

**UNIVERSITY OF SOUTHAMPTON**

**FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES**

**School of Psychology**

**Why do People Return to Complementary Medicine?**

**Understanding the Relationship between Beliefs, Experiences and Health Care  
Behaviours**

by

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ABSTRACT  
FACULTY OF MEDICINE, HEALTH AND LIFE SCIENCES  
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WHY DO PEOPLE RETURN TO COMPLEMENTARY MEDICINE?  
UNDERSTANDING THE RELATIONSHIP BETWEEN BELIEFS,  
EXPERIENCES AND HEALTH CARE BEHAVIOURS

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Use of complementary and alternative medicine (CAM) is substantial in the UK. This thesis is about why people return to CAM, in other words why people continue to use or adhere to CAM. Previous research suggests that people who use CAM do so because they hold beliefs about health, treatment and illness which are congruent with CAM, have chronic health problems, and are disillusioned with the experience and outcomes from orthodox medicine. Working within the self-regulation theoretical framework and combining quantitative and qualitative methods this PhD aimed to identify why people adhere to CAM.

Two new questionnaire measures were developed. The CAM Beliefs Inventory (CAMBI) was developed as a generic measure of treatment beliefs relevant to CAM which can be used in a range of CAM settings. The Treatment Process Questionnaire (TPQ) was developed as a generic measure of peoples' experiences of non-pharmacological treatments and can be used in both CAM and non-CAM settings.

Two questionnaire studies were conducted to examine the relative importance of different beliefs in ongoing CAM use. The cross-sectional study found that beliefs in holistic health were the most important predictors of CAM use across different CAM treatments. The prospective questionnaire study examined the relationship between beliefs, experiences of treatment, and adherence to CAM. This study showed that positive experiences of treatment are the most important predictors of adherence to CAM, compared to treatment and illness beliefs.

A qualitative study using ethnographic and grounded theory techniques was conducted to examine the processes involved in ongoing CAM use. This study developed a process-oriented model of CAM use which suggested ways in which people experience and evaluate CAM therapies, and highlighted the way in which individuals' health care decisions are embedded in the socio-cultural context.

Overall this programme of research has provided rigorous and well-validated insights with questionnaire measures and valuable theory-driven processes in a much under-researched and over-debated area.

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## Abbreviations

BMQ: Beliefs about medicines questionnaire

CAM: Complementary and alternative medicine

CAMBI: Complementary and alternative medicine beliefs inventory

HCAMQ: Holistic complementary and alternative medicine questionnaire

IPQ-R: Revised illness perceptions questionnaire

OM: Orthodox medicine

TPQ: Treatment process questionnaire

## Chapter 1

### Introduction

Complementary and alternative medicine (CAM) consists of a wide range of often disparate approaches to health, illness and wellbeing. The Cochrane Collaboration defines CAM as follows (as cited in Zollman & Vickers, 1999, p. 693):

Complementary and alternative medicine (CAM) is a broad domain of healing resources that encompasses all health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period. CAM includes all such practices and ideas self-defined by their users as preventing or treating illness or promoting health and well-being. Boundaries within CAM and between the CAM domain and that of the dominant system are not always sharp or fixed.

CAM includes a wide range of practices which do not fit within the dominant biomedical model of health care and are not commonly provided within orthodox medicine (OM) settings. The term CAM is used in this thesis as it refers to the two main ways in which these practices are used, as complements and alternatives to OM. In the 1960s CAM was on the fringe of the mainstream, in the 1970s it was positioned as alternative and in the 1990s it became complementary. In the new millennium, the position of CAM has changed again and is moving towards integration with OM, for example CAM therapies are commonly offered in palliative care and pain clinic contexts. In the UK, CAM is accessible through private practice (Dolan & Lewith, 1999) and through NHS; Thomas, Nicholl and Fall (2001) estimated that CAM treatments were available through 39.5% of general practices in England in 1995. The majority of CAM use in the UK, an estimated 90% in 1998, occurs in the private sector (Thomas, Nicholl, & Coleman, 2001).

Currently, substantial numbers of people are turning to CAM. The prevalence of CAM use in the general population in the USA increased from 34% in 1990 to 39% in 1997 (Eisenberg et al., 1998) and remained stable from 1997 to 2002 (Tindle, Davis, Phillips, & Eisenberg, 2005). In the UK, 46% of the population can be

expected to use one or more CAM therapies in their lifetime (Thomas et al., 2001), and 10% of the population used a practitioner-based form of CAM in 2000 (Thomas & Coleman, 2004). The prevalence of CAM use in the north east of Scotland increased from 29% in 1993 to 41% in 1999, and the use of aromatherapy, acupuncture, and reflexology increased significantly in this time period (Emslie, Campbell, & Walker, 2002). It is difficult to make comparisons across surveys of CAM use as they employ different definitions of CAM. For example, Thomas and Coleman (2004) investigated the use of 23 practitioner-based CAM forms, whereas Eisenberg and colleagues (1998) investigated the use of 16 CAM forms. Brief descriptions of some of the more popular CAM therapies in the UK are provided in Table 1.

Table 1  
*Popular Forms of CAM*

CAM Form	Description
Acupuncture	<ul style="list-style-type: none"> <li>• Based on an energetic view of the body.</li> <li>• Stimulation of acupuncture points used to restore energy balance, promote healing and alleviate illness.</li> </ul>
Aromatherapy	<ul style="list-style-type: none"> <li>• Systematic and holistic use of essential oils, extracted from plants, to promote physical and emotional wellbeing.</li> <li>• Essential oils are used in massage, baths, or inhalations.</li> </ul>
Osteopathy	<ul style="list-style-type: none"> <li>• Holistic system of diagnosis and manual treatment for mechanical problems of the body.</li> <li>• Employs manipulation and massage of the soft tissue and joints to promote self-healing and treat musculoskeletal problems.</li> </ul>
Chiropractic	<ul style="list-style-type: none"> <li>• Manipulative technique founded on the idea that musculoskeletal problems are caused by the misalignment of vertebrae.</li> <li>• Spinal manipulations and adjustments are employed to improve alignment and alleviate musculoskeletal problems.</li> </ul>
Herbal medicine	<ul style="list-style-type: none"> <li>• Holistic model of health and illness, separate traditions include European, Chinese, and Indian herbal medicines.</li> <li>• Plant-based herbal remedies are used to treat the cause of health problems and offer a cure beyond symptomatic relief.</li> </ul>
Homeopathy	<ul style="list-style-type: none"> <li>• Based on the Law of Similars (a substance that causes symptoms in a healthy person will alleviate those symptoms in a patient).</li> <li>• Treatment focuses on the whole person and tailors treatments to individuals, aiming to facilitate natural healing abilities through the prescription of remedies.</li> </ul>
Spiritual healing	<ul style="list-style-type: none"> <li>• Based on an energetic holistic view of the mind and body.</li> <li>• Natural energies are channelled through a healer to the patient to help recovery from illness.</li> </ul>

### *1.1 Why Research CAM Use?*

People are increasingly turning to complementary and alternative forms of health care, but why are health psychologists interested in this phenomenon?

- 1. Research into CAM use is both timely and relevant to a substantial proportion of the UK population.* While people who use CAM are in the minority, this minority is growing, as is the availability and accessibility of CAM. Walk down the local high street and you are almost guaranteed to come across some form of practitioner based CAM, or at the very least over the counter CAM remedies in the local chemists. By asking why this is happening now, research into CAM use can inform us about the delivery and use of health care in the early twenty-first century. For example Astin (1998) found that membership of a previously identified cultural group, the ‘cultural creatives’, predicted CAM use. This group is said to represent unconventionality and is characterized by commitment to causes such as feminism and involvement with esoteric forms of spirituality and personal growth, and a love of the foreign and exotic. This finding raises interesting questions relating to possible links between CAM use and wider movements and relationships between health care utilisation and broader social contexts. CAM use also offers an opportunity to explore processes underlying uptake of and demand for different forms of health care. Social networks are one mechanism through which people come into contact with CAM (Valente, 2000), which highlights interesting issues relating to the role of social networks in the popularity and growth of health care systems in general.
- 2. Understanding why people use CAM can help to broaden theoretical models of health care utilisation and decision-making.* Rather than focussing solely on why people use OM services, such as making appointments to see a GP or adherence to medication, a consideration of CAM use encourages a broader perspective on health care decision making. The increasing availability of complementary medicine on the high street provides individuals with a range of options and possibilities when considering taking action regarding their health. Not only does complementary medicine open up more possibilities

for practitioner based treatment, it also offers an increased range of self-care options. How do people decide between the various options that are available? Psychological theory can help us to understand health care decision-making within the context of CAM use (Furnham & Lovett, 2001). Furthermore, research in this context can also encourage the development of psychological theory to incorporate a dynamic view of the processes of treatment initiation and maintenance (Yardley, Sharples, Beech, & Lewith, 2001).

3. *Understanding the beliefs of CAM users extends our understanding of health and treatment beliefs in general, and can help to develop our understanding of the role of beliefs in the initiation and maintenance of health behaviours.* For example research into the beliefs of CAM users highlights the existence of beliefs in holistic and non-toxic treatments (O'Callaghan & Jordan, 2003). CAM provides a context in which the theoretical underpinnings of treatment can be fundamentally different to those of OM. This context offers opportunities to investigate key issues in health care such as the role of belief congruence, the development and maintenance of beliefs, and the impact of pro-CAM beliefs on adherence to and use of OM. The detailed and lengthy consultations often found in CAM could also facilitate research into the role of practitioner-patient interactions in promoting treatment use and behaviour change.

So, understanding why people use CAM has a number of broader implications in terms of theory development and understanding the relationships between health and treatment beliefs and behaviour. The research to date has focussed on associations between CAM use and demographic characteristics, health beliefs and treatment beliefs, and people's own reasons for using CAM. While the findings across studies are not always consistent, there is evidence to suggest that certain variables tend to be associated with CAM use. In summary, the literature to date provides some answers to Vincent and Furnham's (1996) question: why do people turn to CAM? This thesis extends the existing literature by focussing on adherence to CAM: Why do people *return* to CAM?

### *1.2 Thesis Outline*

The existing literature on CAM use is reviewed in chapters 2 and 3, discussing what is already known about why people use CAM. Chapter 2 is concerned with the demographic and health factors that have been associated with CAM use. This literature shows that people who use CAM tend to be female, and more highly educated with higher incomes than people who do not use CAM. People who use CAM are also likely to have chronic physical illnesses and/or psychological or psychosomatic problems. Chapter 3 is concerned with the psychological factors that have been associated with CAM use. This literature shows that people who use CAM tend to have a preference for participation in or control over treatment, hold beliefs related to holism and natural treatments, and be dissatisfied with OM. The role of psychological factors in ongoing CAM use is discussed drawing on a small number of studies which have considered why people continue to use and adhere to CAM.

Chapter 4 presents the methodological and theoretical frameworks employed in the empirical components of this thesis. It is argued that it is not only valid but also valuable to use both qualitative and quantitative methods to investigate why people return to CAM. The need to use psychological theory to guide research into CAM use is explained. Empirical findings from the literature as well as conceptual considerations are drawn on to evaluate a number of psychological theories. It is argued that a modified version of the self-regulation model (e.g. Leventhal, Diefenbach & Leventhal, 1992) is the most appropriate theoretical framework to guide the research in this thesis. This theoretical framework and the empirical literature are then used to develop an outline of the key issues to be addressed in this thesis and a number of broad hypotheses about why people return to CAM.

Chapters 5 and 6 outline the need for and development of two new questionnaires to be used in the later questionnaire study investigating why people adhere to CAM. Chapter 5 presents the development of the CAM Beliefs Inventory (CAMBI), a measure of abstract beliefs about holistic health, natural treatments and participation in treatment. Chapter 6 presents the development of the Treatment Process

Questionnaire (TPQ), a measure of concrete perceptions of the particular therapist and therapy that the respondent has just experienced. The TPQ is suitable for use not only in the context of CAM, but also in the context of OM.

In chapter 7 a cross-sectional internet-based questionnaire study is reported which employs the newly developed CAMBI. The questionnaire study examines the associations between treatment beliefs and illness perceptions and current use of different forms of CAM. This study extends understanding of CAM use by including a range of different beliefs measured by validated questionnaires in a multivariate design and considering the possible differences between psychological factors associated with the use of a variety of types of CAM.

Chapter 8 presents the major quantitative study, which directly assesses why people adhere to CAM. This chapter draws on the literature reviews as well as the empirical work reported in previous chapters. This is a prospective postal questionnaire study which uses both the CAMBI and the TPQ in addition to other questionnaires to examine the psychological predictors of adherence to CAM. Questionnaire measures of psychological factors are used at baseline to predict adherence to CAM three months later. Multivariate statistical analyses are used to show that both abstract beliefs (about treatment and illness) and concrete perceptions of experiences of treatment predict different types of adherence to CAM.

Chapter 9 presents the major qualitative study which investigates the processes involved in ongoing CAM use. Ethnographic field work is combined with analytic techniques from grounded theory to examine the ways in which people who use CAM evaluate their experiences and make decisions about ongoing CAM use within the local context of CAM provision and the wider context of health and health care in the 21<sup>st</sup> century. A process-oriented model is outlined which summarises the influences on decision-making about ongoing CAM use. This study suggests that people do not make one-off decisions about CAM, but continue to evaluate their experiences and decisions as they happen. The study also highlights the ways in which peoples' evaluative and decision-making processes are intimately linked to different dimensions of experiences of treatment, and to the wider context within

which these experiences occur.

In the final chapter the results of the empirical research are summarised and discussed with reference to the findings from the literature reviews. This chapter draws together the findings from all of the empirical research, examining the strengths, limitations and implications of this body of research. This chapter argues that this thesis makes a substantial contribution not only to our understanding of CAM use but also to our understanding of the ways in which people make decisions about health care and the role of abstract beliefs and concrete experiences in ongoing use of and adherence to health care interventions.

## Chapter 2

### Why do People Use CAM? Demographic Characteristics and Health Factors

#### *2.1 Introduction*

This chapter and the subsequent chapter examine the literature on CAM use, which can be characterised by the broad question: Why do people use CAM? The narrative reviews presented in these chapters are based on material derived from a systematic literature search conducted using the computerised databases MedLine, PsycInfo, and Web of Knowledge. The search terms were as follows, where \* represents any ending to the stems: (alternative or complementary) and (medic\* or therap\* or treatment\*). The search was restricted to articles published in peer-reviewed journals from 1995 to 2005. Abstracts and articles were read for relevance to the research question and articles were selected for review if they used appropriate methodologies and presented appropriate inferential statistics concerning associations between CAM use and other factors (for quantitative studies) or used appropriate methodologies in investigating patients' experiences and perceptions of CAM (for qualitative studies). The reference lists from such articles were searched for further relevant material. Two approaches characterise the literature: comparisons between the characteristics of CAM users and non-users, and explorations of peoples' reasons for using and experiences of CAM. The former approach provides information about the differences between CAM users and people who do not use CAM; however it is difficult to then use this information to draw conclusions about why people use CAM. Nearly all of the studies conducted to date have been cross-sectional in design, and so even if a factor is shown to be associated with CAM use, the direction of causality often cannot be determined. Quantitative and qualitative studies that focus on CAM users and the reasons they give for using CAM can provide a link between the factors that are associated with CAM use and the key question of why people use CAM. When factors associated with CAM use correspond to the reasons people give when asked why they use CAM, one can be reasonably confident in asserting that such factors are important influences on why people use CAM.

Much of the research on CAM use to date has been conducted in the US, where the situation regarding CAM provision is different to that in the UK. In the UK the NHS is the main provider of conventional health care, providing a service that is free for all at the point of use, while the private sector is the main provider of CAM (Thomas, Nicholl, & Coleman, 2001). In the US, the private sector is the main provider of both conventional and complementary medicine. While the literature review presented below draws heavily on research from the USA, where possible there is a focus on UK-based research.

This chapter describes the demographic and health factors that are associated with CAM use, suggests why such factors might be important in determining why people use CAM, and examines the evidence to support such explanations. The relationship between these factors and their relative importance in explaining CAM use is then evaluated.

## *2.2 Demographic Factors*

A number of large-scale surveys drawing representative samples from the general population have compared the demographic characteristics of CAM users and non-users. Knowledge of the demographic characteristics of CAM users can provide insights into not only who is likely to use CAM but also the factors influencing the choice to use CAM.

### *2.2.1 Education*

In a nationally representative population-based survey in the US, 44% of people who had some college education used CAM, while 27% of people with no college education used CAM (Eisenberg et al., 1993). Associations between increased education and CAM use have been reported in a range of UK-based studies, for example a representative survey of the UK population (Thomas & Coleman, 2004), a survey of people with cancer in Wales (Harris, Finlay, Cook, Thomas & Hood, 2003), a survey of people with breast cancer (Rees et al., 2000), and survey of people recruited from CAM and OM (Furnham & Beard, 1995). Not all surveys find significant associations between CAM use and education (e.g. Conroy, Siriwardena, Smyth, & Fernandes, 2000; Featherstone, Godden, Selvaraj, Emslie &

Took-Zozaya, 2003). However, education has been associated with CAM use in a wide range of studies and such consistency warrants the conclusion that education indeed has a role in CAM use.

The association between CAM use and education could be explained in terms of higher education being associated with having a higher income, enabling people to afford to pay for CAM therapies. However, in a US survey Astin (1998) found that while education was associated with CAM use, income was not, suggesting that income cannot be the only explanation. Education could be important in increasing peoples' awareness of and ability to seek out information about CAM. This is supported by the finding that in another US-based survey higher education was associated with use of acupuncture and relaxation, while less education was associated with use of chiropractic (Paramore, 1997). In this survey participants who used chiropractic tended to live in the area of the US where it originated, and so people in this area might be expected to have a high awareness of chiropractic regardless of their level of education.

### *2.2.2 Income*

Income has been associated with CAM use in a representative sample of residents in four English counties (Ong, Petersen, Bodeker, & Stewart-Brown., 2002), in a representative survey of the UK population (Thomas & Coleman, 2004), but not in a Scottish study (Featherstone et al., 2003). Further UK-based studies have found associations between CAM use and related indicators such as socio-economic status (Dimmock, Troughton, & Bird, 1996; Downer et al., 1994) and occupational status (Furnham & Beard, 1995). For example, in one study 58% of CAM users belonged to the top three socioeconomic status groups (professional, intermediate or skilled non-manual workers) compared to 33% of people who used only OM (Downer et al., 1994). In the US, Eisenberg et al. (1993) also found a significant association between income and CAM use, as did Tindle, Davis, Phillips and Eisenberg (2005). Associations between income and CAM use make sense in both the UK and the US, as in the UK the majority of CAM is provided privately and in the US most insurance companies offer only limited cover for CAM (Cleary-Guida, Okvat, Oz, & Ting, 2001). A number of US-based studies have however not found an

association between CAM use and income (Astin, 1998; Astin, Pelletier, Marie, & Haskell, 2000; Paramore, 1997). The inconsistency can be explained by the varied and changing status of CAM in terms of private provision, cost, and insurance coverage (Pelletier & Astin, 2002). In one of the studies finding no association with income all respondents received insurance coverage for chiropractic and acupuncture (Astin et al., 2000). While higher income increases the chances of CAM use, people on low incomes do still use CAM: CAM use is not the exclusive domain of the wealthy.

