Medicine*, 34, 515-22.
82. Gentilello L, Rivara F, Donovan D, Jurkovich G, Daranciang E, Dunn C, Villaveces A, Copass M & Ries R (1999) Alcohol interventions in a trauma center as a means of reducing the risk of injury recurrence. *Annals of Surgery*, 230, 473-483.
83. Glass G, Peckham D & Sanders JR (1972) Consequences of failure to meet assumptions underlying the fixed effects analysis of variance and covariance. *Review of Educational Research*, 42, 237-88.
84. Goldstein M, Whitlock E & Depue J (2004) Multiple behavioural risk factor interventions in primary care: Summary of research evidence. *American Journal of Preventive Medicine*, 27 (supp.2), 61-79.
85. Good M (2003) Patient simulation for training basic and advanced clinical skills. *Medical Education*, 37 (supp. 1), 14-21.
86. Gravetter F & Wallnau L (1996) *Statistics for the behavioral sciences : a first course for students of psychology and education*. Minneapolis, West Publishing Company.

References

87. Griffin S, Kinmonth A, Veltman M, Grant J & Stewart M (2004) Effect on health-related outcomes of interventions to alter the interaction between patients and practitioners: A systematic review of trials. *Annals of Family Medicine*, 2, 595-608.
88. Grimshaw J, Eccles M, Walker A & Thomas R (2002) Changing physicians' behaviour: What works and thoughts on getting more things to work. *Journal of Continuing Education in the Health Professions*, 22, 237-43.
89. Grimshaw J, Shirran L, Thomas R, Mowatt G, Fraser C, Bero L, Grilli R, Harvey E, Oxman A & O'Brien M (2001) Changing provider behavior: An overview of systematic reviews of interventions. *Medical Care*, 39, II 2 - II 45.
90. Guyatt G, Berman L, Townsend M, Pugsley S & Chambers L (1987) A measure of quality of life for clinical trials in chronic lung disease. *Thorax*, 42, 773-8.
91. Haist SA, Wilson JF, Pursley HG, Jessup ML, Gibson JS, Kwolek DG, Stratton TD & Griffith CH (2003) Domestic violence: Increasing knowledge and improving skills with a four-hour workshop using standardized patients. *Academic Medicine*, 78, S24-S26.
92. Hajek P, Najberg E & Cushing A (2000) Medical students' concerns about communicating with patients. *Medical Education*, 34, 656-58.
93. Hampl JS, Herbold NH, Schneider MA & Sheeley AE (1999) Using standardized patients to train and evaluate dietetics students. *Journal of the American Dietetic Association*, 99, 1094-7.
94. Handmaker N, Miller W & Manicke M (1999) Findings of a pilot study of motivational interviewing with pregnant drinkers. *Journal of Studies on Alcohol*, 60, 285-287.
95. Hargie O, Dickson D, Boohan M & Hughes K (1998) A survey of communication skills training in UK schools of medicine: present practices and prospective proposals. *Medical Education*, 35, 25-34.
96. Harland J, White M, Drinkwater C, Chinn D, Farr L & Howell D (1999) The Newcastle exercise project: a randomised controlled trial of methods to promote physical activity in primary care. *British Medical Journal*, 319, 828-32.
97. Hayes A, Gee T, Price I, Cooksey R & Patrech A (1998) Determining if skewness and kurtosis are significantly non-normal. http://www.une.edu.au/WebStat/unit_materials/c4_descriptive_statistics/determine_skew_kurt.html

References

98. Heather N, Rollnick S, Bell A & Richmond R (1996) Effects of brief counselling among heavy drinkers identified on general hospital wards. *Drug & Alcohol Review*, 15, 29-38.
99. Heaton CJ, Watson SV & Alger EA (1994) Using a standardized patient to teach health appraisal in a problem-based format. *Academic Medicine*, 69, 415-6.
100. Heaven C (2001) *The role of clinical supervision in communication skills training*. PhD Thesis. Manchester, University of Manchester.
101. Henbest R & Stewart MA (1989) Patient-centredness in the consultation. 1: A measurement. *Family Practice*, 6, 249-53.
102. Hillsdon M & Thorogood M (1996) A systematic review of physical activity promotion strategies. *British Journal of Sports Medicine*, 30, 84-9.
103. Honey P & Mumford A (1982) *Manual of Learning Styles*, London, P. Horley.
104. Hulsman R, Ros W, Wunnubst J & Bensing JM (1999) Teaching clinically experienced physicians communication skills. A review of evaluation studies. *Medical Education*, 33, 655-68.
105. Husted J, Cook R, Farewell V & Gladman D (2000) Methods for assessing responsiveness: A critical review of the literature and recommendations. *Journal of Clinical Epidemiology*, 53, 459-68.
106. Jacobsen E, Rasmussen S, Christensen M, Engberg M & Lauritzen T (2005) Perspectives on lifestyle intervention: The views of general practitioners who have taken part in a health promotion study. *Scandinavian Journal of Public Health*, 33, 4-10.
107. Jamtvedt G, Young J, Kristoffersen D, Thomson O'Brien M & Oxman A (2003) Audit and feedback: effects on professional practice and healthcare outcomes (review). *Cochrane Database of Systematic Reviews*, issue 3. <http://www3.interscience.wiley.com/cgi-bin/mrwhome/106568753/HOME>
108. Jarski RW, Kulig K & Olson RE (1989) Allied health perceptions of effective clinical instruction. *Journal of Allied Health*, 18, 469-78.
109. Jepson R (2000) *The effectiveness of interventions to change health related behaviours: A review of reviews*. Glasgow, Medical Research Council Public Health Sciences Unit.
110. Johnson JA & Kopp KC (1996) Effectiveness of standardized patient instruction. *Journal of Dental Education*, 60, 262-66.

References

111. Johnson JA, Kopp KC & Williams RG (1990) Standardized patients for the assessment of dental students' clinical skills. *Journal of Dental Education*, 54, 331-3.
112. Jordan K, Ong B & Croft P (1998) *Mastering Statistics: A Guide for Health Service Professionals and Researchers*. Cheltenham, Nelson Thornes
113. Kaariainen J, Sillanaukee P, Poutanen P & Seppa K (2001) Brief intervention for heavy drinkers: An action project for health care implementation. *Alcologia*, 13, 67-73.
114. Kahan M, Wilson L & Becker L (1995) Effectiveness of physician-based interventions with problem drinkers: a review. *Canadian Medical Association Journal*, 152, 851-9.
115. Kaner E, Heather N, McAvoy B, Lock C & Gilvarry E (1999) Intervention for excessive alcohol consumption in primary health care: Attitudes and practices of English general practitioners. *Alcohol and Alcoholism*, 34, 559-66.
116. Kaner E, Steven A, Cassidy P, Vardy C (2003) Implementation of a model for service delivery and organisation in mental healthcare: A qualitative exploration of service provider views. *Health and Social Care in the Community*, 11, 519-27.
117. Klaber-Moffat, J, Jackson D, Richmond S, Hahn S, Coulton S, Farrin A, Manca A & Torgerson D (2005) Randomised controlled trial of a brief physiotherapy intervention compared with usual physiotherapy for neck pain patients: outcomes and patients' preference. *British Medical Journal*, 330, 75-80.
118. Kleinman DE, Hage ML, Hoole AJ & Kowlowitz V (1996) Pelvic examination instruction and experience: a comparison of laywoman-trained and physician-trained students. *Academic Medicine*, 71, 1239-43.
119. Kneebone R (2005) Evaluating clinical simulations for learning procedural skills: A theory-based approach. *Academic Medicine*, 80, 549-53.
120. Knowles M (1990) *The Adult Learner: A neglected species*. Houston, Gulf.
121. Koerber A, Crawford J & O'Connell K (2003) The effects of teaching dental students brief motivational interviewing for smoking-cessation counseling: a pilot study. *Journal of Dental Education*, 67, 439-47.
122. Kok G, Van Den Borne B & Dolan Mullen P (1997) Effectiveness of health education and health promotion: meta-analyses of effect studies. *Patient Education and Counselling*, 30, 19-27.

References

123. Kolb D (1984) *Experiential learning : experience as the source of learning and development*, Upper Saddle River, NJ, Prentice-Hall.
124. Krahn LE, Bostwick JM, Sutor B & Olsen MW (2002) The challenge of empathy: A pilot study of the use of standardized patients to teach introductory psychopathology to medical students. *Academic Psychiatry*, 26, 26-30.
125. Kruijver IPM, Kerkstra A, Francke A, Bensing JM & Van De Wiel HBM (2000) Evaluation of communication training programs in nursing care: A review of the literature. *Patient Education and Counselling*, 39, 129-45.
126. Kruijver IPM, Kerkstra A, Kerssens JJ, Holtkamp CCM, Bensing JM & Van De Wiel HBM (2001) Communication between nurses and simulated patients with cancer: evaluation of a communication training programme. *European Journal of Oncology Nursing*, 5, 140-53.
127. Kuchipudi V, Hobein K, Fleckinger A & Iber F (1990) Failure of a two hour motivational intervention to alter recurrent drinking in alcoholics with gastrointestinal disease. *Journal of Studies on Alcohol*, 51, 356-60.
128. Kurz S & Silverman J (1996) The Calgary-Cambridge Referenced Observation Guides: An aid to defining the curriculum and organising the teaching in communication training programmes. *Medical Education*, 30, 83-9.
129. Kurz S, Silverman J & Draper J (1998) *Teaching and learning communication skills in medicine*. Abingdon, Radcliffe Medical.
130. Lane C, Huws-Thomas M, Hood K, Rollnick S, Edwards K & Robling M (2005) Measuring adaptations of motivational interviewing: The development and validation of the Behavior Change Counseling Index. *Patient Education and Counselling*, 56, 166-73.
131. Lane C, Johnson S, Rollnick S, Edwards K & Lyons M (2003) Consulting about lifestyle change: Evaluation of a training course for specialist diabetes nurses. *Practical Diabetes International*, 20, 204-8.
132. Lane C, Speck L, Rollnick S, Hawkins N, Cook A (in preparation) It's not just patients who need to change their behaviour: An action research project into the incorporation of motivational interviewing skills in cardiac rehabilitation and secondary prevention.
133. Lewin S, Skea Z, Entwistle V, Zwarenstein M & Dick J (2001) Interventions for providers to promote a patient centred approach in clinical consultations. *Cochrane Database of Systematic Reviews*. Issue 4.

References

134. Littlefield JH, Hahn HB & Meyer AS (1999) Evaluation of a role-play learning exercise in an ambulatory clinic setting. *Advances in Health Sciences Education*, 4, 167-173.
135. Luce D (2001) The effectiveness of standardized patient tutors in training first-year physician assistant students to conduct the medical interview. *Perspectives on Physician Assistant Education*, 12, 92-9.
136. Madan AK, Caruso BA, Lopes JE & Gracely EJ (1998) Comparison of simulated patient and didactic methods of teaching HIV risk assessment to medical residents. *American Journal of Preventive Medicine*, 15, 114-119.
137. Marlatt G, Baer J, Kivlahan D, DiMeff L, Larimer ME, Quigley L, Somers, J & Williams E (1998) Screening and brief intervention for high-risk college student drinkers: Results from a 2-year follow-up assessment. *Journal of Consulting and Clinical Psychology*, 66, 604-615.
138. Marteau T & Lerman C (2001) Genetic risk and behavioural change. *British Medical Journal*, 322, 1056-9.
139. Martino S, Carroll K, O'Malley S & Rounsaville B (2000) Motivational interviewing with psychiatrically ill substance abusing patients. *American Journal on Addictions*, 9, 88-91.
140. Mavis B, Ogle K, Lovell K & Madden LM (2002) Medical students as standardised patients to assess interviewing skills for pain evaluation. *Medical Education*, 36, 135-40.
141. McCambridge J, Platts S, Whooley D & Strang J (2004) Encouraging GP alcohol intervention: Pilot study of change-oriented reflective listening. *Alcohol and Alcoholism*, 39, 146-9.
142. McCambridge J & Strang J (2003) Development of a generic drug intervention model for public health purposes: A brief application of motivational interviewing with young people. *Drug and Alcohol Review*, 22, 391-99.
143. McCambridge J & Strang J (2004) The efficacy of single-session motivational interviewing in reducing drug consumption and perceptions of drug-related risk and harm among young people: results from a multi-site cluster randomised trial. *Addiction*, 99, 39-52.
144. Mead N & Bower P (2000) Measuring patient centredness: A comparison of three observation-based instruments. *Patient Education and Counselling*, 39, 71-80.
145. Mead N & Bower P (2002) Patient-centred consultations and outcomes in primary care: A review of the literature. *Patient Education and Counselling*, 48, 51-61.

References

146. Medical Research Council (2002) *A framework for the development of complex interventions to improve health*.
http://www.mrc.ac.uk/pdf-mrc_cpr.pdf
147. Mhurchu C, Margetts B & Speller V (1998) Randomized clinical trial comparing the effectiveness of two dietary interventions for patients with hyperlipidaemia. *Clinical Science*, 95, 479-87.
148. Middleton J (2005) Role play is not everyone's scene... Tim Turner (perspectives February 9). *Nursing Standard*, 19 (24), 31.
149. Miller WR (2000) The Motivational Interviewing Skill Code (MISC). (August 2000 version).
<http://motivationalinterview.org/training/MISC.PDF>
150. Miller WR (2001) When is it motivational interviewing? *Addiction*, 96.
151. Miller WR, Benefield R & Tonigan JS (1993) Enhancing motivation for change in problem drinking: A controlled comparison of two therapist styles. *Journal of Consulting and Clinical Psychology*, 61, 455-461.
152. Miller WR & Mount K (2001) A small study of training in motivational interviewing: Does one workshop change clinician and client behaviour? *Behavioural and Cognitive Psychotherapy*, 29, 457-71.
153. Miller WR & Rollnick S (1991) *Motivational Interviewing: preparing people for change*. New York, Guilford Press.
154. Miller WR & Rollnick S (2002) *Motivational Interviewing: Preparing people for change (Second Edition)*. New York, Guilford Press.
155. Miller W, Yahne, C., Moyers T, Martinez J & Pirritano M (2004) A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of Consulting and Clinical Psychology*, 72, 1050-62.
156. Molyneux A, Lewis S, Leivers U, Anderton A, Antoniak M, Brackenridge A, Nilsson F, McNeill A, West R, Moxham J & Britton J (2003) Clinical trial of nicotine replacement therapy (NRT) plus brief counselling, brief counselling alone, and minimal intervention on smoking cessation in hospital inpatients. *Thorax*, 58, 484-88.
157. Monti M, Colby S, Barnett N, Spirito A, Rohsenow D, Myers M, Woolard R & Lewander W (1999) Brief intervention for harm reduction with alcohol-positive older adolescents in a hospital emergency department. *Journal of Consulting and Clinical Psychology*, 67, 989-994.

References

158. Moran J (2003) *Assessing communication strategies in routine consultations between health professionals and patients with type I and II diabetes*. DCLinPsych thesis. Academic Unit of Psychiatry and Behavioural Sciences. Leeds, University of Leeds.
159. Moran L, Guyatt G & Norman G (2001) Establishing the minimal number of items for a responsive, valid, health-related quality of life instrument. *Journal of Clinical Epidemiology*, 54, 571-9.
160. Moyers T, Martin T, Catley D, Harris K & Ahluwalia J (2003) Assessing the integrity of motivational interviewing interventions: Reliability of the motivational interviewing skills code. *Behavioural and Cognitive Psychotherapy*, 31, 177-84.
161. Moyers T, Martin T, Manuel J, Hendrickson S & Miller W (2005) Assessing competence in the use of motivational interviewing. *Journal of Substance Abuse Treatment*, 28, 19-26.
162. MRFIT Research Group (1982) Multiple Risk Factor Intervention Trial: Risk Factor Changes and Mortality Results. *Journal of the American Medical Association*, 248, 1465-77.
163. MRFIT Research Group (1986) Coronary Heart Disease death, nonfatal acute myocardial infarction and other clinical outcomes in the Multiple Risk Factor Intervention Trial. *American Journal of Cardiology*, 58, 1-13.
164. MRFIT Research Group (1990) Mortality rates after 10.5 years for participants in the Multiple Risk Factor Intervention Trial. *Journal of the American Medical Association*, 263, 1795-1801.
165. Murphy K & Davidshofer C (1998) *Psychological testing : principles and applications*. Upper Saddle River, N.J, Prentice Hall.
166. National Audit Office (2001) *Tackling Obesity in England*. HM government.
167. Noonan W & Moyers T (1997) Motivational Interviewing: A review. *Journal of Substance Misuse*, 2, 8-16.
168. Nunan D (1993) *Introducing Discourse Analysis*. London, Penguin.
169. Nunnally J (1978) *Psychometric Theory*. New York, McGraw Hill.
170. Norman G (1989) Issues in the use of change scores in randomized trials. *Journal of Clinical Epidemiology*, 42, 1097-1105.

References

171. Ockene JK, Adams A, Pbert LM, Luippold R, Hebert JR, Quirk M & Kalan A (1994) The physician-delivered smoking intervention project: Factors that determine how much the physician intervenes with smokers. *Journal of General Internal Medicine*, 9, 379-84.
172. Olive, K, Elnicki D & Kelley M (1997) A practical approach to developing cases for standardized patients. *Advances in Health Sciences Education*, 2, 49-60.
173. Onweugbuzie AJ & Leech NL (2005) Taking the “Q” Out of Research: Teaching Research Methodology Courses Without the Divide Between Quantitative and Qualitative Paradigms. *Quality & Quantity*, 39, 267–296
174. Oppenheim A (1994) *Questionnaire design, interviewing and attitude measurement*. London, Compendium.
175. OXCHECK Study Group (1994) Effectiveness of health checks conducted by nurses in primary care: Results of the OXCHECK study after one year. *British Medical Journal*, 308, 308-12.
176. OXCHECK Study Group (1995) Effectiveness of health checks conducted by nurses in primary care: Final results of the OXCHECK study. *British Medical Journal*, 310, 1099-1104.
177. Pallant J (2005) *SPSS survival manual : a step-by-step guide to data analysis using SPSS for Windows (Version 12)*. Maidenhead, Open University Press.
178. Papadakis MA, Croughan-Minihane M, Fromm LJ, Wilkie HA & Ernster VL (1997) A comparison of two methods to teach smoking-cessation techniques to medical students. *Academic Medicine*, 72, 725-727.
179. Pieters H, Touw-Otten F & De Melker R (1994) Simulated patients in assessing consultation skills of trainees in general practice vocational training: a validity study. *Medical Education*, 28, 226-33.
180. Poikolainen K (1999) Effectiveness of brief interventions to reduce alcohol intake in primary health care populations. *Preventive Medicine*, 28, 503-9.
181. Project MATCH Research Group (1997) Matching alcoholism treatments to client heterogeneity: Project MATCH posttreatment drinking outcomes. *Journal of Studies on Alcohol*, 58, 7-29.
182. QSR International Pty Ltd (2002) QSR NUD*ST, version 6.0. QSR International Pty Ltd.
183. Rabin DL, Boekeloo BO, Marx ES, Bowman MA, Russell NK & Willis AG (1994) Improving office-based physician's prevention practices for sexually transmitted diseases. *Annals of Internal Medicine*, 121, 513-9.

References

184. Ram P, Grol R, Rethans J, Schouten B, Van Der Vleuten C & Kester A (1999) Assessment of general practitioners by video observation of communicative and medical performance in daily practice: issues of validity, reliability and feasibility. *Medical Education*, 33, 447-54.
185. Ram P, Van Der Vleuten C, Rethans J, Grol R & Aretz K (1999) Assessment of practicing family physicians: Comparison of observation in a multiple-station examination using standardised patients with observation of consultations in daily practice. *Academic Medicine*, 74, 62-9.
186. Resnikoff A. (1969) The relationship of counselor behavior to client response and an analysis of a medical interview training procedure involving simulated patients. *Dissertation Abstracts International*, 30, 137-138.
187. Rethans J, Norcini J, Baron-Maldonado M, Blackmore D, Jolly B, Laduca T, Lew S, Page G & Southgate L (2002) The relationship between competence and performance: implications for assessing practice performance. *Medical Education*, 36, 901-09.
188. Rice V & Stead L (2001) Nursing Interventions for smoking cessation. *Cochrane Database of Systematic Reviews*. Issue 1.
<http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
189. Richmond R, Heather N, Wodak A, Kehoe L & Webster I (1995) Controlled evaluation of a general practice-based brief intervention for excessive drinking. *Addiction*, 90, 119-32.
190. Riddoch C, Puig-Ribera A & Cooper A (1998) Effectiveness of physical activity promotion schemes in primary care: A review. *Health Promotion Effectiveness Reviews*, 14, 1-79.
191. Rigotti N, Munafo M, Murphy M & Stead L (2002) Interventions for smoking cessation in hospitalised patients. *Cochrane Database of Systematic Reviews*, Issue 4.
<http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
192. Robinson S & Cagianca W (1985) Effects of counsellor's ordinal position when involved in role-play practice in triads. *Counselor Education & Supervision*, 365-71.
193. Roche AM, Eccleston P & Sanson-Fisher R (1996) Teaching smoking cessation skills to senior medical students: A block- randomized controlled trial of four different approaches. *Preventive Medicine*, 25, 251-258.
194. Roe L, Hunt P, Bradshaw H & Rayner M (1997) Health promotion interventions to promote healthy eating in the general population: A review. *Health Promotion Effectiveness Reviews*, 6, 1-198.

References

195. Rogers C (1959) A theory of therapy, personality and interpersonal relationships as developed in the client-centered framework. In Koch S (Ed.) *Psychology: The study of a science*. New York, McGraw-Hill.
196. Rogers S, Humphrey C, Nazareth I, Lister S, Tomlin Z & Haines A (2000) Designing of interventions to change professional practice in primary care: Lessons from an exploratory study of two change strategies. *British Medical Journal*, 320, 1580-3.
197. Rollnick S (2001) Enthusiasm, quick fixes and premature controlled trials. *Addiction*, 96, 1769-70.
198. Rollnick S, Allison J, Ballasiotes S, Barth T, Butler C, Rose G & Rosengren D (2002) Variations on a Theme: Motivational Interviewing and its Adaptations. In Miller WR & Rollnick S (Eds.) *Motivational Interviewing: Preparing people for change*. New York, Guilford Press.
199. Rollnick S, Butler C & Hodgson R (1997) Brief alcohol intervention in medical settings: Concerns from the consulting room. *Addiction Research*, 5, 331-41.
200. Rollnick S, Kinnersley P & Butler C (2002) Context-bound communication skills training: Development of a new method. *Medical Education*, 36, 377-383.
201. Rollnick S, Mason P & Butler C (1999) *Health Behaviour Change: A guide for practitioners*. Edinburgh, Harcourt Brace.
202. Roseby R, Marks MK, Conn J & Sawyer SM (2003) Improving medical student performance in adolescent anti-smoking health promotion. *Medical Education*, 37, 704-8.
203. Roter D (1995) *The Roter method of interaction process analysis*. Department of Health Policy and Management. Baltimore, John Hopkins University.
204. Rubak S, Sandboek A, Lauritzen T & Christensen B (2005) Motivational interviewing: A systematic review and meta-analysis. *British Journal of General Practice*, 55, 305-12.
205. Rutter D and Maguire P (1976) History-taking for medical students – Evaluation of a training programme. *Lancet*, 2, 558-60.
206. Sanson-Fisher R & Cockburn J (1997) Effective teaching of communication skills for medical practice: selecting an appropriate clinical context. *Medical Education*, 31.

References

207. Sanson-Fisher R, Fairburn S & Maguire P (1981) Teaching skills in communication to medical students - a critical review of the literature. *Medical Education*, 15, 33-7.
208. Sasson VA, Blatt B, Kallenberg G, Delaney M & White FS (1999) "Teach 1, do 1 ... better": superior communication skills in senior medical students serving as standardized patient--examiners for their junior peers. *Academic Medicine*, 74, 932-7.
209. Saunders B, Wilkinson C & Phillips M (1995) The impact of a brief motivational intervention with opiate users attending a methadone programme. *Addiction*, 90, 415-424.
210. Schneider R, Casey J & Kohn R (2000) Motivational versus confrontational interviewing: A comparison of substance abuse assessment practices at employee assistance programs. *Journal of Behavioral Health Services & Research*, 27, 60-74.
211. Schuwirth L & Van Der Vleuten C (2003) The use of clinical simulations in assessment. *Medical Education*, 37 (supp. 1), 65-71.
212. Seim HC & Verhoye JR (1995) Comparison of training techniques using a patient-centred approach to smoking cessation. *Medical Education*, 29, 139-143.
213. Silagy C & Ketteridge S (1999) Physician advice for smoking cessation. *The Cochrane Library*, Issue 2. Oxford, Update Software.
214. Silagy C, Mant D, Fowler G & Lancaster T (2002) Nicotine replacement therapy for smoking cessation. *Cochrane Database of Systematic Reviews*. <http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
215. Silagy C & Stead L (2001) Physician advice for smoking cessation. *Cochrane Database of Systematic Reviews*. Issue 1. <http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
216. Smith DE, Heckemeyer CM, Kratt PP, & Mason DA (1997) Motivational interviewing to improve adherence to a behavioral weight-control program for older obese women with NIDDM: A pilot study. *Diabetes Care*, 20, 53-4.
217. Spencer J & Silverman J (2001) Education for communication: much already known, so much more to understand. *Medical Education*, 35, 188-90.
218. SPSS Inc (2001) *SPSS for Windows Version 11*. Chicago, SPSS Inc.
219. SPSS Inc (2003) *SPSS for Windows Version 12*. Chicago, SPSS Inc.

References

220. Stead L & Lancaster T (2002) Group behaviour therapy programmes for smoking cessation. *Cochrane Database of Systematic Reviews*. Issue 2. <http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
221. Stephens J (1996) *Applied Multivariate Statistics for the Social Sciences*, Second edition. Mahwah NJ, Lawrence Erlbaum Associates.
222. Stephens R, Roffman R & Curtin L (2000) Comparison of extended versus brief treatments for marijuana use. *Journal of Consulting and Clinical Psychology*, 68, 898-908.
223. Stewart M, Brown J, Weston W, McWhinney I, McWilliam C & Freeman T (1995) *Patient-centered medicine : Transforming the clinical method*. Thousand Oaks, Sage Publications.
224. Stillman PL (1977) Construct Validation of the Arizona Clinical Interview Rating Scale. *Educational and Psychological Measurement*, 37, 1031-8.
225. Stillman PL, Wang Y, Ouyang Q, Zhang S, Yang Y & Sawyer WD (1997) Teaching and assessing clinical skills: A competency-based programme in China. *Medical Education*, 31, 33-40.
226. Streiner D & Norman G (1995) *Health measurement scales : a practical guide to their development and use*. Oxford, Oxford University Press.
227. Swanson AJ, Pantalon MV & Cohen KR (1999) Motivational interviewing and treatment adherence among psychiatric and dually-diagnosed patients. *Journal of Nervous and Mental Disease*, 187, 630-5.
228. Swink D (1993) Role-play your way to learning. *Training and Development*, 91-7.
229. Tabachnick B & Fidell L (2001) *Using multivariate statistics*. Boston Allyn and Bacon.
230. Tamblyn R (1998) Use of standardized patients in clinical practice. *Canadian Medical Association Journal*, 158, 205-7.
231. Tanner J & Hale C (2002) The Workshop as an effective method of dissemination: The importance of the needs of the individual. *Journal of Nursing Management*, 10, 47-54.
232. Tappin D, Lumsden M, Gilmour H, Crawford F, McIntyre D, Stone D, Webber R, MacIndoe S & Mohammed E (2005) Randomised controlled trial of home-based motivational interviewing by midwives to help pregnant smokers quit or cut down. *British Medical Journal*, 331, 373-7.