### *2.2.3 Gender*

A national survey in the UK showed that people who use CAM are more likely to be female than people who do not use CAM (Thomas et al., 2001). Further UK-based studies have also found that women are more likely than men to be CAM users (Chandola, Young, McAlister, & Axford, 1999; Downer et al., 1994; Featherstone et al., 2003; Furnham & Beard, 1995; Haetzman, Elliott, Smith, Hannaford, & Chambers, 2003; Harris et al., 2003; Ong et al., 2002). In the UK one study found that one in five women compared to one in eight men surveyed used CAM (Downer et al., 1994). In a US study 39% of women compared with 31% of men had used CAM in the past year (Tindle et al., 2005). However a number of studies have found no gender differences, including national surveys (Astin, 1998; Eisenberg et al., 1993; Thomas & Coleman, 2004). Furthermore, a study of people with back pain found that 53% of chiropractor patients were male compared with 44% of GP patients (Shekelle, Markovich, & Louie, 1995).

Women also tend to seek help from orthodox health care professionals more than men (Green & Pope, 1999). However, comparisons of people recruited from CAM and OM clinics also find that CAM users are more likely to be women (Furnham & Beard, 1995; Kelner & Wellman, 1997). In a study of health care utilization conducted with older adults in Italy, 79% of people who used only CAM were female, 72% of people who used both CAM and OM were female, 61% of people using only OM were female, while 46% of people using no health care were female (Buono, Urciuoli, Marietta, Padoani, & Leo, 2001). This suggests that while women are more likely than men to use any form of health care, this tendency is stronger

when considering CAM use than it is for use of OM. The relatively large body of research on gender differences in OM use has not yet provided a comprehensive understanding of the issues involved (Wyke, Hunt, & Ford, 1998) and so it is unsurprising that the inconsistent findings on gender and CAM utilization have yet to be explained.

#### *2.2.4 Ethnicity*

The only large-scale UK-based survey to examine ethnicity found that whites and non-whites used CAM to a similar extent (Thomas & Coleman, 2004). National surveys from the US have been inconsistent: Eisenberg et al. (1993) found that non-blacks (35%) were more likely to use CAM than were blacks (23%), while Astin (1998) found no differences between CAM users and non-users in terms of ethnicity. Studies primarily concerned with the relationship between ethnicity and CAM use suggest that ethnicity is associated with choice of CAM rather than overall use of CAM. For example, Lee, Lin, Wrensch, Adler and Eisenberg (2000) found that blacks most often used spiritual healing, Chinese most often used herbal remedies, and Latinos mainly used dietary and spiritual healing, while whites mainly used dietary, healing and physical therapies. Thus ethnicity may have a role in choice of CAM form, but is inconsistently associated with overall CAM use. This is consistent with Zola's classic work (1966) showing the role of cultural differences in symptom perception, health-related communication, and responses to symptoms. The importance of ethnicity in choice of CAM form further suggests a role for culturally specific beliefs in the choice of CAM.

#### *2.2.5 Age*

While some studies have found a relationship between age and CAM use, there is little consensus between studies beyond the observation that CAM users tend to be young or middle-aged and are less likely to be older adults. Conversely, studies of age and OM suggest that the young (<5 yrs) and the elderly (>65 yrs) make the most use of OM services such as GP consultations (Department of Health, 1998).

In a UK-based survey age was significantly associated with CAM use, in that CAM users tended to be younger than non-users (Thomas et al., 2001). Younger age

was also associated with increased likelihood of CAM use in surveys conducted in Scotland (Featherstone et al., 2003); in Wales with cancer patients (Harris et al., 2003); in Scotland with chronic pain patients (Haetzman et al., 2003); and in UK studies of people with cancer (Downer et al., 1994) and women with breast cancer (Rees et al., 2000). Ong et al. (2002) however found no association between age and CAM use in their representative survey of residents in four English counties. In a further UK-based study homeopathy patients were more likely to be aged 41-50, while GP patients were more likely to be aged 31-40 (Furnham & Bhagrath, 1993). It is possible that the relationships between CAM use and age could represent a cohort effect, but this has not yet been examined in the literature. Overall, it appears that younger middle-aged people are slightly more likely to use CAM than older people, although the differences in CAM use between age groups are relatively inconsistent and often small.

#### *2.2.6 Summary*

CAM users tend to be female, middle-aged, well-educated and have a higher than average income. Characteristics such as education and income, and age and income, could be related to each other (i.e. confounded) and so might not be independently associated with CAM use. Multivariate studies which use statistical techniques to control for all variables in an analysis enable researchers to have increased confidence that associations between an independent and dependent variable are not accounted for by another, confounding, variable. A number of multivariate studies have focused just on demographic factors and CAM use, providing evidence for the independence of these factors in predicting CAM use (see Table 2 for summary of studies). In the UK, studies have shown that age, gender and education are independent predictors of CAM use (Featherstone et al., 2003; Harris et al., 2003). No large-scale UK-based studies have examined the independent contribution of income to CAM use. MacLennan, Wilson and Taylor (2002) found that use of CAM providers in Australia was independently predicted by gender, nationality, education, marital status and being employed, while income and age were not significant independent predictors. Strader et al. (2002) provide evidence for independent roles of age, gender, education and income in predicting CAM use in patients with liver disease in the USA.

Table 2

*Summary of Multivariate Studies of Associations between CAM use and Demographic Characteristics*

Study	Sample characteristics (n)	CAM variable	Significant predictors	Non-significant predictors
Burstein, Gelber, Guadagnoli and Weeks (1999)	Women, early-stage breast cancer, USA (480)	CAM use post- surgery	Age (younger), higher education	Marital status, race, income
Kuo, Hawley, Weiss, Balkrishnan and Volk (2004)	Primary care patients, USA (302)	Use of herbal remedies	Ethnicity (white/Hispanic vs. African American), herbal use by family member, interaction	Gender, age, education, clinic SES type
Kumar (2003)	Convenience sample, general population, Australia (519)	CAM use	Age (younger), Female	
Mackenzie, Taylor, Bloom, Hufford and Johnson (2003)	National probability sample, US (3789)	CAM use in past year	Female, no insurance, education	Age, income, ethnicity, country of birth
		Use of herbs in last year	African American, Latino or Asian American (vs. white), Female, no insurance, education	Age, income, country of birth
		Use of acupuncture in last year	Asian American (vs. white), no insurance	Age, sex, education, income, country of birth

Study	Sample characteristics ( <i>n</i> )	CAM variable	Significant predictors	Non-significant predictors
Mackenzie, Taylor, Bloom, Hufford and Johnson (2003)	National probability sample, US (3789)	Use of chiropractic (in past year)	White (vs. African American, Latino or Asian American), income	Age, sex, education, insurance, country of birth
		Use of healer (in past year)	Education	Age, sex, education, income, insurance, country of birth
		Use of home remedies (in past year)	African American (vs. white), White (vs. Asian American), female, no insurance, born in USA	Age, education, income
MacLennan et al. (2002)	Representative population survey, South Australia (3027)	CAM practitioner use in last year	Female, Born in Australia, Education, Married, Employed	Income, age
		Over the counter CAM use in last year	Age (15-54 vs. >55 years), Female, Education, Income, Employed	Born in Australia, SES, Marital status
Mikhail, Wali and Ziment (2004)	Hispanics, USA (179)	CAM use	Lower income	English proficiency, education

Study	Sample characteristics ( <i>n</i> )	CAM variable	Significant predictors	Non-significant predictors
Najm, Reinsch, Hoehler and Tobis (2003)	Community dwelling elderly (65-95yrs), USA (525)	CAM use in Asian participants	Female, not living in USA >10 years, number of physician	
		CAM use in Hispanic participants	Not living in USA >10 years, number of physicians, no insurance, private insurance	
		CAM use in white non-Hispanic participants	Managed care insurance, Medicare, private insurance	
Rees et al. (2000)	Women with breast cancer, England (714)	CAM use since diagnosis	Age, Education (>18yrs), Past CAM use	
Schafer, Riehle, Wichmann and Ring (2002)	Population based study, people with allergies, Germany (351)	CAM use for allergy	Age >59 (vs. <30), Education	Age 30-59, sex
Shen et al. (2002)	People with advanced cancer, USA (115)	CAM use	Education	Age, income, marital status, family support
Strader et al. (2002)	Liver disease outpatient clinics, USA (989)	CAM use	Age <50, Female, College educated, Income >\$50k, California	African American
		Herbal/botanic therapy use	Female, College educated, Income >\$50k, California	Age, African American

### *2.3 Health Status*

Theories and studies of health care utilization in OM have argued that perceived need in terms of physical and psychological symptoms and health status is one of the most important and immediate variables in explaining use of health services (Andersen & Newman, 1973; de Boer, Wijker, & de Haes, 1997; Rosenstock, 1966; Tessler, Mechanic, & Dimond, 1976). In the context of CAM use it has been suggested that people who use CAM are more likely to have severe, life-threatening diseases and use CAM because they are experiencing psychological distress and will try anything that might offer a cure. It has also been suggested that people who use CAM might be attempting to achieve some relief from chronic conditions that might not have been treated satisfactorily by OM. Surveys of the general population reveal which conditions are commonly treated with CAM, while studies of CAM use within illness groups provide some insight into the role of duration and severity of illness and psychological distress in CAM use.

#### *2.3.1 Diagnoses*

People use CAM for a wide range of physical and psychological conditions and even for no specific condition. Thomas et al. (2001) found that the majority (71%) of visits to CAM practitioners in their UK-based survey were made for musculoskeletal problems, while visits were also made for other health problems (24%) and for health maintenance (5%). In their national survey, Eisenberg and colleagues (1993) noted that CAM use was most common for back problems, anxiety, headaches, chronic pain and cancer. However, one third of CAM users used CAM for no specific health problem. In the follow up study 58% of participants used CAM in a preventative or maintaining manner (Eisenberg et al., 1998). In a study of Singaporean adults with chronic disease, having arthritis or musculoskeletal disorders or stroke significantly increased the likelihood of CAM use (Lee, Charn, Chew, & Ng, 2004). Studies of people with life-threatening conditions suggest that these people do not necessarily use CAM in direct relation to their condition. People with HIV/AIDS tend to use CAM in an attempt to improve their general health and wellbeing and to reduce specific symptoms such as pain, stress and depression, rather than in an attempt to find a cure for their condition (Fairfield, Eisenberg, Davis, Libman, & Phillips, 1998; Langewitz, Ruttimann, Laifer, Maurer, & Kiss,

1994; Mulkins, Morse, & Best, 2002).

In a small UK-based study Murray and Shepherd (1993) found that a higher proportion of CAM users (69%) than non-users (49%) had severe or chronic conditions, such as anxiety, depression, asthma, eczema, hay fever, or musculoskeletal problems. Ong et al. (2002) demonstrated not only that chronic illness can increase the likelihood of CAM use, but also that specific diagnoses are associated with use of specific CAM forms. For example, the predictors of visiting an herbalist included asthma and anxiety, while the independent predictors of visiting a homeopath included arthritis, problems with bowels, indigestion, depression, and skin problems. The evidence does not support the hypothesis that people use CAM mainly for life-threatening conditions but does suggest that CAM is often used by people who have chronic conditions, and that the nature of the chronic condition can influence the type of CAM used.

### *2.3.2 Duration*

In a study in which participants were recruited from chiropractic, acupuncture/traditional Chinese medicine, naturopathy, reiki and OM clinics, the mean duration of health problem was 9.3 years for CAM users compared with 6.7 years for OM users (Kelner & Wellman, 1997). In a similar study comparing users of acupuncture, homeopathy, osteopathy and general practices, self-reported disease duration was longest for users of homeopathy (9.8 years) and shortest for people recruited from general practices (2.2 years) (Vincent, Furnham, & Willsmore, 1995). In a study of people with fibromyalgia, longer illness duration was associated with both the duration and extent of CAM use (Dimmock et al., 1996). However, not all studies have found an association between disease duration and CAM use (Chandola et al., 1999; Furnham & Kirkaldy, 1996; Mantyranta, Hemminki, & Koskela, 1999). There is therefore some evidence to support the hypothesis that having longer illness duration is associated with CAM use, which is consistent with the use of CAM for chronic conditions.

### *2.3.3 Physical Health Status*

Objective measures of disease status have not been related to CAM use in a number of settings including: breast cancer (Balneaves, Kristjanson, & Tataryn, 1999), gynaecological cancer (Kullmer et al., 1999), HIV/AIDS (Langewitz et al., 1994; London, Foote-Ardah, Fleishman, & Shapiro, 2003; Risa et al., 2002), head and neck cancer (Warrick et al., 1999), and systemic lupus erythematosus (Moore et al., 2000). One study of men with prostate cancer found that people with progressive disease were more likely to use CAM than those with stable disease (Wilkinson et al., 2002). Self-reported health status has been associated with CAM use. For example, in a national survey based in the US, 52% of CAM users had one or more health conditions while 38% of non-users had one or more health conditions (Paramore, 1997). A number of studies have found that CAM users report poorer health than non-users (Astin et al., 2000; Moore et al., 2000) although this association is not always found (Kao & Devine, 2000). This, together with the finding that more CAM patients in a Canadian study said their health problem had an impact on their daily lives (Kelner & Wellman, 1997), suggests that it is perceptions of illness that are important, rather than objective measures of illness features. Illness perceptions are discussed in chapter 3.

### *2.3.4 Psychological Health*

Druss and Rosenheck (2000) analysed data from a nationally representative US-based survey and found that people who reported a mental condition were 1.27 times more likely to report visiting a CAM practitioner. This relationship remained significant when controlling for medical co-morbidity, self rated mental health status and demographic variables. Risberg and Jacobsen (2003) found that psychological distress was associated with CAM use in people with cancer. Burstein and colleagues found that psychological distress (at three months after surgery) predicted initiation of CAM use following surgery for breast cancer (Burstein, Gelber, Guadagnoli, & Weeks, 1999). In comparison, Steginga and colleagues (Steginga, Occhipinti, Gardiner, Yaxley, & Heathcote, 2004) found that lower, rather than higher, levels of psychological distress were associated with CAM use in men with prostate cancer. A study of people with temporomandibular disorders also found that CAM use was associated with more positive psychological functioning

(DeBar, Vuckovic, Schneider, & Ritenbaugh, 2003).

A number of UK-based studies have also found associations between poor psychological health and CAM use, for example in surveys of homeopathy patients (Furnham & Bhagrath, 1993; Furnham & Smith, 1988). In a study of people with IBD, CAM users scored significantly lower than non-users on quality of life measures of anxiety, fatigue and malaise (Langmead, Chitnis, & Rampton, 2002). However, not all studies have found an association between CAM use and measures of mental health (e.g. Downer et al., 1994; Furnham and Beard, 1995).

Psychological distress and mental health could have direct and/or indirect influences on CAM use. People might use CAM to alleviate specific psychological disorders, such as using St John's Wort to alleviate depression. A proportion of people who use CAM report doing so because of specific psychological or emotional problems (Fairfield et al., 1998; Kessler et al., 2001; Mantyrantna et al., 1999; Unutzer et al., 2000). Less directly, poor mental health and psychological distress may be associated with CAM use because of the emphasis placed on psychological factors by many forms of CAM. People who experience psychological distress may be attracted to CAM because of a perception that certain forms of CAM are more likely to accept and treat psychological aspects of illness (see discussion of illness perceptions, chapter 3).

#### *2.3.5 People's Health-Related Reasons for Using CAM*

The arguably more robust associations between self-report measures of health status and CAM use (compared with objective measures), suggests that a proportion of CAM use could be explained in terms of a combination of physical and psychological factors. Although it is difficult to interpret the results of cross-sectional surveys in terms of causality, the additional evidence from people's own expressed reasons for using CAM suggest that a range of both psychological and physical problems are indeed important in CAM use. For example, in a study of people with breast cancer in Italy, 61% cited physical distress and 20% cited psychological distress as their reason for using CAM (Crocetti et al., 1998).

People also expect CAM to have an impact on their physical and psychological health status. In a study based in Germany, women with gynaecological cancer had the following expectations of CAM: psychological stabilization, strengthening the immune system and avoidance of progression or recurrence (Kullmer et al., 1999). In a Norwegian study of people with cancer using CAM, the most commonly endorsed expectation of CAM was an improvement in physical resistance and general condition (Risberg, Kaasa, Wist, & Melsom, 1997). Because these expectations have generally been reported after CAM use has been initiated, it is difficult to draw any conclusions about the importance of expectations in initiating CAM use from the research that has been carried out to date. From a discursive perspective, for example, reporting positive expectations of CAM use following the initiation of CAM use can be viewed as a strategy to justify one's actions. While prospective research is needed to look at peoples' expectations of CAM before CAM use, the literature on peoples' health-related reasons for using CAM supports the importance of both physical and psychological health status in CAM use.

### *2.3.6 Summary*

People use CAM for a range of both physical and psychological conditions, including relatively mild conditions such as headaches, and severe, life-threatening, conditions such as cancer. The link between illness duration and CAM use suggests that people may use CAM out of dissatisfaction with OM (see chapter 3). Subjective ratings of health might be more important than objective measures in explaining CAM use.

## *2.4 The Relative Importance of Demographic and Health Factors*

It is likely that a number of demographic and health variables may be confounded, and studies that have conducted multivariate analyses can provide some insight into the possible co-variation between factors and also their relative importance. However, it can be difficult to interpret these studies as they have tended to include different combinations of variables, and when the same variables are included they are not always measured in the same way. Table 3 summarises the results of multivariate analyses of demographic and health-related factors associated with CAM use, and a selection of these are discussed in detail.

Table 3

*Summary of Multivariate Studies of Associations between CAM use and Demographic and Health-related Variables*

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Al-Windi (2004)	Primary health care attendees, Sweden (1433)	CAM provider use	Chronic disease, regular exercise		Age, gender, birth country, occupation, perceived health status, physical fitness
Ashikaga, Bosompra, O'Brien and Nelson (2002)	Breast cancer patients, USA (148)	Number of CAM forms used	Chemotherapy, Extremity swelling	Age, Education, Family income	Other cancer treatments and symptoms, pain, physical functioning, worry
Astin et al. (2000)	Elderly people, USA (728)	CAM use in last year	Depression/anxiety, Arthritis, Hypertension, Meditation, Exercise, Frequent OM visits	Education (higher), Age (younger)	Physical health, pain, memory problems, monitoring BP, alcohol consumption, poor health interfering with daily life

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Bausell, Lee and Berman (2001)	Nationally representative survey, USA (16038)	CAM practitioner use in last year	Lower physical health status	Region of residence, Age (over 30), Female, Higher education, race (white compared to Hispanic and African American)	Mental health status, marital status, race (Asian, other)
Beebe-Dimmer et al. (2004)	Men with family history of prostate cancer, USA (111)	Current CAM use	Being younger affected brother at time of diagnosis	Older age	Marital status, education, income, smoking status, number of relatives affected by prostate cancer
		CAM use related to prostate	Being younger affected brother at time of diagnosis	Older age	Marital status, education, income, smoking status, number of relatives affected by prostate cancer
Buono et al. (2001)	Elderly people in Padua, Italy (655)	CAM use	Depression, Spontaneous reporting of pain/discomfort, No chronic somatic disease	Female	Age, somatisation, anxiety

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Crocetti et al. (1998)	Women with breast cancer, Italy (242)	CAM use after cancer diagnosis	Past CAM use		Age at diagnosis, education, disease extent, religion, marital status, occupation
DiGianni et al (2003)	Women in cancer screening, USA (236)	CAM use in cancer survivors (n=132)	Depression, genetics knowledge, consumption of fruit/vegetables, breast self-examination		
		CAM use in unaffected women (n=104)	Risk perception, sunscreen use, consumption of fruit/vegetables		
Druss and Rosenheck (2000)	People with a mental condition, USA (1803)	CAM use		Age <40, Female, High school graduate, geographical region	Mental illness diagnosis, mental health rating, chronic medical condition, number of diagnoses, race, insurance status

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Egede, Ye, Zheng and Silverstein (2002)	General population, USA (21571)	CAM practitioner use in last year	Poor physical health (self rated), , Diabetes alone, Diabetes & other chronic conditions,	Female, Hispanic (vs. white), Black (vs. white), Private insurance (vs. no insurance), Employed, geographical region, Education (at least high school)	Age, marital status, mental health, income, public insurance
Fairfield et al. (1998)	HIV+ people, Boston (180)	CAM practitioner use in last year	Fatigue	College education	AIDS diagnosis, disease indicators, duration, depression, OM visits, race
		CAM supplement use in last year	Memory loss, Fatigue		Weight loss, AIDS diagnosis, disease indicators, duration, depression, OM visits, race
		Current CAM use	Use of over the counter medications	Age (younger)	Female, provision of CAM by GP

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Fautrel, Adam, St Pierre, Joseph and Clarke (2002)	People with arthritis from national population survey, Canada (12971)	CAM use in last year	Pain, use of analgesics, depression, co-morbid chronic conditions	Age (younger), Higher education, higher income	Gender
Featherstone et al. (2003)	Primary care patients, Scotland (1174)	Lifetime CAM use	Use of over the counter medications, provision of CAM by GP	Female, age (younger)	
Ganguli, Cawdron and Irvine (2004)	Patients attending gastroenterology clinic, Canada (341)	CAM use in last year	Co-morbidity, worse mental health	Education, income	Stressful event in past year, nausea/vomiting
Harris et al. (2003)	People with cancer, Wales (1077)	Current CAM use	Previous CAM use	Female, higher education, younger age	Cancer diagnosis
Henderson and Donatelle (2004)	Women with breast cancer, USA (551)	CAM use in last year		Education, type of insurance (private), age (younger)	Income, marital status, exercise

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Kaboli, Doeppeling and Saag (2001)	Elderly people (>65) with arthritis, USA (480)	CAM-practitioner use	Podiatrist/orthotist use, Arthritis OM visits, Fair/poor physical health (self report)		Arthritis symptoms, COPD diagnosis, sex, alcohol consumption, use of prescription or over the counter medicines
		Over the counter CAM use	Physical/occupational therapy use, Arthritis OM visits, COPD diagnosis, Alcohol abstinence	Interaction between gender and use of over the counter arthritis medicines	
Lafferty et al. (2004)	People with insurance, USA (346,428)	CAM use		Female, age (>40), county of residence	Cancer diagnosis
		NAM use	Cancer diagnosis	Female, age (41-64 vs. 18-40), county of residence	
		Chiropractor use	No cancer diagnosis	Female, age (>40), county of residence	
		Naturopath use	Cancer diagnosis	Female, county of residence	Age

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Lafferty et al. (2004)	People with insurance, USA (346,428)	Acupuncture use	Cancer diagnosis	Female, age (>40), county of residence	
		Massage use	Female		Age, county of residence, cancer diagnosis
Lee, Chang, Jacobs and Wrensch (2002)	Men with prostate cancer, San Francisco (543)	CAM use for prostate cancer	Influenced by relatives or friends with prostate cancer, co-morbidity, participation in social group, exercise	Age at diagnosis (<65)	Education
Lee et al. (2000)	Women with breast cancer, San Francisco (379)	CAM use for breast cancer	Use of counselling, Late stage at diagnosis, Non-smoker, exercise	Completed high school, Latino ethnicity, Private insurance, Age (<55),	
Leung, Dzankic, Manku and Yuan (2001)	Surgery patients, California (2560)	Herbal medicine use	Sleep problems, joints or back problems, addiction, history of general surgery, <i>not</i> having diabetes, <i>not</i> using antithrombotic medications	Female, higher income, Caucasian, higher education	

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
MacLennan, Wilson and Taylor (1996)	General population, Australia (3004)	CAM-practitioner use (last year)	Overweight, Exercise, Optimistic outlook, High alcohol consumption	Age (<55), Country living	Income
		Over the counter CAM use	Overweight, Exercise, Alcohol at risk level	Female, Age (<55), Employed, Higher education,	Birth country, geographic area, income, marital status, hypertension, optimism, SES
Manheimer, Anderson and Stein (2003)	Intravenous drug users, USA (548)	CAM use	Lower health related quality of life, having regular GP	Caucasian, education	Age, insurance, gender, recruitment site, HIV status
McFarland, Bigelow, Zani, Newsom and Kaplan (2002)	National population-based surveys, Canada and USA (87284)	CAM use in Canadians (70884)	Worse health, problems with instrumental activities of daily living, fewer problems with activities of daily living, OM use	Age 20-64, Female, Education, white, western residences,	

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
McFarland, Bigelow, Zani, Newsom and Kaplan (2002)	National population-based surveys, Canada and USA (87284)	CAM use in Americans (16400)	OM use	Age 20-64, Female, Education, white, western residences	Health, problems with instrumental activities of daily living, problems with activities of daily living
Nicassio, Schuman, Kim, Cordova and Weisman (1997)	People with fibromyalgia, US (111)	Frequency of CAM use	Pain, Quality of wellbeing (a measure of functional disability)	Age	
Nilsson, Trehn and Asplund (2001)	Randomised sample of population of northern Sweden: Women (2974)	CAM use	Poor perceived health status	Education, age 55-64 (vs. 25 to 34)	Medical history (hypertension, stroke, MI, diabetes), age 35-44, age 45-54, age 65-74
	Randomised sample of population of northern Sweden: Men (2820)	CAM use	Education		Age, perceived health status, Medical history (hypertension, stroke, MI, diabetes)

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Ong et al. (2002)	Local randomised sample of general population, UK (8889)	CAM practitioner use in past three months	Long-standing illness, use of GP services	Higher social class, Female	
Rafferty, McGee, Miller and Reyes (2002)	Population-based state survey (3764)	CAM use in past year	Poorer health status	Female, White (vs. black), education	Income, age
Ramsey, Spencer, Topolski, Belza and Patrick (2001)	People with osteoarthritis, USA (122)	CAM use	Poorer general health		Socio-demographic factors, arthritis factors, comorbidity, global health
Rao et al. (1999)	Rheumatology patients, USA (232)	Regular CAM use	Severe pain, osteoarthritis	Education	

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Rhee, Garg and Hershey (2004)	Patients from internal medicine clinics, USA (359)	Use of vitamins, herbal or folk remedies Use of diets Use of prayer Use of exercise Use of alternative providers	Number of diagnoses	Age Education Age, race	Sex, race, number of diagnoses, education Age, sex, race Sex, number of diagnoses, education Sex, race, number of diagnoses, age Sex, race, number of diagnoses, age
Risberg and Jacobsen (2003)	Cancer patients, Norway (158)	CAM use	Mental distress		Gender, age, curative or palliative treatment intention

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Robinson, Crane, Davidson and Steiner (2002)	Convenience sample, US (1593)	CAM use	Over 65 and not had influenza vaccine, physical activity in past month		OM visits, cancer screening, health behaviours
Schwartz, Laitin, Brotman and LaRocca (1999)	People with MS, USA (569)	CAM use	Co-morbidity	Income	Age, gender, education, insurance, MS symptoms, MS medications, health behaviours, use of outpatient services
Shekelle et al. (1995)	National survey, people with low back pain, USA (686)	Use of chiropractor as primary HCP		High school graduate (vs. not), white (vs. black), male, geographic location	More than high school education, health status, health worry
Unutzer et al. (2000)	General population, USA (9585)	CAM use in last year (7%)	Major depression, Panic disorder, No dysthymia, More chronic illnesses, Satisfaction with health care	Female, Age (<60), Education, Geographic area, Private medical insurance,	GAD, mania or psychosis, substance abuse, ethnicity, working status, insurance,

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Wang, Patten and Russell (2001)	National population survey, people with major depression, Canada (1043)	CAM use in past year (1994-1995)	Chronic conditions	Age 30-44 years	Sex, marital status, education, income, employment, urban/rural, antidepressant use
	National population survey, people with major depression, Canada (3133)	CAM use in past year (1996-1997)	Chronic conditions	Higher education	Sex, age, marital status, income, employment, urban/rural, antidepressant use
Wister et al. (2002)	Random local sample of adults over 50, Canada (879)	CAM use	Arthritis (compared to hypertension), co-morbidity, fewer prescription medications, reading about chronic illness	Age (younger), income (lower)	Gender, education, marital status, heart problem, perceived severity of illness, duration of illness, number of OM visits

Study	Sample characteristics (n)	CAM variable	Health-related predictors	Demographic characteristics predictors	Non-significant predictors
Wolsko, Eisenberg, Davis, Ettner and Phillips (2002)	National sample of CAM users in last year, USA (914)	CAM practitioner Use	CAM use for diabetes or cancer, Increase OM visits in last year	Female	
	Users of CAM in last year from national USA survey (397)	CAM practitioner use	Use for wellness, Use for back/neck problems	Full insurance, Partial insurance,	Age, sex, SES, health status, psychiatric disorder, region, OM visits
	People attending OM clinics, USA (536)	CAM use	Lower health status	Female	Education, age, ethnicity, income
Wyatt, Friedman, Given, Given, and Beckrow (1999)	Elderly cancer patients USA (699)	CAM use	OM use	Education,	
Yeh, Eisenberg, Davis and Phillips (2002)	Representative survey, USA (2055)	CAM use in past year			Diabetes (adjusted for age, sex, race, income, education, region)
Zochling et al. (2004)	Osteoarthritis patients, Australia (341)	CAM use for osteoarthritis	No use of OM analgesics, bodily pain	Female	Function

Astin and colleagues (Astin et al., 2000) conducted a logistic regression analysis to predict CAM use in an elderly population. They included in their analysis demographic factors, health indicators, subjective health status, lifestyle factors, and frequency of visits to OM providers. The variables that made a significant independent contribution to the prediction of CAM use were (in order of importance): meditation, depression/anxiety, arthritis, exercise, younger age, more frequent visits to OM provider, higher education, no hypertension. This study suggests that CAM users are more likely to have certain physical problems, have psychological difficulties and take action regarding their health by meditating, exercising, and making visits to OM practitioners. Robinson, Crane, Davidson and Steiner (2002) investigated the role of health behaviours and CAM use and found that some health behaviours (exercise, daily vitamins, low fat diet and non-smoking) but not others (e.g. physician visits, cancer screening) were independent predictors of the use of herbal therapies when controlling for demographic and health status variables. However these health behaviours were not predictive of the use of other CAM therapies. In contrast, DiGianni et al. (2003) found that CAM use in cancer survivors was predicted by depression, genetics knowledge, consumption of fruit and vegetables and frequency of breast self examination, while in people at high risk of cancer CAM use was predicted by risk perception, sunscreen use and fruit and vegetable consumption. Thus CAM use is associated with performing other health behaviours associated with healthy lifestyles, but the relationship between CAM use and other health behaviours is not straightforward and is likely to differ according to type of CAM and illness population.

A number of studies suggest that both demographic and health-related variables are independent predictors of CAM use. Unutzer et al. (2000) conducted a logistic regression analysis to predict CAM use in a national survey of the US, finding that both demographic characteristics and mental disorder diagnoses were significant independent predictors of CAM use, suggesting that these variables are not confounded. A further American study based on a nationally representative sample also found that demographic (e.g. female gender) and health factors (e.g. poor self-rated physical health) were independent predictors of CAM use (Egede et al., 2002). Similarly, a national Canadian survey found that demographic (e.g. age) and

health variables (e.g. co-morbidity) were associated with CAM use in people with self-reported arthritis (Fautrel et al., 2002). Wolsko and colleagues investigated the use of a CAM provider among all people reporting CAM use and found that both demographic (e.g. female gender) and health-related variables (e.g. having diabetes) were independent predictors of CAM provider use (Wolsko et al., 2002). In comparison, Druss and Rosenheck (2000) conducted a logistic regression analysis to predict CAM use among people reporting a mental condition and found that demographic variables were independent predictors of CAM use to a greater extent than health related variables. A similar finding was reported by Shekelle et al. (1995) who found that demographic factors (education, race, male gender) all independently predicted use of a chiropractor as primary provider for low back pain while health factors (health status, worry) did not.

Health and demographic variables may be less important in CAM use when previous use of CAM is also considered. Crocetti et al. (1998) surveyed breast cancer patients in one area of Italy and found that CAM users were younger, more highly educated and more likely to have used CAM before surgery. In a multivariate analysis only previous use of CAM predicted use of CAM after surgery for breast cancer. Women who had not used CAM before diagnosis had a 78% reduced probability of becoming CAM users after diagnosis with breast cancer. Rees and colleagues (2000) conducted a survey of CAM use in a sample of women with breast cancer in England, finding that demographic factors (age, education) and use before diagnosis were independently predictive of CAM use in a logistic regression analysis. 75% of those who had used CAM before diagnosis continued to do so, while 24% of those who had not used CAM initiated CAM use after diagnosis.

### *2.5 Conclusions*

There have been few large-scale multivariate studies of CAM use conducted in the UK. However, the evidence from these studies combined with studies from other countries suggests that both demographic and health factors are associated with CAM use. While some studies have found demographic factors to be more important than health related factors, these tend to be the studies that have focused

on specific patient groups, and so have more restricted ranges of health-related variables. People who use CAM tend to be of middle age, higher education, female gender, and higher income. In terms of their health, CAM users tend to have chronic physical illness, psychological problems, and undertake other behaviours associated with healthy lifestyles.

## Chapter 3

### Why do People Use CAM? Psychological Factors

#### *3.1 Introduction*

This chapter is concerned with the psychological factors that have been proposed as explanations for why people use CAM. The literature on psychological factors and CAM use follows the same patterns as the literature on demographic and health factors and CAM use. In summary, much of this literature is based on cross-sectional questionnaire studies that look at the psychological factors associated with CAM use when comparing people who use CAM to those who do not use CAM. The psychological factors that have been examined in the literature can be grouped around the following key themes: control and participation, holism and natural treatments, perceptions of illness, general philosophies, and experiences of OM. This chapter evaluates the evidence surrounding these factors as potential explanations for CAM use and then considers the small number of studies that have focused on the role of psychological factors in ongoing CAM use.

#### *3.2 Control and Participation*

##### *3.2.1 Locus of Control*

Health locus of control refers to the extent to which people believe their health is influenced by internal and external factors (Wallston, Wallston, Kaplan, & Maides, 1976). This concept has been developed to include perceptions of the influence of three factors on health: the self, powerful others such as health care providers, and chance (Lau & Ware, 1981). In the context of CAM use it has been suggested that people who use CAM, compared to people who use OM, are more likely to believe in personal control over health, and less likely to believe in provider control over health. This hypothesis appears to have been based on a view of CAM as a form of health care that emphasises the individual's role in health promotion and therapy, in which CAM practitioners are seen as guides to help individuals promote their ability to heal themselves.

McGregor and Peay (1996) tested the hypotheses surrounding CAM use and locus

of control and found associations between CAM use and high internal locus of control and low provider locus of control. So, CAM users tend to rate more highly their own ability to control their health and rate the ability of OM practitioners to influence their health lower, when compared with non-users. A small number of other studies have tested these relationships, and the findings are mixed. As Table 4 shows, four studies found significant associations between internal locus of control and CAM use, while nine did not, and four studies found significant associations between provider locus of control and CAM use while a further four did not. When matched samples (two studies) or random samples (two studies) were employed no significant associations between CAM use and internal locus of control were found, but there is evidence of significant associations between CAM use and provider locus of control. However, the small number of studies precludes drawing any strong conclusions about this pattern. There is no systematic pattern of illness groups in which these associations are or are not found. While the majority of the studies that have examined locus of control have not found significant differences between CAM and OM users, non-significant differences have been in the predicted direction (Furnham & Kirkaldy, 1996; Vincent, Furnham, & Willsmore, 1995). This is consistent with research on health locus of control in other contexts (Steptoe & Wardle, 2001).

Table 4

*CAM Use and Locus of Control*

Study	Sample characteristics (n)	CAM use and high internal locus of control	CAM use and low provider locus of control
Berg and Arnetz (1998)	Patients from OM dermatology clinic, Sweden (118)	N	N
Downer et al. (1994)	People with cancer, UK (415)	Y	---
Furnham and Bhagrath (1993)	Patients from GP practice and homeopath, UK (160)	Y	---
Furnham and Forey (1994)	Matched sample from OM and CAM, UK (160)	N	Y
Furnham and Kirkaldy (1996)	People from CAM and OM clinics, Germany (202)	N	Y
Furnham and Smith (1988)	Matched sample from GP and homeopath, UK (87)	---	Y
Hedderson et al. (2004)	Random local sample of people with cancer, USA (356)	N	---
McGregor and Peay (1996)	People using 'touch for health' & community sample, Australia (166)	Y	Y
Schafer, Riehle, Wichmann and Ring (2003)	Random population sample, 25-74yrs, with hypersensitivity, Germany (350)	N	---

Study	Sample characteristics ( <i>n</i> )	CAM use and high internal locus of control	CAM use and low provider locus of control
Sirois and Gick (2002)	CAM and OM patients, Canada (199)	N	N
Steginga, Occhipinti, Gardiner, Yaxley, and Heathcote (2004)	Men with prostate cancer attending OM, Australia (111)	N	N
Vincent et al. (1995)	Patients attending CAM or GP clinics, UK (216)	N	N
Weis et al. (1998)	Patients from OM cancer rehabilitation clinics, Germany (250)	Y	---

Note. Y indicates a significant association between CAM use and locus of control; N indicates no statistically significant relationship between CAM use and locus of control; --- indicates the dimension of locus control was not reported.

### *3.2.2 Participation in Treatment*

Related to beliefs in control over illness is the idea that people vary in the extent to which they desire participation in treatment decisions. This concept has been explored in a range of contexts, including work on doctor-patient relationships and the move towards a patient-centred model of care (Mead & Bower, 2000). Again, the relevance of this to CAM research is that CAM therapies (and practitioners) tend to offer patients more participation in treatment decisions than OM. The hypothesis is that people who use CAM will be more likely to prefer an active or collaborative role in treatment decisions and less likely to prefer a passive role in treatment decisions than will people who do not use CAM.