References

233. Tappin D, McKay C, McIntyre D, Gilmour WH, Cowen S, Crawford F, Currie F, Lumsden MA (2000) A practical instrument to document the process of motivational interviewing. *Behavioural and Cognitive Psychotherapy*, 28, 17-32.
234. Ten Have P (1999) *Doing Conversation Analysis: A practical guide*. London, Sage.
235. Thomson O'Brien M, Freemantle N, Oxman A, Wolf F, Davis D & Herrin J (2001) Continuing education meetings and workshops: Effects on professional practice and health care outcomes (review). *Cochrane Database of Systematic Reviews*. Issue 1.
<http://www3.interscience.wiley.com/cgi-bin/mrhome/10658753/HOME>
236. Trochim B (2004) *The Research Methods Knowledge Base, 2nd Edition*.
<http://trochim.human.cornell.edu/kb/index.htm>
237. Turner T (2005) Stage Fright. *Nursing Times*, 19 (22), 22-3.
238. Utting MR, Campbell F, Rayner C, Whitehouse CR & Dornan TL (2000) Consultation skills of medical students before and after changes in curriculum. *Journal of the Royal Society of Medicine*, 93, 247-253.
239. Wass V, Jones R & Van Der Vleuten C (2001) Standardized or real patients to test clinical competence? The long case revisited. *Medical Education*, 35, 321-5.
240. Weingarten M, Yaphe J, Blumenthal D, Oren M & Margalit A (2001) A comparison of videotape and audiotape assessment of patient-centredness in family physicians' consultations. *Patient Education and Counselling*, 45, 107-10.
241. Weston WW & Brown JB (1995) Dealing with common difficulties in learning and teaching the patient centered method. In Stewart M, Brown JB, Weston WW, McWhinney LR, McWilliam CL & Freeman TB (1995) *Patient centered Medicine: Transforming the clinical method*. Thousand Oaks, Sage publications. 132-42.
242. WHO European Collaborative Group (1986) European collaborative trial of multifactorial prevention of Coronary Heart Disease. *Lancet*, 1, 869-72.
243. Wilk A, Jensen N & Havighurst T (1997) Meta-analysis of randomized controlled trials addressing brief interventions in heavy alcohol drinkers. *Journal of General Internal Medicine*, 12, 274-83.
244. Wise P S (1980) Methods of teaching--revisited. Character play and role play. *Journal of Continuing Education in Nursing*, 11, 37-8.

References

245. Wonderling D, Langham S, Buxton M, Normand, C & McDermott C (1996) What can be concluded from the OXCHECK and British Family Heart Studies: Commentary on cost effectiveness analyses. *British Medical Journal*, 312, 1274-8.
246. Wonderling D, McDermott C, Buxton M, Kinmonth A, Pyke S, Thompson S & Wood D (1996) Costs and cost effectiveness of cardiovascular screening and intervention: the British family heart study. *British Medical Journal*, 312, 1269-73.
247. Yedidia MJ, Gillespie CC, Kachur E, Schwartz MD & Ockene J (2003) Effect of communications training on medical student performance. *Journal of the American Medical Association*, 290, 1157-1165.
248. Zraick RI, Allen RM & Johnson SB (2003) The use of standardized patients to teach and test interpersonal and communication skills with students in speech-language pathology. *Advances in Health Sciences Education*, 8, 237-48.

Appendix I

Behaviour Change Skills Rating Scale

Rater:

Tape:

Date:

Scoring instructions:

- Each skill/technique can be rated from 0 to 5 or not applicable (N/A).
- **Not applicable** is used when this particular skill/technique was not relevant/appropriate in the consultation, or that it could have been appropriate but you did not consider its absence detrimental in this context.

For example, a patient presents having responded to a dietary indiscretion with black and white thinking which lead them to over consume further (ate two biscuits, felt guilty, thought 'I've blown it, might as well finish the packet'). The dietitian might have approached this in a number of ways such as problem solving, general work on modifying biased thinking, or specifically tackling the notion of dietary 'rules'. If any one of these was constructively used the others could be marked as N/A as although they were potentially appropriate it was not detrimental that they were not used.

- For items in the **structure section** the concept of frequency is not relevant as each of these items relates to a single process or event. Therefore scoring is relatively straightforward:
 - 0 = not done (but should have been)
 - 1 = done but poorly
 - 2 = done with basic level of skill
 - 3 = done moderately well
 - 4 = done fairly well
 - 5 = done well
- For all other items the concept of *extent of use* is also relevant. Scoring takes into account the *extent* to which the skill technique was used, *relative to the opportunities for its use*, in addition to the *level of skill* displayed in its use.

For example: You would only expect 'closes the sessions with a summary' to be applicable once during a consultation. So if this is done and done with a fair degree of skill, it might attract a score of 4. However, opportunities to 'demonstrate empathy' might occur on multiple occasions in the consultation and in this case to attract a score of 4 the dietitian would need to have: a) shown empathy on several of the occasions where there was an opportunity to do so *and*, b) done so fairly skilfully.

Hence items in the **interpersonal skills**, and **specific techniques** sections would be scored thus:

- ♦ 0 = This skill/technique was absent from the consultation and you consider its absence detrimental in this context. For example, the patient is clearly ambivalent but the dietitian gives information/instruction without exploring ambivalence. [short form = not at all but should have]
 - ♦ 1 = Skill/technique used to a *very limited extent* **OR** used *more but very poorly* **OR** used to a *limited extent and fairly poorly* [short form = a little bit or pretty poorly]
 - ♦ 2 = Skill/technique used to a *limited extent* but *fairly skilfully* **OR** used *more but with a basic level of skill* [short form = a bit more/a bit better]
 - ♦ 3 = Skill/technique used to a *moderate extent* **and** with a *moderate level of skill* [short form = ok]
 - ♦ 4 = Skill/technique used to a *fair extent* **and** with a *fair degree of skill* [short form = quite good]
 - ♦ 5 = Skill/technique used to a *large extent* **and** with a *good level of skill*. [short form = good]
- **NB** a score of 5 is **not** intended to represent perfect, but a good overall level of skill usage. It is the level you might expect with a dietitian well trained and fairly experienced in the use of these skills.

Behaviour Change Skills Rating Scale

Structure:		
Makes first contact that is warm and open		0 1 2 3
Agrees and uses agenda for session with the patient		0 1 2 3
Reviews progress since previous session		0 1 2 3
Closes session with a summary and clarification of future plans/hwk/goals		0 1 2 3
Interpersonal skills:		
<i>Therapist attributes/behaviours:</i>		
Demonstrates unconditional acceptance/is non-judgemental towards the patient		0 1 2 3
Shows genuineness		0 1 2 3
Demonstrates empathy		0 1 2 3
Works collaboratively with the patient		0 1 2 3
Gives positive feedback frequently		0 1 2 3
Maintains appropriate boundaries and responds to 'challenges' or direct questions from the patient quickly and clearly		0 1 2 3
<i>Uses active listening techniques and guided discovery to explore the current situation and consider possibilities for change</i>		
Minimal encouragers		0 1 2 3
Appropriate use of questions		0 1 2 3
Paraphrasing and reflection		0 1 2 3
Summarising		0 1 2 3
Offers information and ideas appropriately and sensitively		0 1 2 3

Techniques:			N/A
<i>Motivational techniques:</i>			
is sensitive to the patient's stage		0 1 2 3 4 5	
the pros and cons of, and barriers to, and elicits change talk		0 1 2 3 4 5	
resistance		0 1 2 3 4 5	
<i>Cognitive/behavioural strategies:</i>			N/A
promotes the use of self- g by patients		0 1 2 3 4 5	
ot in devising and implementing e behavioural strategies to he target dietary change(s)		0 1 2 3 4 5	
s 'SMART' goals		0 1 2 3 4 5	
blem solving approach		0 1 2 3 4 5	
e patient in modifying biased or nal thinking		0 1 2 3 4 5	
e patient in addressing dietary		0 1 2 3 4 5	
he patient in developing s to eating in response to non- es (e.g. negative affect)		0 1 2 3 4 5	
conscious eating		0 1 2 3 4 5	
<i>the patient in relapse prevention</i>			N/A
patient to identify appropriate systems		0 1 2 3 4 5	
he patient in identifying and r high risk situations and problems		0 1 2 3 4 5	
s the patient to find sources of		0 1 2 3 4 5	

Another possibility would be to briefly review any shared written notes that have been made during the session.

Example: At the close of the session the dietitian sums up, 'So it seems like the main point from the session today has been the difficulty of sticking with your low-fat eating plan while you're away. We've done a bit of problem solving, and come up with some possible coping strategies. You're planning to try... and.... And we'll review how those work out when we meet again on.... Is that right? Have I missed anything important there?'

Section 2: Interpersonal skills

Therapist attributes/behaviours

1. *The dietitian demonstrates unconditional acceptance/is non-judgemental towards the patient.*

Descriptor: is accepting and respecting of the patient, not judging them by a set of rules or standards. NB this does not imply that the dietitian must approve of or like the patient, but accept what is there to work with and respect their intrinsic value as a human being

Example(s): A patient who is on a low income and is a smoker explains that it is difficult to eat more healthily because of the cost.

A judgemental response might be: 'Of course, if you were to stop smoking you'd be able to afford to buy healthier foods', whereas a preferable response might be: 'In that case we'll need to keep your financial situation in mind as we talk this through.'

2. *The dietitian shows genuineness towards the patient.*

Descriptor: is committed to helping the patient, is sincere and non-defensive. The dietitian is open, and has no 'hidden agenda'.

Example(s):

A patient in an assessment session says that although she would like to lose weight she doesn't believe the dietitian can help her, as nothing else seems to have worked. Rather than responding defensively ('Fine, I'm not about to force you to do anything, and I'm pretty busy anyway'), or failing to respond to her concerns ('Well it is important for you to lose weight so maybe I could suggest some ways that I could help'), the dietitian expresses a genuine desire to help by seeking to understand the patient more ('It sounds like you would like to lose weight, but you don't feel as if coming here will be very helpful. I wonder if you would mind telling me about what has been helpful and unhelpful in the past?').

3. *The dietitian demonstrates empathy for the patient.*

Descriptor: being able to see things from your patient's world view, seeing the situation as your patient perceives it – and therefore being sensitive to how this might make your patient feel and think. This understanding is achieved through active listening and being open to what the patient is trying to communicate. (cf. unconditional acceptance/non judgmental approach).

Example(s): The patient has angina, raised BP, is overweight and has recently learned that they have type 2 diabetes. The dietitian introduces herself, and explains that the doctor has suggested a meeting so that they can discuss the food and diabetes. She asks the patient how he has been feeling since he learned about his diagnosis. The patient says 'I haven't really thought about it, there's been such a lot going on lately. My mother recently had a stroke and I've been very busy at work too.'

Rather than the dietitian expressing her sympathy that life has been so stressful lately, then moving on to the 'matter in hand' (food and diabetes) a more empathic response might be: 'It sounds like your life has been quite stressful lately. I'm wondering if the diabetes doesn't seem like your top priority at the moment?'

She is reflecting what he has said about his current pre-occupations indicating accurate listening, and perception of how this might be affecting his thinking at the moment – and checks her interpretation out with the patient.

Example(s):

i) paraphrasing:

Patient: 'One leaflet said you should take fish oil capsules, my neighbour said her doctor told her not to take them, and the stuff I've found on the web says all sorts of things.'

Dietitian: 'The information you've picked so far has been quite confusing then?'

ii) reflection

Patient: 'it's just that I've tried to lose weight so many times before and it's never worked. What if it all goes wrong again this time and I end up feeling even worse?'

Dietitian: 'It sounds like you feel quite anxious about the prospect of trying to lose weight and the impact that might have on you.'

4. *Summarising:*

Descriptor: The dietitian aims to crystallise the essence of what has been said over part of or the whole session in order to clarify and move forward. The summary may encompass both content and emotions, and attends to both verbal and non-verbal communication. A summary is presented tentatively so the patient can correct distortions or misunderstandings.

Example(s): 'Let me just check if I've picked this up correctly – you are very keen to get your diabetes under control, but given that your work is so busy and your wife has been ill this is very hard to achieve. The fact that a very close friend of yours is now suffering kidney problems as a result of his diabetes is making you anxious about your health, but because you've been so stressed lately you've ended up feeling overwhelmed by the situation rather than able to tackle it. Have I picked that up right?'

5. *Offers information and ideas appropriately and sensitively*

Descriptor: Providing information is one important part of the dietitian's role; offering it in a manner consistent with the collaborative nature of this approach maximises the chance of the patient feeling able to 'own' and make use of it. Information is provided tentatively or indirectly.

Example(s):

'I'm not sure if it might be helpful for you to know...'

'Would it be useful if I explained a bit about...?'

'Some people find that...'

'I guess in some situations x/y/z might be a possibility, I don't know if you might...'

The dietitian uses cognitive/behavioural strategies.

1. The dietitian actively promotes the use of self-monitoring by patients:

Descriptor: Maintaining records (e.g. of food intake, activity levels or thoughts/feelings) is a key factor in successful dietary change. It enables the patient to become aware of habits and triggers to eating. It increases control and reduces automatic eating. It provides a basis for discussion, gives clues about potential changes, and also illustrates positive changes that have been achieved. For record keeping to be successful the dietitian must be very positive about its benefits, and must actively use the records in sessions.

Example(s):

- Simple tallies such as: alcohol units per week; portions of fruit and vegetables per day, times a week went for a walk
- Early in treatment for obesity food records are used to establish what initial dietary habits are contributing to the problem. The dietitian and patient can review options for change.
- A patient with type 1 diabetes has been in contact with the dietitian on and off for many years. He tends to run high blood sugars, being afraid of hypos. Food/activity/insulin diaries are used to open up the discussion about the possibility of developing more functional management strategies.
- A patient with a tendency to binge eat on occasions used food diaries initially to help her gain control of her eating. (In some cases recording alone is sufficient to halt binge eating). Later in treatment event/thought records are used to identify and address body image concerns.

2. Supports the patient in devising and implementing appropriate behavioural strategies to promote the target dietary change(s):

Descriptor: Behavioural strategies are actions which the patient can take towards the achievement of the desired dietary change goal. Some are direct actions (e.g. choose a low-fat product, take fruit to work for a snack), and others are supportive actions (e.g. shop from a list, make a plan to cope with a special occasion). Increasing physical activity might also be regarded as a behavioural strategy. Many behavioural strategies centre on modifying or responding differently to 'triggers' or 'cues' such as keeping high risk foods inaccessible and making healthy choices easily available.

NB Generally these are the actions patients need to take in order to actually make dietary change(s), and it is these activities that dietetic activity has traditionally focussed on. Clearly, no-one will lose weight, control their diabetes, or reduce their risk of heart disease unless they make the appropriate dietary behavioural changes, but in order to maximise the chance of the patient being able to make and maintain these changes it is imperative that behavioural strategies are implemented within the context of the other processes described in this document.

Example(s):

Note: not all behavioural strategies will be appropriate to every patient. Some may be expanded to cover numerous aspects of behaviour.

- Plan each day's menu to include regular meals and snacks
- Shop from a list
- Keep crisps and biscuits out of sight/inaccessible
- Keep low-fat snacks easily available
- Freeze/throwaway leftovers
- Adapt a favourite recipe to contain less fat/sugar
- Don't eat while doing other things (driving, watching TV etc)
- Make specific plans to cope with social eating, holidays, special occasions
- Walk to work or join a keep-fit class

that just the two of them, or whether he would also like to come to a joint meeting with the dietitian. The patient is aware that this will not resolve the issue immediately. However, it gives her some confidence that she can manage the situation, and that she can continue problem solving to further develop her action plan.

5. Assists the patient in modifying biased or dysfunctional thinking

Descriptor: Automatic thoughts that are biased, negative or otherwise dysfunctional result in feelings of sadness, anger, or other distressing emotions. If they can be identified and challenged, a more rational alternative can be substituted that will not provoke such distressing feelings. Once identified, the dietitian can help the patient learn to question the thought, and re-frame it as a more realistic or functional alternative.

Example(s):

The patient describes how she had tried to avoid eating biscuits altogether, but after a particularly long and irritating day at work she ate two biscuits on returning home. Feeling guilty and cross with herself about having 'given in' she decided she might as well continue, and went on to eat most of the packet. The dietitian asks the patient what was going through her mind as/just after she ate the first two biscuits. She replies: 'I've blown it. No point in trying to stick with it now. Might as well just eat the rest.'

The dietitian recognises this as biased thinking. They discuss what has happened, checking for evidence – is it actually true that she's blown it and there's no point in sticking with it any longer? They consider if there is another points of view ('what would you say to a friend if they had experienced this situation?') They are able to conclude that the biscuits may not have been a helpful contribution to the patient's diet, but they were not disastrous, and all the reasons to continue working towards her goal do still exist.

6. Assists the patient in addressing 'dietary rules'

Descriptor: Many patients have rigid food beliefs, typically involving the absolute avoidance of favoured or 'high risk' foods, or attempting to stick to a very ascetic meal pattern or calorie goal. 'Rule violation' often results in a very black and white response, which is likely to end up with the patient abandoning control. The dietitian can help the patient to experiment with a more flexible approach, (in addition to modifying biased thoughts to ameliorate the 'black and white' cognitive response).

Example(s): A patient who was trying to lose weight decided she would eat only three meals per day and avoid snacking, most particularly she would not eat at all after her evening meal since she had struggled with evening 'nibbling' for a long time. The first few days of the new regime went well, but soon the urge to eat in the evening started to mount. Once she 'gave in' and ate something she felt terrible, and ended up eating two portions of cake and several chocolates. Through sensitive questioning the patient and dietitian established that not only was the patient finding it hard to change her well-established habit, but also that she was actually hungry in the evening too. Having such a stringent rule about not eating in the evening turned out to be unhelpful. The patient decided to plan an evening snack having worked out that this was a much less 'calorie-expensive' and more satisfying option than an uncontrolled lapse.

7. Supports the patient in developing alternatives to eating in response to non-hunger cues (e.g. negative affect).

Descriptor: Commonly patients eat in response to non-hunger cues such as social situations (e.g. parties or meals out), feelings (e.g. low mood, boredom), beliefs ('eating a snack will make me feel better', 'it is rude not to accept food offered'), physical sensations (e.g.

tiredness, headache) or environmental triggers (walking past a chip shop or bakery). The dietitian can promote a number of strategies to help patients avoid this. These include:

- learning to distinguish between hunger and other cues to eat
- delay and distraction ('urge-surfing')
- meeting the need in alternative ways
- developing tolerance of negative affect
- promoting assertiveness skills
- encouraging planning to deal with high risk situations

Example(s): One patient found she would often reach for a snack immediately after getting in from work. Using information from the food records and discussion, the patient realised that she was not always hungry at this time, but felt in need of a 'pick-me-up'. After some experimentation she found that she could meet this need with a cup of tea and a ten minute power nap rather than the snack, as it was not hunger but tiredness and stress that was triggering her urge to eat.

Another patient found herself eating chocolate or cake in the evenings when her child was in bed and her husband out. She had not long ago eaten dinner usually, so could identify that this was not true hunger. She was feeling lonely, bored, and that the outlook for her evening (ironing, making her daughter's packed lunch and so on) was rather bleak. Talking this through with the dietitian she was able to identify that the real need was for a treat, something to look forward to, or a way of nurturing herself. She used a problem solving approach to consider other (non-food) options for nurturing herself and also planned to try 'urge-surfing'. This involves riding out a craving for food until it fades (as non-hunger triggers tend to do). To help make this more effective she planned to use distracting activities (phone a friend, read a good book) whilst she waited for the urge to diminish.

8. Promotes 'conscious' eating:

Descriptor: 'Conscious' or 'mindful' eating involves eating thoughtfully, focussing on the taste of the food and the sensation of eating. It also involves allowing oneself to notice and respond to cues of hunger and satiety. Mindful eating is hindered by rushed eating, eating while doing other things, and by a very chaotic eating pattern. Behavioural strategies to promote planned and distraction-free eating, as well as a simple eating meditation or thought-focussing activity can aid mindful eating.

Example(s): One patient explained how she had forgotten what it was like to feel hungry. When her daughter was born she lost her eating routine as she ate to fit in with the baby's routine, and although her daughter was now two she was still eating chaotically and often on the move. By starting to eat in a more planned fashion, and where possible allowing more time to eat a meal or snack at a leisurely pace she was able to learn to savour her food, and to recognise once more feelings of hunger and fullness.

The dietitian engages the patient in relapse prevention work.

*NB It will be noted from all the examples in the relapse prevention section that this aspect of work occurs **throughout treatment**, rather than being exclusive the closing stages of and episode of dietary intervention. Furthermore, relapse prevention work can, and should be prophylactic, i.e. the dietitian need not wait until a lapse or difficulty has occurred, but can actively engage with the patient in predicting potential stumbling blocks and planning how to handle these.*

1. Helps the patient to identify appropriate monitoring systems:

Descriptor: Regular progress information makes it easier to identify and respond to small changes in behaviour, and can help to embed new changes. Lack of regular information means major shifts can occur unchecked; these are much harder to deal with.

Example(s): For a patient who has lost weight and is now maintaining a new, lower weight, regular weighing (and careful interpretation of weight changes) means that if an upward trend is noticed remedial action can be taken early on, while the problem remains small. Waiting until weight gain is visible (either by 'eyeballing', or because clothes have become tight, for example) means that the problem is identified much later and is more difficult to deal with.

Similarly, keeping a tally of time spent exercising, or number of portions of fruit/vegetables eaten per day enables small deviations from the target to be identified, rather than distant observation of a gradual drift away from the goal.

2. Engages the patient in identifying and planning for high risk situations and anticipated problems:

Descriptor: Pre-rehearsed coping strategies can enable patients to handle situations which put them at risk of lapsing from their new, healthier behaviour. The dietitian engages the patient in identifying such high-risk situations, and in drawing together a range of strategies that might be used to help manage the situation.

Example(s): The dietitian explains to the patient that inevitably things will occur in the future that challenge their new, healthier behaviours and suggests that they discuss these and plan how to manage them: 'We know life is rarely as smooth as we'd like it to be, so it can be hard to stick with your healthy eating plans sometimes. Can we think about what situations might be difficult for you, so we could start to think about how you might cope if something like that did come up?'

3. Encourages the patient to find sources of support:

Descriptor: The majority of patients will benefit from ongoing support, but this may not be available from the dietitian long term, or maybe required at times when a health professional is not accessible. For this reason it is useful to discuss with the patient what support they feel they might benefit from, and how they can access it if they need it. Some people are reluctant to seek help, feeling they are 'putting on people' or embarrassed by an apparent display of 'weakness', if so, it is be important to address these concerns. Patients may seek support from family, friends, self-help groups, and commercial organisations. They may set this up on an informal or *ad hoc* basis, or as a regular fixture. Patients may also support themselves by booking time for an 'appointment' with themselves, at which they can review progress and plan for any upcoming challenges or problem solve current difficulties.

Example(s): A patient who had successfully lost weight was ending treatment with the dietitian. The dietitian encouraged the patient to consider how she might obtain support for herself in the future: 'Given that our meetings will soon be coming to an end, I'm wondering if we could spend some time thinking about any support you might need in the future. What sort of support might best help you stick to your goals?'

Agenda setting and permission seeking

1. The patient is invited to talk about behaviour change

hardly at all minimally to some extent a good deal a great extent

2. Practitioner negotiates with the patient which behaviour change to talk about

YES/ NO/ UNCERTAIN/ NOT APPLICABLE

The why and the how of change in behaviour

3. Patient talks about behaviour change

hardly at all minimally to some extent a good deal a great extent

4. Patient talks about positive aspects of behaviour change

hardly at all minimally to some extent a good deal a great extent

5. Patient talks about the negative aspects of behaviour change

hardly at all minimally to some extent a good deal a great extent

6. Practitioner asks open questions to elicit how patient feels about change

hardly at all minimally to some extent a good deal a great extent

7. Practitioner uses reflective listening to elicit how patient feels about change

hardly at all minimally to some extent a good deal a great extent

8. Practitioner uses summaries to convey understanding of what the patient says about change

hardly at all minimally to some extent a good deal a great extent

Talk about targets

9. Practical solutions are discussed in the consultation Yes/NO

If no go to item 10

If YES:

a) Practitioner encourages discussion of a range of possibilities.

hardly at all minimally to some extent a good deal a great extent

b) Patient selects suitable options

hardly at all minimally to some extent a good deal a great extent

c) Practitioner avoids single-simple solutions

YES/NO/UNCERTAIN

The Whole Consultation

10 Practitioner acknowledges challenges facing the patient (affirmation)

hardly at all minimally to some extent a good deal a great extent

11. Practitioner conveys respect for patient choice about behaviour change

hardly at all minimally to some extent a good deal a great extent

12. Across the whole consultation, the practitioner's talking takes up what percentage (%) of the total time?

between 0-33% between 34-59% over 60%

MANUAL FOR CODING BEHAVIOUR CHANGE COUNSELLING

INTRODUCTION

Helping people to change behaviour concerning eating, drinking, smoking, taking exercise or adherence to medication represents a challenge for health care practitioners, many of whom will have received little or no formal training (Rollnick, Kinnersley, and Stott 1993). Some situations in health care practice demand the use of skilful communication about behaviour change (Rollnick (2000) and it has been suggested that attention to what the practitioner says and how it is said, can make or mar relationship building. One relatively new framework that has been put forward towards understanding health behaviour is behaviour change counselling (BCC). The model offers a combination of skills and strategies that can be used to improve effectiveness and enhance satisfaction of both parties in the consultation.

WHAT IS BEHAVIOUR CHANGE COUNSELLING?

Behaviour change counselling is derived from Motivational Interviewing (MI). Motivational Interviewing (Miller and Rollnick 1991; 2001) has been widely applied in the field of addictive behaviours and more recently in general health settings and primary care. It has received respectable empirical and practical support as a directive counselling style which elicits behaviour change by helping patients to explore and resolve ambivalence. However, a limiting factor of MI in primary health care settings is its time constraints. BCC on the other hand is briefer in nature and although invariably opportunistic, it can also be part of a planned plan of an encounter. It is more suited to those patient encounters in primary health care which typically range from 10-15 minutes (Emmons and Rollnick, 2001). Awareness of stages of change and motivation for change will be a driving force of the content of the session (Rollnick et al, in press). It is not offered as an 'all or nothing' approach as BCC does not follow a recipe cookbook approach to dealing with patients. It is a *way* of communicating rather than a fixed set of techniques to be used *on* people and is facilitative in helping people to change. The principle factors include; agenda setting, reflective listening, open ended questions, elicitation of change talk, patient freedom and responsibility and a non confrontational 'spirit'. Although there are many similarities with some overlapping skills as in MI, there are enough differences to render them separate entities. BCC strategies involve a means of directing the

(d) Assisting patient to look over the fence

This strategy is useful when importance is high (such as 7/10 or more on the visual picture) and it assists patient in guiding them to look away from their current, to their 'ideal' or 'ought' self.

A low score would indicate the practitioner does not use questions or strategies designed to encourage the patient to talk about the how or why of behaviour change.

2. The health care practitioner negotiates with the patient which behaviour change to talk about

A YES response would indicate that the practitioner helped the patient to select from a range of options and behaviours to be discussed. Agenda setting often will be achieved by asking open questions. The practitioner may indicate his or her preference, but emphasises the autonomy of the patient to make a choice.

A NO response would indicate that the practitioner made their own decisions about what the patients' priorities should be and proceeds discuss these with the patient.

This item relates to the negotiation of discussion of different health behaviours. The aim is to maximize patient choice and demonstrate understanding and curiosity in the patient's agenda. Where more than one behaviour is to be discussed, then the practitioner needs to prioritize and focus on behaviour (s) agreed by both parties. Practitioner behaviour and tone of voice reflect curiosity about what the patient really wants to talk about and will reinforce autonomy and decision-making. The patient really is in the driving seat, although the practitioner may well express his or her own views about priorities as well.

The Why and How of Change in Behaviour

Item 3. The patient talks about behaviour change

A high score reflects the patient talking readily about the reasons for change both good and bad. It might include both positive and negative talk about current behaviour. The important point is that the patient is talking freely about change.

A low score would be reflected in absence of talk from the patient about behaviour change.

Here the patient talks about the benefits of moving on to their health. Conversely, the patient may also talk about the benefits and harms of staying the same (resistance/ambivalence). The practitioner must neither argue for change by telling the patient the costs of continuing behaviour or by advising the patient of the advantages of change. Good practice involves facilitating the patient through the good things and bad things of current behaviour and to listen carefully.

Examples of responses which highlight talk of change is manifested in 'why' questions to oneself such as "Do I really want to give up smoking?"; "Why should I?"; "How will I benefit?"; and "At what cost?"

Also can be seen in talk of the 'how' of change such as the belief in mastery of change in responses such as "I can cope with the x, y, and z of change"; "Somehow I can alter my diet"

4. Patient talks about positive aspects of behaviour change

A high score would indicate patient using change talk about the positive aspects of change. It would include talk about what he or she could do to achieve change.

A low score would indicate absence of positive talk about change.

It is seen in speech stated in the hypothetical (I *could* change) or the declarative (I *can* do it). “Yes, giving up smoking is good for me because it harms the baby”; “I will cut down from 40 units to 20 units of beer a week to save my liver”. “ Changing will help my marriage no end”.

5. Patient talks about the negative aspects of behaviour change

A low score would indicate the patient **engages** in negative aspects of behaviour change such as resistance talk

A high score would indicate that the patient **refrains** from negative aspects of speech regarding behaviour change

The patient may talk of resistance such as arguing, interrupting, denial of problem and excuse making. E.g. “ I would love to stop smoking but I love my fags when I’m stressed”. Additionally, change talk maybe diminished by practitioner engaging in negative judgemental statements such as “ *Why don’t you change*”? “ *How can you tell me you don’t have a problem*”?

6. Practitioner uses open ended questions to elicit how patient feels about change

High score would indicate that the practitioner uses *open questions* throughout the conversation about behaviour change

Low score would indicate an absence of *open questions* designed to elicit how the patient feels about behaviour change.

Open ended questions represent one of the core strategies of BCC and are used to understand further the patients feelings and thoughts about the how and why of change (relating to lifestyle factors, medication use, diet etc). They leave room for patient response.

7. Practitioner regularly uses reflective listening statements to convey what patient feels about change

High score indicates that the practitioner, regularly throughout the conversation about behaviour change, uses reflective listening statements to summarise his or her understanding of how the patient feels about change.

Low score indicates that the practitioner does not use reflective listening statements to convey understanding.

8. Practitioner uses summaries to convey understanding what is said about change

High score would indicate the practitioner, at key points in the interview, uses summaries to sum up what the patient has said about change.

Low score would indicate an absence of summing up what the patient has said about change

Summarizing involves a quick assessment of the patient's situation and draws together in a succinct way, the reasons to change.

Talk about Targets

9. Practical solutions are discussed in the consultation YES/NO if no go to item 10.

If YES:

a) Practitioner encourages discussion of a range of possibilities

High score would indicate that the practitioner encourages patient to brainstorm solutions and construct a range of options for the patient. The practitioner may also provide advice and information to enhance behaviour change. The skilled practitioner may structure creative thinking about how change can be achieved and involves generating ideas how change can be accomplished.

Low score would indicate absence of discussion of possibilities

b) Patient selects suitable options

High score would indicate that the patient *selects* or *decides* on suitable options which stimulates decision making. Responses such as " *You mentioned you enjoyed painting when you feel stressed. Could this be something you can do during those not so good days?*"

Low score indicates that the patient fails to select or decide on suitable options.

c) Practitioner avoids single-simple solutions YES/NO

A YES response indicates that the practitioner emphasizes a respect for autonomy by talking of different solutions without patronizing.

A NO response would indicate that the practitioner dictating solutions for change from the practitioner's agenda such as " You really do need to go on those salads you know instead of those fish and chips"; " There's a good non smoking clinic on tonight and I'd like you to go right away". Either way the patient is likely to recoil and become defensive or even become passive throughout the consultation.

The essence here is for the patient to have autonomy in decision making and the practitioners expertise should facilitate and not overwhelm the patient.

The Whole Consultation

10. Practitioner acknowledges challenges facing the patient (affirmation)

A high score would indicate the practitioner giving feedback which reflects the patients situation, challenges, dilemmas, strengths, and weaknesses. It can be done by offering compliments or statements of appreciation and understanding. It reinforces rapport and open exploration

A low score indicates absence of positive feedback to the patients situation and challenges.

11. Practitioner conveys respect for patient choice about behaviour change

A high score would convey acknowledgement and acceptance of patient choice even if this does not fit in with practitioners agenda.

Low score would indicate absence of acknowledgment or acceptance of patient choice.

A positive behaviour change counselling consultation is where the patient will leave feeling in control and listened to. The practitioner's attitude and the atmosphere of the consultation will contribute to the patients reaction to choice. A practitioner can be honest about own thoughts by saying to a patient, " I think you should stop smoking, but its really up to you and I respect your choice" without it damaging rapport. The goal is for the patient to leave the consulting room feeling empowered.

12. Across the whole consultation, the practitioner's talking takes up what percentage (%) of the total time?

between 0-33%

between 34-59%

over 60%

The Behaviour Change Counselling Index (BECCI)

Manual for Coding Behaviour Change Counselling

- Miller W and Rollnick S (2002) *Motivational Interviewing: Preparing People for Change (2nd Edition)* New York: Guilford Press, Chapters 4 and 5 (pp. 33 – 51)

Training Video

- Health Behaviour Change: A Selection of Strategies, An Aid for Trainers © Media Resources Centre, University of Wales College of Medicine 2001 (available from edwardske@cardiff.ac.uk)

BECCI

- A copy of the manual and BECCI should be read thoroughly to ensure the rater understands how to use the checklist correctly.

Simulated versus 'Real' Consultations

BECCI has been tested for reliability mainly on simulated consultations. It is hoped that in the future, it will be tested for robustness on 'real' consultations. Based on the minimal number of real consultations that have been rated, the simulated and real consultations appear to be very similar in nature, but it cannot be guaranteed that this will be the case in all simulated consultations. However, as BECCI is primarily an instrument for trainers, the likelihood is that in most cases the consultations will be simulated.

Item choice

BECCI contains items that concentrate mainly on practitioner behaviours. We realise that the main goal of BCC is to encourage the patient to talk about the how and why of change. However, the checklist is designed to assess the skills of practitioners, and it is not reliable to assess the practitioner's performance based on the patient's behaviour in the consultation.

We have deliberately restricted the selection of *practitioner behaviours* in a number of ways. Firstly, we have tried to steer clear of items that measure patient-centredness in its pure or more general form. Thus, even the items that elicit judgements about the practitioner's handling of the consultation as a whole (Items 5, 6, 7, 8, 9 and 10) focus on talk about behaviour change. The rationale here is that if the practitioner succeeds in getting high scores for the items on behaviour change, the consultation will be a patient-centred one. BCC is a patient-centred method in itself. Secondly, we have selected a few key practitioner microskills to focus on (e.g. questions, empathic listening statements, summaries) rather than their combination into any of a large number of strategies, like pros and cons, assessment of importance and confidence, and so on.

Invitation does not occur in every consultation (where the practitioner invites the patient to talk about behaviour change). Sometimes because the practitioner does not do this, and sometimes because the practitioner does not get the chance. Therefore, item 1 is only scored when the practitioner has the chance, making a distinction between not being able to invite the patient to talk, and simply not doing it. It has been argued that either invitation occurs or it does not, leading some to believe that a dichotomous item rather than a scale would be more suitable for this item. However, it has been found during the development of the instrument that invitation can vary on a continuum of how well it is performed. There is a difference between the practitioner who asks if it is okay with the patient to talk about behaviour change and emphasises patient choice from the outset, the practitioner who says 'You've been sent here by your doctor. How do you feel about that?', and the practitioner who does not invite the patient to talk about behaviour change at all. Therefore, item 1 will remain a scaled item at this stage.

Information exchange again does not occur in all BCC consultations (sometimes because the patient does not request information, sometimes because it is not appropriate to give information), but when it does take place, we felt it was important to assess how skilfully this is done. Therefore, item 9 is only completed when it is applicable to the context

Talking about targets also does not occur in every consultation i.e. when the patient and practitioner talk about possible methods of how change can be achieved. Therefore, raters should only score item 11 when it is applicable to the context.

Talk time is a feature central to BCC. However, internal consistency reliability testing found that this item was not giving a reflective score of practitioner skill when correlated with the other items. As this feature is so important to the concept of BCC, we have chosen to exclude it from the scale to enhance its reliability, but include it as a separate ordinal item so that this information is still present and can be assessed by the trainer.

Scoring

While completing the checklist, each item is accompanied by a Likert scale to reflect the degree to which the action was carried out. As a guide, circling each number would indicate that the action was carried out:

0 = *Not at all*, 1 = *Minimally*, 2 = *To some extent*, 3 = *A good deal*, 4 = *A great extent*

The main purpose of the checklist is to provide trainers and practitioners with a window into their consulting. Looking at scores on individual items is thus at the heart of this activity.

However, should an overall score be required, the mean across item responses is taken to give a Practitioner BECCI Score. The mean should be calculated as follows:

1. Take the mean of all the applicable items (i.e. add up the total score of the applicable items, and divide by that number of items).
2. If all items are applicable in that particular consultation, this mean is the Practitioner BECCI Score. If any of the items were not applicable in the consultation, proceed to step 3.
3. A technique known as 'mean substitution' is used for any items scored as 'not applicable'. The mean of the applicable items is the score to be used for the not applicable items. So, for example, if the mean of all other items is 2.87, this is the score that should be given to any items scored as not applicable. Proceed to step 4.
4. Now you have the scores for any not applicable items, recalculate the mean for all the items. This will give you the practitioner BECCI score.

You will find that by taking the mean score, the Practitioner BECCI Score corresponds to the points given on the Likert scales on the checklist. For example, if the Practitioner BECCI Score is 2.94, you will see that they have been practicing BCC 'a good deal', or a practitioner scoring 1.62 has been practicing BCC somewhere between 'minimally' and 'to some extent'.

References

1. Rollnick S, Mason P, and Butler C (1999) *Health Behaviour Change: A Guide for Practitioners* Edinburgh: Churchill Livingstone
2. Rollnick S, Allison J, Ballasiotis S, Barth T, Butler C, Rose G and Rosengren D (2002) *Variations on a Theme: Motivational Interviewing and its Adaptations* in Miller W and Rollnick S (2002) *Motivational Interviewing: Preparing People to Change (2nd Edition)* New York: Guilford Press, Chapter 18

Domain 1: Agenda Setting and Permission Seeking

1. The practitioner invites the patient to talk about behaviour change*

**NB This item does not need to be coded if it is not applicable to the context*

A high score: The practitioner explicitly asks the patient's permission to talk about behaviour change, making it clear that the patient is not obliged to make any decisions regarding their behaviour.

Example: 'Before we start, I'd just like to make it clear that I am not here to tell you what to do or to force you to make decisions you don't feel ready to make. I am here to understand you. We don't have to talk about anything you don't want to talk about. Now I understand your GP has sent you here to talk about your smoking. Would it be okay with you if we had a chat about that now?'

A low score: The practitioner fails to ask the patient about a willingness to talk about behaviour change and does not give them an opportunity to speak, giving the impression that the patient has little choice in the matter!

Not Applicable: The patient goes straight into the interaction, without giving the practitioner a chance to invite them to talk about behaviour change.

2. The practitioner demonstrates sensitivity to talking about other issues*

**(An issue can be anything of concern to the patient, whether it is connected to the behaviour in question or not)*

A high score: The patient is given choice in what to talk about, because, for example, the practitioner goes through an agenda setting process in which the patient is encouraged to talk about other health behaviours, or other issues not immediately connected to behaviour change.

Example: 'So, since you've had your heart attack you've been asked to make a lot of changes. That must seem quite a lot to deal with at the moment. I know you've been sent here to talk about your smoking, but I'm wondering if there is anything else bothering you that you would rather talk about today.'

A low score: The practitioner does not give the patient any choice about what to talk about, and proceeds with the consultation discussing in turn what s/he feels are the most important issues.

Domain 2: The Why and How of Change in Behaviour

3. Practitioner encourages patient to talk about current behaviour or status quo

A high score: The practitioner encourages the patient to talk freely about what they both like and/or dislike about their current behaviour/status quo. They may do this in a variety of ways, for example through asking open questions or using empathic listening statements, to gain an understanding of the patient's perspective.

A low score: The practitioner does not actively encourage the patient to talk about what they like and/or dislike about their current behaviour/status quo.

Domain 4: Talk about Targets

11. Practitioner and patient *exchange* ideas about *how* the patient could change current behaviour

**NB This item does not have to be coded if it is not applicable to the context*

A high score: The practitioner actively encourages the patient to brainstorm a number of strategies that may help them change their behaviour. With encouragement, the patient offers the most ideas, and the practitioner also makes suggestions.

A low score: The practitioner does not encourage the patient to brainstorm. There is no exchange about a range of possibilities. The patient does not suggest any. Instead, it is the practitioner only who suggests ideas for change.

Not Applicable: There is no discussion of targets within the consultation.

Measure of Practitioner talk time

This indicator of practitioner talk time is there for information alongside the total BECCI score. Simply tick the box next to the item that best describes how much the practitioner talked within the consultation. As a guideline, the practitioner should be speaking approximately 50% of the time or less.

Measuring adaptations of motivational interviewing: the development and validation of the behavior change counseling index (BECCI)

Claire Lane^{a,*}, Michelle Huws-Thomas^b, Kerenza Hood^c, Stephen Rollnick^a,
Karen Edwards^a, Michael Robling^c

^a Communication Skills Unit, Department of General Practice, University of Wales College of Medicine,
Llanedeyrn Health Center, Cardiff CF23 9PN, UK

^b Department of Child Health, University of Wales College of Medicine, Heath Park, Cardiff, UK

^c Department of General Practice, University of Wales College of Medicine, Llanedeyrn Health Center, Cardiff, UK

Received 5 July 2002; received in revised form 16 January 2003; accepted 25 January 2004

Abstract

One of the most common challenges faced by health professionals is encouraging patients to change their behavior to improve their health. This paper reports the development of a checklist, the behavior change counseling index (BECCI). This aims to measure practitioner competence in behavior change counseling (BCC), an adaptation of motivational interviewing suitable for brief consultations in healthcare settings. The checklist has demonstrated acceptable levels of validity, reliability and responsiveness, and aims to assist trainers and researchers in assessing change in practitioner behavior before, during and after training in BCC. BECCI will also provide valuable information about the standard of BCC that practitioners were trained to deliver in studies of BCC as an intervention.
© 2004 Elsevier Ireland Ltd. All rights reserved.

Keywords: Behavior change counseling; Lifestyle change; Communication skills; Training; Outcome measure

1. Introduction

Consultations about behavior change are fairly widespread in healthcare settings, and usually involve talking to patients about changes in lifestyle (e.g. diet, exercise, smoking, alcohol) and medication use. They occur in most settings (primary, secondary and tertiary care), and embrace both the management and prevention of a wide range of conditions, for example, diabetes, asthma and heart disease.

It has been suggested that these consultations present particular challenges to practitioners and patients alike [1]. Among their main characteristics is the potential for disagreement about why, how and when change might occur. Value judgements about resistant or unmotivated patients are often close to the surface, and quasi-psychoanalytical terms like “being in denial” are often used to describe patients who apparently do not see the need for change. Efforts to find constructive ways through these consultations have emerged in the form of the stages of change model [2] and

motivational interviewing [3]. At their heart is an attempt to encourage patients to be more active in the consultation, to think aloud about the importance of change and their confidence to achieve it.

Systematic reviews of motivational interviewing and its adaptations point to a lack of precision about what skills were actually used by practitioners in a wide range of controlled trials [4,5]. Guidelines for evaluating complex interventions [6], which stress the need to focus on the training of practitioners in skills that are reliably measured, have often been bypassed by enthusiasm to conduct controlled trials that look primarily at patient outcomes [7]. It is only recently that efforts to list essential skills have emerged, thus opening up the possibility to develop reliable measures.

One recent development has been the description of *behavior change counseling* (BCC)—an adaptation of motivational interviewing which might be suitable for brief consultations about behavior change in healthcare settings [8]. Many of the skills overlap with motivational interviewing, while some of the more psychotherapeutic elements of the “parent method” have been omitted. This paper describes the development of The behavior change counseling index (BECCI)—a scale for use by trainers and researchers

* Corresponding author. Tel.: +44-29-2054-1133;
fax: +44-29-2054-0129.
E-mail address: laneca1@cardiff.ac.uk (C. Lane).

when helping practitioners to learn the essential skills of BCC.

1.1. The relationship between motivational interviewing and behavior change counseling

Although motivational interviewing and behavior change counseling are related methods, they are somewhat different in nature [8]. Motivational interviewing is a style of counseling amenable for use by psychotherapists (though not restricted to them), and incorporates a number of skills found in generic counseling, such as using open questions and reflective listening [3]. However, these skills are used not only to understand the client's perspective, but to selectively and strategically elicit 'change talk' (e.g. commitment language) from a client, and to 'develop discrepancy'—a way of pointing out conflicts between the client's current behavior and their personal values [3].

BCC was developed for brief healthcare consultations with a more modest goal in mind: simply to help the person to talk through the why and how of change, with the practitioner's main task being to understand how the person is feeling and what plans they might have for change. The practitioner uses listening skills to understand the patient's perspective, but not with a view to strategically eliciting change talk and developing discrepancy as in motivational interviewing [8]. BCC is linked to the patient centered method of consulting [9], and incorporates many of the skills and principles from motivational interviewing [3]. It can be used in both help-seeking and opportunistic settings. Many skills used in BCC overlap with motivational interviewing—for example, demonstrating respect for patient choice, asking open questions, using empathic listening, summarizing and so on [8].

1.2. Rationale for designing a new measure

There is a range of instruments available to measure patient centredness in its pure form, and general physician–patient interaction [10,11]. However, none are specific to the topic of health behavior change, and the microskills of motivational interviewing and behavior change counseling are largely absent from these measures.

There is one instrument currently available for measuring motivational interviewing—the Motivational Interviewing Skill Code (MISC) [12–14]. This is a research tool, which requires three passes or phases of analysis. The first pass consists of global ratings for the therapist, client and the relationship between them. It focusses on the spirit of the consultation rather than specific microskills. The second pass provides tally charts to count the number of specific client and therapist behaviors. Thirdly, total talk time for the therapist and the client is calculated.

Although the MISC has proved to be a useful research tool [13–15], there are a number of factors that make it unsuitable for use as a training tool. It is a lengthy instrument that

requires three passes. Although it has been suggested that one pass could be used for BCC consultations, this would be difficult, as there are three sections to code (the globals, behavior counts and timing) and this threatens to reduce rater reliability. There are also a number of subsections that would not be essential for trainers in BCC to assess—for example, items on the specific type of reflective listening strategy used. Shortening the MISC to simply include the global ratings would not be suitable for trainers, as information regarding the acquisition of microskills would be lost. Work done by Boycott concluded that MISC was not suitable for training purposes—rating was time consuming and expensive, and the point was made that although the MISC provided counts of actual behaviors, it did not provide an assessment of the overall strength of those behaviors [16]. Therefore, it was felt that a new measure needed to be designed, specifically with BCC trainers in mind, that was brief, could be coded in one pass, and focussed on the spirit and principles of BCC.

1.3. The development of BECCI

Our strategy was to design an instrument that could be used either in training itself as an aid to learning, or as a tool for assessing improvement in competence associated with training. The aim was therefore to focus on practitioner consulting behavior and attitude, rather than the response of the patient. We wanted BECCI to be scored as easily as possible (as trainers are often subject to time constraints when assessing competence), and therefore conducted the initial psychometric work using audio-recordings rather than transcripts. Finally, we decided to examine reliability and validity using mainly simulated patients, since these are more commonly used in training than real patients.

2. Method

A summary of the development process can be viewed in Fig. 1. A number of different data sets were used in the development of BECCI. The details of each data set can be found in Table 1.

2.1. Item development and validity

Following a literature review 38 items were generated, which were based on the theory and practice of BCC [8]. These items were subdivided into four domains coherent with the construct of BCC: agenda setting and permission seeking; the how and why of change in behavior; the consultation as a whole; and talk about targets.

The items were circulated to 12 experts in the fields of motivational interviewing and BCC. Nine of the 12 participants approached provided feedback. They individually rated the items' relationship to BCC on a scale from 1 (not at all) to 5 (extremely). They also commented on the items'

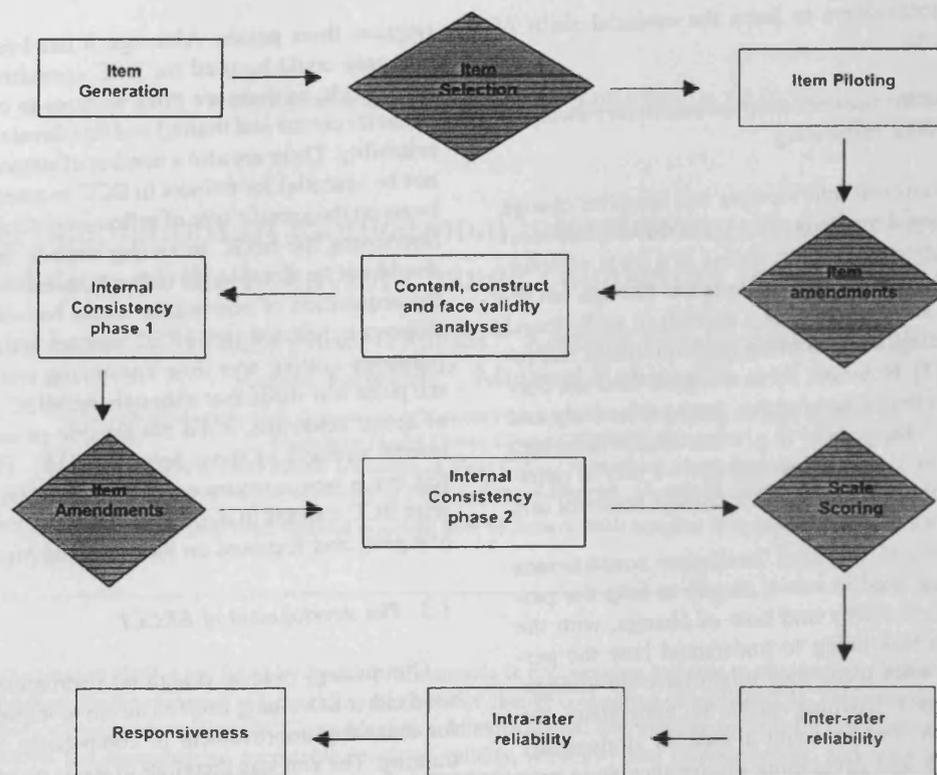


Fig. 1. The process of the development of BECCI.

content validity. Items were selected, rejected and reformulated based on these assessments [16].

The remaining 20 items were then subjected to a number of tests. A researcher (MHT) rated data set 1 using the checklist. These consultations were selected as model consultations of good and bad BCC, which were used for training purposes. Frequency tally charts were also used

to aid the selection of the most applicable items for the checklist—non-endorsed items were removed from the checklist [16]. The same researcher also rated data sets 2 and 3, to ensure that the checklist items were displaying content validity [16].

The items were then piloted by two researchers trained in BCC (CL and SR), who independently scored data set 4.

Table 1
Data sets used in the development of BECCI

Data set number	Consultation type	No. of consultations	Contribution
1	Training video consultations of model BCC	8	Item selection
2	Simulated primary care consultations about lifestyle change	16 (8 pre-training, 8 post-training), from 8 participants	Content validity analysis
3	Real consultations following training in BCC about smoking cessation	12	Content validity analysis
4	Simulated smoking cessation consultations, selected arbitrarily from data set 6	20	Content validity analysis
5	Simulated smoking cessation consultations, selected arbitrarily from data set 6	5	Content validity analysis
6	Simulated smoking cessation consultations, gathered from two workshops on health behavior change	74 (37 pre-training, 37 post-training), from 37 participants	Internal consistency analysis
7	Simulated smoking cessation consultations, selected arbitrarily from data set 6	24	Inter- and intra-rater reliability analysis
8	Simulated diabetes consultations, taken from various stages of a training program [20]	24 (from 6 participants)	Inter- and intra-rater reliability analysis

They discussed their findings in relation to content validity. Items were modified, and then cross-checked against data set 5.

These items were subjected to a construct explication exercise [17]. Construct explication is a technique where a description of the relationship between specific behaviors and abstract constructs is provided, hence investigating the construct validity of items. By carrying out this exercise, it was possible to check that all items were measuring BCC and not related constructs, such as patient centeredness or brief advice. Construct explication showed that all items were centrally related to BCC and closely related to motivational interviewing, which was expected as BCC is derived from motivational interviewing. The items were then circulated to the same experts (as above) in the field of BCC to check that they were coherent with the BCC construct.

Finally, the face validity of the checklist was assessed. It was found that although the items were all centrally related to BCC, some items concentrated on patient rather than practitioner behaviors. Since the core construct of the checklist is practitioner behavior, patient oriented items were rephrased.

2.2. Reliability

2.2.1. Internal consistency

The checklist was tested for internal consistency against data set 6 [18]. The consultations were split into two groups for analysis—baseline (before training) and final (after training), to ensure that the data was not distorted by intervention effects.

Items were separated into ‘core’ and ‘non-core’ items for analysis. Core items are those that need to be completed for every consultation. Non-core items are those that can be scored as ‘not applicable’ (for example, a particular practitioner behavior may not be carried out in every BCC consultation, but needs to be assessed by an item when it is). As non-core items were not scored in every consultation, they were analyzed separately.

Core items were assessed by calculating the inter-item correlations, item-total correlations, Cronbach’s Alpha, Alpha when item deleted and a single factor solution on SPSS [19]. Non-core items were analyzed using descriptive statistics (overall scale mean, item means and inter-item correlations). This analysis took part in two phases—the initial phase looked at the internal consistency of the existing items, and any necessary changes were made to the items based on these results. Following this initial analysis, the internal consistency tests were re-executed on the amended scale.

2.2. Inter-rater reliability

Data sets 7 and 8 [20], were rated independently by two researchers (CL and KE) using BECCI, who gave each consultation one pass. The raters were permitted to consult the manual during the scoring period, but were not allowed to consult each other during this process.

Reliability was estimated by calculating single measure intraclass correlation coefficients [18], using SPSS [19]. The data were separated into two groups for analysis—smoking cessation and diabetes—to establish whether the type of consultation had an effect on the reliability of the checklist.

2.2.3. Intra-rater reliability

The inter-rater reliability exercise described above was repeated by the same researchers 10 weeks later. Again, data sets 7 and 8 were used and results were analyzed using single measure intraclass correlation coefficients [18].

2.3. Responsiveness

The standardized response mean (SRM) is the most commonly used statistic for calculating responsiveness. In this instance, attention was focussed on changes in BECCI scores before and after training. This was calculated by dividing the mean change in BECCI score by the standard deviation of that change [21]. A score of 0.8 or above is thought to show a high level of responsiveness. This statistic was calculated for data set 6 (as this was the only set that had acceptable numbers of participants).

3. Results

3.1. Internal consistency

Initial internal consistency (phase 1) testing showed that the item on information exchange did not correlate with the rest of the items, as information exchange was not occurring in every consultation (but when it did, it needed to be assessed). The item was therefore given non-core status. The item dealing with practitioner talk time was found to have a negative weighting effect. As it was an important element of BCC, and therefore important to record, it was removed from the scale, but remained on the checklist as an ordinal indicator, so that this information was available for trainers and trainees.

Following the initial changes, the internal consistency tests were re-executed (phase 2). The items and the corresponding item numbers can be viewed in Table 2.

In the core item analysis, the mean inter-item correlation was 0.22 for the baseline consultations and 0.14 for the final consultations. The score for Cronbach’s Alpha in the baseline consultations was $\alpha = 0.71$, and $\alpha = 0.63$ in the final consultations. The item-total correlations and Cronbach’s Alpha (if item deleted) scores can be found in Table 3. The results of the single factor solution can be found in Table 4.

The results show that item 2 in the baseline consultations, and items 4 and 5 in the final consultations were displaying inconsistency. These items displayed low item-total correlations, indicating that they were not correlating with the

to start the consultation without asking the patient if they were happy to discuss the topic.

It is not possible to provide a full and comprehensive guide as to how to score each item on BECCI within the confines of this paper. The scale and the user manual can be obtained from <http://www.uwcm.ac.uk/csu>.

To derive an overall practitioner BECCI score, the mean score across all 11 items is calculated. As the non-core items were found to be correlating with the core items, mean substitution is used to give a score to the non-core items that are scored 'not applicable'. This involves calculating the mean of all the scored items, and using that mean as a replacement score for each item marked 'not applicable'. A mean across all 11 items is then calculated to derive the BECCI score. It takes approximately 1 min to score a 10-min consultation in this way.

4.2. Limitations and further research

There are a number of limitations to this study. Firstly, BECCI has only been tested for validity and reliability on simulated consultations. Although this is suitable for the purpose for which BECCI has been primarily developed, there is a potential limitation that it may not prove to be reliable in real consultations. However, many pieces of research have reported that the widely accepted practice of using standardized patients when training practitioners in communication is often a realistic and helpful one in training [23], and a new phase of research, already begun, is focussing on the reliability and validity of the checklist when looking at practitioner performance in real consultations. This seeks to establish whether BECCI would be a valuable tool for practitioner performance in delivering BCC, as well as competence in BCC skill. Until these results are available, any data generated from real consultations should be interpreted with caution.

Another limitation of BECCI is that it focusses purely on the practitioner behaviors rather than patient behaviors, which may prove to be a missing vital element if it is possible to use BECCI for research on real consultations. Elwyn et al. [24], in the development of the OPTION scale, argue that leaving out this information fosters a missing link in researching the relationship between patient involvement and outcomes. The MISC does incorporate scores on patient as well as practitioner behaviors, providing a useful dimension in examining patient outcomes. As BECCI was designed for training purposes, this is not currently an issue, but if following further investigation it is anticipated that BECCI may be suitable for use with real consultations, it is important to establish whether there is a suitable measure of patient behavior available that may be able to investigate this aspect of the BCC process.

Further work on simulated consultations will examine the reliability of the scale when a BCC consultation is observed and rated at the same time, and will also investigate correlations between checklist scores and those from other

measures of motivational interviewing (concurrent validity [12–15]). More research into the validity of BECCI will focus on the correlations between practitioner BECCI scores and changes patients make to their lifestyle, and will also investigate practitioner change over time following training in BCC.