Balneaves and colleagues (Balneaves, Kristjanson, & Tataryn, 1999) found that preferred decisional role, as measured by a card sort test, was predictive of CAM use in breast cancer: 94% of CAM users preferred an active or collaborative role in treatment decision making, compared with 56% of OM users. Similarly, more CAM patients than OM patients reported taking a proactive role in maintaining health in terms of taking regular exercise, monitoring diet and taking vitamin supplements (Kelner & Wellman, 1997). Further evidence concerning quantitative relationships between preferences for participation and CAM use is summarized in Table 5, and is more consistent than the evidence on locus of control as seven of the nine studies included in the table have found significant associations between CAM use and wanting to participate in treatment. However it is notable that most of these studies have been conducted in cancer (four studies) or HIV (three studies), while the one study using a nationally representative sample in the US found that participation in treatment was only related to using CAM as a primary source of health care rather than any use of CAM. Furthermore, none of the quantitative studies of participation in treatment have been conducted in the UK. Thus while there is reasonably consistent evidence that CAM use is related to wanting to participate in treatment in people with HIV or cancer, this needs to be assessed in other illness groups and in a UK population.

Qualitative studies that have asked people why they are attracted to CAM do suggest that control and participation are important but complex issues to CAM users. In

a small qualitative study of decision making processes in CAM use Caspi, Koithan and Criddle (2004) found that making decisions about health care oneself was central to CAM users' explanations of treatment decisions, whereas for people who only used OM medical doctors' knowledge and opinions were central to treatment decisions. A number of qualitative studies suggest that the use of CAM as part of the self management of chronic illness relates to taking responsibility for treatment and gaining a sense of control and empowerment (e.g. Andrews, 2002; Foote-Ardah, 2003; Seidl & Stewart, 1998; Thorne, Paterson, Russell & Schultz, 2002). Downer et al. (1994), in a UK based study, found that people with cancer were attracted to CAM in part because CAM offered them participation in their treatment and a supportive relationship with a practitioner. Such studies also highlight the multi-faceted nature of control in CAM use, suggesting that reliance on existing constructs such as locus of control and desired participation can mask more complex issues that emerge from more inductive, qualitative research (Montbriand, 1995; Montbriand & Laing, 1991). For example, Bishop and Yardley (2004) conducted a discursive analysis of cancer patients' talk about OM and CAM that suggested that making treatment decisions can be difficult for patients as agency is associated with taking responsibility for one's health and so it becomes possible for patients to be blamed for their decisions.

Table 5

*CAM use and Beliefs about Participation*

Study	Sample characteristics (n)	CAM use and participation-related variable
Astin (1998)	Nationally representative, general population, US (1035)	N (desire for control in CAM users in general); Y (desire for control in primary CAM users)
Balneaves et al. (1999)	Women with breast cancer, Canada (52)	Y (CAM users prefer active or collaborative role in decisions)
Boon et al. (2000)	Random local sample of women with breast cancer, Canada (411)	Y (CAM users prefer to make decisions on own or with practitioner)
Hedderon et al. (2004)	Random local sample of people with cancer, USA (356)	Y (CAM users have higher desire for personal control)
Hsiao et al. (2003)	National probability sample of people with HIV, US (2466)	Y (CAM users have higher desire for participation in treatment decisions and higher desire for medical information)
London, Foote-Ardah, Fleishman and Shapiro (2003)	Nationally representative survey of people with HIV, US (2754)	Y (CAM users have higher desire for information and involvement in treatment decisions)
O'Callaghan and Jordan (2003)	Opportunistic sample, Australia (171)	N (belief in individual responsibility for health)
Risa et al. (2002)	People with HIV attending OM clinics, US (118)	N (sense of personal control)
Yates et al. (1993)	People with terminal cancer, Australia (152)	Y (CAM users higher desire for control)

Note. Y indicates a significant association between CAM use and participation-related variable; N indicates no statistically significant relationship between CAM use and participation-related variable.

### *3.2.3 Coping Strategies*

Few studies have investigated associations between coping strategies and CAM use, but there is some evidence to suggest that people who use CAM tend to be more likely than non-users to adopt active coping strategies. Knippels and Weiss (2000) carried out one of the few studies to have looked at coping using a well-validated questionnaire (the COPE scale) to compare users and non-users of CAM. They found that active coping and expressing emotions were predictive of CAM use in a self-selected sample of gay HIV+ men (controlling for employment, social support, pain and stage of disease) while the remaining two coping strategies, maladaptive coping and turning to emotions were not associated with CAM use. However, a number of other studies have found inconsistent relationships between coping strategies and CAM use. As Table 6 shows, six studies have found significant associations between CAM use and active coping, while four have not. Only one study has found a significant association between CAM use and other coping strategies, while seven have not. Those studies that found associations between CAM use and active coping suggest that this association might be robust, as they have been conducted in a range of countries (Germany, Austria, and the US) and in different illness groups (OM patients, breast cancer, HIV, and melanoma). However large representative or randomised samples have not been employed in this area, and the one UK-based study did not find a significant association between coping strategies and CAM use. Those studies that have been conducted suggest that CAM use tends to be associated with active coping but not with other coping styles.

Qualitative studies suggest that people take active roles in searching out information when they make decisions about using CAM. A number of studies describe how CAM users go through a process of finding out about CAM, actively researching different treatment options through reading popular and scientific publications, researching on the internet and talking to friends and family (e.g. Boon, Brown, Gavin, Kennard, & Stewart, 1999; Caspi et al., 2004; George, Ioannides-Demos, Santamaria, Kong, & Stewart, 2004; Kakai, Maskarinec, Shumay, Tatsumura, & Tasaki, 2003; Scott, Verhoef & Hilsden, 2003). These studies not only support the assertion that CAM users tend to take active roles in making decisions about treatment, but also highlight the importance of the social context, i.e. availability

of sources of information and/or advice, in CAM use.

While the evidence for associations between active coping and CAM use is mixed, such a tendency is consistent with the evidence outlined above that CAM use is associated with having a higher internal locus of control and stronger preference for participating in treatment. This triangulation of evidence suggests that taking an active role in treatment is associated with CAM use.

Table 6

*CAM use and Coping Strategies*

Study	Sample characteristics (n)	CAM use and active coping	CAM use and other coping
Furnham and Beard (1995)	Patients from CAM and OM clinics, UK (187)	N	N
Huber, Ludtke, Beiser and Koch (2004)	OM patients, Germany (350)	Y	---
Jacobs, Kraaimaat and Bijlsma (2001)	OM patients with arthritis, The Netherlands (262)	N	N (passive)
Moschen et al. (2001)	OM patients with breast cancer, Austria (117)	Y	N (depressive)
Nicassio, Schuman, Kim, Cordova and Weisman (1997)	People with fibromyalgia, US (111)	N	Y (passive)
Risa et al. (2002)	People with HIV attending OM clinics, US (118)	Y (problem focussed)	N (emotion focussed)
Singh et al. (1996)	People with HIV attending OM clinics, US (56)	N	N
Sollner et al. (2000)	Cancer patients using OM, Austria (172)	Y (information seeking, problem focussed)	N (depressive; minimizing)
Sollner, Zingg-Schir, Rumpold and Fritsch (1997)	OM patients with melanoma, Austria (215)	Y	---

Study	Sample characteristics ( <i>n</i> )	CAM use and active coping	CAM use and other coping
Suarez and Reese (2000)	People with HIV, US (108)	Y (active, planning, seeking support, turning to religion)	N (denial, disengagement, acceptance, suppression of competing activities)

Note. Y indicates a significant association between CAM use and coping strategy; N indicates no statistically significant relationship between CAM use and coping strategy.

### *3.3 Illness Perceptions*

While extensive research has been conducted on illness perceptions and use of and adherence to OM (e.g. see Petrie & Weinman, 1997), relatively little has been conducted in the context of CAM use. Research on illness perceptions and CAM use is summarized in Table 7. Seventeen of the twenty three studies summarized in Table 7 found significant relationships between CAM use and illness perceptions. Significant relationships between CAM use and illness perceptions have been found in the UK, the US, Canada, Germany, Austria, and Israel, suggesting that illness perceptions are relatively consistently associated with CAM use. However, this research has tended to focus mainly on perceptions of the causes of illness and much of it (15 of the 23 studies) has been conducted with cancer patients. Adrian Furnham has conducted a number of studies on non illness-specific populations, comparing CAM users to OM users. When viewed together these studies suggest that people who use CAM are more likely than non-users to believe that psychological factors have a role in the origin of illness and the promotion of health. For example, Furnham and Beard (1995) found CAM users stressed the importance of emotional well-being factors in health and illness more than OM users, and were more likely to believe that psychological, environmental and self-medication factors have more of an impact on future health, and medical treatments less of an impact on future health. Maskarinec and colleagues showed that beliefs about the causes of cancer can influence not only use of CAM, but also choice of CAM; for example users' explanations of use of dietary therapies incorporated talk about diet having a causal role in cancer (Maskarinec, Gotay, Tatsumura, Shumay, & Kakai, 2001). Such beliefs are consistent with many CAM approaches to illness and treatment. Few other aspects of illness perceptions have been investigated in CAM use. However, recent qualitative work suggests that perceptions of the severity of illness are not as important in CAM users' decisions about treatment as in OM users' decisions (Caspi et al., 2004).

Table 7

*CAM use and Illness Perceptions*

Study	Sample characteristics (n)	CAM use and illness perceptions
Boon, Westlake et al. (2003)	Random local sample of men with prostate cancer, Canada (534)	Y (More likely to view cancer as stable or spreading rather than cured)
Burstein, Gelber, Guadagnoli and Weeks (1999)	Women with early-stage breast cancer, USA (480)	Y (Fear of recurrence)
Cassileth, Lusk, Strouse and Bodenheimer (1984)	People with cancer, US (660)	Y (belief that cancer is preventable)
Diefenbach et al. (2003)	Men with prostate cancer, US (417)	N (worry about prostate cancer; perceived seriousness of prostate cancer)
DiGianni et al. (2003)	Women enrolled in genetic testing program for cancer USA (236)	Y (greater perceived cancer risk in unaffected participants) N (perceived cancer risk in cancer survivors)
Furnham (2000b)	General population, UK (159)	Y (belief that psychological factors influence health)
Furnham and Beard (1995)	Patients from CAM and OM clinics, UK (187)	Y (belief that emotional wellbeing factors important in health & illness)

Study	Sample characteristics ( <i>n</i> )	CAM use and illness perceptions
Furnham and Bhagrath (1993)	Patients from GP practice and homeopath, UK (160)	Y (belief that lifestyle is important in preventing illness)
Furnham and Forey (1994)	Matched sample from GP and CAM, UK (160)	N (beliefs about aetiology of illness)
Furnham and Kirkaldy (1996)	People from CAM and OM clinics, Germany (202)	Y (psychological factors important role in illness)
Hedderson et al. (2004)	Random local sample of people with cancer, USA (356)	Y (perceiving distress about symptoms)
Henderson and Donatelle (2003)	Women with breast cancer, USA (588)	Y (high beliefs in control over course of cancer and cause of cancer)
Moschen et al. (2001)	Patients with breast cancer attending OM, Austria (117)	Y (using CAM for 4 or more years associated with attributing illness to stress susceptibility, or interpersonal /psychological or external or coincidence causes) N (any CAM use not associated with causal attributions)
Paltiel et al. (2001)	Cancer patients attending OM clinics, Israel (1027)	Y (change in outlook or beliefs since diagnosis; belief situation will change in future)

Study	Sample characteristics (n)	CAM use and illness perceptions
Risa et al. (2002)	People with HIV attending OM clinics, US (118)	N (belief that HIV was likely to progress)
Sato, Takeichi, Shirahama, Fukui, and Gude (1995)	OM outpatients, Japan (1088)	N (understanding of illness, belief in diagnosis and treatment)
Shumay, Maskarinec, Gotay, Heiby and Kakai (2002)	People with cancer, Hawaii (143)	Y (degree of CAM use associated with perception of disease severity)
Sollner et al. (2000)	Cancer patients using OM, Austria (172)	N (fear of tumour progression)
Steginga et al. (2004)	Men with prostate cancer attending OM, Australia (111)	Y (CAM use at baseline associated with uncertainty about prostate cancer); N (CAM use 12 months post-baseline not associated with uncertainty about prostate cancer)
Tough, Johnston, Verhoef, Arthur and Bryant (2002)	People with colorectal cancer, Canada (871)	Y (belief that cancer caused by weak immune system, or toxins, or stress, or disturbance in energy balance or lifestyle) N (belief that cancer caused by eating wrong foods)

Study	Sample characteristics ( <i>n</i> )	CAM use and illness perceptions
Weis et al. (1998)	Patients from OM cancer rehabilitation clinics, Germany (250)	Y (belief that psychological distress is a cause of cancer)
Yates et al. (1993)	People with terminal cancer, Australia (152)	Y (Belief in alternative cause of cancer)

Note. Y indicates a significant association between CAM use and illness perceptions; N indicates no statistically significant relationship between CAM use and illness perceptions.

### *3.4 Holism and Natural Treatments*

Holism and natural treatments could be considered as general philosophies. However, they are not included as general philosophies in this review because they are beliefs and attitudes specifically about the nature of health, illness and treatments (holism) and treatments (natural treatments), and, unlike general philosophies, these beliefs do not incorporate philosophies about other areas of life. Much of the systematic research in the OM literature on beliefs about treatment has been concerned with beliefs specifically about medications using the Beliefs about Medicines Questionnaire (Horne, Weinman, & Hankins, 1999). In the context of CAM use, researchers have focused on beliefs about the nature of treatment provided by CAM and OM practitioners and preferences for certain forms of treatment. Swartzman, Harshman, Burkell and Lundy (2002) investigated perceptions of treatment empirically using factor analysis, and found that the extent to which treatments for chronic back pain were perceived as complementary was related to perceptions of treatments as more appealing, less invasive and less drug-like. Seidl and Stewart (1998) interviewed women using CAM for menopausal symptoms and found that these women perceived CAM therapies as natural and therefore safe. Barrett and colleagues (Barrett et al., 2003) interviewed CAM practitioners and patients and found that holism was one of four main themes that emerged as distinguishing between CAM and OM (the other themes were empowerment, legitimacy and access). Siahpush (1999) found that positive attitudes to CAM were associated with beliefs in holism and natural remedies.

In his national survey Astin (1998) found that having a holistic philosophy of health was predictive of CAM use. Table 8 shows that, while valuing holistic and non-toxic treatments is relatively consistently associated with CAM use in the literature, not all studies have found an association between treatment beliefs and CAM use (e.g. Hyland, Lewith, & Westoby 2003). For example, Balneaves et al. (1999) found no relationship between treatment beliefs and CAM use. However, this study looked at beliefs about the nature of treatments (a typical questionnaire item: 'complementary therapies assist the body's natural forces to heal'), rather than evaluations of treatments, and so could be seen as a test of knowledge rather than treatment beliefs or attitudes to treatments per se. Vincent et al. (1995) found an

inconsistent relationship between CAM use and treatment beliefs, with acupuncture patients being more worried about toxicity of OM and attaching less importance to science than not only a group of GP patients, but also patients from homeopathy and osteopathy. This highlights the diversity of CAM forms, and demonstrates the need for researchers interested in CAM use to attend to this diversity.

Table 8

*CAM use and Treatment Beliefs*

Study	Sample characteristics (n)	CAM use and treatment beliefs
Astin (1998)	Nationally representative, general population, US (1035)	Y (belief in holistic health)
Balneaves et al. (1999)	Women with breast cancer, Canada (52)	N (treatment beliefs)
Boon, Westlake et al. (2003)	Random local sample of men with prostate cancer, Canada (534)	Y (higher belief in efficacy of CAM for prostate cancer; lower belief in adverse effects of CAM)
Conner, Kirk, Cade and Barrett (2001)	Random sample from survey of women, UK (303)	Y (attitudes to dietary supplements)
De Visser and Grierson (2002)	People with HIV/AIDS, Australia (924)	Y (positive attitudes to CAM)
Furnham (2000b)	General population, UK (159)	N (belief in need for research evidence for medicine)
Furnham and Forey (1994)	Matched sample from OM and CAM, UK (160)	Y (belief that treatment should concentrate on whole person)
Furnham and Smith (1988)	Matched sample from GP and homeopath, UK (87)	Y (beliefs that treatment should focus on whole person, body can heal self, individual responsibility for health)

Study	Sample characteristics ( <i>n</i> )	CAM use and treatment beliefs
Hyland et al. (2003)	People attending CAM and OM clinics, UK (100)	Y (positive attitudes to CAM) N (beliefs in holistic health)
Jain and Astin (2001)	Random sample of university alumni, USA (601)	Y (belief that CAMs are ineffective or inferior associated with not using CAM)
O'Callaghan and Jordan (2003)	Opportunistic sample, Australia (171)	Y (beliefs in natural remedies, rejection of authority); N (beliefs in holism, innate belief in health)
Pettigrew, King, McGee and Rudolph (2004)	OM women's clinic, USA (250)	Y (knowledge of therapy, perceived efficacy of therapy)
Ratcliffe et al. (2002)	CAM and OM hospitals, UK (142)	Y (belief that doctors should treat patient as whole person)
Risa et al. (2002)	People with HIV attending OM clinics, US (118)	N (belief that OM treatment is beneficial; belief in holism)
Sherman et al. (2004)	OM patients with low back pain, USA (249)	Y (high expectations associated with likely to try therapies)
Vincent et al. (1995)	Patients attending CAM or GP clinics, UK (216)	Y (belief in risks of OM, depending on type of CAM)

Note. Y indicates a significant association between CAM use and treatment beliefs; N indicates no statistically significant relationship between CAM use and treatment beliefs.

Interview studies further suggest that holism and non-toxicity are important and attractive features of CAM. For example, in an interview study with users of CAM with cancer, 39% of users said they were attracted to CAM because of the natural, non-toxic nature of treatment (Cassileth, Lusk, Strouse, & Bodenheimer, 1984). In a more general study of CAM users in the UK, many users of CAM thought OM was riskier than CAM in terms of side-effects and the toxicity of medications (Murray & Shepherd, 1993). In a qualitative study of people using CAM at an NHS clinic, the desire for a holistic approach to treatment emerged as an important theme (Richardson, 2004). George et al. (2004) reported that their interviewees, while sometimes expressing concern about the effectiveness of CAM, were confident in its safety because CAM therapies were viewed as natural and therefore low risk. Boon et al. (1999) found that breast cancer patients went through a process of decision-making about CAM use in which reasons for using CAM included feeling there was nothing left to lose by trying, as CAM was seen as natural and not harmful. Both quantitative and qualitative studies thus suggest that people who use CAM are more likely than OM users to value a holistic orientation to treatment, to value treatments they perceived to be non-toxic and natural, and to be concerned about the dangers of OM.

### *3.5 General Philosophies*

#### *3.5.1 Unconventionality*

A number of authors have suggested that more general philosophies of life, in other words belief systems that are not specifically related to health, illness and treatment, might be associated with CAM use. Specifically, it has been suggested that people who are less conventional may be more likely to use CAM (McGregor & Peay, 1996). In this way, people who use CAM, an unconventional form of health care, are thought to be unconventional in other ways, such as their political views and interests. An immediate difficulty with this is the subjectivity and broadness of the concept of unconventionality and alternative philosophies of life. This problem has been overcome either by examining specified philosophies and political values, or by employing an explicitly subjective definition of unconventionality.