4.3. Practice implications

The need to communicate effectively with patients about lifestyle change is a growing pressure for practitioners, especially when taking into account strategies such as the National Service Frameworks [25] for health problems such as heart disease and diabetes. Patients, for their part, deserve consultations that are skillfully and respectfully carried out. However, before the efficacy of BCC can be evaluated reliably, it needs to be measured and practitioners' competence monitored before looking at patient outcome data. Trainers need to know how to tailor and evaluate their training effectively, and conclude that practitioners are using BCC to an acceptable standard to deliver it as part of larger trials.

BECCI makes it possible for trainers to assess practitioner competence in BCC and provides a quick evaluation of which skills the practitioner needs to improve on to deliver good BCC. Researchers may also find the scale useful to evaluate training, and its impact on a range of outcomes. As noted above, however, we await evidence of reliability and validity in real consultations.

Acknowledgements

Many thanks to Jeff Allison, Denise Ernst, Steve Berg Smith, Jacqui Hecht, Gary Rose, Chris Butler, Brian Burke, Stephanie Balliasotes and Tom Barth for their input in the item development stage. Thanks also to David Tappin for the data used in the item development stage. Thanks to Tom Fowler for his assistance with coding, and finally thank you to Ian Russell and Nigel Stott for their guidance during the development of BECCI.

References

- [1] Rollnick S, Mason P, Butler C. Health behaviour change: a guide for practitioners. Edinburgh: Harcourt Brace, 1999.
- [2] Prochaska JO, DiClemente CC. Transtheoretical therapy: toward a more integrative model of change. *Psychother Theor Res* 1982;19: 276–88.
- [3] Rollnick S, Miller WR. Motivational interviewing: preparing people for change. 2nd ed. New York: Guilford, 2002.
- [4] Dunn C, DeRoo L, Rivara FP. The use of brief interventions adapted from motivational interviewing across behavioural domains: a systematic review. *Addiction* 2001;96:1725–42.
- [5] Burke BL, Arkowitz H, Dunn C. The efficacy of motivational interviewing and its adaptations: What we know so far. In: Miller WR, Rollnick S, editors. *Motivational interviewing: preparing people for change*. 2nd ed. New York: Guilford, 2002. p. 217–50.

- [6] A framework for the development and evaluation of RCTs for complex interventions to improve health. Medical Research Council, 2002. http://www.mrc.ac.uk/pdf-mrc_cpr.pdf.
- [7] Rollnick S. Enthusiasm, quick fixes and premature controlled trials—commentary. *Addiction* 2001;96:1769–70.
- [8] Rollnick S, Allison J, Ballasiotis S, Barth T, Butler C, Rose G, et al. Variations on a theme: motivational interviewing and its adaptations. In: Miller WR, Rollnick S, editors. *Motivational interviewing: preparing people for change*. 2nd ed. New York: Guilford, 2002. p. 251–69.
- [9] Stewart M, Brown J, Weston W, McWhinney I, McWilliam C, Freeman T. *Patient-centered medicine: transforming the clinical method*. California: Sage, 1995.
- [10] Mead N, Bower P. Measuring patient centredness: a comparison of three observation based instruments. *Patient Educ Couns* 2000;39:71–80.
- [11] Boon H, Stewart M. Patient–physician communication assessment instruments: 1986–1996 in review. *Patient Educ Couns* 1998;35:161–76.
- [12] Miller WR. *Motivational Interviewing Skill Code (MISC)*, August 2000 version. <http://motivationalinterview.org/training/MISC.PDF>.
- [13] Moyers T, Martin T, Catley D, Harris KJ, Ahluwalia JS. Assessing the integrity of motivational interviewing interventions: reliability of the motivational interviewing skills code. *Behav Cogn Psychoth* 2003;31:177–84.
- [14] Tappin D, McKay C, McIntyre D, Gilmour WH, Cowan S, Crawford F, et al. A practical instrument to document the process of motivational interviewing. *Behav Cogn Psychoth* 2000;28:17–32.
- [15] Miller WR, Mount KA. A small study of training in motivational interviewing: does one workshop change clinician and client behaviour? *Behav Cogn Psychoth* 2001;29:457–71.
- [16] Boycott M. Behaviour change counselling (Rollnick, Mason and Butler 1999): development of a checklist. MSc Thesis. University of Bath, 2001.
- [17] Murphy K, Davidshofer C. *Psychological testing*. 5th ed. New Jersey: Prentice–Hall, 2000.
- [18] Streiner D, Norman, G. *Health measurement scales: a practical guide to their development and use*. 2nd ed. Oxford: Oxford University Press, 1995.
- [19] SPSS Base 11.0 for windows user's guide. Chicago: SPSS Inc., 2001.
- [20] Lane C, Johnson S, Rollnick S, Edwards K, Lyons M. Consulting about lifestyle change: evaluation of a training course for specialist diabetes nurses. *Pract Diab Int* 2003;20:204–8.
- [21] Husted JA, Cook RJ, Farewell VT, Gladman DD. Methods for assessing responsiveness: a critical review and recommendations. *J Clin Epidemiol* 2000;53:459–68.
- [22] Weingarten M, Yaphe J, Blumenthal D, Oren M, Margalit A. A comparison of videotape and audiotape assessment of patient-centredness in family physicians' consultations. *Patient Educ Couns* 2001;45:107–10.
- [23] Roter DL. Observations on methodological and measurement challenges in the assessment of communication during medical exchanges. *Patient Educ Couns* 2003;50:17–21.
- [24] Elwyn G, Edwards A, Wensing M, Hood K, Atwell C, Grol R. Shared decision making: developing the OPTION scale for measuring patient involvement. *Qual Saf Health Care* 2003;12:93–9.
- [25] National Service Frameworks. Department of Health, 2002. <http://www.doh.gov.uk/nsf>.

Appendix II

COMMUNICATION SKILLS UNIT
University of Wales, College of Medicine, Cardiff, WALES

PERMISSION TO ANALYSE RECORDINGS OF SIMULATED CONSULTATIONS

The *Communication Skills Unit* is currently evaluating various aspects of teaching and training. This includes the development of instruments and checklists for measuring clinical skill acquisition. Our research effort is currently focussed on validating these instruments by analysing recordings collected before, during and after training. When writing up our research, we might use anonymous quotations from these recordings to illustrate different skills and the enhancement of them.

This is to request permission for us to use a recording of your consultation(s) for these purposes. The only person who will know the link between your recording and your name is Ms Claire Lane, who is doing her Masters research on this topic.

If you are happy with this arrangement, please sign the statement below in the affirmative.

Thanks very much for your co-operation.

Sincerely,

Stephen Rollnick
Co-Director, Communication Skills Unit

Claire Lane
Social Scientist

=====

I am happy for the *Communication Skills Unit* to use my recording for the above purposes and in the manner described above.

Name:

Job Title:

Date:

HEALTH BEHAVIOUR CHANGE WORKSHOP: 1 & 2 October 2001

Case Scenarios & Briefing for Actors

Times & Activities: On day 1, please be at the venue at 8.15am, on day 2 at 9.00 am. We will finish at 5pm on both days. There will be quite a lot of down time, so please bring a book or other work with you. There might be periods of more than an hour when we will not need your services.

Colour-coded Actors: You will be colour-coded on arrival and linked to a "consulting room", a space in one of the rooms we have access to. There are 20 participants and 5 actors. Usually you will see 4 participants in a row, for 8 – 10 minutes each.

1. *The ambivalent smoker* – Lyn Richards (Baseline & Closing Scenario)

At the beginning and end of the workshop, each participant will see the same case, *the ambivalent smoker*. The interview will be recorded.

This scenario might also be used at other times.

Lyn Richards (either male or female) has had a heart attack about a month ago, has made a good recovery and has been very strongly urged by the GP to see a "counsellor" about stopping smoking. (S)he attends this appointment in the health centre reluctantly. Its all very well for the doctor to say 'stop smoking', but this is the one thing that (s)he gets stress relief from. (S)he is only just getting back on an even keel and feeling well again, and now there's this problem to face.

Lyn lives with a spouse and 2 children. They tend to work hard and play hard. The local pub and club are the centre of their social lives. The heart attack stopped all of that.

Lyn is ambivalent about stopping smoking. If 0 is not ready to change, and 10 is very ready, (s)he would score 5. On the one hand (s)he knows its not good for health, on the other hand smoking is enjoyable many times of the day: after meals, when feeling stressed, and so on. Stopping would be very difficult. The withdrawal symptoms are terrible – (s)he's tried this before (and only lasted a week); how to cope when others are smoking in social situations would also be difficult. In summary, it is fairly important to consider quitting, but well nigh impossible to imagine succeeding with this.

In the consultation.

You feel guilty about your smoking. You don't want to get a lecture. This wont help you. You are usually polite and easy to talk to, and you don't like arguments. However, if the counsellor thinks that all you need to do is make a decision and stop, that's not really on today.

PARTICIPANTS' BRIEFING FOR SMOKING CONSULTATION

Please conduct a very brief interview of 8 mins max with the smoker described below. You are a counsellor in a primary care setting, and you have a few more clients in the waiting room.

Lyn Richards: Ambivalent smoker

Lyn Richards (either male or female) has had a heart attack about a month ago, has made a good recovery and has been very strongly urged by the GP to see a "counsellor" about stopping smoking.

(S)he attends this appointment reluctantly. Its all very well for the doctor to say "stop smoking", but this is the one thing (s)he gets stress relief from. (S)he is only just getting back on an even keel and feeling well again, and now there is this problem to face.

Lyn lives with a spouse and two children. They tend to work hard and play hard. The local pub and club are the centre of their social lives. The heart attack stopped all of that.

Your task

Try to encourage this person to quit smoking. Please start the consultation by dealing directly with this issue. Although this might feel a little artificial, because you do not have time to establish rapport, please dive in! Our immediate interest in the workshop is in talking about behaviour change.

Scenarios constructed by the specialist Diabetes nurses

Scenario 1

- 57 year old female
- Type 2 Diabetes
- On oral hypoglycaemic agents - has poor glycaemic control
- Overweight
- Unable to follow dietary advice from the GP
- Says she 'feels healthy'
- GP is concerned that unless the patient loses weight, she will need insulin therapy

Scenario 2

- 41 year old male
- Has had Type 1 Insulin Dependant Diabetes for 25 years
- Good glycaemic control
- Increasingly overweight
- High fat, high sugar diet - raised cholesterol of 6.6
- Stopped exercise due to lack of time
- Hectic home and professional life which makes lifestyle change difficult

The Leeds Teaching Hospitals

NHS Trust

St James's University Hospital

Beckett Street
Leeds
West Yorkshire
LS9 7TF

Tel: 0113 243 3144

Ann Prothero
Secretary to the Ethics Committee
Research and Development Department
Room 5.1, Clinical Sciences Building
St James's Hospital
Beckett Street
Leeds
LS9 7TF

5 April 2003

Dear Ann Prothero,

Project 02/094: Assessing communication strategies in routine consultations between health professionals and patients with type I and type II diabetes.

I am writing to inform you of several developments regarding data analysis for the above study.

1. In the original ethics application protocol the Motivational Interviewing Skills Code (MISC) was stated as the principal material for content analysis. However, a more appropriate form of coding has since been found. The alternative measure Behaviour Change Counselling Checklist (BECC) is based on the same principles as the MISC but is more suited to medical consultations of the type in the current study. This rating scale was found as a result of consultation with the authors based at the Department of General Practice, Cardiff University. I am therefore able to consult with experts in using the scale who have agreed to inter-rate this method of coding on the consultations in my study.
2. I am requesting permission for named members of team at Cardiff to have access to the anonymised tapes and transcripts for the purposes of inter-rating using the BECC scale. I will need to send the anonymised tapes and transcripts down to them for this purpose. They will be held confidentially and will be destroyed after use.
3. I am also requesting permission for the results of the rating to be provided to the team at Cardiff in order to inform the future use and development of the scale. In order for them to be able to report results of analysis on my sample in future studies or papers I am requesting that they are named as collaborators on my project (CVs to follow).

I hope these small changes meets with your approval. No changes are required to the existing patient information and consent. I would be grateful if you could inform me if you are happy for the change to be made.

If you would like any further information, please do not hesitate to contact me. I can be contacted at the following address or telephone number:

Chairman Bill Kilgallon OBE Chief Executive David Johnson

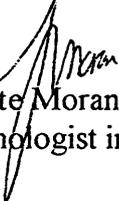
The Leeds Teaching Hospitals Incorporating: Chapel Allerton Hospital Cookridge Hospital Leeds Chest Clinic
Leeds Dental Institute Seacroft Hospital St James's University Hospital The General Infirmary at Leeds

W/hafeale Hospital

Doctorate in Clinical Psychology Course
15, Hyde Terrace, Leeds, LS2 9LT
Tel: 0113 2332732

Fax: 0113 2064079
(Dept of Clinical and Health Psychology SJUH)

Yours sincerely,


Janette Moran
Psychologist in Clinical Training

Patient Information Sheet
Routine diabetes clinic consultations: Research Project

Dear Patient,

We are writing to ask you whether you will take part in a research project looking at what happens during routine appointments in the diabetes clinic. Important decisions about your treatment are often made at these appointments and staff want to provide you with the best service possible. Your views are important to the staff in this unit. Please read the following details before deciding whether or not to take part in this project.

This project asks patients about their experiences of the consultation with the doctor or nurse in the clinic. All patients attending this clinic for a routine visit will be asked to take part. The study is running for about four months and we will include the views of over 60 patients. The results will provide us with an idea of what works best in the consultations and whether the service could be changed.

If you take part in the study, your consultation will be audiotape-recorded. These tapes will be used for research purposes only. After the consultation, you will meet the researcher for a short interview (about 10-15 minutes) and will fill in 4 short questionnaires. To make sure responses and tapes are confidential, a study number is used to identify questionnaires and tapes. Your name does not appear on the questionnaire or tape. The tapes will be destroyed at the end of the study.

You will receive the same care from staff at this clinic whether or not you take part in this project. Participation is voluntary. If you participate, you will be free to withdraw from the project at any time, without giving a reason. Withdrawing from the project will not affect the care you receive.

Janette Moran will be happy to answer any questions you have about this project. Janette can be contacted on this number 0113 2332732.

If you decide to take part, please tell one of our nursing or clerical staff. You will be given this information sheet to keep and be asked to sign a consent form. You will be given a copy of the signed consent form to keep. If you decide not to participate, your clinic visit will continue as usual.

Thank you for taking the time to read this information.

Janette Moran
Psychologist in
Clinical Training

Dr Gary Latchford
Clinical Psychologist

Dr Hilary Bekker
Chartered Health Psychologist

Diabetes Clinic, St James's University Hospital

Consent form (Health professional)

I understand the purposes of the study and my involvement in it. I give permission for my consultations with patients who wish to participate in the study to be audio-taped for the purposes of the project. I understand that the audio-tapes of consultations will be anonymised and all study data will be kept confidential and destroyed after the study has been completed. I understand that the tapes will only be used for the purposes of the current study.

Signed (clinic staff)

Designation

Signed (researcher)

Date

Appendix III

MOTIVATIONAL INTERVIEWING IN HEALTHCARE

Introductory workshop

COMMUNICATION SKILLS UNIT
UNIVERSITY OF WALES COLLEGE OF MEDICINE

**Two-day workshop in Cardiff, Wales:
20 & 21 April 2004**

Practitioners from a wide range of settings face the challenge of encouraging patients to consider behaviour change - in diet, smoking, taking medicines, exercise and drinking. It is often a frustrating encounter. The workshop will:

- Introduce participants to models, concepts and skills for conducting constructive consultations about behaviour change.
- Provide an opportunity for practice in private with simulated patients.

Open to all practitioners in healthcare settings, the workshop is ideally suited to those wanting a basic introduction to motivational interviewing. The workshop will be led by Dr Stephen Rollnick, Communication Skills Unit, University of Wales College of Medicine and Dr Gary Rose, Clinical Psychologist, Massachusetts, USA. Dr Rollnick is a clinical psychologist who has many years of experience of training practitioners, and is the co-author (with William R Miller) of *Motivational Interviewing: Preparing People for Change* and *Health Behavior Change: A Guide for Practitioners* (with Pip Mason and Chris Butler). Dr Rose is a widely experienced trainer in motivational interviewing and has extensive experience of training. He is also the Secretary to the international Motivational Interviewing Network of Trainers - MINT (www.motivationalinterview.org)

Venue: Glamorgan County Cricket Club, Sophia Gardens, Cardiff

Cost: £200 for 2 day workshop

This price includes training fees, morning and afternoon refreshments and buffet lunch. (Any profits from the workshop will be used to fund the work of the Communication Skills Unit.)

For further enquiries please contact: Karen Edwards, Administrator, Communication Skills Unit, Department of General Practice, University of Wales College of Medicine, Llanedeyrn Health Centre, Maelfa, Llanedeyrn, Cardiff CF23 9PN. WALES
Tel: 44 (0) 29 2054 7525 Fax: 44 (0) 29 2054 0129 Email: edwardske@cf.ac.uk

Delegates are responsible for arranging their own overnight accommodation.

Semi-structured interview schedule

- How did you find the training?
- What was particularly useful?
 - What was not so useful?
- Do you think the training has affected your clinical practice?
 - What was the most/least important thing you learned?

1 – You strongly disagree with the statement

	Strongly Agree		
1. This practice session was stressful for me	5	4	3
2. This practice session was realistic overall	5	4	3
3. This practice session was difficult	5	4	3
4. This practice session bore no relation to my everyday work	5	4	3
5. This practice session helped me to develop skills	5	4	3
6. This practice session helped me feel able to use the skills I have learned today in my everyday work	5	4	3
7. The patient was portrayed accurately in this practice session	5	4	3
8. This practice session was useful to me	5	4	3
9. The case scenario for this practice session was not believable	5	4	3
10. I felt self conscious in this practice session	5	4	3
11. I felt comfortable in this practice session	5	4	3
12. I enjoyed this practice session	5	4	3
13. I did not feel in control during this practice session	5	4	3

Demographic Information

ID number:

Age:

Sex:

Nationality:

Job Title:

Number of years in practice:

Amount of previous training in motivational interviewing (in days if possible):

Block Randomisation Master List

A = Control Group B = Experimental Group

1 = AABB 2 = ABAB 3 = ABBA 4 = BBAA 5 = BABA 6 = BAAB

Numbers Selected from random numbers table – selecting first number from 1-6

ID		ID		ID	
1	B	50	A	90	B
2	A	51	B	91	B
3	A	52	A	92	A
4	B	53	B	93	A
5	B	54	A	94	A
6	A	55	B	95	B
7	B	56	B	96	A
8 (41)	A	57	A	97	B
9	A	58	A	98	A
10	B	59	A	99	A
11	A	60	B		
12	B	61	B		
13	B	62	A		
14	B	63	A		
15	A	64	B		
16	A	65	B		
17	A	66	A		
18	B	67	B		
19	A	68	B		
20	B	69	A		
21	A	70	B		
22	B	71	A		
23	B	72	B		
24	A	73	A		
25	B	74	B		
26	A	75	A		
27	A	76	B		
28	B	77	A		
29	B	78	A		
30	B	79	B		
31	A	80	A		
32	A	81	B		
33	A	82	B		
34	B	83	A		
35	B	84	A		
36	A	85	B		
37	A	86	B		
38	A	87	B		
39	B	88	A		
40	B	89	A		

Dear colleague,

Re: Motivational interviewing in healthcare – introductory workshop

We look forward to seeing you at our 4th Cardiff Health Behaviour Change workshop on the 20th and 21st April 2004. The last few went really well, so we are hoping that this next one will be stimulating and enjoyable. There's quite a few learning opportunities lined up, a few visitors from distant places, an email discussion group to join, and even a voluntary experiment which we will ask you to take part in. Between now and the workshop, please don't hesitate to ring us if there is anything we can do to make your stay comfortable.

You will find enclosed here a provisional programme, a consent form for the experiment (to be returned as soon as possible please), and a provisional list of fellow participants.

The trainers

Dr Stephen Rollnick (Cardiff) and Dr Gary Rose (US) will run the workshop. Dr Nick Francis, a GP, will also briefly describe (20 minutes) the results of an experiment we did on whether angry patients elicit confrontation from practitioners.

Your role

There will be 40 participants in all. It's a bit of an old cliché, but what you put in will be what you get out. Our job will be to provide a heady mixture of theoretical debate and hopefully useful clinical ideas and strategies. Please let us know beforehand if you have any concerns and aspirations that we should be aware of, and during the workshop, please raise any concerns with us between sessions, during the breaks.

Profits from the workshop

These are being used to fund Dr Rose's trip from the US and to fund the research and training work of the Communication Skills Unit.

The research experiment

We are excited about this small component of the workshop. We have done this before, and even shared with participants what we have found. In the forthcoming April workshop we will be looking at the use of everyday methods for practising skills. We plan to share the rationale for the research with you in a brief discussion session after lunch on the second day. This is usually a lively session, and impacts directly on the purpose of the workshop – to learn new skills. You will meet Ms Claire Lane who is doing her PhD with us here in Cardiff on this subject. Attached here is an explanation and consent form. Please feel free not to take part, but accept my enthusiastic endorsement based on previous experience! Probably the most taxing part is the recording of a simulated consultation before the workshop starts. This is done in private, is anonymous and gives you a chance to assess your own skills.

To ensure the smooth running of this task, we ask you to complete the attached consent form now, and to return this to us as soon as possible. Feel free to ring me or Claire Lane with any queries (02920-541133).

Request for reduced price books

I can obtain discounted copies of:

1. *Health Behaviour Change: A Guide for Practitioners* (written with Pip Mason and Chris Butler), published 1999

and
2. The 2nd edition of *Motivational Interviewing: Preparing People to Change* (written with William R. Miller) published in 2002.

These will be available for you to purchase.

Recreation

The venue is very close to the city centre, in the grounds of the local county cricket ground, on the banks of the River Taff. Most participants will be staying in nearby Bed and Breakfast accommodation. There are nice pubs close by, paths for taking exercise, and we will encourage participants to share possibilities for dining out.

With best wishes to you, and I look forward to seeing you.

Professor Stephen Rollnick

HEALTH BEHAVIOUR CHANGE

Skills for constructive consultations

20th and 21st April 2004
Glamorgan Cricket Club, Cardiff, Wales

Aims

To provide participants with a stimulating and enjoyable opportunity to review the field of health behaviour change, theory and practice, and to consider their own skill development.

Learning outcomes

By the end of the workshop, participants will have received the opportunity to:

1. Review key concepts for guiding health behaviour change consultations, including those derived from motivational interviewing and the stages of change model.
2. Review the origins and key principles of motivational interviewing, and understand the relationship between this method and behaviour change counselling.
3. Observe examples of good and bad practice.
4. Participate in transcript analysis and simulated exercises designed to improve skilfulness in behaviour change counselling.

Learning opportunities and methods

A range of learning opportunities will be provided, including demonstrations (live and on video), simulated practice, discussion groups and solitary reflection.

Trainers

Dr Stephen Rollnick is a trainer in motivational interviewing and behaviour change counselling, based in Cardiff, with many years of experience in training practitioners in these and other methods. Dr Gary Rose, from Massachusetts, USA is likewise an experienced trainer in motivational interviewing and has a particular interest in the information exchange process. Both trainers are active members of the international Motivational Interviewing Network of Trainers (M.I.N.T.) (www.motivationalinterview.org).

Times, dates and venue

9.00am – 5.00pm, Tuesday 20th April

9.00 am – 5.00 pm Wednesday 21st April

Glamorgan Cricket Club, Sophia Gardens, Cardiff, CF11 9XR

Content & Structure

The workshop will be divided into segments, each lasting approximately 1.5 hours. Each segment will be devoted to different topics, which will include

- *motivational interviewing: past present and future*
- *behaviour change counselling: rationale, key elements & overlap with motivational interviewing*
- *agenda-setting*
- *importance & confidence exploration*
- *resistance*
- *information exchange*

Handouts

These will be provided and will include copies of overheads and slides and a reading list

Evaluation

By self-report at the end of workshop, and to be made available to participants afterwards.

Discussion Forum

Participants will be offered the opportunity to join a new email-based health behaviour change discussion group, so that they can keep in touch, exchange information and have access to support from others and the Communication Skills Unit in Cardiff.

Health Behaviour Change
Skills for constructive consultations

20th and 21st April 2004
Glamorgan Cricket Club, Cardiff

Training Programme

Day 1

Background to MI and Behaviour Change Counselling
Agenda Setting

Coffee

Practice Session one
Empathic listening

Lunch

Empathic listening
Practice Session two

Coffee

Resistance

**Health Behaviour Change
Skills for constructive consultations**

**20th and 21st April 2004
Glamorgan Cricket Club, Cardiff**

Training Programme

Day 2

Exploring the how and why of change

Coffee

**Practice Session one
Exchanging information**

Lunch

Experimental debrief

Chosen group activity

Coffee

Chosen group activity

The Experiential Practice Experiment **Information sheet for practitioners**

Why are you conducting an experiment at this workshop?

Ms Claire Lane, a researcher in the communication skills unit, is conducting her PhD study into how healthcare practitioners acquire skills in motivational interviewing. For one component of her thesis, she is looking at practice during training, and how this facilitates learning. As this is a workshop in motivational interviewing for healthcare practitioners, it provides an ideal opportunity to investigate this. It is hoped that from conducting this experiment, we will have a greater understanding as to what kinds of practice during training are the most useful for practitioners. The results will be shared with workshop participants.

What would I be expected to do if I take part?

On registration at the workshop, you will be asked to conduct a consultation with a simulated patient. This will be audio recorded and will last about 8 minutes. We are not asking you to conduct a perfect consultation with the simulated patient – just to have a go at having a consultation.

During the workshop, there will be three practice sessions. All participants will be allocated into different groups for practice prior to the workshop. The practice sessions **will not** be audio recorded. You will be asked to fill out a brief rating scale at the end of your practice session, which will be collected from you.

During lunch on day two, you will be asked to consult once again with the simulated patient you saw at the beginning of the workshop. This will be audio recorded and will last about 8 minutes. Again, we are not looking for the perfect consultation from you – just another go at having a stab at the consultation.

You will be fully debriefed and invited to take part in a discussion after lunch on day two.

Will my data be confidential?

Yes. All recordings will be anonymous. You will be allocated an ID number, which is the only way in which you will be identified on the tape and on your questionnaires. A master list of names and numbers will be kept by Mrs Joanne Sloan, and will only be used if we need to get in touch with you regarding the experiment after the workshop. Your data will not be shared with anyone else without your permission. We will be happy to send you the results of our experiment when the data has been analysed.

Do I have to take part?

No, your participation in the experiment is completely voluntary. You are also free to withdraw consent at any time if you change your mind. Your decision will not affect the training you receive in any way.

What should I do now?

Please fill out and return the enclosed consent form in the SAE provided, indicating whether you are happy to take part in the experiment or not. If you would like any more information, please call Claire Lane or Stephen Rollnick on 029 2054 1133 who will be more than happy to deal with any queries that you have.

CONSENT FORM FOR PRACTICE EXPERIMENT

I have read the details of the experiment.

I realise that I will be asked to conduct two private simulated consultations and to complete some small questionnaires. I accept that my name will not be associated with the recordings or questionnaires.

I accept that no audiotape or questionnaire will have my name on it, and the only record of my name will reside on a master list held for identification purposes only by Mrs Joanne Sloan.

I agree that no piece of dialogue from my consultations should be used in any publication without my permission.

I am aware that at any stage, I am able to withdraw my consent to participate.

Name:

I am happy to take part in this experiment (please tick):

YES

NO

Please return this in the enclosed envelope as soon as possible. Please be mindful that, for purely practical purposes, we might come back to you if we don't receive a reply.

Thanks a lot for your co-operation.

Stephen Rollnick
On behalf of Claire Lane and Joanne Sloan

REGISTER

Motivational Interviewing in Healthcare – 20/21st April 2004

Surname	Forename	Company	Signature	ID No.	Consent	Q1	Q2	Q3	
				1	Y	✓	✓	✓	Sim
				2	Y	✓	✓	✓	RP
				3	Y	✓	✓	✓	RP
				4	Y	✓	✓	✓	RP
				5	Y	✓	✓	✓	Sim
				6	N				RP
				7	Y	✓	✓	✓	Sim
				8	N				RP
				9	Y	✓	✓	✓	RP
				10	Y	✓	✓	✓	Sim
				11	Y	✓	✓	✓	RP
				12	Y	✓	✓	✓	Sim
				13	Y	✓	✓	✓	Sim
				14	Y	✓	✓	✓	Sim

Surname	Forename	Company	Signature	ID No.	Consent	Q1	Q2	Q3	
				31	Y	✓	✓	✓	RP
				32	N				RP
				33	Y	✓	✓	✓	RP
				34	Y	✓	✓	✓	Sim
				35	Y	✓	✓	✓	Sim
				36	N				RP
				37	N				RP
				38	Y	✓		✓	RP
				39	Y	✓	✓	✓	Sim
				40	Y	✓	✓	✓	Sim
				41	Y	✓	✓	✓	RP

*Paying on day

**Gluten Free Meal

Surname	Forename	Company	Signature	ID No.	Consent	Q1	Q2	Q3	
				15	Y	✓	✓	✓	RP
				16	Y	✓	✓	✓	RP
				17	N				RP
				18	Y	✓	✓	✓	Sim
				19	Y	✓	✓	✓	RP
				20	Y	✓	✓	✓	Sim
				21	Y	✓	✓	✓	Sim
				22	Y	✓	✓	✓	Sim
				23	Y	✓	✓	✓	Sim
				24	Y	✓	✓	✓	RP
				25	Y	✓	✓	✓	Sim
				26	Y	✓	✓	✓	RP
				27	Y	✓	✓	✓	RP
				28	Y	✓	✓	✓	Sim
				29	Y	✓	✓	✓	Sim
				30	N				Sim

REGISTER

Motivational Interviewing in Healthcare – 5th & 6th July 2004

Surname	Forename	Company	Signature	ID.No.	Consent	Q1	Q2	Q3	
				50	Y	✓	✓	✓	RP
				51	Y	✓	✓	✓	SIM
				52	N				RP
				53	Y	✓	✓	✓	SIM
				54	Y	✓	✓	✓	RP
				55	Y	✓	✓	✓	SIM
				56	N				SIM
				57	N				RP
				58	Y	✓	✓	✓	RP
				59	Y	✓	✓	✓	RP
				60	Y	✓	✓	✓	SIM
				61	Y	✓	✓	✓	SIM

Surname	Forename	Company	Signature	ID.No.	Consent	Q1	Q2	Q3	
				62	N				RP
				63	Y	✓	✓	✓	RP
				64	Y	✓	✓	✓	SIM
				65	Y	✓	✓	✓	SIM
				66	Y	✓	✓	✓	RP
				67	N				SIM
				68	Y	✓	✓	✓	SIM
				69	Y	✓	✓	✓	RP
				70	N				SIM
				71	Y	✓	✓	✓	RP
				72	Y	✓	✓	✓	SIM
				73	Y	✓	✓	✓	RP
				74	N				SIM
				75	Y	✓	✓	✓	RP

Surname	Forename	Company	Signature	ID.No.	Consent	Q1	Q2	Q3	
				91	N				SIM
				92	N				RP
				93	N				RP
				94	Y	✓	✓	✓	RP
				95	Y	✓	✓	✓	SIM
				96	Y	✓	✓	✓	RP
				97	Y	✓	✓	✓	SIM
				98	N				RP
				99	N				RP

The experiment – Information sheet for practitioners

Baseline Consultation

Following registration, you will be asked to conduct a recorded consultation with a simulated patient. We have 10 simulated patients available, so we will be asking you to conduct your consultations in groups of 10. Each group will be taken in as the patients become available (one of the administrative staff will let you know when to go in).

You will be given a case scenario before you go into the consultation, briefing you about the patient. You have 8 minutes to conduct the consultation. To make things run smoothly, everyone will be asked to leave the consultation after this time has elapsed (even if you haven't quite finished).

We are not asking you to conduct the 'perfect consultation' – just to have a go with the patient.

Practice Sessions

During the workshop, there will be three practice sessions. The practice sessions will not be audio recorded.

You may have noticed that people have different coloured stickers on their badges – this indicates their groups for the practice sessions. If you are wearing a red sticker, you will be asked to role-play with a colleague in your practice sessions. If you are wearing a blue or green sticker, you will be consulting with a simulated patient during your practice sessions.

Both rooms for practice (for both role-play and consultations with simulated patients) will be set up with private booths for you to practice in, with case scenarios provided.

You will be asked to fill out a brief rating scale at the end of your practice session, which will be collected from you.

Final Consultation

During lunch on day two, you will be asked to consult once again with the simulated patient you saw at the beginning of the workshop. This will be audio recorded and will last about 8 minutes. Once again, administrative staff will let you know when it is your turn to go in.

Again, we are not looking for the perfect consultation from you – just another go at having a stab at the consultation.

Debriefing

After lunch on day two, all will be revealed! You will be fully debriefed about the experiment, and invited to take part in a recorded group discussion about the experiment.

We would like to ask you not to discuss the experiment with any other participants until after the debrief.

Round 1

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Case1

Baseline/Final Experimental Case

(this case will be used on day 1 on arrival at the workshop, and at lunchtime on day 2 and will be tape recorded for research purposes)

SMOKING – MR(S) JENKINS

It is your first meeting with the counsellor, and (s)he knows nothing about your situation.

Your background

Whatever typical background seems suitable. You are a conventional person, and you lead a conventional life.

Your situation

You were seen by a surgeon who seemed to refuse to conduct an essential but minor operation unless you stopped smoking. He strongly advised you to go back to your GP for help with this. The GP referred you right away to a smoking counsellor. You are not happy with the surgeon and the health service, because you had waited a long time for the operation, geared yourself up for it, then got fobbed off by the surgeon.

Your attitude towards smoking

You have never seriously considered whether or not to stop smoking. Sure, you are concerned about your health and the operation, but you don't like being pushed around by the health service. You are not really ready to consider how to stop smoking at any time during the session. You might be OK about talking about smoking, but not if there is pressure on you to stop.

In the interview

The consultation should begin with a brief statement of your situation. Respond naturally, depending on how you are handled by the practitioner. In other words, don't be rigidly angry all the time, which is very unusual in healthcare consultations – it usually depends on how the practitioner behaves towards you.

Practitioner Briefing Case 1 (Experimental case)

In this scenario, you take on the role of a smoking counsellor.

Mr(s) Jenkins

Mr(s) Jenkins was seen by a surgeon, who seemed to refuse to conduct an essential but minor operation unless s/he stopped smoking.

He strongly advised *him/her* to go back to their GP for help with this.

The GP referred Mr(s) Jenkins right away to a smoking counsellor, and this is the first meeting they have with you.

Your task is to talk to Mr(s) Jenkins about their smoking and to try to help them give up.

Case 2

Practice Case

(this case will be used for the practitioners to practice the skills they have learned and will be used during the workshop)

SMOKING – MR(S) JENKINS

You are the same patient as in case 1. Again, the counsellor knows nothing about your situation.

The situation

It is three months later. You stopped smoking and had the operation. *The anger with the surgeon and the system has subsided.* In fact, you can even see that some good came out of the situation. But you have relapsed, asked the GP for help, and went to see a new counsellor.

Your attitude towards smoking

Your first statements are about the fact that you are confused. You relapsed, and don't understand why, and whether you will succeed again. You want to talk it through quietly.

In the interview

Please just respond in keeping with the scenario described above. In other words, you are no longer angry, and want help to think things through. You don't want to be rushed. This is your time to take stock. Respond naturally, depending on how you are handled by the practitioner.

Practitioner Briefing

Case 2 (to be used during the workshop for practice)

This case follows on from the experimental case conducted at the beginning of the workshop. Again, you are to take on the role of the smoking counsellor.

Mr(s) Jenkins

Three months ago, Mr(s) Jenkins was seen by a surgeon, who seemed to refuse to conduct an essential but minor operation unless s/he stopped smoking. Mr(s) Jenkins got help from a smoking counsellor and managed to give up smoking. S/he has now had the operation.

However, Mr(s) Jenkins has recently relapsed and has begun smoking again. S/he has asked their GP for help, and has now been sent to see a different smoking counsellor.

Case 3

Practice Case

(this case will be used for the practitioners to practice the skills they have learned and will be used during the workshop)

DIABETES – MR(S) WILLIAMS

Background

Mr(s) Williams was diagnosed with diabetes by the GP about two months ago. It was a bit of a shock, and strange as well, because (s)he feels quite well, yet (s)he has to go to a clinic at least once a month to have sugar levels checked. These have been very high recently. The practitioner has not prescribed tablets, but keeps stressing a change in diet, getting more exercise and stopping smoking. It's a lifelong disease, they say.

This is a disease that can make the risk of heart disease and other problems much higher. That's what it said in the leaflet Mr(s)Williams read. You can't catch it from someone else, but it does run in families, and can be caused by bad diet and that sort of thing.

Mr(s)Williams is told that his/her fasting glucose level is 11, and that this is too high, which (s)he was expecting to hear.

Mr(s)Williams works as a courier and can be driving for hours on end some days. Eating special foods at lunchtime is not so easy when you stop at a motorway café! At home, fried food and sugary food are what the family like (there's five of them altogether). Mr(s)Williams gets little exercise, smokes 10 – 15 a day and likes to drink wine, especially at the weekend.

In the consultation

You understand about what diabetes is, and you feel guilty about your lifestyle – yet you feel well enough not to be too bothered about having to be the perfect specimen! You don't want to get a lecture. That won't help you. You are usually polite and easy to talk to, and you don't like arguments. However, if the practitioner thinks that all you need to do is make a decision and stop, that's not really on today.

You feel very reluctant to stop smoking – you have tried once before and it was hell on earth – you are not sure whether you will be successful if you were to try again. You are OK about trying to get more exercise but are not sure where you could fit this in. You are a bit overwhelmed by all the talk about diet. Your wine is a big part of your life, and you certainly are not an alcoholic or anything like that! You are happy to discuss and think about any of the above. However, you will not be happy if somebody tries to make you commit to something you don't feel comfortable with or if they try to 'force' you to do something.

Please don't be intransigent in the meeting. If the practitioner listens to your concerns you will be more receptive than if you are lectured at.

Please don't talk all the time and be too articulate. Don't say exactly what you feel about things and all the lifestyle changes unless you are asked about this. Let the practitioner do a bit of work! You are actually hoping that you can get out of there without making too many changes.

Practitioner Briefing

Case 3 (to be used during the workshop for practice)

In this scenario, you are to take on the role of a fitness and lifestyle counsellor at a diabetes clinic.

Mr(s) Williams

Mr(s) Williams was diagnosed with diabetes by the GP about two months ago. S/he has to go to a clinic at least once a month to have his/her sugar levels checked. These have been very high recently - his/her fasting glucose level is 11.

Mr(s)Williams works as a courier and can be driving for hours on end some days. Eating special foods at lunchtime is not so easy when you stop at a motorway café! At home, fried food and sugary food are what the family like (there's five of them altogether).

Mr(s)Williams gets little exercise, smokes 10 – 15 a day and likes to drink wine, especially at the weekend.

The practitioner at the clinic has not prescribed tablets, but keeps stressing a change in diet, getting more exercise and stopping smoking. S/he has come to talk to you about this today.

Appendix IV

Interviews – Free Node (skills practice)

Practitioner 1: I didn't mind anything really. I didn't have a very good experience with the actor if you can remember

Interviewer: Do you want to tell me about that

Practitioner 1: On the last interview when I was concentrating on agenda setting and just concentrating on one lifestyle change the actor thought that I'd forgot about the other things that he was doing wrong so he was playing charades with me

Interviewer: Oh god

Practitioner 1: And saying... I think for example, one of the things he picked on was diet so I was concentrating on diet, so then he thought I had forgotten about smoking so he was going like this with a cigarette and pretending to run so I'd remember about exercising and so that was

Interviewer: It was like he kind of thought that was what you should have been doing and he was trying to influence

Practitioner 1: So that wasn't very good because I couldn't concentrate then so I had to sort of oh well do you smoke... you lose your track then don't you

Interviewer: Yeah, that's interesting, so the actors weren't consistent between the first recording then

Practitioner 1: They weren't no, it was daft. Maybe they thought that I'd forgotten or was a bit stuck or something, I don't know really

Interviewer: But apart from the before and after, how did you feel about the use of actors during the training? Was it helpful or...?

Practitioner 1: Not for me really because I didn't have a very good experience. I found it more helpful going back into practice and using the skills. But maybe I was gaining the skills by talking to the actors. Because the middle actor I saw as well wasn't very good and I think that Steve brought it out as well because I said that she was very difficult and she wasn't very forthcoming.

Interviewer: Is she the one that miss-read the scenario?

Practitioner 1: Yes, so I had 2 which were awful really

Interviewer: So generally not a very good experience

Practitioner 1: No

Interviewer: What do you think, you know, if we were going to take these actors again, what would be helpful for you? What would you like us to tell them?

Practitioner 1: Oh I don't know really.

Interviewer: Just to...

Practitioner 1: Read the script

Interviewer: That would be a good start. You know, if we could take them to one side and sort of brief them, what do you think would be some useful bits of advice that we could give them so that you'd get the most benefit out of you seeing them

Practitioner 1: I don't know. Just to leave us talk really I suppose and not try and prompt us on really

Interviewer: They'll be horrified that I found out about that really

Practitioner 1: I couldn't believe it

Interviewer: Can you imagine patients sitting there going...

Practitioner 1: I still got a lot out of it

Interviewer: But it could have been better?

Practitioner 1: With the actors for me yeah, personally

Interviewer: Right ok, and what about the tape recordings, how did you feel about being taped?

Practitioner 1: I didn't mind really

Interviewer: You didn't mind

Practitioner 1: No, because it was only one to one I didn't mind

Interviewer: Mm

Practitioner 1: I wouldn't have liked it if it was a group, you know, if you were doing it in front of a lot of people, but one to one it didn't bother me at all. I didn't really notice it was there really

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 2

* Male, Cardiac Rehab

++++
++++

[Practitioner 2 : 157 - 159]

Practitioner 2: So yeah, I think in terms of the skills from my own personal point of view, I guess it was ok to be able to practice the stuff although some of the scenario's were a little inconsistent

...

[Practitioner 2 : 172 - 242]

Practitioner 2: I think I'm going to have to bring in, if I talk about the actors at this time it's going to be excessively negative so I think I'm going to think back to the training course as well

Interviewer: Mm

Practitioner 2: And I think the opportunity that we had on the training course was a much more positive experience. I think the actor that we had there was much more consistent and much better briefed, properly.

Interviewer: Mm

Practitioner 2: Um, I think in the case of the more recent stuff, I just thought people were inconsistent and perhaps at times trying to be helpful with out actually understanding what was going on in the back ground and I think in their desire to be helpful they were actually under mining the reality of the situation because when we did it on the training course I believed I was in the consultation with somebody who was depressed.

Interviewer: Mm

Practitioner 2: The actor was that good. Where as when we did it this time I never actually believed that for a second. I couldn't get in to the scenario. I think in terms of, I don't know how wide Steve's knowledge is about cardiac rehabilitation, and I think it would possibly been more advantageous to have somebody like Linda to have gone in and said... and briefed the actors. But I think consistency was the main problem

Interviewer: So they were inconsistent between the first recording and the last recording

Practitioner 2: I get the feeling they were inconsistent from day to day

Interviewer: Right

Practitioner 2: I get the feeling that they were seeing four people and responding

in different ways. I don't know, I suppose it keeps them more interested if they develop different stories as they go along. I think in some cases different stories were emerging all the time. Because obviously people who've interviewed them have gone and talked about who they've interviewed and how it's gone and it just didn't seem to be consistent and standardized and it would probably have been more helpful if it was.

Interviewer: Mm, so you were talking about the actors trying to be helpful. I'm kind of intrigued by that. What did they do?

Practitioner 2: It's things like trying to change the subject. It almost felt like in some cases the object was for us to get through everything. All of the different stages of behaviour change, they wanted us to get through it all. And we were trying to do the exact opposite, so it was difficult to pin people down and get any great depth out of it

Interviewer: So as if the actors had a different expectation of what you should be doing

Practitioner 2: Yeah, the agenda was different. And it made it very difficult to pin them down to one area and explore any area in any depth

Interviewer: Mm

Practitioner 2: Because I think they wanted to say, and we want to talk about exercise and we want to talk about smoking and drinking and we want you know, and it wasn't an ideal situation

Interviewer: No

Practitioner 2: I know they can't know what's going on in the background because that defeats the whole object of both the training and the research really but it wasn't always easy or necessarily the best

Interviewer: Ok, and this sort of relates to the actors as well; if the actors had been consistent across cases like they were meant to be

Practitioner 2: Yeah

Interviewer: Would you have said that the cases that they were playing were realistic

Practitioner 2: Reasonably so, yeah I think the actual scenario's that we were given were probably genuine scenario's and they were realistic to that extent. I wouldn't have a criticism of that, I thought that was fine, I thought it was the inconsistency of the acting

Interviewer: Yeah, great. I say great... ok right. Was there, I mean we've talked about the actors not being brilliant, was there anything else

about the training that wasn't that good for you?

Practitioner 2: I think I came out of one of the interviews, the joint interviews that we did, I think I came out of that session and actually spoke to you and said don't ever do that again.

Interviewer: Yeah you did

Practitioner 2: Um, whatever you do, don't ever do that again, that was awful. That for me just didn't work. I didn't feel comfortable and neither did the person that I was interviewing with and I think general consensus among the group was that it was perhaps the weakest bit of the training

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 3

*Female, Cardiac Rehab

++++
++++

[Practitioner 3 : 15 - 30]

know there was a time when I was put in to a situation where two of us went to interview an actor and it was absolutely dreadful. We just sat there looking at one another, neither of us knew what to say and I think that Steve himself afterwards said that he shouldn't have done it and I think that really did throw me a little bit you know, cos I've been nursing for 23 years and I've never been short of something to say but I really didn't know how to deal with that

Interviewer: Was it having someone with you or?

Practitioner 3: I think that's part of it and I think that it's because the person that was with me was an equal colleague. I'm used to taking students with me when I see people and I'm used to talking in groups but I found the interviewing the actors quite stressful and having a colleague of an equal grade and knowledge with me I just couldn't do it and I think she felt the same as well

Interviewer: Yeah

Practitioner 3: Neither of us knew what to say

...
[Practitioner 3 : 37 - 55]

Interviewer: What about when you were interviewing the actors individually. How did you find that?

Practitioner 3: The first one, without having any training at all I found pretty easy

Interviewer: Mm

Practitioner 3: Probably because I was unaware of what motivational interviewing was all about so things seemed to just flow. The last one I found very very difficult and a lot of it I think was because the actor I thought was supposed to have been the same as he was week 1 but the interview took a completely different turn and I ended up becoming more the instructor when I wanted to be the coach because that's the way I always tend to work anyway and he kept throwing things back to me and what do you think and it was completely different to the way he'd been on week 1

Interviewer: So maybe the actors weren't consistent and the time

Practitioner 3: No. and I also found that with a bit of training you're more aware of what you said which made what you were doing more difficult because I suppose when you've been in a job for so long I suppose you fall in to, not necessarily bad habits, but you've got your own way of talking to people and it's trying to change that because of all this new information you've got.

...

[Practitioner 3 : 157 - 192]

Practitioner 3: I didn't enjoy being taped with the actors. I really didn't. It's very difficult because I think the first time I was taped I was fine but that was before I'd had any of the information. But I think the consistency wasn't there. I thought I was just going to go in the second time on the final interview and I was going to get the same scenario that I got the first time and I just got completely thrown because where as in the first week he'd asked me what life style changes should he make and I said to him what do you think are your priorities and he'd said smoking, when I asked him the same thing the second time he basically turned it back on me to say well what do you think I should do and I was... I suppose it was because I expected the same thing and it completely threw me because I then felt that I became more the instructor where as I wanted to be the coach, cos I thought that was the way of dealing with this person

Interviewer: Was it more the actor side of things you didn't like or was it the actual being taped

Practitioner 3: Um, I think it was a bit of both really and the thought that somebody would listen to it all after, ha-ha

Interviewer: Ha-ha. What was it about the other person listening to it that...

Practitioner 3: I don't know, I don't know.

Interviewer: You know, I ask these questions because it's important for us to try and get at what puts people off the idea of being taped

Practitioner 3: I think it's fear of humiliation, it's fear of somebody listening to what you're saying and thinking my god... it's awful... do these people really work with the public? Um, I think that's probably part of it isn't it

Interviewer: Mm. almost like the feeling that you're being judged or assessed

Practitioner 3: Yes

Interviewer: And the patient, do you feel the case was reflective of something that you would get in your every day practice? Do you think it was realistic?

Practitioner 3: Um, yes. Yeah, I've had a few really difficult situations. I mean the majority of people we see from cardiac rehab point of view, by the time they get to the phase 3 programme they've made significant life style changes. We don't seem to get an awful lot of people who haven't given up smoking

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 4
*Female, Health Visitor

++++
++++

[Practitioner 4 : 26 - 27]

certainly I found that the second interview with the actors worth while because I certainly had my thoughts more together then

...
[Practitioner 4 : 50 - 69]

Practitioner 4: No I think that the day was good, although I found that I was a gibbering wreck by the end of it

Interviewer: Ha-ha a gibbering wreck?

Practitioner 4: Yeah

Interviewer: What do you mean by that?

Practitioner 4: Well the actors were hysterical. I'm so used to interviewing people in they're own homes. I mean I've been doing it for years.

Interviewer: Mm

Practitioner 4: And though I've come across a lot of stropky people in my time and difficult people, I wasn't expecting this actress to turn the scenario

around to being quite so difficult.

Interviewer: Mm

Practitioner 4: And I just didn't feel so in control at all and I'm not used to that

Interviewer: No

Practitioner 4: That was the first interview.

Interviewer: Yeah

Practitioner 4: And the other interviews I did through the day obviously got better, but I found that quite stressful knowing that I was being recorded and it was an artificial situation yet, she was very good... she really was difficult.

...

[Practitioner 4 : 71 - 79]

Practitioner 4: But strangely enough I had the same, almost identical interview with the Cardiff people

Interviewer: Really

Practitioner 4: But he didn't win because by the time we finished he stood up and shook my hand and said thanks for coming I really enjoyed this visit

Interviewer: Yeah

Practitioner 4: But he was actually giving me the same negative attitude as this actress and I couldn't believe it because I was remembering everything that she said and he was coming out with the same things. It was good.

...

[Practitioner 4 : 86 - 129]

Practitioner 4: Well the first one I hated from start to finish because like I said, I wasn't in control, and you know, she really, I couldn't get around her at all

Interviewer: Mm

Practitioner 4: And because, like if I'd been on a home visit I would have completely dropped the subject of what we were talking about and started talking about something else just to sort of soften her up.

Interviewer: Mm

Practitioner 4: Which would have probably taken me about an hour, and these visits do take an hour, so to try and sort of dive in in 10 minutes

Interviewer: 10 minutes

Practitioner 4: Is difficult

Interviewer: Mm

Practitioner 4: Very difficult. So the first one, that was the most negative experience of my entire life

Interviewer: Oh no

Practitioner 4: But then, having said that, you learn from it don't you and you think well this is not happening to me again right, so... So the next interview I did was with a different actor, was much better because I was far more focussed and he wasn't as negative and then as we moved along... and I think the actors and actresses have been told to be less negative

Interviewer: Mm

Practitioner 4: So it was... the last one I thought was very positive and I enjoyed it and you could see that she was actually taking on board what I was saying. Even though she was an actress.

Interviewer: So in a way it kind of helped so that if you were in that situation again, because you'd been through it once you kind of...

Practitioner 4: Well like I was saying it did help with that one that visit I did over Christmas because

Interviewer: Yeah

Practitioner 4: He was so like her and this was for real now, he meant every thing he was saying. He didn't want to exercise and that's all there was to it.

Interviewer: Mm

Practitioner 4: So you know, all of it prepared me. I really did sort of motivate him into thinking about what I was talking about and not the fact that um, like you know, I think he thought that I wanted him to jog around the block or something

Interviewer: Yeah

Practitioner 4: So yeah, that really did help because I thought I've already gone through this, all be it based in an artificial situation but I um, yeah it was good

Interviewer: So just to sort of summarise what you've just said, at first it

was very difficult

Practitioner 4: A bit uncomfortable yes

...

[Practitioner 4 : 131 - 131]

Practitioner 4: Very uncomfortable yes

...

[Practitioner 4 : 139 - 140]

Practitioner 4: I mean I was gob smacked more than anything because I'm not used to not being able to turn people around

...

[Practitioner 4 : 148 - 151]

Practitioner 4: Yeah I went into it quite early. But yeah, I think that's what I would say, just as you summarised. But I think we all felt like that after, but as the time went on I was determined when the next time I went in that there was no way that that was going to happen again

...

[Practitioner 4 : 164 - 167]

Practitioner 4: So the recording bit, although you're initially aware of it I didn't actually mind it so much. And I think that's quite a positive experience you know, because it teaches you to focus on the person and not what's going on

+++++

+++ ON-LINE DOCUMENT: Practitioner 5

*Female, Health Visitor

+++++

[Practitioner 5 : 41 - 45]

Practitioner 5: No I didn't like being taped, no I didn't. I didn't mind actually doing the interview

Interviewer: Yeah

Practitioner 5: But I found that bit really... it put me under pressure, that's what I found

...

[Practitioner 5 : 48 - 80]

Practitioner 5: Well, first of all it was like 7 minutes and I felt like I had to talk for 7 minutes.

Interviewer: Right

Practitioner 5: And I felt like I dried up and I never dry up, ha-ha. Do you know what I mean?

Interviewer: Yeah, so it was quite anxiety provoking

Practitioner 5: Yeah, not even the first one. The first one wasn't too bad, it was the second one when I knew what to expect and I went back to the same lady so I knew what she was going to say

Interviewer: Mm

Practitioner 5: But even so, if felt towards the end I thought turn it off quick

Interviewer: So was it the actual interview or just the fact that you were being taped?

Practitioner 5: I was being taped I think. I felt that I had to... I don't know, maybe if I wasn't being taped I probably would have been a little more relaxed and perhaps a bit more chatty and... I don't know, it just felt under pressure to get it right

Interviewer: To get it right, mm. that's interesting

Practitioner 5: You know, having being... and it was definitely the second time. I was definitely worse the second time I felt

Interviewer: Mm

Practitioner 5: Because I'd been taught by Steve and we had all these things in our head to try and remember and to try and get them in but completely messed up and I felt I was worse the second time than the first time

Interviewer: So because you were being taped you felt that you had to get as much as what you'd been taught on to the tape

Practitioner 5: Yeah

Interviewer: So is it because you kind of felt that you were being assessed or judged?

Practitioner 5: Yeah, that's exactly what it was

Interviewer: Right

Practitioner 5: Which is wrong really because I know that's not why I was being taped. Do you know what I mean

...

[Practitioner 5 : 123 - 128]

Practitioner 5: I have to be honest, when he said in the morning 'we're going to tape you' I went in a cold sweat. I was thinking, oh my god. But it actually wasn't that bad but I only did what I normally do

Interviewer: Yeah, so that was maybe a little less intimidating

Practitioner 5: Yeah, yeah. But the second time like I said, I was just trying to make a bit more of an effort really I suppose

...

[Practitioner 5 : 134 - 160]

Practitioner 5: Mm, the other thing it might have been, the first time I went with the actor, I wasn't, I didn't expect anything really, I just went in and... but she was so difficult. Because I think Jan had the same one. At the time, I went back to her and I knew what to expect and I think maybe that made me a bit anxious.

Interviewer: So the case made you quite anxious as well

Practitioner 5: Well, her. Because what ever you said to her, she was sort of, so negative which is not what we deal with. I mean we do deal with negative people but not quite that bad.

Interviewer: So it's probably the very worst case scenario that you could face

Practitioner 5: Yeah probably yeah I would say

Interviewer: And because you were expecting it, it made you feel...

Practitioner 5: Yeah it maybe put a bit more pressure on it as well. Plus trying to get all the information in as well

Interviewer: Mm

Practitioner 5: Sort of made it a bit more difficult really

Interviewer: So maybe if we were going to do it again, if we used an easier case than that, it might be more useful

Practitioner 5: Yeah I mean, you know, like I said some people are quite negative and they're very much you can do this and they'll come back with 'but... if I do that this happens, or I can't do that because of this', but she was very 'no I don't want to do that, no I'm not going to'.

Interviewer: Oh

Practitioner 5: When you're in somebody's house, you can't say well you have to do this you have to do that. You have to try and listen to them, even

though you sit there and think it's a load of rubbish, and I know this works. Do you know what I mean?

...

[Practitioner 5 : 164 - 201]

Practitioner 5: Yeah, it would get your back up straight away wouldn't it you know

Interviewer: That's right

Practitioner 5: She was so negative, I was losing heart in the end and I was thinking, I don't know where to go.

Interviewer: Mm

Practitioner 5: Which sometimes happens, but the majority of the time it doesn't happen

Interviewer: Yeah

Practitioner 5: Especially with cardiac visits because they're really pleased to see you a lot of the time and they want to listen to what you've got to say

Interviewer: Yeah

Practitioner 5: Whereas some of the mums that you go and see, they can be quite negative about it

Interviewer: Mm

Practitioner 5: With cardiac visits often they're not going to change but they might say to you yeah I might do that, but you know they're not going to do it

Interviewer: Yeah, yeah, almost offering you something just to get rid of you

Practitioner 5: Yeah. And also you know, they've had good treatment in hospital and they think the nurses are wonderful and they don't want to upset anybody so they'll just agree to a lot of things

Interviewer: Yeah

Practitioner 5: And it's difficult because we never go back

Interviewer: Mm

Practitioner 5: Just a one off visit so, the cardiac visits are a lot different to visiting families at home when you see them because you can't build a relationship with them and trust, which is often what we do in the first

couple of visits you know

Interviewer: Yeah, ok so if we were going to do it again and we were going to construct a case for an actor for you to practice, what sort of case would you say is typical of your every day work and what would be quite helpful in that training situation

Practitioner 5: Yeah, maybe not, they will have negatives, but maybe not quite as negative as this one was

Interviewer: So a little bit less stubborn

Practitioner 5: Yes, yeah you know. I don't know, that's just my point of view. I don't know what other people

...