McGregor and Peay (1996) employed a subjective definition of unconventionality,

using self-ratings on a set of four attributes (conventional, habitual, traditional and conforming) to construct a subscale of unconventionality. They found that unconventionality predicted CAM use when comparing users of ‘touch for health’ with a matched community-based sample.

Astin (1998) looked more specifically at membership of cultural groups, a concept from socio-demographic research, and found that membership of a previously identified cultural group, the ‘cultural creatives’, predicted CAM use. This group is said to represent unconventionality and is characterised by commitment to causes such as feminism and environmentalism, and involvement with esoteric forms of spirituality and personal growth, self-actualisation and self-expression, and a love of the foreign and exotic. According to Astin, the general philosophy held by this group is congruent with the philosophies underlying many forms of CAM.

Similarly, Messerli-Rohrbach (2000) found that CAM users in Switzerland were more likely than non-users to subscribe to a post-materialist belief system, which includes valuing progression towards less impersonal societies, the importance of ideas in society and the improvement of towns and rural areas. In a study based in Germany a CAM group displayed higher health consciousness and awareness of environmental shopping than an OM group (Furnham & Kirkaldy, 1996), while in an English study users of acupuncture and shiatsu were more likely to be left-wing than people recruited from GP’s surgeries and outpatients departments (Furnham & Beard, 1995). The evidence that CAM users might be more post-materialist than non-users highlights the importance of considering the broader context of CAM use in terms of both belief systems that are broader than beliefs about health illness and treatment and also the ways in which these belief systems are situated within cultural environments.

### *3.5.2 Religiosity and Spirituality*

Further work concerning general philosophies has examined the relationship between religious and/or spiritual beliefs and CAM use, with mixed results. In a national study of people with cancer in Norway, use of spiritual forms of CAM (spiritual faith or touch healing) was associated with self-reporting as religious or in doubt, while fewer non-believers used spiritual forms of CAM. However, use of

non-spiritual forms of CAM was not associated with religious belief (Risberg, Wist, Kaasa, Lund, & Norum, 1996). Petry and Finkel (2004) found that people who use chiropractic, naturopathy, homeopathy, or other forms of CAM provided by an MD had higher scores on a measure of spirituality (not connected to any specific religion) than people using an MD who did not provide CAM. Lee and colleagues found that involvement in spiritual or community groups was associated with CAM use, supporting the importance of particular cultural group membership, but not necessarily formal religious beliefs (Lee, Lin, Wrensch, Adler, & Eisenberg, 2000). Indeed, in a UK-based study, users of acupuncture and shiatsu were less likely to be religious than people recruited from GP surgeries and outpatient departments (Furnham & Beard, 1995). Messerli-Rohrbach (2000) found that CAM users in Switzerland were more likely than non-users to hold neo-religious beliefs (e.g. in beliefs in reincarnation) and less likely to hold traditional Christian beliefs. Overall, the findings on religious and spiritual beliefs demonstrate that spiritual beliefs in particular, rather than adherence to conventional religions, might be associated with certain forms of CAM, particularly those with a strong spiritual ethos, and that the importance of wider belief systems may vary across forms of CAM. This is supported by a qualitative study in which cancer patients reported not only differences but also important similarities between the purposes of their use of CAM, religious and spiritual resources and OM (Tatsumura, Maskarinec, Shumay, & Kakai, 2003). The association between spirituality rather than conventional religious beliefs and use of certain forms of CAM is consistent with the hypothesis that CAM users are less conventional than users of OM, and suggestive of an interesting parallel between the conventionality of health care and that of religious beliefs. However, there is as yet no work that has investigated this parallel.

### *3.6 Experiences of OM*

One prominent theory about CAM use is that people who use CAM are dissatisfied with OM, and hence look elsewhere to satisfy their health care needs. While this is an apparently simple theory, it has become clear that dissatisfaction is far from a unitary construct, and that identifying important aspects of dissatisfaction is a complex task. A relatively large number of studies have investigated the relationship between CAM use and dissatisfaction with OM, but the lack of

conceptual clarity regarding dissatisfaction makes it difficult to integrate these findings and determine precisely which aspects of OM people who use CAM are dissatisfied with.

Table 9 summarises studies that have investigated associations between CAM use and dissatisfaction with OM, showing that a large number of such studies have been conducted and that most have found statistical associations between CAM use and dissatisfaction with some aspect of OM. Studies that have looked at dissatisfaction with OM in general terms have demonstrated that this is important in CAM use, although they provide little insight into the nature of dissatisfaction with OM. An early study of the beliefs of CAM users in Southampton suggested that an important reason for turning to CAM was the perceived failure of OM, while in contrast these participants often had high expectations for CAM treatments (Moore, Phipps, Marcer, & Lewith, 1985). McGregor and Peay (1996) demonstrated that any general measure is unlikely to capture the range of experiences with and attitudes to OM that are important to CAM users. They compared users of 'touch for health' with users of and found that both groups were satisfied with their last visit to OM, but CAM users were less satisfied with treatment for persistent problems.

Experiencing side-effects from OM therapies has also been associated with CAM use, particularly where OM therapies are relatively aggressive, such as in HIV/AIDS or cancer. In one study 59% of people with HIV/AIDS who had experienced side-effects from OM used CAM, while 46% of those who had not experienced side-effects used CAM (de Visser, Ezzy, & Bartos, 2000). Side-effects of OM therapies were an important reason for using CAM for people with head and neck cancer (Warrick et al., 1999). One further aspect of OM that may be related to patient dissatisfaction and subsequent use of CAM is the need for hope and optimism, particularly in relation to life-threatening conditions such as cancer. In one study of people with cancer, 40% of CAM users compared with 20% of non-users felt that their OM practitioners had given them little hope in their initial consultation (Risberg, Kaasa, Wist, & Melsom, 1997), while in a further study of older people with cancer optimism was higher in CAM users than non-users (Wyatt, Friedman, Given, Given, & Beckrow, 1999).

Table 9

*CAM Use and Dissatisfaction with OM*

Study	Sample characteristics (n)	CAM use and dissatisfaction with OM
Astin (1998)	Nationally representative, general population, US (1035)	Y (primary CAM use and distrust of & dissatisfaction with OM) N (any CAM use and dissatisfaction with OM);
Balneaves et al. (1999)	Women with breast cancer, Canada (52)	N (dissatisfaction with OM)
Begbie, Kerestes and Bell (1996)	Cancer patients attending OM, Australia (507)	Y (dissatisfaction with OM)
Bernstein and Shuval (1997)	Representative general population, Israel (2030)	Y (dissatisfaction with relationship, amount of time, convenience, amount of information, quality of care, overall)
Boon et al. (2000)	Random local sample of women with breast cancer, Canada (411)	Y (lower belief in curative & spread prevention abilities of OM; low belief that OM can help other treatments; low belief that OM helps body's natural healing, boost immune system, are safe; high beliefs OM has side-effects and weakens body) N (overall satisfaction with relationship with physician)

Study	Sample characteristics ( <i>n</i> )	CAM use and dissatisfaction with OM
Boon, Westlake et al. (2003)	Random local sample of men with prostate cancer, Canada (534)	Y (belief that OM has adverse effects) N (severity of OM side effects; rating of relationship with OM doctor; efficacy of OM)
Cassileth et al. (1984)	People with cancer, US (660)	Y (view of medical profession)
Chandola, Young, McAlister and Axford (1999)	People attending OM musculoskeletal clinics, UK (166)	Y (Dissatisfaction with OM treatment)
Conroy, Siriwardena, Smyth and Fernandes (2000)	GP patients, Dublin (200)	N (dissatisfaction with OM)
De Visser and Grierson (2002)	People with HIV/AIDS, Australia (924)	Y (negative attitudes to antiretrovirals) N (experience of side effects from OM)
De Visser et al. (2000)	People with HIV/AIDS, Australia (925)	Y (side-effects of OM)
Dimmock, Troughton and Bird (1996)	People with fibromyalgia attending OM outpatient clinic, UK (56)	Y (dissatisfaction with OM hospital treatment)

Study	Sample characteristics ( <i>n</i> )	CAM use and dissatisfaction with OM
Donnelly, Spykerboer and Thong (1985)	OM patients, Australia (238)	N (dissatisfaction with OM)
Downer et al. (1994)	People with cancer, UK (415)	Y (dissatisfaction with OM)
Furnham (2000b)	General population, UK (159)	N (scepticism to OM, side-effects of OM)
Furnham and Bhagrath (1993)	Patients from GP practice and homeopath, UK (160)	Y (dissatisfaction with OM)
Furnham and Forey (1994)	Matched sample from OM and CAM, UK (160)	Y (dissatisfaction with listening; sceptical and critical of efficacy of OM) N (wellbeing, efficacy, satisfaction with last visit)
Furnham and Kirkaldy (1996)	People from CAM and OM clinics, Germany (202)	Y (dissatisfaction with: general, last visit, concern with wellbeing, efficacy, listening)
Furnham and Smith (1988)	Matched sample from GP and homeopath, UK (87)	Y (dissatisfied with effectiveness and last visit, low confidence)
Hedderson et al. (2004)	Random local sample of people with cancer, USA (356)	Y (dissatisfaction with OM providers, but only for some CAM forms)

Study	Sample characteristics ( <i>n</i> )	CAM use and dissatisfaction with OM
Hsiao et al. (2003)	National probability sample of people with HIV, US (2466)	Y (negative attitudes towards antiretrovirals)
Koloski, Talley, Huskic, and Boyce (2003)	Local sample of people with IBS drawn from population-based survey, Australia (207)	N (overall satisfaction, satisfaction with relationship, provision of reassurance and support, being understood)
Langewitz, Ruttimann, Laifer, Maurer, and Kiss (1994)	People with HIV/AIDS attending OM outpatient clinic, Switzerland (100)	Y (dissatisfaction with efficacy for emotional and medical problems)
Lee, Charn, Chew and Ng (2004)	Local random sample of people with chronic diseases attending OM clinics, Singapore (488)	Y (Dissatisfaction with cost of treatment, dissatisfied with benefit received from treatment, overall dissatisfaction) N (satisfaction with doctor-patient interactions)
McGregor and Peay (1996)	People using 'touch for health' & community sample, Australia (166)	Y (dissatisfied with treatment for persistent problems) N (satisfaction with last OM visit)
Moore et al. (2000)	Patients with systemic lupus erythematosus attending OM clinics, Canada, US and UK (707)	Y (dissatisfaction with general, interpersonal skills, communication, time, accessibility)

Study	Sample characteristics (n)	CAM use and dissatisfaction with OM
Moschen et al. (2001)	Patients with breast cancer attending OM, Austria (117)	N (compliance & confidence in physician)
Ng, Tan, and Kua (2004)	Community older adults (>65), Singapore (2010)	Y (low compliance with OM)
Ng, Wong, Hong, Koh and Goh (2003)	Adults with asthma in OM care, Singapore (802)	Y (not having a better response to OM in past year)
Paltiel et al. (2001)	Cancer patients attending OM clinics, Israel (1027)	Y (OM not meeting needs; lack of trust in doctor) N (doctor's approachability, encouragement, inclusion of patient in treatment plan, explanations of illness or treatment)
Rawsthorne et al. (1999)	Patients attending IBD centres, Ireland, US, Sweden, Canada (289)	Y (dissatisfaction with OM; perceiving hospitals as dangerous)
Shmueli and Shuval (2004)	Representative sample of urban population, Israel (1390)	Y (low satisfaction with GP and/or specialists)
Shumay et al. (2002)	People with cancer, Hawaii (143)	Y (low satisfaction with doctors) N (satisfaction with treatment)

Study	Sample characteristics (n)	CAM use and dissatisfaction with OM
Sirois and Gick (2002)	CAM and OM patients, Canada (199)	Y (dissatisfaction with OM)
Sollner et al. (2000)	Cancer patients using OM, Austria (172)	N (satisfaction with information from physician, trust in OM)
Sollner et al. (1997)	Patients attending melanoma hospital clinic, Austria (215)	Y (perceived poorer emotional support from OM & wanting more support)
Tan, Uzun and Akcay (2004)	Patients attending OM hospitals, Turkey (714)	Y (dissatisfaction with OM therapy)
Tough et al. (2002)	People with colorectal cancer, Canada (871)	Y (dissatisfaction with OM doctor)
Verhoef, Sutherland and Brkic (1990)	People attending gastroenterology clinic Canada (395)	Y (sceptical of OM, dissatisfaction with communication) N (satisfaction with OM)
Westbrook, McIntosh and Talley (2000)	Dyspepsia population-based, Australia (748)	Y (CAM & OM users more dissatisfied with OM care than OM only users)

Note. Y indicates a significant association between CAM use and dissatisfaction with OM; N indicates no statistically significant relationship between CAM use and dissatisfaction with OM.

Qualitative studies support the quantitative evidence that a proportion of people who use CAM have unsatisfactory or difficult experiences with OM and then turn to CAM to seek relief (e.g. Verhoef, Scott, & Hilsden, 1998). For example, in a content analysis of interviews with men with prostate cancer, negative experiences of OM treatment emerged as important influences on CAM use (Boon, Brown, Gavin, & Westlake, 2003). The links between dissatisfaction with OM and treatment beliefs that are consistent with CAM are highlighted in a study of American military veterans' perceptions of health care and CAM use: The key motivators for participants to use CAM were dissatisfaction with both OM doctors' reliance on prescription medication and also their lack of interest in holistic aspects of health and illness (Kroesen, Baldwin, Brooks, & Bell 2002). Paterson and Britten (1999) used a temporal framework to analyse interviews with CAM users, looking at illness experience, assessment of OM and hopes for CAM. Their participants experienced illness in negative terms that impacted on their feelings. In terms of OM, three themes were differentiated. The first reflected a lack of confidence in the ability of OM to help them, based on their own past experiences and anecdotes about waiting lists; the second theme incorporated a feeling of being rejected by OM and of being offered little hope by OM; the third theme involved perceptions of OM treatments as unacceptable and involving side-effects. The participants' hopes for CAM ranged from complete relief of symptoms, to some relief in terms of physical symptoms or ability to cope, to an ability to reduce dependence on harmful OM treatments such as steroids. These interviews were conducted with predominantly first time users of CAM, and so provide some insight into patients' beliefs when they are starting to use CAM, suggesting that dissatisfying experiences of OM may lead to the desire for a different form of health care and the subsequent initiation of CAM use.

It is important to acknowledge that while some CAM users may be dissatisfied with some aspects of OM, this does not mean that CAM users have rejected OM altogether. Furnham and Bhagrath (1993) found that while homeopathy patients were dissatisfied with OM, they continued to use OM. Furthermore, people who use CAM also tend to use OM to a greater extent than people who use only OM (e.g. Astin, Pelletier, Marie, & Haskell, 2000; Bair et al., 2005; Druss & Rosenheck,

1999; Moore et al., 2000; Paramore, 1997). For example, in one national survey in the US CAM users made almost twice as many visits (on average in the previous year) to OM practitioners than non-users (Paramore, 1997). This has led to a number of possible explanations: perhaps some people who use CAM are more health conscious than non-users (Astin et al., 2000), are more illness conscious than non-users, have higher general care-seeking behaviour than non-users (Moore et al., 2000), use health care in general to a higher extent (Druss & Rosenheck, 1999) or possibly are unlikely to be satisfied with any health care and cannot find a form of treatment to suit them (Furnham & Smith, 1988). There is little evidence to differentiate between these explanations, and it seems probable that they are all relevant, possibly to different people at different stages in their quest for health care.

### *3.7 Summary*

A number of psychological factors have been associated with CAM use in a variety of populations. Studies of participation in treatment, coping strategies and locus of control suggest that people who use CAM tend to want to participate in treatment decisions and believe that they, rather than their health care professionals, have control over their health. Studies using a number of different questionnaire measures suggest that CAM users tend to hold beliefs in the importance of non-toxic and holistic treatments, and to have what have been termed postmodernist belief systems that are consistent with such treatment beliefs. Studies of illness perceptions suggest that CAM users tend to believe in the importance of psychological and lifestyle factors in the development of illness. Studies of experiences of OM suggest that CAM users tend to be dissatisfied with aspects of OM that include side-effects, consultations and the nature and efficacy of treatments. There is also evidence to suggest that CAM users tend to see themselves as more unconventional than non CAM users. Many of these factors have also been shown to be important considerations for people who use CAM, when they are asked why they do so.

### *3.8 The Relative Importance of Psychological Factors in CAM Use*

As explained in chapter 2, multivariate analyses can provide insight into which factors are most important (account for the most variance) in explaining CAM use. A number of studies have incorporated psychological factors in multivariate analyses of factors associated with CAM use, and so provide more rigorous evidence of associations between psychological factors and CAM use.

Arguably the most comprehensive multivariate analysis to date was conducted by Astin (1998) on data obtained from a nationally representative survey in the US. Astin found that philosophical/value congruence in terms of belonging to the 'cultural creatives' group and having a holistic philosophy of health and illness was the most important attitudinal predictor of CAM use, while dissatisfaction with OM and desire for control did not predict CAM use. Also predictive in this analysis were (in order of importance): anxiety, back problems, urinary tract problems, and chronic pain, having had a transformational experience, health status and education. However, other demographic factors, including ethnicity, age, sex and income, did not predict CAM use. Thus, according to Astin philosophical value congruence, education, health status and presence of specific physical/psychological problems are all independently associated with CAM use, while dissatisfaction with OM, desire for control and other demographic factors are not. Astin also looked separately at a small group of people (4.4% of his sample) who primarily relied on CAM, finding a different set of variables to be important here: distrust of and dissatisfaction with OM practitioners/hospitals, desire for control over health matters, and belief in the importance of one's inner life and experiences. This study thus highlights the potential difference between groups of patients according to the extent to which they use CAM (compared with their use of OM), and thus the importance of considering this when investigating CAM use. A number of smaller studies support Astin's main findings.

Siahpush (1999) conducted a regression analysis to predict favourable attitudes to CAM in Australia. Overall this model accounted for 23% of the variance in attitudes to CAM. Demographic factors, treatment beliefs, measures of dissatisfaction with OM and beliefs in science and authority were included in the

model. The significant independent predictors of favourable attitudes to CAM were education and beliefs in natural remedies, holism, individual responsibility, and consumerism. O'Callaghan and Jordan (2003) conducted a similar study in Australia, this time conducting a regression analysis to predict CAM use and accounting for 13% of the variance in CAM use. They found that, when controlling for demographic and health variables, rejecting authority and believing in natural remedies were significant independent predictors of CAM use, although believing in individual responsibility for health and holism were not significant predictors in this study. Taken together, the results of these studies provide some support for Astin's findings, suggesting the importance of beliefs in natural treatments and holism in explaining CAM use.