[Practitioner 5 : 204 - 206]

Practitioner 5: I mean it might have been just that one actor because I only went with her so I don't know what the others were like you know

Interviewer: Which actor was it

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 6

* Female, Health Visitor

++++
++++

[Practitioner 6 : 15 - 44]

extremely useful. The actors were for me probably a good idea. I didn't like the idea initially but then for me that was far better than role play in the middle of all my colleagues. I would have never been happy with that sort of arena

Interviewer: Yeah you felt better than role play

Practitioner 6: It did, although I was very aware that it was a very false situation because these actors had not suffered, well I think one of them had, but they hadn't suffered with heart disease so to try and get to be realistic and try and get something realistic from them I realised was really quite difficult.

Interviewer: Because their knowledge was limited and maybe difficult to put themselves in that situation?

Practitioner 6: Yes I think so yeah, because you ask them how they are and they're just saying how they think they would be rather than how somebody who's had a heart attack would actually feel.

Interviewer: Mm

Practitioner 6: Although that's not predictable but, so I did think that if we're going to use role play that was the best way to do it. I don't know how else it could have been done really.

Interviewer: Do you think it was important to have a practice element in there or do you think it would have been more useful not to do any practice at all?

Practitioner 6: Well the practice element came in between didn't it. In between the initial recording and the final recording but I suppose for research purposes there has to be that otherwise it would be bias.

Interviewer: Yeah

Practitioner 6: So yeah, I suppose there is, so nothing can replace the real thing

Interviewer: No that's right

Practitioner 6: But yeah I certainly felt I came away with something and I certainly, it made me far more aware of my practice.

...

[Practitioner 6 : 193 - 196]

Practitioner 6: Unless it was all done with role play with the tutor and an actor. You know...

Interviewer: So just demonstrations instead of actually going up and practising

Practitioner 6: Possibly, or maybe a bit more of that maybe

...

[Practitioner 6 : 229 - 231]

Interviewer: Yeah, yeah. Right ok that's good. Just sort of going back to the actors and the role play and stuff now; what do you think about the scenario that was given? I know we had one for the before and after, I don't think we had one for the practice sessions in between.

Practitioner 6: Yeah we did, because I got a little bit confused

Interviewer: Ok

Practitioner 6: When I did the first one, um, that was ok. I thought it went ok. I wasn't quite so horrified as some of my colleagues were

Interviewer: Ha-ha

Practitioner 6: Although I should have been now I've had the out come back. The second time we went in for a practice that wasn't taped and in a way it was probably foolish of me. Not that I'd planned it in that was but I went to the same actor

Interviewer: Mm

Practitioner 6: And picked up where I'd left off

Interviewer: Right

Practitioner 6: But we'd been given a different scenario and it was sort of two thirds through he said to me 'do you think I'm the same person I saw last time?' and I realised god this is...

Interviewer: So you got a bit confused on the two scenario's

Practitioner 6: Yeah

Interviewer: To work with at the same time

Practitioner 6: Yes, probably because I went to the same actor the second time

Interviewer: Yeah

Practitioner 6: And if I'd gone to somebody else it would have been probably totally different

Interviewer: Mm

Practitioner 6: I don't know

Interviewer: But with regards to the actual scenario's, did you find that they were realistic, too hard, too easy?

Practitioner 6: Um, neither really. Yeah, they were fairly realistic.

Interviewer: So if you were going out and sort of going about your every day practice you know, there's a chance that you might come across a patient like that?

Practitioner 6: Yes, you may have a little bit more information

Interviewer: Yeah

Practitioner 6: But really I don't know whether that's useful or not. Unless you're clinically minded, I mean I am clinically minded because my background is cardiology but most of my colleagues are not, so we're used to having just a small amount of information and at the end of the day

our roll is not to understand the clinical aspects of what's happening really, it's a health promotion role so I suppose in a way um, you know

...

[Practitioner 6 : 365 - 374]

Practitioner 6: I didn't really, I must admit I went with an open mind. I didn't really know exactly what it was going to be about and I didn't know exactly how it was going to be delivered but I didn't feel inhibited really. As I said, I wouldn't have been happy with role play in front of my peers because that's just not my type of thing.

Interviewer: Mm

Practitioner 6: Using the actors was yeah, a fairly good idea although it does bring other issues I suppose

Interviewer: Mm

Practitioner 6: And it was probably I feel the best way to do it. I can't really

+++++

+++ ON-LINE DOCUMENT: Practitioner 7

* Female, Health Visitor

+++++

[Practitioner 7 : 79 - 88]

Practitioner 7: The interviews were a bit nerve racking

Interviewer: The interviews with the actors yeah?

Practitioner 7: Yes, it was very very different. But I suppose I felt so confident at that point that I was ok, that I quite enjoyed doing them you know

Interviewer: Was that the second time around or?

Practitioner 7: Well no because I did it the first time around and I thought this is really going to stand out now as being 'oh she didn't mention this, she didn't mention that' but of course as the content went on I thought well actually you know... and I felt second time around I really didn't make that much difference because that is the way I work anyway

...

[Practitioner 7 : 106 - 110]

Interviewer: Oh that's good. What did you think of the case, you know, the patient that we used for the before/after?

Practitioner 7: It was very realistic

Interviewer: Yeah?

Practitioner 7: I thought it was very realistic yes

...

[Practitioner 7 : 141 - 149]

Practitioner 7: Well it had an edge to it obviously. I mean being recorded at any time you are a bit wary. I mean, I don't think I've done anything majorly like that since health visitor training and we were actually videoed and you just end up giggling and stuff don't you

Interviewer: Watching all your mannerism's, god do I always flick my hair every 3 seconds

Practitioner 7: Yeah, so thankfully it wasn't video'd which was good, but it makes you a bit more nervous but it wasn't a major problem. I didn't feel that badly about it.

...

[Practitioner 7 : 288 - 314]

Interviewer: Did you find the sort of practising with the actors helpful or... would you have preferred to chalk and talk.

Practitioner 7: Well I could see the point of it and I mean I came out and thought I'd done hopelessly because I'd done my usual blurb you know and other people were sort of, oh I couldn't do it, I walked out you know. So I thought ooh, perhaps I haven't done so bad at all you know

Interviewer: Mm

Practitioner 7: I mean it's not easy in a false situation but you know, I didn't think it was that difficult. Do you know what I mean?

Interviewer: Would it have been more difficult to sit and role play with your colleagues?

Practitioner 7: Mm, much more, much more. Because then I would have felt oh I've got to get this in, I've got to get that in because they would expect a health visitor to

Interviewer: Yeah

Practitioner 7: And maybe that's not being fair to my colleagues. You know, because I'm sure they would wipe the agenda if circumstances dictate but I just felt I always come away missing out something but you know... because I haven't deemed it appropriate to do it

Interviewer: Yeah

Practitioner 7: And, so no, it's easier with somebody anonymous I think

Interviewer: Yeah

Practitioner 7: And not medical because otherwise you feel that you have to fall into the you know, the technical jargon and everything else and it's not what we do with clients so it's easier to do it with somebody...

Interviewer: Yeah

Practitioner 7: No I thought it was very good

Interviews – Training Node (positive experiences)

Interviewer: So I'll just start off by asking you how helpful was the training for you?

Practitioner 1: Fairly helpful. I feel that doing groups and seeing patients now I'm more aware of what I'm saying and how I'm saying it so yeah, I thought it was very helpful really

...

[Practitioner 1 : 93 - 95]

Practitioner 1: I still got a lot out of it

Interviewer: But it could have been better?

Practitioner 1: With the actors for me yeah, personally

...

[Practitioner 1 : 156 - 157]

Practitioner 1: Not really. I mean I enjoyed it, I certainly got something out of it so, you know... it wasn't a waste of time for me

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 2

* Male, Cardiac Rehab

++++
++++

[Practitioner 2 : 9 - 18]

Practitioner 2: Ok, um... I thought one of the most helpful things for me about the training was the stuff that we did the first week really, about the coach and instructor. And I guess for me the benefits of the training came from that because I was continually trying to work out the movement between the two and what was most appropriate at what particular time and you know. It was good to have that distinction but then the rest of the training for me was largely about shifting from one moan to another and when it was appropriate; and I think that was something that probably a few people struggled with throughout so I think that was the most beneficial thing for me.

...

[Practitioner 2 : 20 - 30]

Practitioner 2: It was nice to have the manual to sort of back that up and reinforce that although I'm not sure the manual was finished.

Interviewer: No it wasn't it was the first draft. It was nowhere near finished.

Practitioner 2: Good. It was like SR to enlarge on this...

Interviewer: Ha-ha, I don't know whether you got it or not but there was actually a covering letter in there saying it was not the final form.

Practitioner 2: What I would probably do is shove the letter and read the manual

Interviewer: No it was a first draft but however, if you read it Practitioner 2: I'm going to ask you about that later!

Practitioner 2: Well I've read bits of it anyway

...

[Practitioner 2 : 157 - 159]

Practitioner 2: So yeah, I think in terms of the skills from my own personal point of view, I guess it was ok to be able to practice the stuff although some of the scenario's were a little inconsistent

...

[Practitioner 2 : 226 - 231]

Interviewer: Would you have said that the cases that they were playing were realistic

Practitioner 2: Reasonably so, yeah I think the actual scenario's that we were given were probably genuine scenario's and they were realistic to that extent. I wouldn't have a criticism of that, I thought that was fine, I thought it was the inconsistency of the acting

...

[Practitioner 2 : 261 - 275]

Interviewer: Ok, was there anything that you thought was particularly good about the training that really sort of stood out in your mind?

Practitioner 2: As I said at the start, the instructor/coach thing is something that I'll use time and time again I think both in my head and in talking to other people about delivery of service and stuff. So I think that was perhaps the idea that came out the strongest. But for me as well I like flexible delivery of training. I like the idea that trying without a set agenda and that kind of just fits in with motivational interviewing I know, but doesn't come in with a set agenda, comes in with we can do lots and lots of things, what do you want to do? And I think if we'd been a more responsive group that would have been even more successful but for me that's still a good way of being trained. I don't think it worked to it's fullest potential over the four sessions that we had but I don't think that was anything to do with the training. I think that was to do with who was there.

...

[Practitioner 2 : 292 - 334]

Practitioner 2: It's actually again, good as a refresher because I think a lot of it is just what we talked about and I think that's a cracking way of designing a manual. How useful that becomes later on or as the training develops I don't know, if you want to make it into a standard manual. I think it's a great idea to look back and have notes because the stuff that's in there is stuff that you recognise directly from the training

Interviewer: Mm

Practitioner 2: Um, as I say, the frustrating part about it is the fact that it wasn't finished

Interviewer: Ha-ha

Practitioner 2: Which I guess is fine because you want to get a bit of feedback on it and if I'd read the covering letter I would have been aware that it was a draft but I mean, I did become aware that it was a draft fairly quickly. But I guess what would be useful is to have the final manual

Interviewer: The final one when it's done

Practitioner 2: Yeah

Interviewer: And do you feel it will kind of back up a few things and refresh you on a few things after you finish training.

Practitioner 2: Yeah I think as it stands at the moment it's done that, having a flick through from time to time and thinking oh yes we've done this and going back from time to time to some of the finer points, cos at 31 my memory's shot to bits...

Interviewer: Mm

Practitioner 2: So um, yeah it is useful and I think that's the thing. I think the thing that's most useful about it is that it comes directly from the training. And as the training changes and mutates and stuff you know, perhaps in three years time it will be less used because Steve will be doing different stuff

Interviewer: And it would need to be revised...

Practitioner 2: And it would need to be revised regularly to keep it up to date with what he's doing because I think he's probably the type of person who'd say, oh sod the manual we'll do something different, I feel like doing something different today so you know... and it might not be in the manual. And sometimes I guess he'll come up with stuff off the top of his head and he'll say well lets have a go which seemed to be what happened with the two people doing an interview.

Interviewer: Mm

Practitioner 2: And you know sometimes it will work, sometimes it won't. but I think the manual's greatest benefit is for the people who have been involved in the training who it has come from

Interviewer: Mm

Practitioner 2: Um, and it would need to be regularly revised given the temptation to change the content of the presentation

+++++
+++++
+++ ON-LINE DOCUMENT: Practitioner 3
*Female, Cardiac Rehab
+++++
+++++

[Practitioner 3 : 185 - 199]

Interviewer: And the patient, do you feel the case was reflective of something that you would get in your every day practice? Do you think it was realistic?

Practitioner 3: Um, yes. Yeah, I've had a few really difficult situations. I mean the majority of people we see from cardiac rehab point of view, by the time they get to the phase 3 programme they've made significant life style changes. We don't seem to get an awful lot of people who haven't given up smoking

Interviewer: Mm

Practitioner 3: The pain and the heart attack for the majority of people is enough so by the time they get to phase 3 a lot of them are looking at other issues then about weight and you know, anxiety and things like that. From a phase 1 point of view it's very much so because it's at that point then we've got these people with multiple risk factors. It's important you get it right then

+++++
+++++
+++ ON-LINE DOCUMENT: Practitioner 4
*Female, Health Visitor
+++++
+++++

[Practitioner 4 : 14 - 14]

Practitioner 4: Well I thoroughly enjoyed it actually. I found it very stimulating.

...

[Practitioner 4 : 23 - 32]

Practitioner 4: I think perhaps, I mean I certainly thought I was glad we went back the second time because we needed to sort of go over what we'd done the first time to sort of re-waken the memory and what have you, and certainly I found that the second interview with the actors worth while because I certainly had my thoughts more together then

Interviewer: Yeah

Practitioner 4: So that was useful. I mean I enjoyed the day, don't get me wrong but I think that you know, it could have just been done in a morning session I think. Just consolidating what we did on the first day and the second interview

...

[Practitioner 4 : 42 - 44]

Practitioner 4: Um, no I liked the full day because it was very intensive and I think that you kept your mind on it where as once you get into practice things tend to, you sort of push things to one side

...

[Practitioner 4 : 46 - 48]

Practitioner 4: But because it had been such an intensive day, I did find that I took a lot of the thoughts or a lot of the training in to practice with me, where as if it was half days I might not have had such an impact

...

[Practitioner 4 : 174 - 184]

Practitioner 4: It is yeah. I mean certainly I think watching Steve communicate, because you know he did some demonstration interviews

Interviewer: Mm

Practitioner 4: I found that really interesting because the way he phrased questions

Interviewer: Mm

Practitioner 4: And the way he got around people then, I mean I thought that was good and it made me think more about the way I talk to people.

Interviewer: Mm

Practitioner 4: Yeah, I think probably the empowerment of people to actually do something they don't want to do. I mean that message came over quite strong

...

[Practitioner 4 : 187 - 190]

probably... that. And also I think it helped me confirm the fact that I

am actually doing things right you know, from watching him and from what he was saying. I thought well yeah, I mean I am on the right lines but I need to focus a bit perhaps on the...

...

[Practitioner 4 : 197 - 202]

Practitioner 4: Yes, yes thank you. Agenda setting. I found that really useful because although I talk to people about lots of different subjects, it's never occurred to me before to sit down and... I mean, I think I try and come from their agenda, but to actually set it and start by setting an agenda, well what do you want to talk about, what do you need to know, alright lets do that, rather than try and cover the whole lot in one go.

...

[Practitioner 4 : 334 - 339]

Practitioner 4: Yeah, yeah. And I suppose that is because we'd all settled down and also um, because the people that we were interviewing were less negative.

So that we were able to actually give advice. I think that when you're saying the first thing you were saying about interview... what you're saying is that you summarise what people said to you and then give it to them back

...

[Practitioner 4 : 369 - 391]

Practitioner 4: Yes it did actually, yeah it did. And when you sit down and think about what we do, yeah we pass from one to the other all the time. Yeah it's like fluid isn't it. And yeah that did make it clear, you could actually see which road we should be going down and how we could change people or change the way that you're speaking to people. I mean swinging from instructing them about one thing or down to counselling them and empathising about another. Swing from one thing to another during one visit.

Interviewer: Yeah, and did it kind of make it easier to understand where motivational interviewing fits into the whole sort of frame?

Practitioner 4: Yeah I think so, yes I think so, yeah

Interviewer: Oh that's great

Practitioner 4: Yeah, it was a good sort of structure to follow that wasn't it?

Interviewer: Mm, we found it very useful anyway

Jan , Good

Interviewer: And it's nice because we learnt something from you as well as you learning something from us but...

Practitioner 4: I don't know who came out with that one but um...

Interviewer: Oh you know, we sort of started off with the instructor/coach thing but it was one of the health visitors who said look there's something missing...

Practitioner 4: Yeah that's right. Probably because we do a lot of the counselling bit don't we.

+++++

+++++

+++ ON-LINE DOCUMENT: Practitioner 5

*Female, Health Visitor

+++++

+++++

[Practitioner 5 : 12 - 36]

Practitioner 5: Yeah, I thought the lecturer was really enthusiastic about his subject and he was easy to listen to. You know, that's what I enjoyed most about it really

Interviewer: So kind of Steve's teaching style and what he talked about and his enthusiasm that you quite liked

Practitioner 5: Yeah, you know, he didn't stand there and lecture to us. When you get people involved in the lecture it just makes it more interesting really

Interviewer: Mm

Practitioner 5: And health visitors tend to be quite vocal anyway

Interviewer: That's good

Practitioner 5: And it changed, you know, I actually remember him saying that this was what he was planning on doing but because of what we were saying, it was changing and he was happy to do that and he was keen to do it

Interviewer: So you kind of liked it because it was dynamic rather than set in stone

Practitioner 5: Yeah

Interviewer: And we will cover this

Practitioner 5: Yeah, cos you know, a lot of people don't know what health visitors do and he admitted that you know, and he said he was really enthusiastic because we were telling him what we were doing and he was

changing it according to what we needed really I suppose

Interviewer: Mm

Practitioner 5: So you know, that was really good

...

[Practitioner 5 : 240 - 240]

Practitioner 5: So that was really valuable to teach me to shut up!

...

[Practitioner 5 : 254 - 262]

Practitioner 5: But I think he was really interesting to listen to as well especially when he was talking about his own clients. It's easier to listen to, do you know what I mean, more interesting than being lectured to all the time.

Interviewer: Yeah, yeah. So you quite liked the demonstrations and the examples that he used as well

Practitioner 5: I liked it when he was doing it as well because, you never know, alright we do it in the training, you go out with people and see how they do it but not very often

...

[Practitioner 5 : 267 - 282]

Practitioner 5: I have to say, some of the time I was thinking he didn't actually do it particularly well

Interviewer: It's even more artificial being up there with everybody

Practitioner 5: I mean he did well considering he didn't know what he was talking about with the cardiac and stuff

Interviewer: Yeah

Practitioner 5: You know, but it was interesting to watch his body language

Interviewer: Mm

Practitioner 5: Because he looked really, you know, laid back in the chair and... you know, I never sit like that when I'm talking to somebody you know. I suppose him being like that made him feel more comfortable. It was interesting to watch somebody else do it. So you know that was a learning curve.

Interviewer: Yeah, yeah

Practitioner 5: And also what I felt was ????????, and picturing it in somebody's

house if you did that. Do you know what I mean?

...

[Practitioner 5 : 286 - 292]

Practitioner 5: Um, what else was there. Obviously the discussions that we all had they were really good as well because there were a lot of experienced health visitors in the room, for more than 3 years; so it's interesting to listen to everybody else in the room as well in the room

Interviewer: Yeah, it was kind of useful to have that interacting

Practitioner 5: Yes, oh yes, it was very useful I felt you know. And everybody's got some ideas and it's really interesting to know what other people do

...

[Practitioner 5 : 325 - 327]

Practitioner 5: Yeah, instructor/counsellor thing, that was really good as well. Um I tried to put myself into one of the categories and I didn't think I was one or the other. Probably somewhere in the middle I would hope.

...

[Practitioner 5 : 538 - 538]

Practitioner 5: No, but I enjoyed the was Steve teaches, I really did enjoy that

+++++

+++++

+++ ON-LINE DOCUMENT: Practitioner 6

* Female, Health Visitor

+++++

+++++

[Practitioner 6 : 15 - 19]

extremely useful. The actors were for me probably a good idea. I didn't like the idea initially but then for me that was far better than role play in the middle of all my colleagues. I would have never been happy with that sort of arena

Interviewer: Yeah you felt better than role play

...

[Practitioner 6 : 41 - 51]

Practitioner 6: So yeah, I suppose there is, so nothing can replace the real thing

Interviewer: No that's right

Practitioner 6: But yeah I certainly felt I came away with something and I certainly, it made me far more aware of my practice.

Interviewer: Mm

Practitioner 6: Um, and possibly the way to approach topics that are sometimes quite difficult. I mean, you know, sometimes barrier's are very evident when you talk to somebody and I felt that there were examples of how you could approach different topics without being threatening because I very much want to advocate the non-threatening aspect of nursing care, so yes I found that very useful

...

[Practitioner 6 : 56 - 65]

Practitioner 6: Yeah, I suppose um, Professor Rollnick did some role play in front of us with some of the actor's and that was quite useful because he approached things differently you know. Rather than asking a question outright he sort of skirts around it and goes in the back way which is what we have to do sometimes, and I thought that I did that but I came out of it thinking, well if I do I don't do it that way so you know, I thought that very useful. I always enjoy listening to other people's experiences because I do think you get a lot through that, so even though these are colleagues of mine it's not very often I hear their experiences because we all work as individual practitioners

...

[Practitioner 6 : 67 - 70]

Practitioner 6: And so that's quite useful. Um, what else. I mean obviously I like to listen to the theory of the motivational interviewing; where it come from and why. You know it's an approach that's used in the area of which it's used in so I do find that... I enjoy that kind of study anyway

...

[Practitioner 6 : 72 - 76]

Practitioner 6: What else did we do? We did a little bit of audience participation didn't we where we did that um, thing on the board wasn't it. On the flipchart where we went from sort of mentor to...

Interviewer: Instructor/coach/counsellor

Practitioner 6: Yeah, I thought that was very good

...

[Practitioner 6 : 118 - 128]

Practitioner 6: So yes. I suppose what it did, it tried to make me understand the difference between instructor and counsellor where as the instructor is the one telling the person what to do and that was presumably me a few years ago. Although I didn't think so at the time.

Interviewer: I know yeah, it's hard to think back and say what did I do

Practitioner 6: Yeah, I'm a counsellor who takes very much a back seat and allows somebody to talk and tries to um, well yeah, facilitate their learning I

suppose by giving them a little bit and making them think about what you've said without directing them to which way they need to go.

Interviewer: Mm

Practitioner 6: So yeah, you know I did think that was very useful

...

[Practitioner 6 : 178 - 207]

Practitioner 6: Um, I think I was quite satisfied with the way it was conducted. I don't see you could do it in any less time as an introduction, because that's all it was really isn't it.

Interviewer: Mm

Practitioner 6: You know, if it's done over four half days or two full days makes absolutely no difference. I mean, sometimes it's easier to plan your workload if you're out for two days, it makes no difference to me. The venue was fine, the room was fine. Um, you know, I don't know that it could have been delivered any other way. Nothing springs to mind. I mean, I haven't really thought long and hard about it.

Interviewer: No

Practitioner 6: But um, nothing that really springs to mind. The use of the actors I thought was very good, I don't know how it could have been done an other way

Interviewer: Mm

Practitioner 6: Unless it was all done with role play with the tutor and an actor. You know...

Interviewer: So just demonstrations instead of actually going up and practising

Practitioner 6: Possibly, or maybe a bit more of that maybe

Interviewer: A bit more demonstration?

Practitioner 6: Yeah, you know, when you get somebody who's completely closed, perhaps you pick up tips on how to open channels rather than... cos I suppose the feeling is just to back off and think oh well ok, just one that I can't get through to and so the challenge really is to try and get through

Interviewer: Yeah

Practitioner 6: And I think that's something that's maybe easier to pick up from demonstrations rather than being put in that situation and not knowing

how you did because at the time we only had our own thoughts on how the interview went really isn't it

...

[Practitioner 6 : 235 - 288]

Practitioner 6: When I did the first one, um, that was ok. I thought it went ok. I wasn't quite so horrified as some of my colleagues were

Interviewer: Ha-ha

Practitioner 6: Although I should have been now I've had the out come back. The second time we went in for a practice that wasn't taped and in a way it was probably foolish of me. Not that I'd planned it in that was but I went to the same actor

Interviewer: Mm

Practitioner 6: And picked up where I'd left off

Interviewer: Right

Practitioner 6: But we'd been given a different scenario and it was sort of two thirds through he said to me 'do you think I'm the same person I saw last time?' and I realised god this is...

Interviewer: So you got a bit confused on the two scenario's

Practitioner 6: Yeah

Interviewer: To work with at the same time

Practitioner 6: Yes, probably because I went to the same actor the second time

Interviewer: Yeah

Practitioner 6: And if I'd gone to somebody else it would have been probably totally different

Interviewer: Mm

Practitioner 6: I don't know

Interviewer: But with regards to the actual scenario's, did you find that they were realistic, too hard, too easy?

Practitioner 6: Um, neither really. Yeah, they were fairly realistic.

Interviewer: So if you were going out and sort of going about your every day practice you know, there's a chance that you might come across a patient

like that?

Practitioner 6: Yes, you may have a little bit more information

Interviewer: Yeah

Practitioner 6: But really I don't know whether that's useful or not. Unless you're clinically minded, I mean I am clinically minded because my background is cardiology but most of my colleagues are not, so we're used to having just a small amount of information and at the end of the day our roll is not to understand the clinical aspects of what's happening really, it's a health promotion role so I suppose in a way um, you know it's irrespective of what's happened. Although I must admit, in practise I do find it useful to understand what type of a heart attack this individual has had. For instance, if they've had a non-cur wave heart attack which is a mini heart attack

Interviewer: Right

Practitioner 6: Then often they don't take it very seriously, they don't regard it as having a heart attack where as if they have the blue lights and the I don't know what's going to happen next, they do tend to be a little bit more receptive possibly to

Interviewer: Mm

Practitioner 6: So maybe from that point of view it's useful to try and understand why they may be thinking ;well it was only a little one, so what'. Maybe it's useful

Interviewer: Mm

Practitioner 6: But our health promotion and advice should be the same, and the approach should be the same really irrespective. It just helps us to have an understanding and as I said earlier, perhaps helps our clinical outcome and self satisfaction from the visit

...

[Practitioner 6 : 291 - 310]

Practitioner 6: No not really. I've had my script back, and I haven't read the script but I've read the scoring system

Interviewer: Mm

Practitioner 6: And um, I mean, I didn't really think long and hard about how I performed. That wasn't really the issue but looking at my initial interview I scored fairly badly I suppose. Which, I'm not saying it surprised me but I've done a little bit with counselling and I thought my listening skills perhaps were a little bit better. Although I know it is

a false scenario and I do appreciate that, but thankfully the scores after were quite a lot better so I was quite pleased about that really but then maybe I felt more happy with it. Maybe I didn't feel quite so apprehensive about being put in that situation as well and maybe things that had been discussed throughout the two days had actually had an affect and I just dealt with things that little bit differently which was hopefully what happened

Interviewer: Mm

Practitioner 6: But I mean I did score a little bit better. I mean there was some things that I was quite surprised at and I thought oh gosh, I'm surprised I didn't do very well on that but there we are, you know.

Interviewer: Mm

...
[Practitioner 6 : 368 - 376]
really. As I said, I wouldn't have been happy with role play in front of my piers because that's just not my type of thing.

Interviewer: Mm

Practitioner 6: Using the actors was yeah, a fairly good idea although it does bring other issues I suppose

Interviewer: Mm

Practitioner 6: And it was probably I feel the best way to do it. I can't really feel I was being fair if I criticised any part of it really other than the unhealthy lunch

...
[Practitioner 6 : 378 - 382]
Practitioner 6: But then it was nice that the hours were nice, it was useful to listen to other people's experiences, useful to listen a little bit about the theory of motivational interviewing and yeah, I definitely think it's a good foundation and one that needs to be built upon. I think it will be a shame not to continue with it now

++++
++++
+++ ON-LINE DOCUMENT: Practitioner 7
* Female, Health Visitor
++++
++++

[Practitioner 7 : 20 - 21]
Practitioner 7: I thought it was excellent. For me it was um, this sounds, a bit

of a ray of sunshine really. I've been health visiting 14 years

...

[Practitioner 7 : 154 - 156]

Interviewer: Right ok, with the things that we covered in the two days, were there any particular things that were particularly useful to you?

Practitioner 7: Well as I say it was almost like putting the theory to my instinct. I mean it just, that yes it's ok to do it like that. I mean as I say, it was a revelation you know.

Interviewer: Yeah

Practitioner 7: I've never read anything, I mean I don't read enough obviously but anything along that basis and I don't think, I mean I trained 14 years ago, um, but there was certainly nothing on a level like that to suggest that there was that way of working

Interviewer: Mm

Practitioner 7: I mean, you know, it was more of this is information, you give it out.

Interviewer: Yeah

Practitioner 7: Not brow beat but influence accordingly you know. So, it was just wonderful to know that there was a theory out there and a theory that fitted what I seemed to do instinctively you know

...

[Practitioner 7 : 238 - 240]

Interviewer: What about the format of the days in terms of them being a couple of weeks apart and being a day long. Was that ok for you?

Practitioner 7: Yeah that was fine

...

[Practitioner 7 : 274 - 274]

Practitioner 7: But no on the whole it was excellent

...

[Practitioner 7 : 288 - 314]

Interviewer: Did you find the sort of practising with the actors helpful or... would you have preferred to chalk and talk.

Practitioner 7: Well I could see the point of it and I mean I came out and thought I'd done hopelessly because I'd done my usual blurb you know and other people were sort of, oh I couldn't do it, I walked out you know. So I thought ooh, perhaps I haven't done so bad at all you know

Interviewer: Mm

Practitioner 7: I mean it's not easy in a false situation but you know, I didn't think it was that difficult. Do you know what I mean?

Interviewer: Would it have been more difficult to sit and role play with your colleagues?

Practitioner 7: Mm, much more, much more. Because then I would have felt oh I've got to get this in, I've got to get that in because they would expect a health visitor to

Interviewer: Yeah

Practitioner 7: And maybe that's not being fair to my colleagues. You know, because I'm sure they would wipe the agenda if circumstances dictate but I just felt I always come away missing out something but you know... because I haven't deemed it appropriate to do it

Interviewer: Yeah

Practitioner 7: And, so no, it's easier with somebody anonymous I think

Interviewer: Yeah

Practitioner 7: And not medical because otherwise you feel that you have to fall into the you know, the technical jargon and everything else and it's not what we do with clients so it's easier to do it with somebody...

Interviewer: Yeah

Practitioner 7: No I thought it was very good

Interviews – Training Node (negative experiences)

Interviewer: But apart from the before and after, how did you feel about the use of actors during the training? Was it helpful or...?

Practitioner 1: Not for me really because I didn't have a very good experience. I found it more helpful going back into practice and using the skills. But maybe I was gaining the skills by talking to the actors. Because the middle actor I saw as well wasn't very good and I think that Steve brought it out as well because I said that she was very difficult and she wasn't very forthcoming.

Interviewer: Is she the one that miss-read the scenario?

Practitioner 1: Yes, so I had 2 which were awful really

Interviewer: So generally not a very good experience

Practitioner 1: No

...

[Practitioner 1 : 116 - 129]

Practitioner 1: I don't know, there wasn't a lot of structure to it really. It was more of a sort of what do we want and...

Interviewer: And how did you feel about that sort of format?

Practitioner 1: Not very good for me really because I didn't really know what I wanted out of motivational interviewing at the start so... I really wanted somebody to tell me what I didn't know, if you know what I mean

Interviewer: Yeah

Practitioner 1: Rather than put it to us, well what do you want. If it was a bit more structured it would have been better for me really, not knowing anything about motivational interviewing.

Interviewer: Right, ok. It was kind of difficult to say what you wanted from it because...

Practitioner 1: I didn't really know what I could gain from it if you understand what you mean. Does that make sense

...

[Practitioner 1 : 134 - 152]

Practitioner 1: Yes, yeah. And I mean 4 half day sessions isn't a lot really is it

Interviewer: Mm

Practitioner 1: Something like that for me would have been better with shorter gaps in between

Interviewer: Mm

Practitioner 1: Not such long gaps

Interviewer: So there was a bit too much timing between sessions

Practitioner 1: Yeah. A bit closer for me would have been better, just to get it rolling a bit more you know because it was a fortnight or three weeks in between?

Interviewer: 2 weeks yeah, every fortnight

Practitioner 1: Yeah, so it could have flowed better maybe if it was close but that's difficult then isn't it. And mornings would have probably been better than afternoons.

Interviewer: Are you more alert in the morning?

Practitioner 1: Yeah

Interviewer: Yeah

Practitioner 1: Maybe four mornings in a row but then it's difficult with time and work and things isn't it.

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 2

* Male, Cardiac Rehab

++++
++++

[Practitioner 2 : 136 - 141]

Practitioner 2: I think personally for me a lot of the training overlapped with the training that Steve did on the training course.

Interviewer: Mm

Practitioner 2: And that was only a couple of years ago so it was a useful refresher but I think it was probably more useful in terms of the team approach

...
[Practitioner 2 : 157 - 159]

Practitioner 2: So yeah, I think in terms of the skills from my own personal point

of view, I guess it was ok to be able to practice the stuff although some of the scenario's were a little inconsistent

...

[Practitioner 2 : 172 - 174]

Practitioner 2: I think I'm going to have to bring in, if I talk about the actors at this time it's going to be excessively negative so I think I'm going to think back to the training course as well

...

[Practitioner 2 : 176 - 178]

Practitioner 2: And I think the opportunity that we had on the training course was a much more positive experience. I think the actor that we had there was much more consistent and much better briefed, properly.

...

[Practitioner 2 : 180 - 203]

Practitioner 2: Um, I think in the case of the more recent stuff, I just thought people were inconsistent and perhaps at times trying to be helpful with out actually understanding what was going on in the back ground and I think in their desire to be helpful they were actually under mining the reality of the situation because when we did it on the training course I believed I was in the consultation with somebody who was depressed.

Interviewer: Mm

Practitioner 2: The actor was that good. Where as when we did it this time I never actually believed that for a second. I couldn't get in to the scenario. I think in terms of, I don't know how wide Steve's knowledge is about cardiac rehabilitation, and I think it would possibly been more advantageous to have somebody like Linda to have gone in and said... and briefed the actors. But I think consistency was the main problem

Interviewer: So they were inconsistent between the first recording and the last recording

Practitioner 2: I get the feeling they were inconsistent from day to day

Interviewer: Right

Practitioner 2: I get the feeling that they were seeing four people and responding in different ways. I don't know, I suppose it keeps them more interested if they develop different stories as they go along. I think in some cases different stories were emerging all the time. Because obviously people who've interviewed them have gone and talked about who they've interviewed and how it's gone and it just didn't seem to be consistent and standardized and it would probably have been more helpful if it was.

...

[Practitioner 2 : 226 - 231]

Interviewer: Would you have said that the cases that they were playing were realistic

Practitioner 2: Reasonably so, yeah I think the actual scenario's that we were given were probably genuine scenario's and they were realistic to that extent. I wouldn't have a criticism of that, I thought that was fine, I thought it was the inconsistency of the acting

...

[Practitioner 2 : 235 - 242]

Practitioner 2: I think I came out of one of the interviews, the joint interviews that we did, I think I came out of that session and actually spoke to you and said don't ever do that again.

Interviewer: Yeah you did

Practitioner 2: Um, whatever you do, don't ever do that again, that was awful. That for me just didn't work. I didn't feel comfortable and neither did the person that I was interviewing with and I think general consensus among the group was that it was perhaps the weakest bit of the training

...

[Practitioner 2 : 244 - 258]

Practitioner 2: Um, otherwise, I don't think anything could have been done particularly differently. At times, we weren't the best group. Um, at times I thought it was a bit like pulling teeth and I think given a different set of people there may well have been a more energetic response.

Interviewer: Mm

Practitioner 2: But that's not a reflection of the training, that's nothing more than perhaps a group of people that went into the training suspiciously. Thinking that this is not necessarily the thing we want to do

Interviewer: Mm

Practitioner 2: And I don't think... I think some of what comes from behind that is that Steve's from a psychology background and I think they're a little suspicious of psychology. Certain members of the team are a little suspicious of psychology. But I think that goes back to the politics within the team

...

[Practitioner 2 : 263 - 286]

Practitioner 2: As I said at the start, the instructor/coach thing is something that I'll use time and time again I think both in my head and in talking to other people about delivery of service and stuff. So I think that was

perhaps the idea that came out the strongest. But for me as well I like flexible delivery of training. I like the idea that trying without a set agenda and that kind of just fits in with motivational interviewing I know, but doesn't come in with a set agenda, comes in with we can do lots and lots of things, what do you want to do? And I think if we'd been a more responsive group that would have been even more successful but for me that's still a good way of being trained. I don't think it worked to it's fullest potential over the four sessions that we had but I don't think that was anything to do with the training. I think that was to do with who was there.

Interviewer: And how did you feel about having the four half day sessions with a week in between them?

Practitioner 2: Personally I would prefer to have a more intense period of training. I guess that's just personal preference. I would prefer to have a more intense period of training perhaps with some sort of half a day follow up. So maybe a day and a half or two days

Interviewer: Hmm

Practitioner 2: And then leave it two or three weeks and then have a period of follow up where we could talk about how things were being developed within our practice and that kind of stuff. That's just personal preference. I don't know how that would collate in anybody else's views.

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 3

*Female, Cardiac Rehab

++++
++++

[Practitioner 3 : 13 - 34]

Practitioner 3: Over the whole group I thought it was really good. I was a little bit thrown by the first week I think, it was all a bit disorganised and I know there was a time when I was put in to a situation where two of us went to interview an actor and it was absolutely dreadful. We just sat there looking at one another, neither of us knew what to say and I think that Steve himself afterwards said that he shouldn't have done it and I think that really did throw me a little bit you know, cos I've been nursing for 23 years and I've never been short of something to say but I really didn't know how to deal with that

Interviewer: Was it having someone with you or?

Practitioner 3: I think that's part of it and I think that it's because the person that was with me was an equal colleague. I'm used to taking students with me when I see people and I'm used to talking in groups but I found

the interviewing the actors quite stressful and having a colleague of an equal grade and knowledge with me I just couldn't do it and I think she felt the same as well

Interviewer: Yeah

Practitioner 3: Neither of us knew what to say

Interviewer: Almost like you were being inspected by each other

Practitioner 3: Yeah, yeah

Interviewer: Mm

Practitioner 3: But I think he agreed that it didn't work and he wouldn't do it again

...
[Practitioner 3 : 234 - 253]

Practitioner 3: Week 1 I thought was a bit bitty. I don't think there was much structure to week 1. I'm used to sitting in a classroom and as a nurse and having done several courses, having more of a structured talk. It did get there. I think when he got on to talking about agenda setting and things like that then it was more structured but week 1 threw me a little bit. And I also felt as well, if the four days had been closer together it might have flowed a little bit more but there was a week in between, no it was more than a week in between wasn't it

Interviewer: Most of them it was the training then the week in between then there was training the next week

Practitioner 3: Yeah, I think it was a little bit too much space. I think if it had been held over 2 full days I think that would have been, from my point of view, better

Interviewer: Yeah

Practitioner 3: It would have... because fairly often I'd forgotten an awful lot of what had been said. Its not hard I know, but um, it didn't flow as well as it would have if it had been all together

Interviewer: So it would have been better for you if it would have been closer together so you could remember and piece it together a little bit more

Practitioner 3: Yeah, to collate everything together yeah

++++
++++
+++ ON-LINE DOCUMENT: Practitioner 4

*Female, Health Visitor

+++++

[Practitioner 4 : 15 - 17]

I thought perhaps the two days were a bit long. The second day I thought... I didn't think that we covered anything really new, either that or perhaps I'd switched off by that point but certainly I thoroughly

...

[Practitioner 4 : 19 - 21]

Interviewer: Ok, but you feel like the second day, was it more like repetition of the first day or...?

Practitioner 4: I think it was a bit. I think it was stretched out a bit I think.

...

[Practitioner 4 : 29 - 32]

Practitioner 4: So that was useful. I mean I enjoyed the day, don't get me wrong but I think that you know, it could have just been done in a morning session I think. Just consolidating what we did on the first day and the second interview

...

[Practitioner 4 : 241 - 242]

Practitioner 4: Well, yeah, I felt that we weren't moving on to anything that we hadn't really covered before

...

[Practitioner 4 : 244 - 246]

Practitioner 4: But perhaps that was down to the group because we're sort of fairly experienced at visiting and sort of communication and listening skills
yeah

...

[Practitioner 4 : 259 - 268]

Practitioner 4: That's the word. That went out the window completely to be honest. I mean I started off by, and I think I voiced this actually on the study day, that unless you do it naturally you find yourself not listening to what people are saying but actually thinking more about when you should interject with these pertinent phrases and what phrases you should be using without being too directive.

Interviewer: Mm

Practitioner 4: So um, and that was very true because I did start off thinking that I should be saying something and then just gave up because he was so interesting I was just listening basically

...

[Practitioner 4 : 270 - 280]

Practitioner 4: And I mean, we do listen to people all the time and I'm not aware that am saying... what do you call it?

Interviewer: Empathic listening

Practitioner 4: Yeah, I'm not aware that I'm doing that and I don't think that... I don't know, I'm haven't' really developed that and that means that is, you know, I don't know whether I do it or not to be honest

Interviewer: That was maybe one of the more difficult things in the training

Practitioner 4: I think so, I would probably need longer on that

Interviewer: Mm

Practitioner 4: So that it comes naturally to you, otherwise you are not listening to people properly

...
[Practitioner 4 : 290 - 291]

Practitioner 4: But that I couldn't get my head around at all, but I mean we just touched on it really didn't we if you think about it

...
[Practitioner 4 : 294 - 297]

Interviewer: So maybe if we were going to do it again, there might be a different way to teach you the empathic listening skills maybe?

Practitioner 4: I don't know, I don't know. Probably, I don't know to be honest cos I just listen. I've been listening for so long

+++++
+++++
+++ ON-LINE DOCUMENT: Practitioner 5
*Female, Health Visitor

+++++
+++++
[Practitioner 5 : 380 - 438]

Practitioner 5: I think towards the end of the second day I felt it was getting a bit repetitive and I think I got tired and my brain was switching off

Interviewer: So you thought it was quite long

Practitioner 5: Yeah, I thought that in the afternoon, I think we were going over the same stuff. I didn't feel I was learning anything new and I think from the atmosphere other people were feeling the same.

Interviewer: Yes

Practitioner 5: Where as the first day I didn't feel like that at all and normally by lunchtime, after lunch you know people are like losing the will to live anyway

Interviewer: Yeah

Practitioner 5: I didn't feel like that on the first day at all

Interviewer: It's almost like on the first day your brain was still active and then on the second day you got tired

Practitioner 5: And it was also quite a while between the first day and the second day. There was a time...

Interviewer: A couple of weeks

Practitioner 5: Yeah, which I found quite difficult

Interviewer: So you would have preferred them closer together?

Practitioner 5: Yeah, not that I forgot anything, but I thought that the second day was reminding us a lot of what we'd learnt. Do you know what I mean, whereas...

Interviewer: It kind of felt like dead time

Practitioner 5: Yeah, possibly. Probably could have got squashed into a day and a half maybe

Interviewer: Yeah

Practitioner 5: And I thought there was a lot of hanging around on the second day as well with actors and... I don't know, it didn't feel the same. I wasn't as enthusiastic on the second day as I was on the first

Interviewer: Mm. that's interesting, that's good. Just something that I'm going to sort of throw in. we also trained the cardiac rehab team around the same time but because of work commitments and stuff, we did it over 4 half days instead so we started at lunch and ended at about 4 o'clock on four half days

Practitioner 5: Right

Interviewer: Do you think that something like that would have worked better for you

Practitioner 5: Um, no. I tell you why, because once you get into the office you get into all the work and it's difficult to get out. So if you've got to

go into work first in the morning, if you're mind is set that you've got a study day the whole day

Interviewer: Yeah

Practitioner 5: No for me personally I would rather get out, know that you're not going in to work and that's it. You're not in for the whole day

Interviewer: And what would have been... you know when we were talking about maybe having the days closer together than having a couple of weeks in between, would it have been better to have 2 days right together or have maybe one week apart

Practitioner 5: Yeah I think another day the next week would have been ok cos two days together can sometimes be impossible to do you know in your weeks work with clinics and that. But I think definitely closer together

Interviewer: Yeah, yeah

Practitioner 5: So you haven't forgotten anything

Interviewer: Yeah

Practitioner 5: I remember thinking I should read all this before I go in tomorrow and time just goes

Interviewer: Of course it does yeah

Practitioner 5: So I think if it was only a week later I would have remembered more.

++++
++++

+++ ON-LINE DOCUMENT: Practitioner 6

* Female, Health Visitor

++++
++++

[Practitioner 6 : 329 - 336]

Practitioner 6: You know, where did I... where was the opportunity to discuss this further where I missed. How could have I and why didn't I do it, what was it that made me move to something else when I missed that opportunity that was there staring me in the face?

Interviewer: Mm

Practitioner 6: Possibly

Interviewer: So maybe looking at a transcript at the same time at what you did

last time might help

Appendix V

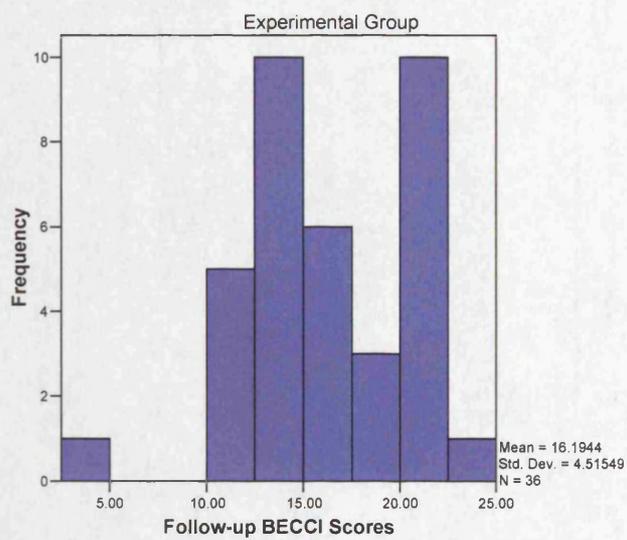
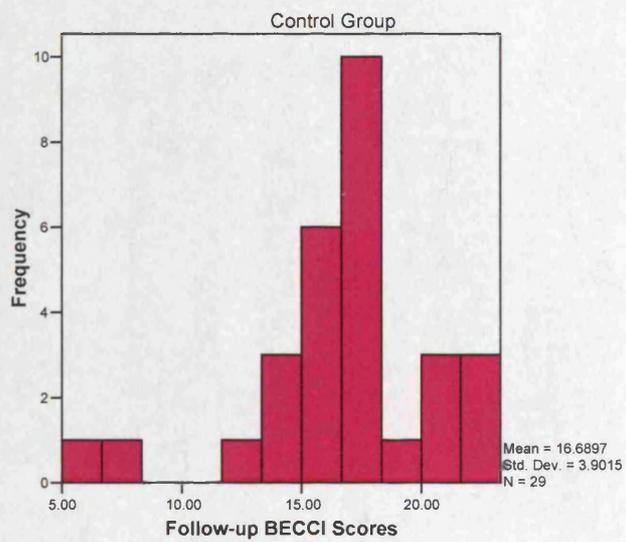


Figure AV.2: Histograms of scores on BECCI at baseline in the control and experimental groups respectively

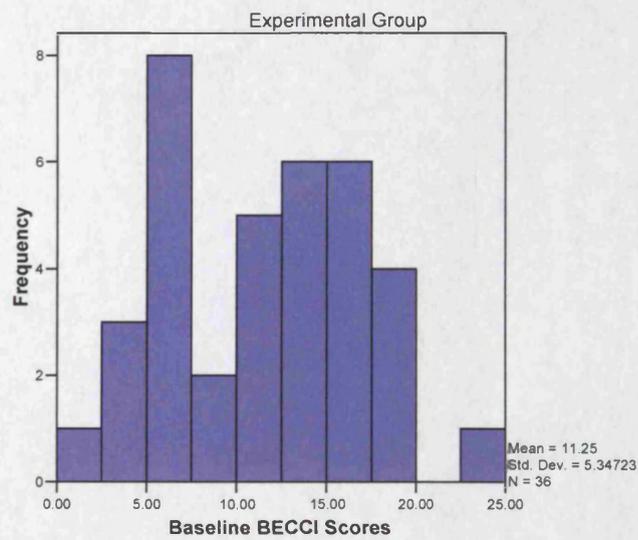
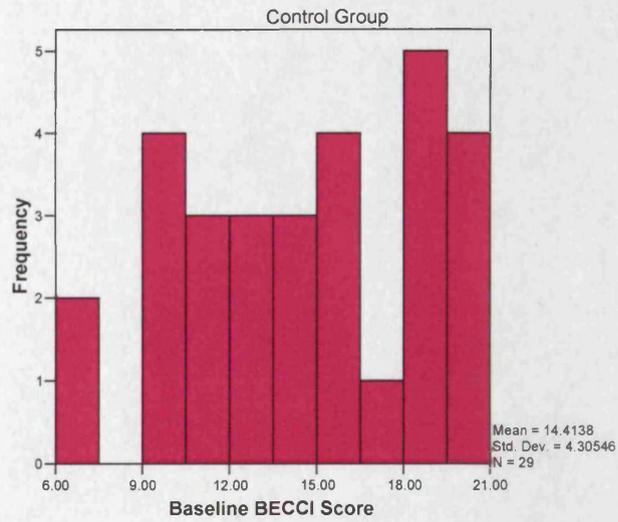


Figure AV.1: Histograms of scores on BECCI at baseline in the control and experimental groups respectively

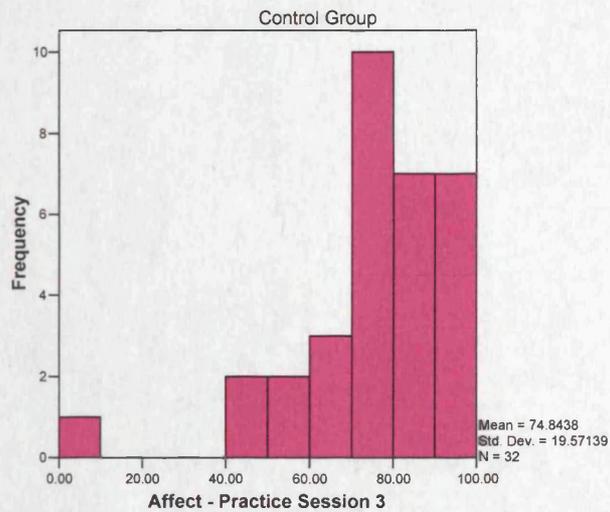
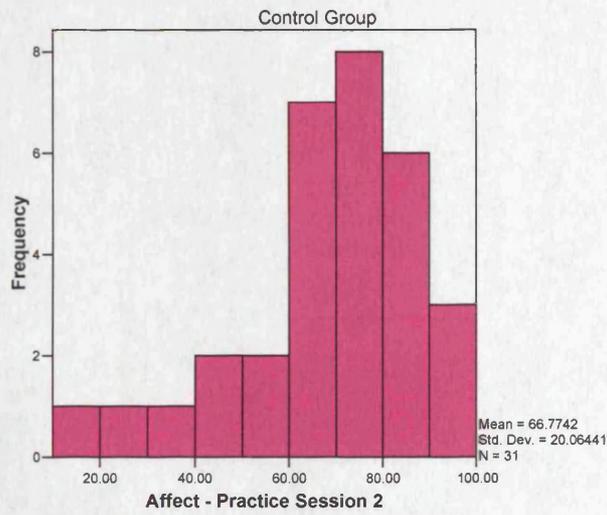
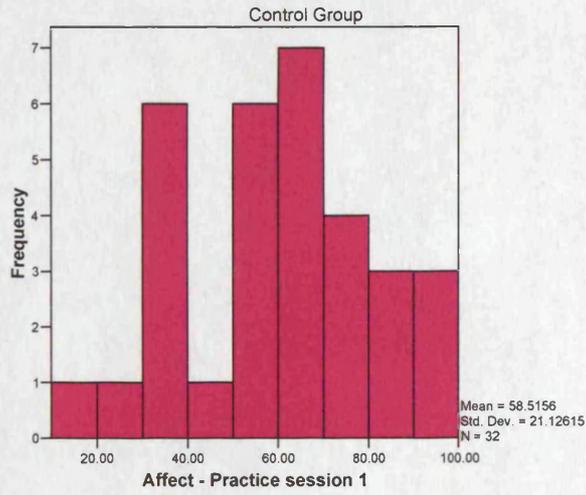


Figure AV.3a: Histograms of scores on the factor of affect for the control group in practice sessions one, two and three respectively

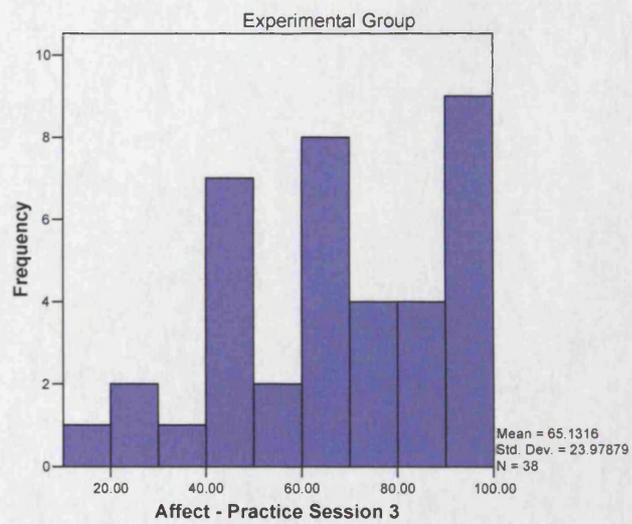
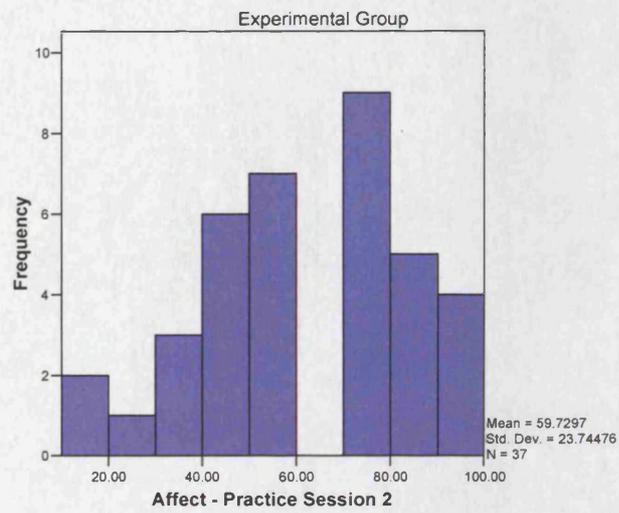
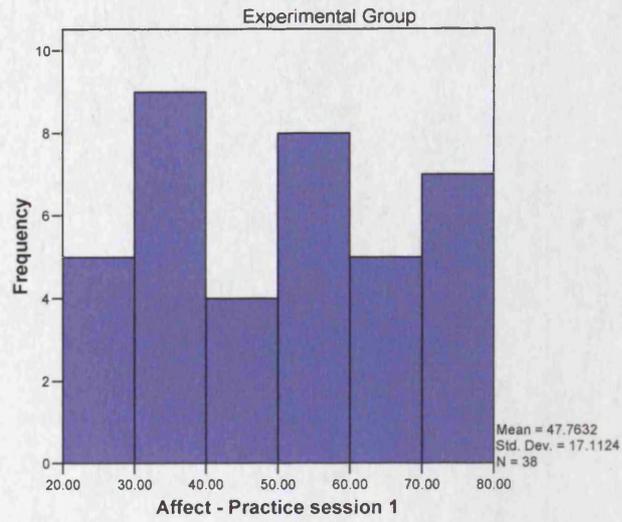


Figure AV3b: Histograms of scores on the factor of affect for the experimental group in practice sessions one, two and three respectively