A number of multivariate studies have shown that beliefs about causes of illness and participation in treatment influence CAM use when controlling for demographic factors. Yates and colleagues conducted a logistic regression analysis to predict use of CAM in terminal cancer (Yates et al., 1993). They included in their analysis demographic variables and measures of beliefs about causes of cancer, desire for control over treatment, and will to live. They found that the three belief measures were each significant independent predictors of CAM use, while age and income had no independent effect. Henderson and Donatelle (2003) found that believing in one's ability to control the cause and course of cancer predicted CAM use in women with breast cancer when controlling for demographic factors. Similarly, Moschen and colleagues (2001) found that having an active, problem-oriented, coping style predicted CAM use in breast cancer patients when controlling for demographic and clinical factors. In comparison, Hedderson and colleagues (2004) found that neither desire for control nor locus of control scores were significant independent predictors of CAM use when controlling for demographic and health factors in their sample of cancer patients. Furnham and Beard (1995) found that CAM users believed more strongly than non-users that positive attitudes and general happiness influence future health, even when controlling for demographic differences between the two groups. There is thus some evidence to suggest that beliefs in one's ability to control one's health and beliefs in the importance of psychological factors in health are associated with CAM use. However, there are no studies to date that have compared factors

related to both beliefs about control and also beliefs about illness with the beliefs about treatment that were found to be significantly associated with CAM use by Astin and others.

In comparison to the above studies, McGregor and Peay (1996) found that lack of confidence in OM and unconventionality were both significant independent predictors of CAM use in a matched sample, controlling for occupation and health status. Shumay and colleagues also found that dissatisfaction with medical doctors was an independent predictor of CAM use in cancer, although socio-demographic factors, clinical factors and subjective health ratings accounted for higher proportions of variance in CAM use (Shumay, Maskarinec, Gotay, Heiby, & Kakai, 2002). In a national US-based study of people with HIV, having negative attitudes to antiretrovirals and wanting to participate in treatment decisions both independently predicted CAM use when controlling for demographic and clinical factors (Hsiao et al., 2003). Paltiel and colleagues (2001) also looked at CAM use in cancer patients, and found that lower trust in one's doctor and having needs that were not met by OM predicted CAM use after controlling for demographic and clinical variables. Unsuccessful experience of OM, rather than dissatisfaction per se, has also been found to be an important independent predictor of CAM use. For example, a lack of improvement in response to OM treatment independently predicted CAM use in a sample of Singaporean adults with asthma, alongside the influence of ethnicity, asthma severity and knowledge of asthma (Ng, Wong, Hong, Koh, & Goh, 2003). Further support for the role of dissatisfaction with OM comes from a factor analytic study to determine the most important reasons for using CAM among people using osteopathy, homeopathy and acupuncture (Vincent & Furnham, 1996). They found that the most important reasons were the positive value of CAM and previous experience of OM as ineffective; the next most important reasons were dangers and side-effects of OM, poor communication with doctors, and, lastly, availability of CAM. Thus, overall the evidence suggests that beliefs about treatment and health are important in the prediction of CAM use, while dissatisfaction with OM may be less important.

While multivariate quantitative studies can suggest the extent to which different variables are associated with CAM use when controlling for other variables, qualitative studies remind us that different beliefs can be inter-related. For example, in a study of users of St John's Wort, participants were characterised by a distrust of OM, a wariness about the side-effects of OM, a belief that their depression was not serious enough to warrant OM treatment, a view that St John's Wort was more natural and so safer than OM, a willingness to experiment and try new things and a belief in individual control of health and illness, which was often related to poor experiences with OM providers (Wagner et al., 1999). Furthermore, participants saw St John's Wort as a first stage in treatment, and if it did not work then use of prescription medications remained a possibility. In this study, illness-treatment beliefs about both OM and CAM, and negative experiences of OM were both related to use of St John's Wort and were also inter-related. Scott et al. (2003) have similarly demonstrated links between beliefs and experiences of OM. In their study of people with IBD three main themes were important in decisions to use CAM, the personal context of the individual, including their perceptions of health and illness, the impact of illness on daily life, and experiences of OM treatment in terms of negative side effects and failure to control symptoms.

One of the main issues highlighted by the multivariate analyses of CAM use is the possibility that there might be important differences between groups of CAM users and, indeed, multiple pathways to CAM use. A number of people have suggested that this might be a productive way of thinking about CAM use, including Furnham and Smith (1988) and Furnham and Kirkcaldy (1996), who suggested that users of CAM may be appropriately thought of in terms of different groups: *principalists*, who believe in CAM; people who are primarily frustrated with OM; and *opportunists*, who shop around for the best available. Such a distinction has not been empirically tested, but there are a number of studies that provide support for and suggest similar distinctions.

Furnham (2000a) provides evidence to support the existence of distinct routes to CAM use in terms of attitudes and beliefs, supporting the idea that although the findings above are often inconsistent, it may not necessarily be the case that some

findings are more accurate than others. He found that different attitudes towards homeopathy were predictive of being well-disposed to homeopathy, being poorly disposed to homeopathy and seeing homeopathy as a practical alternative or complementary to OM. Having tried few CAM therapies and not having heard of many predicted holding a negative attitude towards homeopathy; having tried more CAM therapies and being more religious predicted being more positively disposed to homeopathy; being younger and self-rating as less healthy than contemporaries predicted viewing homeopathy as a practical alternative/complementary to OM. A study of Chinese people with lupus further suggests that different psychological factors may be associated with CAM use in people who use CAM for different health reasons. Leong, Pong and Chan (2003) considered the predictors of CAM use separately for lupus patients who used CAM with the intent to treat lupus and those who used it for other reasons. They found that both disease-specific and general CAM users perceived their illness as less severe than non-users, while disease-specific CAM users were different from non-users in a number of other ways, including having greater learned helplessness.

A number of authors have suggested that it is necessary to use dimensions such as type of CAM form in order to develop a clearer understanding of possible pathways to CAM. Kelner and Wellman (1997) highlight the importance of considering the form of CAM being used, suggesting that different issues vary in importance between different therapies, and that the choice to use CAM should rather be viewed as a choice between a range of individual therapies, both from OM and CAM. This is also shown to be important by Vincent and Furnham (1996), who compared the beliefs and reasons for choosing a therapy of patients using osteopathy, homeopathy and acupuncture and found, for example, that osteopathy users were seeking help for mainly musculoskeletal problems, while users of homeopathy and acupuncture were seeking help for a wider range of problems; and that homeopathy patients felt more strongly about the naturalness of treatments, while users of acupuncture were more sceptical and critical of OM. Similarly, there may be differences between people who use practitioner-provided CAM and over the counter CAM, as described above Wolsko and colleagues were able to predict use of CAM providers among all people reporting CAM use (Wolsko, Eisenberg, Davis, Ettner, & Phillips, 2002). A

related issue, highlighted by Astin (1998) is the likelihood of differences between people who use CAM alongside OM, and those who use CAM instead of OM.

### *3.9 Summary*

A small number of multivariate analyses have been conducted to date, with a range of designs and findings, making it difficult to draw any firm conclusions. Because the studies to date have not all been conducted on the same populations and have not tended to delineate possible differences between initial and continuing use of CAM, or between different forms of CAM, the possibility remains that the factors associated with CAM use in univariate analyses may emerge as more or less important depending on the specific forms of CAM and population groups sampled. There is evidence to suggest multiple pathways to CAM, but at present no clear evidence for the precise nature of such differences. However, the studies discussed above do suggest that psychological factors (desire for participation/control, beliefs related to holism and natural treatments, illness perceptions, and dissatisfaction with OM) are important in explaining CAM use when demographic and clinical factors have been taken into account.

### *3.10 Ongoing CAM Use*

This section considers the existing evidence concerning why people continue to use CAM. There is evidence to suggest that CAM use is indeed not a unitary behaviour and does change over time, supporting the importance of a focus on ongoing CAM use. Truant and Bottorff (1999) used grounded theory to analyse interviews with women and showed that there are three inter-connected phases of the decision-making process; getting something in place, getting a personalized regimen in place, and fine-tuning a regimen to live with. The first two stages tended to help to develop and increase a sense of control, hope, and healing, while the third stage helped women to maintain this sense of control while acknowledging, but disregarding, that their disease outcome probably lay beyond their control. In this way, the process of choosing and using CAM in cancer can be seen as a protective mechanism in which the concept of control is central. This study goes some way to illuminating the limitations of cross-sectional research and frameworks, by

showing that choosing and using CAM is a dynamic process involving re-evaluations and modifications over time.

Attena and colleagues conducted a prospective study of people using homeopathy, conducting interviews with patients one year after their first homeopathic consultation (Attena, Del Giudice, Verrengia, & Granito, 2000). They found that 83% of patients reported adhering to their treatment and 84% reported being satisfied with their treatment, while 74% reported that their health status was either somewhat or much better than when they had started homeopathy. This study suggests that rates of adherence to and satisfaction with homeopathy are high, which is supported by findings from a large-scale study from Germany that found that practitioners reported 73% of patients to have very good adherence to CAM therapies (Schneider, Hanisch, & Weiser 2004).

Sirois (2002) recruited people from a range of health care centres in Canada and separated their participants into three groups, those who used OM, those who were established CAM users (who regularly used CAM) and those who were new or infrequent CAM users. They found that, even when controlling for number of health problems experienced, established CAM users sought treatment more often than new CAM users, who in turn sought treatment more often than the OM group. Established CAM users also used OM to a lesser extent than new CAM users. In a similar study, Sirois and Gick (2002) investigated the attitudes, personality and health characteristics of new and established CAM users. The two predictors of new/infrequent CAM use were performing more health-aware behaviours and dissatisfaction with OM, while the CAM group also scored higher than the OM group on a measure of the personality trait openness to experience. In comparison, the group of established CAM users reported more health problems and more health-aware behaviours (e.g. healthy diet) than the new/infrequent CAM users. This study suggests that dissatisfaction with OM is more important in initial CAM use than ongoing CAM use, and that poor health status is important in ongoing CAM use. However, the previous study (Sirois, 2002) suggests that a high tendency to seek treatment, rather than the number of health problems experienced, is an important determinant of ongoing CAM use. These studies provide quantitative evidence

that established CAM users differ in some respects from new CAM users. However, the cross-sectional designs used means that the results cannot be interpreted in terms of causal influences on CAM use over time and are only weakly suggestive of such influences. The finding that dissatisfaction with OM was more important in initial than ongoing CAM use is supported by some qualitative research, including the study by Patterson and Britten (1999) described above and a study by Andrews (2002) in which older CAM users reported that dissatisfaction was important in their initial decisions to use CAM. However, Luff and Thomas (2000) found that CAM users contrasted positive aspects of relationships with CAM practitioners with more negative experiences of relationships with OM practitioners, suggesting that dissatisfaction with OM might have a role in ongoing as well as initial CAM use.

A number of qualitative studies present analyses of patients' experiences of CAM use and their evaluations of and satisfaction with CAM. Canales and Geller (2003) interviewed women with breast cancer who were using CAM and found that how CAM made their participants feel, for example in terms of the relationship with CAM providers, was more important to participants than the impact CAM had on either cancer or side-effects from OM. Luff and Thomas (2000) interviewed people using CAM within the NHS about their experiences of and satisfaction with their treatment. They found that experiences of treatment were more important for their participants' satisfaction than more abstract beliefs about treatment. Participants reported improvements in their health from using CAM and highly valued the relationships they developed with CAM practitioners, who were characterised as caring, calm, and encouraging patient involvement. This suggests that the therapeutic relationship incorporating patient involvement is important in ongoing CAM use. A range of studies provide further support for the importance of experiences of therapeutic relationships in ongoing CAM use. Lee-Treweek (2002) showed that trust between patients and therapists is vital in ongoing CAM use and is created over time by patients, based on experiences of therapists' communication and treatment. Murray and Shepherd (1993) found that CAM users most valued the therapist's time and attention. Andrews (2002) found that older CAM users in the UK were satisfied with their treatments, felt their health had benefited, and felt empowered by participating in treatment decisions and later (2003) noted that

CAM users value in particular the individuality which they perceived in their relationships with CAM practitioners. These studies not only suggest that experiences of therapeutic relationships are important in ongoing CAM use, but also suggest that abstract beliefs about participation in treatment might play a role in ongoing CAM use.

One questionnaire study provides evidence for a role of illness beliefs in ongoing CAM use. Searle and Murphy (2000) conducted a prospective study of people using homeopathy, using the self-regulatory model to carry out a small-scale ( $n = 30$ ) longitudinal examination of illness beliefs and CAM use. They found that causal beliefs (such as beliefs in stress and one's own behaviour as causes of illness) were the best predictors of adherence to and understanding of homeopathy (compared to other illness beliefs), suggesting a role for illness beliefs in ongoing CAM use.

Mercer and Reilly (2004) interviewed people using homeopathy within the NHS and two main themes emerged from their analysis, themes external and internal to the consultation. The themes external to the consultation show that the environment within which homeopathy was undertaken, for example the NHS provision and the physical environment, were important to patients. The themes internal to the consultation show interplay between abstract beliefs about treatment and concrete experiences of consultations. For example, patients valued being treated as a whole person, which relates to both beliefs about holism and perceptions of the practitioner. A study of CAM use by people with Parkinson's disease also suggests that beliefs about treatment are important in ongoing CAM use: Low (2004) showed that CAM users' beliefs about the naturalness of specific CAM therapies vary from risk free to risky and that these beliefs have consequences for ongoing CAM use.

In summary, very few studies have examined the factors and processes involved in ongoing CAM use. Those that have suggest that patients' experiences of treatment and their relationship with their practitioner might be important determinants of ongoing CAM use. Abstract beliefs about participation in treatment, holistic and natural treatments, and dissatisfaction with OM might also have a role in

explaining why people return to CAM.

### *3.11 Conclusions*

It is not at present possible to outline a general theory of why people turn to CAM because of the inconsistency of research findings and the small number of theoretically driven studies. A range of factors influence CAM use and different factors may be important for different groups of CAM users. Overall, the picture remains complicated, and there is no reason to disagree with John Astin's conclusion: 'No matter which way we characterize people who use complementary/alternative care, the reasons why they make such choices are complex' (Astin, 2000, p.110). It is undoubtedly important to reach a more comprehensive understanding of initial CAM use, but it is also both theoretically and practically important to begin to understand the issues surrounding continuing use of CAM. The literature to date has produced a general picture of the factors involved in CAM use. There remains a need for greater specification of how these factors are related to each other over time, and a broader view of CAM use as a long-term process involving reappraisals over time. Few studies have investigated the processes or factors involved in ongoing CAM use, although there is evidence to suggest that psychological factors are important in ongoing CAM use and that this behaviour requires further research. Individuals do not make a one-off decision to use CAM; once they have decided to try a form of CAM there are a number of possible outcomes, ranging from devout adherence to one form of CAM and one practitioner, and the rejection of OM, to never using any form of CAM again.

## Chapter 4

### Methodological and Theoretical Frameworks

#### *4.1 Introduction*

This chapter outlines the methodological and theoretical approaches taken in the empirical research that follows. The first section discusses the issues surrounding the choice of methodological frameworks, arguing that it is appropriate to use both qualitative and quantitative approaches to the research question. The second section outlines the issues surrounding the choice of theoretical frameworks, arguing that the dynamic model of treatment perception, located within the self-regulatory model framework, is the most appropriate framework available to guide the quantitative research.

#### *4.2 Combining Qualitative and Quantitative Approaches*

Recently there has been increasing interest in and calls for the use of combined methods in the fields of health psychology and other health related research (e.g. Foss & Ellefsen 2002; Yardley, 2001). The use of a combination of qualitative and quantitative methods is not a new development in psychology. As Fine and Elsbach (2000) have argued, many of the classic studies in social psychology incorporated both quantitative and qualitative data and analyses. A significant barrier to the renewal of such approaches is the common representation of qualitative and quantitative methodologies as distinct and antagonistic approaches to research. This conceptualization is questioned and shown to be problematic. Through a consideration of research in health psychology and related areas, and of writings on the philosophy of science, it is argued that qualitative and quantitative approaches to research both have strengths and weaknesses, and if used in combination can provide a balance to each other and enable a more comprehensive understanding of complex phenomena to emerge. A combination of qualitative and quantitative approaches is not merely suitable, but valuable, for the current research project.

#### *4.2.1 Levels of Analysis*

All research is underpinned by philosophical assumptions about the nature of reality and knowledge. These assumptions are often implicit, however, and are most

often addressed in the specific contexts of the philosophy and history of science, or when there is an express need to justify an approach to research. Such a need commonly arises when radically new methods are generated or used which do not easily fit within the dominant paradigm of a discipline. In psychology, the development of qualitative methodologies has been accompanied by the explication of underlying assumptions of both quantitative and qualitative approaches. For example, philosophical arguments have been key in the development, justification and acceptance of discourse analysis (see Potter's justification of discourse analysis, 1996).

The recent trend to advocate and use combinations of quantitative and qualitative methods has not always incorporated an awareness of the foundational philosophical issues underlying such an approach. According to Bryman (1988), such work attempts to resolve the technical tensions surrounding the combination of methods while ignoring, or side-stepping, the epistemological tensions. Guba and Lincoln (1994) have argued that it is necessary to form a position on issues of ontology, epistemology and methodology before making decisions about methods, although the formation of such a position does not necessarily determine the methods chosen. Therefore questions of methodology are imbued with questions of philosophy. In the debate between qualitative and quantitative approaches to the social sciences, relativism and realism have been identified as the respective philosophical positions underlying these approaches. In the following section these underlying differences between qualitative and quantitative research are summarised and their extent and implications are explored.

#### *4.2.2 The Dichotomous View of Qualitative and Quantitative Approaches*

Differences between qualitative and quantitative approaches to research have been emphasised by proponents of both forms of research (e.g. Abraham & Hampson, 1996; Chamberlain, Stephens, & Lyons, 1997; Sciarra, 1999). At its most extreme this approach results in the conclusion that qualitative and quantitative research constitute separate, and incommensurable, approaches to research (e.g. Masse, 2001). A number of dichotomies surrounding ontology, epistemology, and the research process have been constructed both by those arguing the case for

qualitative methods, and those arguing for quantitative methods, in the defence of their preferred approach to research. Although qualitative and quantitative approaches each consist of a variety of specific methodologies, it is possible to draw out some general differences between the two approaches. Table 10 summarises a number of these typical differences between qualitative and quantitative approaches, in a simplified form.

Table 10

*Comparison of Quantitative and Qualitative Approaches to Research*

Feature of research	Quantitative position	Qualitative position
Ontology	Realist	Relativist
Epistemology	Knowledge limited only by technologies of knowing	Knowledge is embedded in value and culture (including the research process)
Aims/intended outcome	Universal laws	Locally situated and contextualised understandings
Relationship between researcher and participants	Distant, objective	Close, subjective
Scope	General, nomothetic	Specific, idiographic
Nature of information	Causal, mechanistic explanation and prediction	Meaning, understanding
Relationship between theory and data	Hypothetico-deductive, data confirms/falsifies theory	Inductive – theory emergent from data

#### *4.2.3 Breaking down the Dichotomies*

Quantitative research is characterized by a (realist) belief in an independent reality which is knowable. Qualitative research is characterized by a (relativist) belief

that the world is only knowable through our conceptual frameworks, which may differ between individuals and cultures. The extreme ontological positions are incommensurable – there cannot both be an independent, external reality, and a reality that only exists as we apprehend it through our conceptual frameworks. However, this does not mean that researchers are faced with an abstract, unjustifiable, decision to make about the nature of reality before being able to make progress in the selection of a coherent approach to research. Whether or not there is an independent reality does not have a meaningful impact on how we go about ascertaining the nature of that reality. Epistemological positions, however, can be seen to have a meaningful impact on methodology (Bryman, 1988).