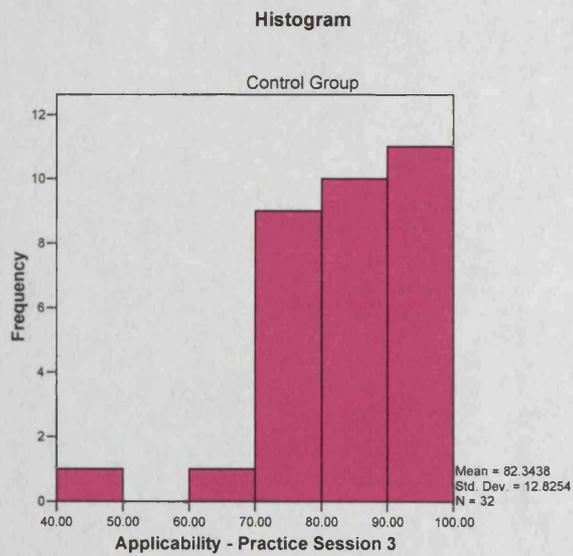
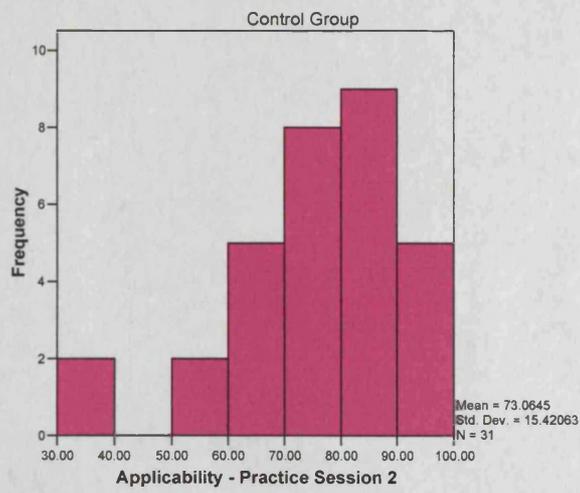
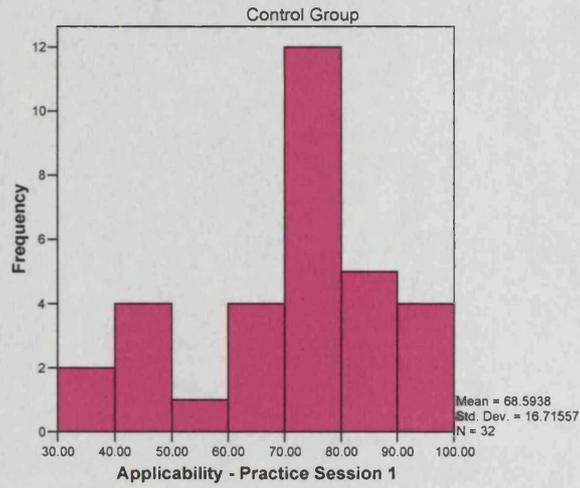


Figure AV.4a: Histograms of scores on the factor of applicability for the control group in practice sessions one, two and three respectively

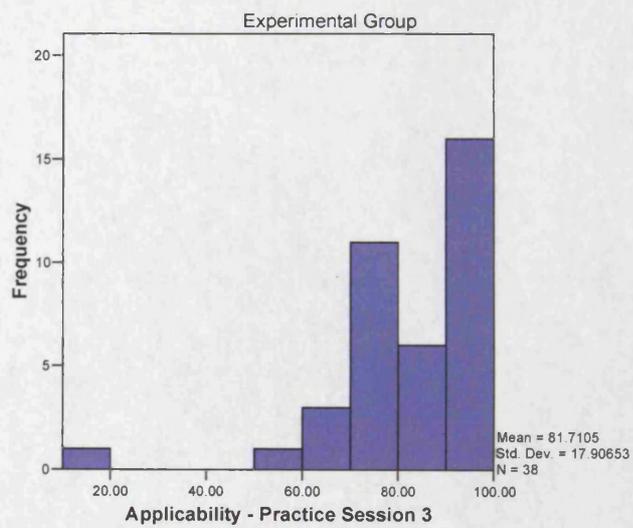
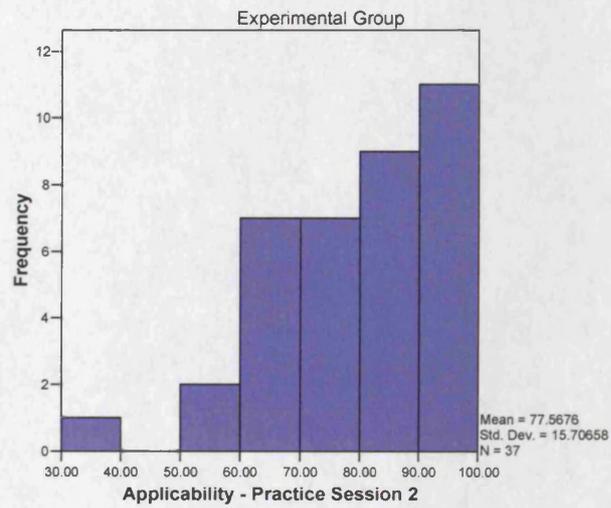
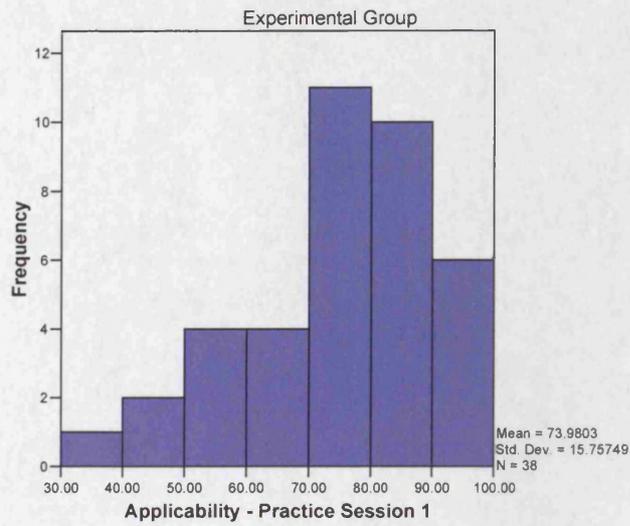


Figure AV.4b: Histograms of scores on the factor of applicability for the experimental group in practice sessions one, two and three respectively

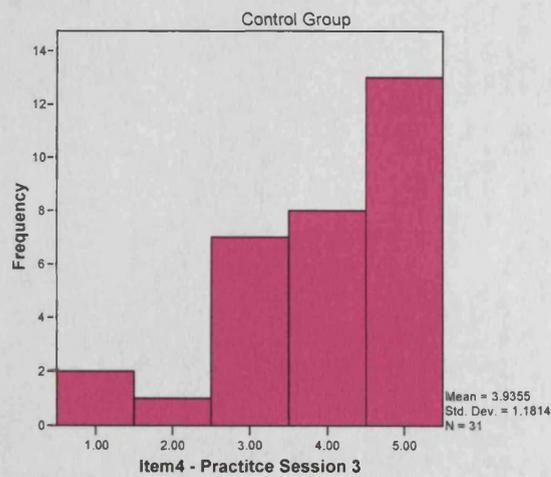
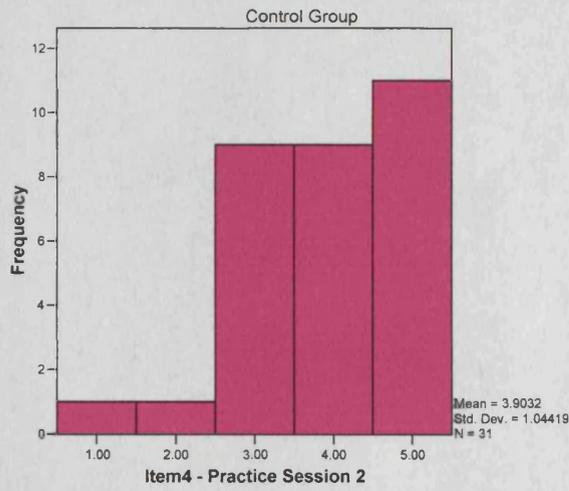
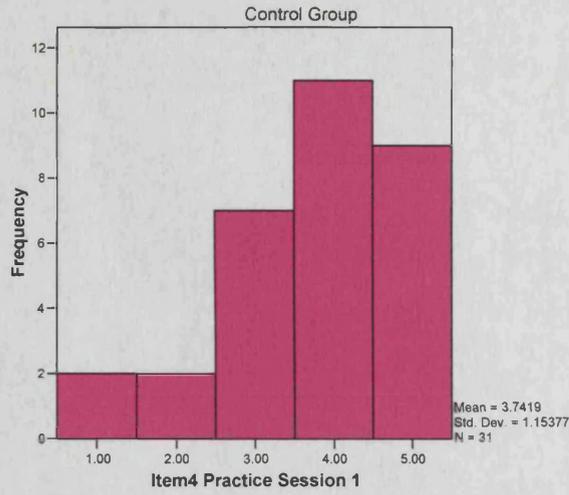


Figure AV.5a: Histograms of scores on item four for the control group in practice sessions one, two and three respectively

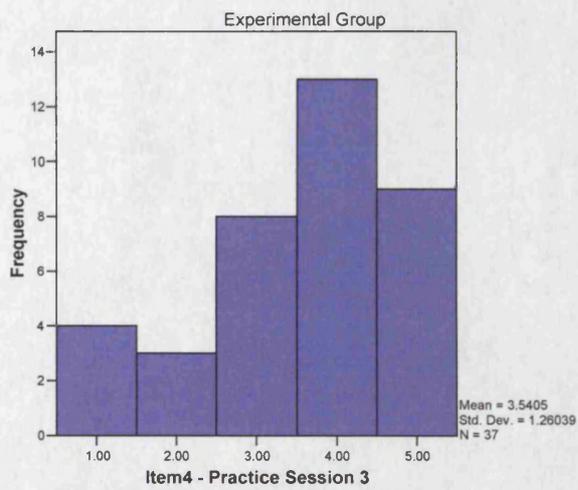
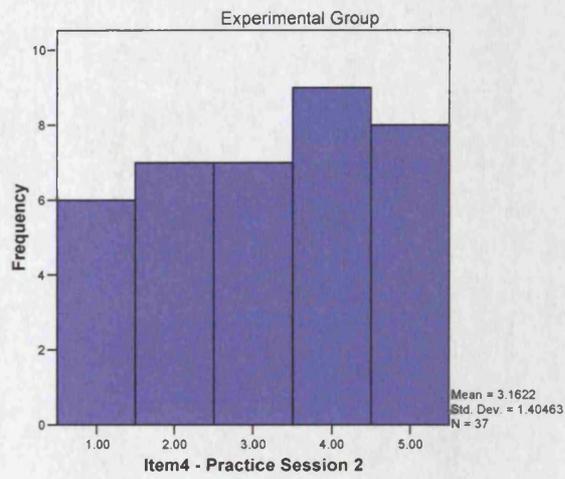
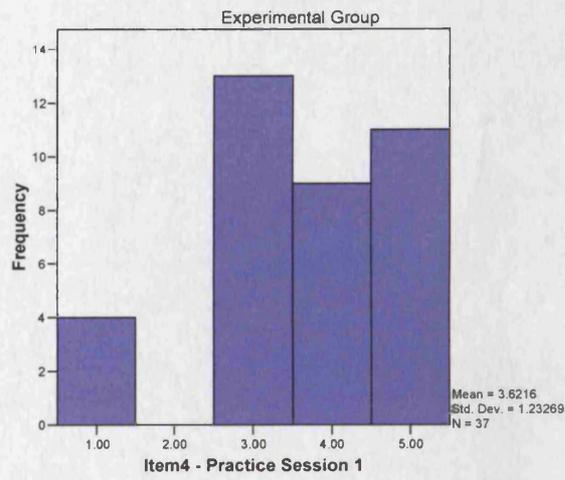


Figure AV.5b: Histograms of scores on item four for the experimental group in practice sessions one, two and three respectively

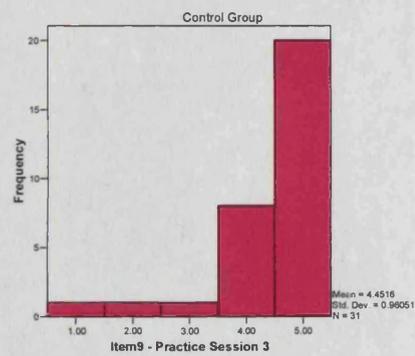
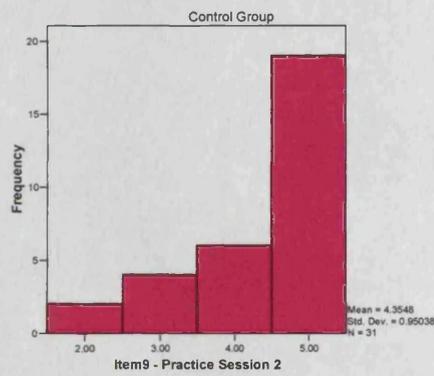
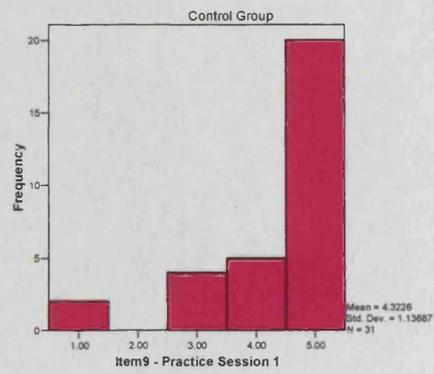


Figure AV.6a: Histograms of scores on item nine for the control group in practice sessions one, two and three respectively

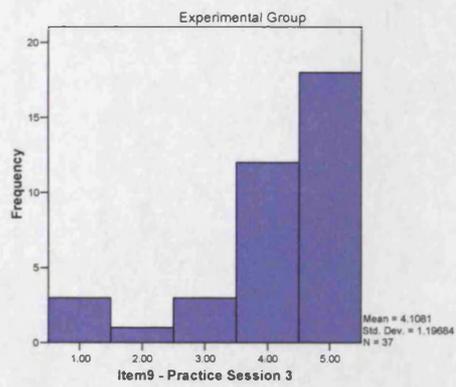
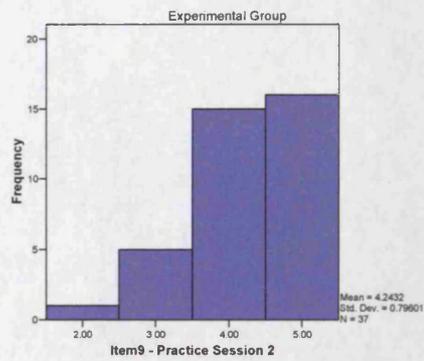
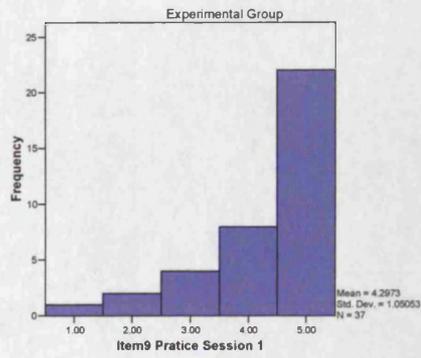
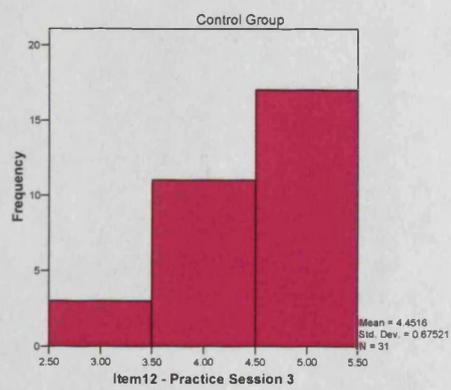
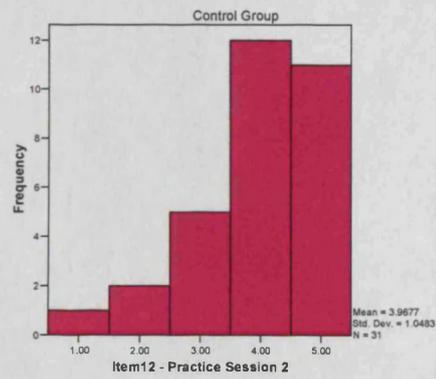
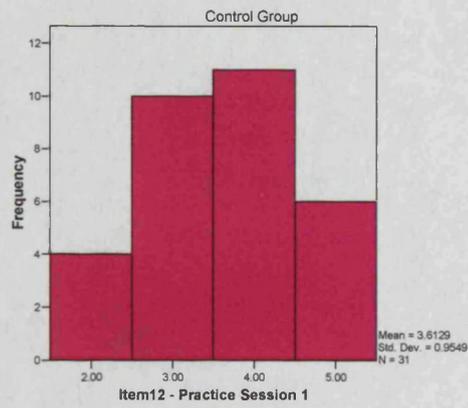
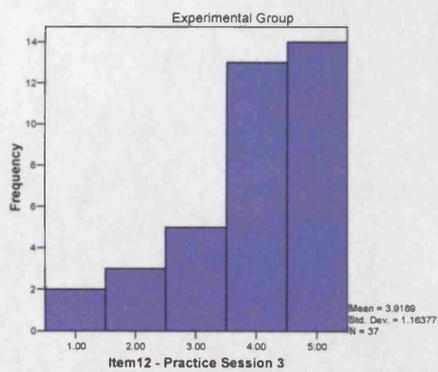
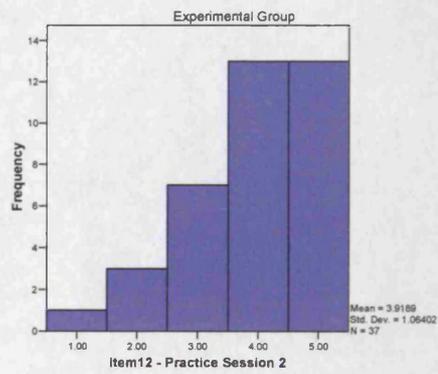
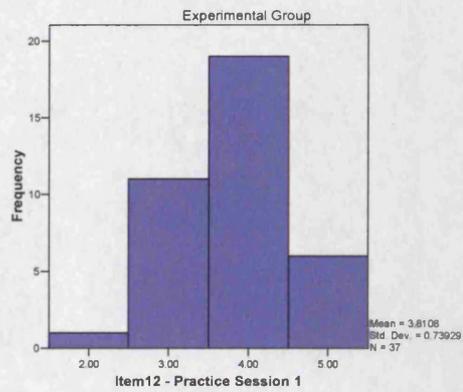


Figure AV.6b: Histograms of scores on item nine for the experimental group in practice sessions one, two and three respectively



FigureAV.7a: Histograms of scores on item twelve for the control group in practice sessions one, two and three respectively



FigureAV.7b: Histograms of scores on item twelve for the experimental group in practice sessions one, two and three respectively

Table AV.4: Initial eigenvalues for practice session 1			
Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	3.64	28.02	28.02
2	2.59	19.95	47.97
3	1.21	9.27	57.24
4	1.09	8.35	65.59
5	0.93	7.17	72.76
6	0.74	5.69	78.45
7	0.69	5.30	83.75
8	0.57	4.40	88.15
9	0.54	4.14	92.29
10	0.33	2.57	94.86
11	0.29	2.26	97.12
12	0.21	1.63	98.75
13	0.16	1.25	100.00

Table AV.5: Initial eigenvalues for practice session 2			
Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.53	34.85	34.85
2	2.70	20.79	55.64
3	0.99	7.62	63.26
4	0.97	7.42	70.68
5	0.74	5.69	76.37
6	0.64	4.95	81.32
7	0.52	3.97	85.29
8	0.47	3.61	88.90
9	0.42	3.20	92.10
10	0.39	3.00	95.10
11	0.29	2.20	97.30
12	0.23	1.73	99.03
13	0.13	.97	100.00

Table AV.6: Initial eigenvalues for practice session 3			
Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.83	37.17	37.17
2	2.33	17.92	55.09
3	1.05	8.04	63.13
4	0.95	7.31	70.44
5	0.79	6.10	76.54
6	0.70	5.36	81.90
7	0.63	4.86	86.76
8	0.45	3.49	90.25
9	0.40	3.10	93.35
10	0.33	2.55	95.90
11	0.23	1.76	97.66
12	0.17	1.32	98.98
13	0.14	1.02	100.00

Table AV.7: Descriptive statistics of the follow-up BECCI scores when the five consultations with no baseline recording are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	62.70	16.62	
	Standard Deviation	3.90	4.0	
	95% Confidence Interval	Upper Bound	18.17	18.13
		Lower Bound	15.20	15.11
	Variance	15.22	15.74	
	Minimum	5.00	5.00	
	Maximum	22.00	22.00	
	Median	17.00	17.00	
Experimental	Mean	16.19	16.25	
	Standard Deviation	4.52	4.50	
	95% Confidence Interval	Upper Bound	17.72	17.76
		Lower Bound	14.74	14.66
	Variance	20.40	20.02	
	Minimum	3.00	3.00	
	Maximum	23.00	23.00	
	Median	16.00	16.00	

Table AV.8: Descriptive statistics of the baseline BECCI scores with the participants who swapped conditions in their intended and swapped conditions				
Group	Statistic	Intended Condition	Swapped Condition	
Control	Mean	14.41	14.52	
	Standard Deviation	4.31	4.28	
	95% Confidence Interval	Upper Bound	16.05	16.15
		Lower Bound	12.78	12.78
	Variance	18.54	18.33	
	Minimum	6.00	6.00	
	Maximum	21.00	21.00	
Median	14.00	15.00		
Experimental	Mean	11.25	11.67	
	Standard Deviation	5.35	5.31	
	95% Confidence Interval	Upper Bound	13.06	12.96
		Lower Bound	9.44	9.37
	Variance	28.59	28.20	
	Minimum	2.00	2.00	
	Maximum	23.00	23.00	
Median	11.50	11.50		

Table AV.9: Descriptive statistics of the follow-up BECCI scores with the participants who swapped conditions in their intended and swapped conditions				
Group	Statistic	Intended Condition	Swapped Condition	
Control	Mean	16.68	16.62	
	Standard Deviation	3.90	3.96	
	95% Confidence Interval	Upper Bound	18.17	18.13
		Lower Bound	15.21	15.11
	Variance	15.22	15.74	
	Minimum	5.00	5.00	
	Maximum	22.00	22.00	
Median	17.00	17.00		
Experimental	Mean	16.19	16.25	
	Standard Deviation	4.52	4.47	
	95% Confidence Interval	Upper Bound	17.72	17.76
		Lower Bound	14.66	14.74
	Variance	20.39	20.02	
	Minimum	3.00	3.00	
	Maximum	23.00	23.00	
Median	16.00	16.00		

Table AV.10: Descriptive statistics of the follow-up BECCI scores with the participants who only completed two practice sessions included and removed				
Group	Statistic	Included	Removed	
Control	Mean	15.79	16.69	
	Standard Deviation	3.90	4.07	
	95% Confidence Interval	Upper Bound	18.17	17.86
		Lower Bound	14.74	15.20
	Variance	15.22	15.58	
	Minimum	5.00	5.00	
	Maximum	22.00	22.00	
Median	17.00	17.00		
Experimental	Mean	16.18	15.80	
	Standard Deviation	4.51	5.07	
	95% Confidence Interval	Upper Bound	17.72	17.06
		Lower Bound	14.66	14.53
	Variance	20.04	29.89	
	Minimum	2.00	3.00	
	Maximum	21.00	20.00	
Median	15.00	16.00		

Table AV.11: Descriptive statistics of the factor of 'affect' in practice session three, if the two participants who did not complete practice session two are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	74.84	75.80	
	Standard Deviation	19.57	19.11	
	95% Confidence Interval	Upper Bound	81.90	82.82
		Lower Bound	67.79	68.80
	Variance	383.04	365.16	
	Minimum	5.00	5.00	
	Maximum	100.00	100.00	
Median	75.00	75.00		
Experimental	Mean	65.13	65.14	
	Standard Deviation	23.98	24.63	
	95% Confidence Interval	Upper Bound	73.01	73.47
		Lower Bound	57.25	56.81
	Variance	575.00	606.40	
	Minimum	10.00	10.00	
	Maximum	100.00	100.00	
Median	65.00	65.00		

Table AV.12: Descriptive statistics of the factor of 'applicability' in practice session three, if the two participants who did not complete practice session two are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	82.35	82.10	
	Standard Deviation	12.83	13.00	
	95% Confidence Interval	Upper Bound	86.97	86.85
		Lower Bound	77.34	77.72
	Variance	164.49	167.96	
	Minimum	40.00	40.00	
	Maximum	100.00	100.00	
Median	85.00	85.00		
Experimental	Mean	81.71	82.22	
	Standard Deviation	17.91	18.26	
	95% Confidence Interval	Upper Bound	87.60	88.40
		Lower Bound	75.82	76.04
	Variance	320.64	333.49	
	Minimum	10.00	10.00	
	Maximum	100.00	100.00	
Median	85.00	85.00		

Table AV.13: Descriptive statistics of item four in practice session three, if the two participants who did not complete practice session two are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	3.93	3.93	
	Standard Deviation	1.18	1.18	
	95% Confidence Interval	Upper Bound	4.37	4.37
		Lower Bound	3.50	3.50
	Variance	1.40	1.40	
	Minimum	1.00	1.00	
	Maximum	5.00	5.00	
Median	4.00	4.00		
Experimental	Mean	3.54	3.53	
	Standard Deviation	1.26	1.28	
	95% Confidence Interval	Upper Bound	3.96	3.96
		Lower Bound	3.12	3.10
	Variance	1.59	1.63	
	Minimum	1.00	1.00	
	Maximum	5.00	5.00	
Median	4.00	4.00		

Table AV.14: Descriptive statistics of item nine in practice session three, if the two participants who did not complete practice session two are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	4.45	4.45	
	Standard Deviation	0.96	0.96	
	95% Confidence Interval	Upper Bound	4.80	4.80
		Lower Bound	4.10	4.10
	Variance	0.92	0.92	
	Minimum	1.00	1.00	
	Maximum	5.00	5.00	
Median	5.00	5.00		
Experimental	Mean	4.11	4.11	
	Standard Deviation	1.20	1.21	
	95% Confidence Interval	Upper Bound	4.51	4.52
		Lower Bound	3.71	3.70
	Variance	1.43	1.47	
	Minimum	1.00	1.00	
	Maximum	5.00	5.00	
Median	4.00	4.50		

Table AV.15: Descriptive statistics of item twelve in practice session three, if the two participants who did not complete practice session two are included and removed				
Group	Statistic	Included	Removed	
Control	Mean	4.45	4.45	
	Standard Deviation	0.68	0.68	
	95% Confidence Interval	Upper Bound	4.70	4.70
		Lower Bound	4.20	4.20
	Variance	0.46	0.46	
	Minimum	3.00	3.00	
	Maximum	5.00	5.00	
Median	5.00	5.00		
Experimental	Mean	3.92	3.92	
	Standard Deviation	1.16	1.18	
	95% Confidence Interval	Upper Bound	4.31	4.32
		Lower Bound	3.53	3.52
	Variance	1.35	1.39	
	Minimum	1.00	1.00	
	Maximum	5.00	5.00	
Median	4.00	4.00		

Table AV.16: Skewness and Kurtosis statistics for the primary and secondary outcomes				
	Skewness	Std. Error Skewness	Kurtosis	Std. Error Kurtosis
Baseline BECCI scores				
Control	-0.17	0.43	-0.85	0.85
Experimental	0.06	0.39	-0.84	0.77
Follow-up BECCI scores				
Control	-1.26	0.43	2.59	0.85
Experimental	-0.50	0.39	0.38	0.77
Affect scores, Practice 1				
Control	0.05	0.41	-0.43	0.81
Experimental	0.01	0.38	-1.08	0.75
Affect scores, Practice 2				
Control	-0.93	0.42	0.76	0.82
Experimental	-0.20	0.39	-0.63	0.76
Affect scores, Practice 3				
Control	-1.49	0.41	4.09	0.81
Experimental	-0.26	0.38	-0.71	0.75
Applicability scores, Practice 1				
Control	-0.62	0.41	-0.50	0.81
Experimental	-0.65	0.38	0.16	0.75
Applicability scores, Practice 2				
Control	-0.81	0.42	0.81	0.82
Experimental	-0.88	0.39	0.87	0.76
Applicability scores, Practice 3				
Control	-1.06	0.41	2.52	0.81
Experimental	-1.82	0.38	5.70	0.75
Item 4 scores, Practice 1				
Control	-0.85	0.42	0.26	0.82
Experimental	-0.72	0.39	0.01	0.76
Item 4 scores, Practice 2				
Control	-0.74	0.42	0.31	0.82
Experimental	-0.18	0.39	-1.25	0.76
Item 4 scores, Practice 3				
Control	-1.04	0.42	0.53	0.82
Experimental	-0.71	0.39	-0.33	0.76
Item 9 scores, Practice 1				
Control	-1.86	0.42	-1.86	0.82
Experimental	-1.55	0.39	-1.55	0.76
Item 9 scores, Practice 2				
Control	-1.30	0.42	0.59	0.82
Experimental	-0.83	0.39	0.21	0.76
Item 9 scores, Practice 3				
Control	-2.27	0.42	5.51	0.82
Experimental	-1.55	0.39	1.78	0.76
Item 12 scores, Practice 1				
Control	-0.10	0.42	-0.83	0.82
Experimental	-0.12	0.39	-0.24	0.76
Item 12 scores, Practice 2				
Control	-1.05	0.42	0.87	0.82
Experimental	-0.86	0.39	0.22	0.76
Item 12 scores, Practice 3				
Control	-0.85	0.42	-0.33	0.82
Experimental	-1.06	0.39	0.46	0.76