While there are meaningful implications of the different epistemological positions represented in Table 10, the extreme positions of naïve realism and strong relativism are problematic and rarely held in social science research. As Fay (1996) points out, the realist, positivist view that our knowledge of reality is only constrained by our ability to apprehend it has been replaced by perspectivism as “the dominant epistemological mode of contemporary intellectual life” (p. 72). Perspectivism asserts that we can only know reality through our conceptual frameworks. While there are serious problems with an extreme relativist ontological position, such as the impossibility of asserting moral judgement, a relativist epistemology is tenable, and is not far removed from the perspectivist standpoint. What is required, according to Fay (1996), is a balance between acknowledging the subjective, constructed nature of knowledge and grounding that knowledge in a shared reality. Yardley reaches the same conclusion from an explicitly pragmatic standpoint (Yardley, 2001).

The further differences between qualitative and quantitative research can be seen as emanating from their philosophical underpinnings. However, it is argued that these differences are not dichotomous in nature and do not justify viewing qualitative and quantitative approaches as incommensurable: they can be seen as differences in emphasis, rather than differences of type. The extreme positions on each side can be problematic, and there is often as much diversity within each form of research as there is between the two. In terms of the aims and outcomes of research, in

quantitative research the search for universal laws is often replaced by a search for probabilistic statements about specific groups of people within specific contexts. Quantitative researchers are also aware of the contextualised nature of their research, and attend to the importance of context and its impact (e.g. Chow, 1995). In qualitative research, the extent to which findings are locally and contextually situated varies, from individual case studies to studies based on a number of different settings, to studies situating findings within the context of the investigation to studies situating findings within the cultural group of participants. A similar situation exists in relation to the scope of findings. Qualitative researchers are becoming concerned with the transferability of their findings to other groups, while quantitative researchers are often concerned to emphasise the limited generalisability of their findings.

The tendency to be close or distant towards one's participants does not appear to be a determining aspect of methodology. Qualitative researchers differ in the extent to which they attempt to get close to their participants, and there are many discussions in the ethnography literature concerning the dangers of getting too close and 'going native'. The extent of objectivity and subjectivity within the research process is again difficult to cast in a dichotomous framework. Quantitative researchers do not deny that there are subjective influences on the research process, while qualitative researchers differ in the extent to which they embrace the subjective nature of research. A related difference is the extent to which researchers rely on their own concepts or those of their participants. The problem with relying solely on the researcher's concepts is that one's research may become overly theoretically driven, esoteric and irrelevant to the real world. However, the problem with relying solely on the concepts of those being researched is that no new understanding is generated, and research becomes a descriptive exercise, achievable by anyone, with no role for researchers.

A desire for understanding and a focus on participants' meanings is by no means incompatible with a desire for explanation in terms of causal mechanisms. The difference here can again be viewed in terms of the difference between an emphasis on the constructs of the researcher and the researched. A focus on participants'

meanings in order to gain understanding of their behaviour emphasises the constructs of the researched. A focus on the causal mechanisms purported to underlie and hence explain behaviour emphasises the researcher's constructs. Furthermore, both types of information can be seen as necessary to generate a comprehensive understanding of behaviour. While an emphasis on the causal mechanisms underlying behaviour is useful in that it can generate knowledge about why behaviour occurs, an emphasis on participants' meanings and understandings of their behaviour can provide equally valuable knowledge about how behaviour occurs in the context of participants' systems of meaning. In order to develop comprehensive understandings of behaviour it is useful to know which psychological constructs such as attitudes can predict behaviour and also to know how these constructs are developed and maintained socially and to understand the meanings that are associated with the behaviour.

The dichotomies between qualitative and quantitative research, as established by proponents of each approach, have been further sustained by social factors, such as the need to publish in top journals and attract research funding (Krantz, 1995). This can be seen as a consequence of the dominance of one approach over the other. For example, in psychology quantitative research has dominated over qualitative approaches, particularly in the form of a focus on cognition. In this way, the emphases that can be found in the literature on the differences between qualitative and quantitative research can be seen as sociolinguistic strategies on the part of qualitative researchers to attain recognition and status and on the part of quantitative researchers to maintain the dominance of quantitative methodologies. The rise of qualitative research in recent years can be seen as facilitating a less antagonistic and divisive approach to the differences between qualitative and quantitative research, thus enabling a more considered approach to these issues and resulting in a number of calls to abandon this dichotomy and move on to combining, or even integrating, these frameworks to produce a more coherent overall strategy for research. Indeed, the above discussion has shown that a dichotomous view of qualitative and quantitative research is inaccurate and no longer appropriate (see also discussions in Bryman, 1988; Hammersley, 1992; Yardley, 2001). There is a good deal of overlap and similarity between qualitative and quantitative traditions, both at an

epistemological and methodological level; there remains the question of why the two approaches need to be combined, what is gained by doing so?

#### *4.2.4 Advantages of Combining Qualitative and Quantitative Methods*

Different approaches to research have different strengths and weaknesses, and combining qualitative and quantitative approaches can facilitate a more comprehensive account of research phenomena (Sale, Lohfeld, & Brazil, 2002). This thesis aims to provide an answer to the question ‘why do people return to CAM?’ To comprehend the nature of the answer to this question it is first necessary to explore further the research question itself. This question clearly necessitates a longitudinal approach to the research process. A range of factors have been shown to be important when considering CAM use. Individuals use CAM, but they do so within their own social networks and the broader socio-cultural climate, and in using CAM they form a relationship with a practitioner. The many levels at which CAM use can be situated, combined with the longitudinal picture of continuing CAM use, suggests that this research question (and so the answer sought) involves a complex interplay of various influences on behaviour. In addition, the applied nature of this project requires that the findings should be transferable to people other than those participating in this research. The demands of this research question are best met by a combination of qualitative and quantitative methods. Such a combination of methods allows the various demands to be met, and by drawing on the strengths of both qualitative and quantitative approaches enables a more complete version to be offered in accounting for why people (re)turn to CAM.

Two main methods are used in the current thesis, qualitative ethnographic research and quantitative questionnaire research. These methods offer complementary approaches to the research question, facilitating an explanation of CAM use in terms of the experiences of individuals situated within a socio-cultural context and the relative importance of factors influencing CAM use across individuals. Three methods are discussed in terms of what they offer this particular piece of research: ethnographic interviewing, ethnographic unstructured observation, and questionnaires. The strengths of qualitative and quantitative methods and combining these methods are discussed in detail by a number of authors (e.g.

McGrath & Johnson, 2003; Robson, 1993; Seale 1999; Yardley, 2001).

The strengths of ethnographic observation include:

- Can access habitual and non-verbal aspects of behaviour that are not readily accessible to direct questioning through interviews or questionnaires.
- Less intrusive than other methods – more naturalistic.
- Can indicate potentially interesting factors not verbally acknowledged by either researcher or the participants.

The strengths of in-depth ethnographic interviewing include:

- Explicating the insider viewpoint.
- Focus on meaning, experience, and concerns of individuals.
- Focus on contextual aspects of experience.
- Focus on process and ability to understand process as dynamic.
- Micro-level understanding.

Previous work on CAM employing qualitative interviews has been valuable in elucidating the processes involved in decisions about initiating CAM use, for example in cancer (Boon, Brown, Gavin, Kennard, & Stewart, 1999).

The strengths of a questionnaire approach include:

- Potential generalisability.
- Researcher's concepts used to establish a causal model.
- Can answer 'how many' questions, in other words questions that require numerical answers.
- Permits the development of questionnaires which enable systematic comparisons between groups of people.
- Can suggest the extent to which different concepts are important.
- Can address issues not easily addressed in interviews, for example sensitive and personal information such as diagnoses may be more readily obtained through questionnaires, which offer more distance between the researcher and participants, than through face-to-face interviews.

- Can address issues not immediately available to informants, for example questionnaire studies can examine predictive longitudinal associations between different beliefs, while interviews can examine peoples' justifications for and meanings associated with behaviour.
- Provides a means to understanding at a macro-level.
- Permits large-scale longitudinal research.

Previous work on CAM using questionnaires and the conceptually similar survey interview has provided information about the proportion of the general public and specific medical populations who use CAM (e.g. Eisenberg et al., 1998), and the beliefs of CAM users (e.g. Astin, 1998).

The strengths of combining ethnographic and questionnaire methods include:

- Can examine the consistency between micro and macro level explanations.
- Comprehensiveness – rather than the findings from ethnographic and questionnaire methods being used to validate each other, they can be used to increase the comprehensiveness of the research by accessing different aspects of the behaviour.
- Strengths of each can compensate for weaknesses of other.
- Can reveal issues for further study, and suggest appropriate means to do so.
- Encourages the grounding of the researchers' concepts in participants' realities.

In the present research, combining quantitative and qualitative methods is not only defensible but also valuable. In the interests of comprehensiveness and balance, such a complex question is best answered by a combination of complementary methods. Although there has been little research into CAM use incorporating qualitative and quantitative methods, previous work in related and similarly complex areas suggests that combining qualitative and quantitative methods is indeed a useful undertaking. Work that has benefited from a combination of methods includes research on: primary care utilisation (Rogers & Nicolaas, 1998); patterns of participation in medical consultations (Waitzkin, 1990); intravenous drug use and HIV/AIDS (Carlson, Siegal, Wang, & Falck, 1996); decision-making regarding

infant feeding behaviour (Bauer & Wright, 1996). Previous research also demonstrates that combining qualitative and quantitative approaches can result in mutually reinforcing findings (e.g. Chan, 2001), or contradictory findings (e.g. Maher, Kinne, & Patrick, 1999). Both outcomes are potentially valuable in terms of the overall goal of providing a comprehensive account of why people return to CAM. As Maher and colleagues (1999) recognized, contradictory findings can point to weaknesses in one or other aspect of a study, and, furthermore, can suggest areas that require further investigation.

#### *4.2.5 Means of Combining Qualitative and Quantitative Research*

Having established that qualitative and quantitative methods can be combined, and that combining them in the present research project is worthwhile, the technical question remains: How to combine methods? Morgan (1998) suggests there are four main ways in which methods might be combined. According to his framework, two decisions must be made, firstly about which method will take priority in the research, and secondly about the order in which the primary and supplementary methods are best employed. Such a framework however ignores the possibility of giving each method equivalent emphasis, and also implies a linear, rather than cyclical, model of the research process. The technical question must be related to how to get the best out of each method, and also how to get the most out of the combination of methods. A cyclical, iterative view of the research process thus seems most appropriate, using the findings from each method to inform the other approaches. In practice, however, this could be difficult to achieve without either very careful planning or the involvement of a number of researchers (or both). Here, the longitudinal nature of the research is advantageous. It is envisaged that, as in a longitudinal research project on aging conducted by Wenger (1999), the combined and overlapping collection and analysis of qualitative and quantitative data will be advantageous. Wenger found that as the combination of methods overlapped in terms of timing, insights from each approach could be used to inform the other approach, and the interactions between the two approaches had a profound impact on the progression and outcomes of the research. In the present research project the timing was such that existing published qualitative research could inform the design of the questionnaire study, and that preliminary quantitative analyses were

available before the completion of the ethnographic research. In this way it was hoped that the advantages gained by combining methods would be maximized.

### *4.3 Theoretical Frameworks*

#### *4.3.1 Introduction*

This section considers a number of conceptual frameworks in terms of their ability to provide a sound theoretical grounding for research into why people continue to use CAM. At a fundamental level, it is important to justify not only the choice of a particular theoretical framework for a piece of research, but also the decision to use a theoretical framework in the first place. As outlined above, quantitative and qualitative approaches to research tend to take different positions on the relationship between theory and data. Quantitative approaches tend to use theories to determine data collection, and then use data to test theories (e.g. in research applying social cognition models the constructs prescribed by the models determine the data collected, which is then used statistically to examine the utility of the model in that particular domain). The emphasis is on the development of general theories of human behaviour capable of making predictions and suggesting why behaviour occurs. Qualitative approaches tend to use broad theoretical assumptions to guide the collection of data, from which localised, contextualised theories are constructed to explain the data (e.g. in discourse analysis the assumption that language is key to social life guides the collection of discourses which the subsequent analysis attempts to explain). The emphasis is on the development of specific theories of human behaviour capable of explaining behaviour in terms of meanings and suggesting how behaviour occurs. The difference between qualitative and quantitative approaches to the theory-data relationship is therefore closely related to the difference in the types of explanation emphasised by the two approaches. From a pragmatic perspective both types of explanation are useful additions to the body of health psychology knowledge to the extent that they provide information that can be used to fulfil valuable, practical functions. In keeping with the conceptual differences between quantitative and qualitative approaches to the theory-data relationship, specific existing theoretical models were used to guide the quantitative aspect of the present thesis, whereas broader theoretical perspectives were used to guide the

qualitative aspect of the thesis. The following section therefore focuses on the use of theoretical frameworks and models to guide the quantitative research.

From a quantitative perspective, conceptual frameworks and models are needed to encourage the development of more cohesive and complete understandings of why people use CAM. The use of theoretical frameworks and models facilitates the organization of research findings, comparisons between studies, the development of interventions, the identification of further research questions, and encourages the development of explanations that go beyond descriptions of behaviour.

In the following sections, theoretical frameworks from health psychology and related disciplines are evaluated in terms of the fundamental assumptions made about human behaviour, the level of empirical research evidence supporting them, and their strengths and weaknesses in terms of their ability to provide coherent explanations of behaviour and to extend our understanding of why people use CAM. The frameworks are also evaluated in terms of their potential to integrate the findings from the literature reviews and to incorporate the major conceptual issues identified therein. Following the conclusions of chapter 3, any explanation of ongoing CAM use needs to incorporate the conceptualisation of CAM use as a dynamic behaviour occurring across time, and should embrace all the factors relevant to explaining why people return to CAM: health status; abstract beliefs related to control and participation, holism and natural treatments; illness perceptions; past experiences of OM; concrete experiences of treatment including the therapeutic relationship; and the broader social and cultural context of CAM use.

A number of frameworks have been used to understand why people use orthodox health care services. While these frameworks have rarely been applied to the CAM context, it is appropriate to examine the potential application of existing frameworks, developed in research on OM, to CAM use. Use of OM has been positioned within theoretical frameworks as both a health behaviour (undertaken to maintain health or improve well-being) and an illness behaviour (undertaken in response to specific symptoms). Within this broad classification of behaviours, CAM use can also be positioned as a health behaviour and an illness behaviour,

and both types of behaviour fall within the remit of the current research question: people may continue to use CAM either as a health behaviour or an illness behaviour or as a combination of both. The frameworks considered below are major theoretical frameworks from health psychology and related disciplines that have been applied to health care seeking or adherence to treatment in the context of OM and CAM. While other frameworks, such as self-efficacy and health locus of control, could be applied to CAM use, the present discussion is limited to those major frameworks that are sufficiently general to incorporate a range of factors associated with CAM use and that have already been applied to some extent in the CAM context.

#### *4.3.2 The Behavioural Model*

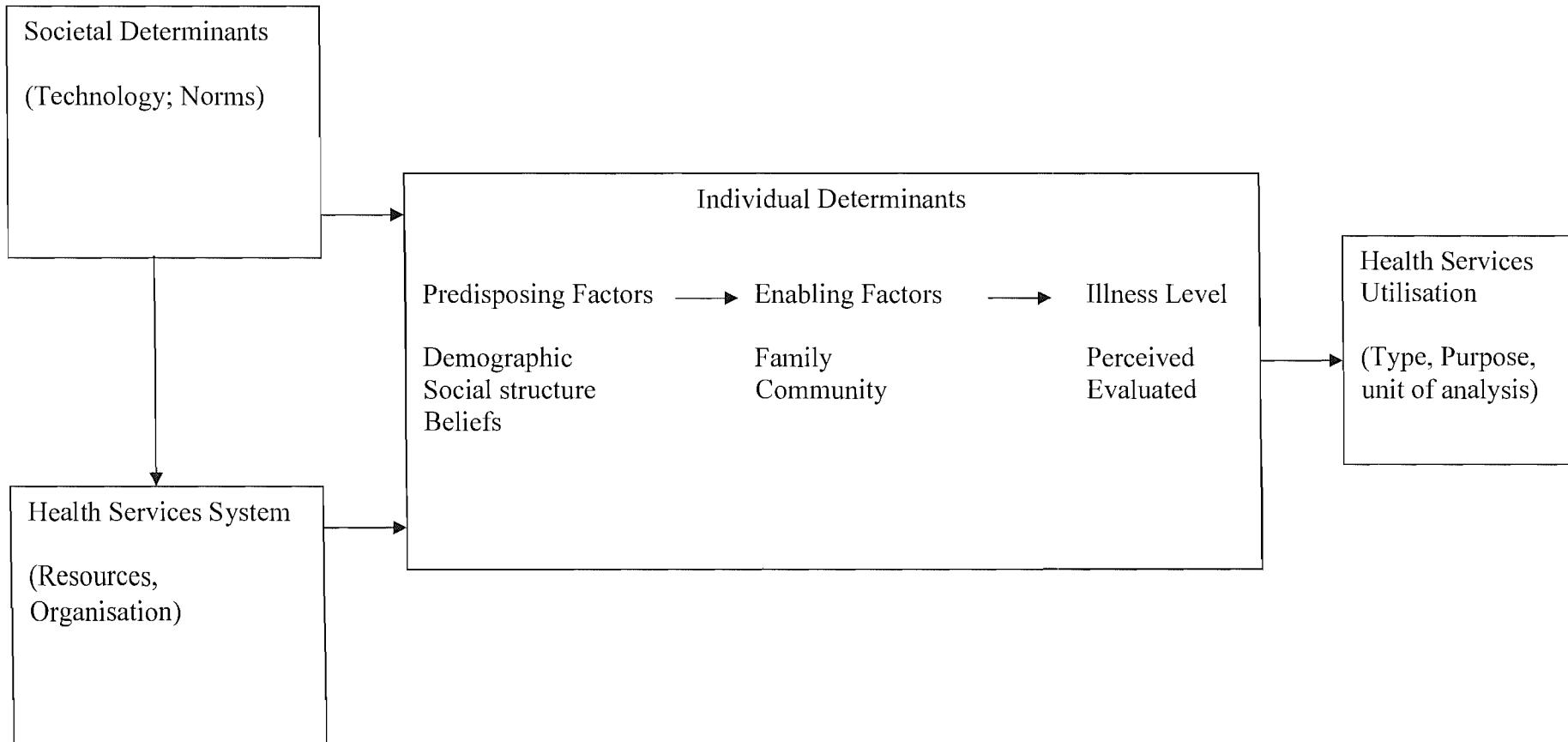
The behavioural model of access to medical care was developed by medical sociologists Andersen and Newman in the late 1960s and early 1970s (Andersen & Newman, 1973), and more recent developments of the model are summarised by Andersen (1995). This model was developed and has been widely applied as a framework to enable the understanding of health care utilisation and access to health care services in terms of societal and individual factors (e.g. Young, Dobson, & Byles, 2001). According to this model (see Figure 1), there are three classes of variables that impact health care utilisation: societal determinants, health services system features and individual determinants. Individual determinants have been separated into three categories: predisposing factors, enabling factors, and illness level factors. Predisposing factors include demographic factors, factors related to social structures, such as the social status of individuals and corresponding ability to access resources, and health beliefs. Enabling factors refer to the availability of services at community and individual levels. Illness level factors are defined as perceived illness and health status and a corresponding evaluation of that status in terms of perceived need for action.

According to the behavioural model, people will use CAM when certain predisposing, enabling and illness level factors are in place. Influences such as demographic factors, beliefs about health, illness and treatment, and social influences including friends and family are incorporated as predisposing factors.

Practical aspects of treatment such as cost are incorporated as enabling factors.

Perceptions of illness are incorporated as illness level factors.

Kelner and Wellman (1997) used the behavioural model in a Canadian study of the use of general practice, chiropractic, traditional Chinese medicine, acupuncture, naturopathy and reiki. They argued that demographic characteristics that are associated with CAM use can be seen as predisposing factors; local availability of CAM, knowledge of CAM from media, friends and relatives, practical accessibility of CAM and financial considerations can be seen as enabling factors; duration of problem, length of previous treatment, effect on daily life and chronicity of problem can be seen as determining the illness level, or need for care. This model therefore provides a way to organise the factors that are associated with CAM use into groups of factors that, taken together, influence the use of CAM. Kelner and Wellman further argued that the importance of the three classes of factors differs between therapies, suggesting that the framework can incorporate a variety of pathways to CAM. The behavioural model does not however explicitly account for all the research findings and issues identified in the literature review. For example, this model does not emphasise the embodied experience of treatment in terms of symptom perception or the interpersonal experience of the consultation. Furthermore, the model is inherently better suited to predicting uptake of rather than adherence to health care, as it contains no explicit feedback loop to incorporate the role of treatment experiences in ongoing use of treatment.



*Figure 1.* The behavioural model of health services use.  
Adapted from Andersen (1995); Andersen and Newman (1973)

Overall, the behavioural model can be seen as a useful framework for organising the factors associated with CAM use. The flexibility of this framework is its strength. It suggests that people use CAM when some predisposing, enabling and need factors are in place, but allows for a range of factors in each group, thus facilitating the description of different pathways to CAM use. The model also attempts to position individuals in their socio-cultural and economic contexts, although there is perhaps a lack of specification of the links between that context and health behaviours. The central role for illness level or need is consistent with the importance of health variables in CAM use. Kelner and Wellman (1997) have demonstrated the utility of applying the behavioural model in the context of organising and understanding the factors associated with initial CAM use. However, the behavioural model is, ultimately, a relatively static linear model, which is less capable of explicating the processes involved in the integration of different factors, the dynamic nature of the ongoing use of treatment and the interpersonal nature of the experience of treatment.

#### *4.3.3 The Health Belief Model*

The health belief model is one of the most widely used explanatory frameworks in health psychology, and was originally developed in the context of preventive health behaviours by Rosenstock, Becker and colleagues (Becker, 1974; Rosenstock, 1966). In comparison with the behavioural model, the health belief model does specify the content of beliefs that are expected to determine health behaviours. A meta-analysis of a range of studies using the health belief model found limited support for the predictive validity of the model (Harrison, Mullen, & Green, 1992). According to the health belief model (see Figure 2), people use health services when a number of conditions are satisfied, the most important of which is the perception of need to use health services and the evaluation that such use will result in benefits which outweigh the costs of use. The decision to perform a particular behaviour, in this case use of CAM, is thought to result from a rational process of weighing up the benefits and costs of alternative actions.

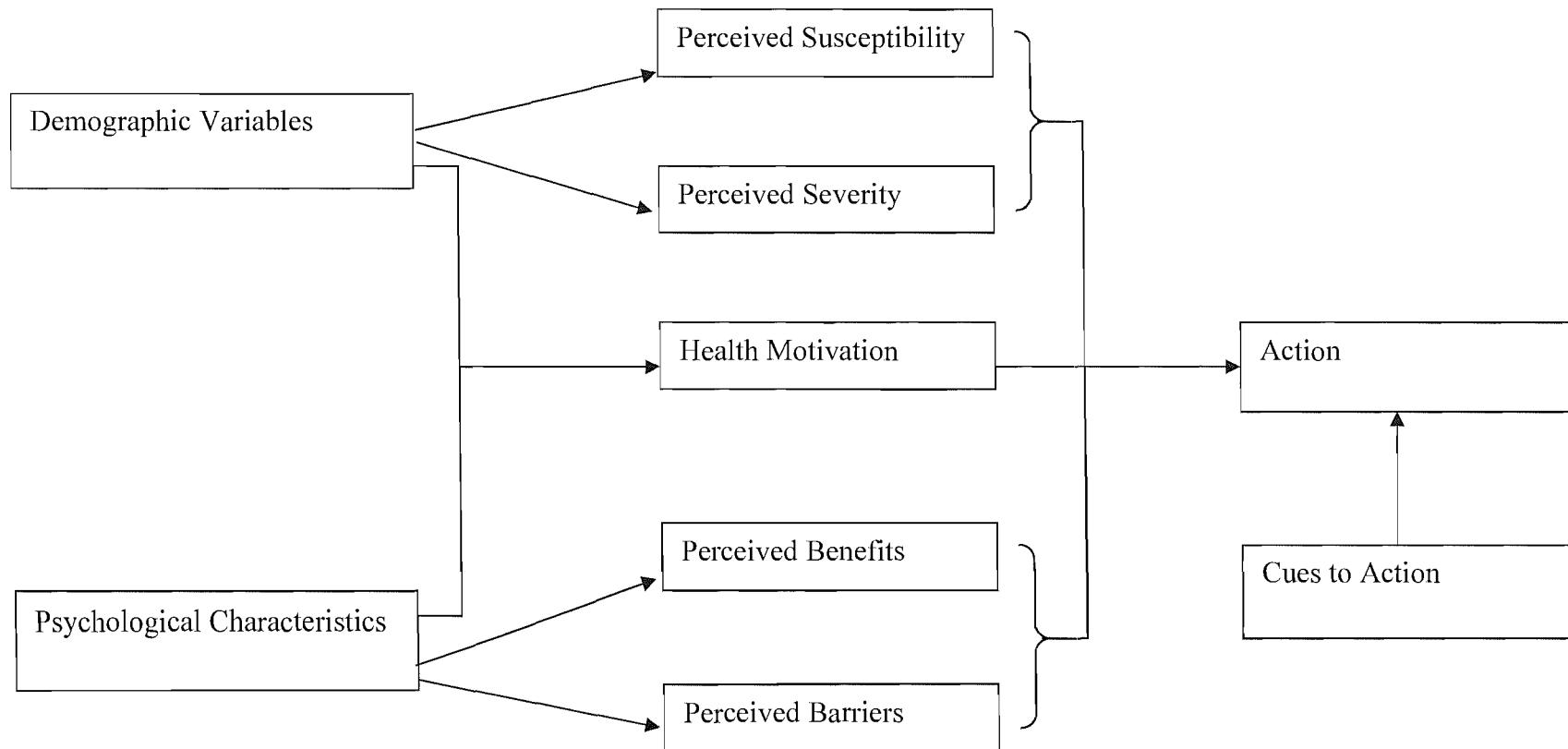


Figure 2. The health belief model.

Adapted from Sheeran and Abraham (1995).

According to the health belief model, CAM use will primarily result from perceptions of illness (e.g. self-ratings of health status and severity/duration of illness) and perceptions of CAM (e.g. expectations that CAM will help in some way, evaluation that such expectations outweigh barriers such as financial cost). General health motivation (e.g. healthy lifestyle behaviours), demographic (e.g. being female) and psychological characteristics (e.g. desire for participation in treatment) also play a role. The influence of friends and family and dissatisfying experiences with OM could be incorporated as cues to action.

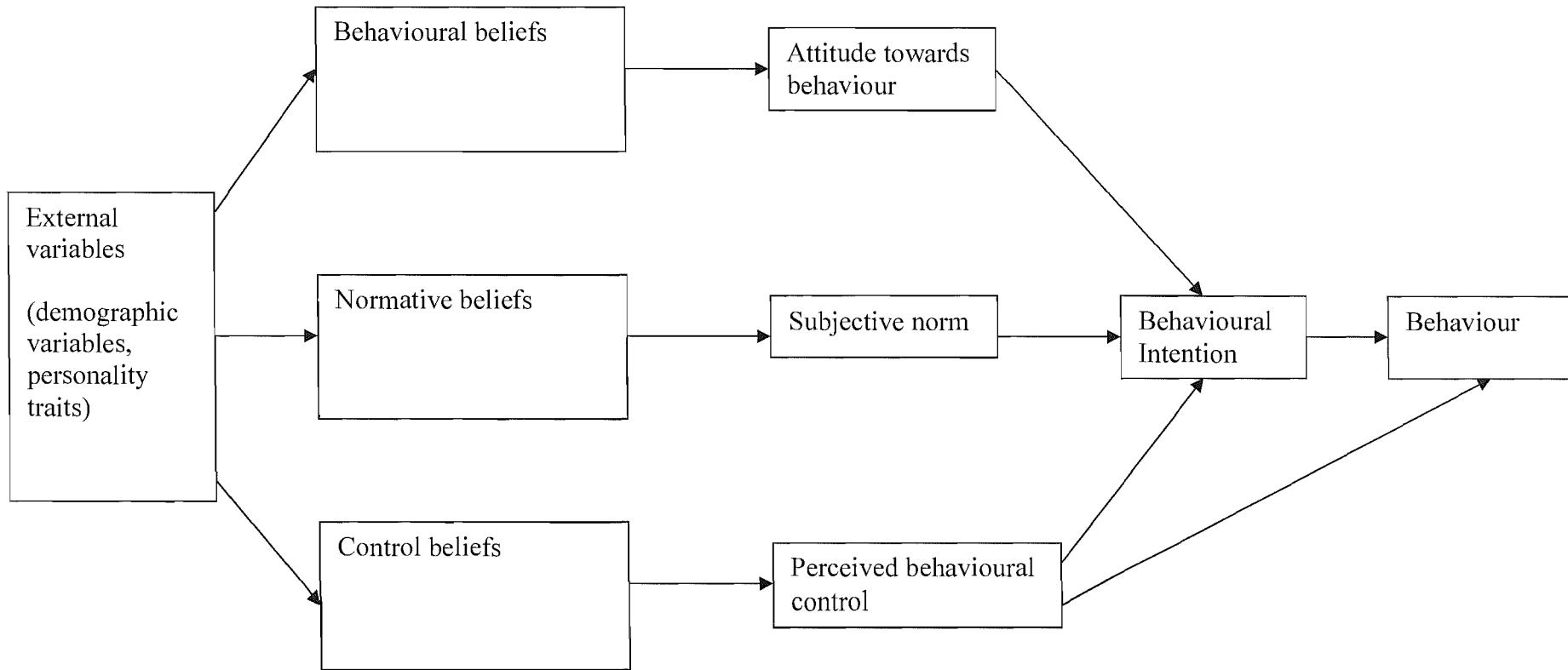
The health belief model has been used to aid interpretation of a qualitative study of the use of St John's Wort in depression (Wagner et al., 1999). Wagner et al. argued that people were more likely to use St John's Wort if they perceived their depression as less severe, perceived increased benefits of St John's Wort (in terms of the lack of side-effects and the naturalness of St John's Wort as compared with negative perceptions of prescription medications for depression) and reduced barriers to taking St John's Wort (in terms of the ease of access). While the health belief model can be used to interpret these findings, there are a number of problems with the use of the health belief model in this context. For example, the health belief model does not differentiate between initial and ongoing CAM use. While the experience of the consultation and the influence of the therapist could be incorporated as cues to action, the health belief model neither explicitly nor specifically models the interpersonal context of the consultation and the impact of this on continuing treatment.

A number of general criticisms can be, and have been, levelled at the health belief model both from advocates and opponents of the use of social cognition models (Conner & Norman, 1995; Edwards & Potter, 1992). The health belief model is primarily a subjective-utility model, assuming that individuals are rational cognitive beings who are logical in their health-related decision-making; it is static, not allowing for the possibility of dynamic interactions between variables and changes over time; it fails to position individuals in their socio-cultural context, beyond the possibility that events in that context act as cues to action; it does not include potentially important non-cognitive (e.g. fear) factors, and processes such as

symptom perception; and it is generally under specified in terms of the content and organization of the central cognitive constructs. These general points can be demonstrated in the present context. For example, in terms of the overly rational view of individuals, the health belief model does not allow a consideration of the emotional and embodied features of illness and disease, which in many cases are long-standing chronic problems that interfere in the daily lives of CAM users. In addition, the health belief model is perhaps not the most suitable framework in which to analyse decisions which involve more than one main option. In many health belief model studies, the behaviour of interest has two possible outcomes – it is performed or it is not performed. In explaining ongoing CAM use, we want to explain not only why some people use CAM and some people do not, but we want to explain the degree to which people continue to use CAM over time, and how the factors that influence the use of CAM change (or not) over the course of treatment.

#### *4.3.4 The Theory of Planned Behaviour*

The theory of planned behaviour, an extension of the theory of reasoned action, was developed by Ajzen and colleagues (e.g. Ajzen & Madden, 1986). According to this theory the immediate causes of behaviour are intention to perform behaviour and perceived behavioural control (perceived control over performing the behaviour), while the influences on intentions are attitudes (positive to negative evaluations of the behaviour), subjective norms (evaluations of the importance of attitudes of significant others, such as close family, to the behaviour) and perceived behavioural control (see Figure 3). A recent meta-analytic review found that applications of the theory of planned behaviour across a range of behaviours accounted for 27% of the variance in behaviour and 39% of the variance in intentions (Armitage & Conner, 2001). The theory of planned behaviour can be used to make the following predictions about CAM use: 1) Intending to use CAM will predict CAM use, 2) Perceiving control over CAM use will predict CAM use, 3) Holding positive attitudes towards CAM use will predict intention to use CAM, 4) Having positive subjective norms concerning CAM use will predict intention to use CAM, 5) Perceiving control over CAM use will predict intention to use CAM.



*Figure 3.* The theory of planned behaviour.

Adapted from Armitage and Conner (2001); Conner and Sparks (1995).

Furnham and Lovett (2001) applied the theory of planned behaviour to predict use of homeopathy, arguing that the theory emerged as a powerful explanatory framework in which to understand CAM use, and that past behaviour should also be taken into account in this context. Attitudes, subjective norms and perceived control were significant predictors of intention, intention was a significant predictor of behaviour, and past behaviour predicted both intention and behaviour. Overall, the theory of planned behaviour accounted for a substantial amount of the variance (58%) in use of homeopathy in this study. Thus the theory of planned behaviour does have something to offer research on CAM use. However additional factors, such as the socio-cultural context of behaviour, not easily incorporated into the theory of planned behaviour are also likely to have an important role in CAM use. Furthermore, the validity of estimates of explained variance in regression studies using non-experimental data such as this study is questionable (Sutton, 2002).

The theory of planned behaviour shares many assumptions with the health belief model, but avoids some of its limitations, for example by including a construct related to self-efficacy in the form of perceived behavioural control and providing tight definitions and specificity regarding individual variables and the relationships between them (although the conceptualisation of perceived behavioural control has been a topic of debate, see Armitage & Conner, 2001; Povey, Conner, Sparks, James, & Shepherd, 2000). However, the theory of planned behaviour still has a number of limitations that are relevant to its application to CAM use.

1. Although it is arguably the most social of the social cognition models, taking social influences into account in the form of social norms, this is in the form of individuals' perceptions of social influences.
2. The theory of planned behaviour is primarily a general model, developed in social psychology and applied to a range of domains. Thus the theory of planned behaviour does not incorporate health-specific variables.
3. The theory of planned behaviour is a relatively static framework within which to investigate the dynamic nature of ongoing CAM use.
4. While the theory of planned behaviour has been applied to adherence, the model is not well-suited to generating explanations incorporating the dynamic nature of continual decision making about treatment shown

- in the CAM literature.
5. The theory of planned behaviour is not easily able to explain or incorporate a number of specific findings concerning factors associated with CAM use, for example the range of distinct attitudes concerning illness and treatment or the role of general belief systems (not directly concerning the behaviour). Although a number of these variables, such as desire for participation, could be incorporated by the 'attitude toward behaviour' variable, incorporating the range of attitudes that can be associated with CAM use as one variable adds little to our understanding of the predictors of CAM use.
  6. Because the theory of planned behaviour focuses on factors proximal to rather than distal from behaviour, the theory is well-suited to predicting behaviour but less able to explain behaviour, and its explanations can be seen as somewhat circular. In the current context, knowing that people who have positive attitudes towards CAM and intend to use CAM are likely to use CAM adds little to our understanding of why people use CAM.

#### *4.3.5 The Self-Regulatory Model*

The self-regulatory model was developed by Howard Leventhal and colleagues as an alternative to social cognition models for understanding adherence to medical regimes (e.g. Leventhal & Cameron, 1987; Leventhal, Diefenbach, & Leventhal, 1992). In contrast to the social cognition models, the self-regulatory model is a dynamic explanatory framework that incorporates both cognitive and emotional processes and representations, specifies the content of representations and provides a way of thinking about the processes involved in decision-making in the health domain. The self-regulatory model views people as active problem solvers who, when faced with a health threat, construct representations of that threat, that are used to select coping strategies, which are then evaluated. The framework is highly interactive, proposing that appraisals of coping procedures go on to modify illness representations and coping procedures. Figure 4 depicts the basic components and processes of the self-regulatory model, into which treatment beliefs have been incorporated as representations of coping strategies (see below).

According to the self-regulatory model, representations of illness are structured in a predictable way along specific dimensions relating to illness identity, timeline, causes, consequences, and controllability/cure. Coping procedures have typically been conceptualized in terms of classical coping styles, including avoidance, denial, emotional, and problem-faced coping, although can include any procedure which is undertaken in response to a health threat (Leventhal, Leventhal, & Contrada, 1998). A meta-analytic review provides empirical support for the content and structure of illness representations, and for the existence of predictable relationships between illness representations, coping procedures (in terms of coping strategies), and outcome (in terms of health status) (Hagger & Orbell, 2003).

The framework also suggests a process through which coping procedures are selected: coping procedures are selected that have common sense coherence with the representation of the health threat, for example a skin rash might be treated by a cream directly applied to the affected area (Leventhal, Hudson, & Robitaille, 1997). Individuals with congestive heart failure strive to achieve coherence, or integration, between illness representations and coping procedures as they select self-management strategies which make sense in the context of their own interpretations of their symptoms (Horowitz, Rein, & Leventhal, 2004). Work by Rob Horne and colleagues has conceptualised adherence to treatment as a coping procedure and proposed an extension of the self-regulatory model to include abstract beliefs about treatment (Horne, 1997, 1999). There is preliminary empirical evidence to support the inclusion of treatment beliefs in an extended self-regulatory model. In the context of adherence to preventive asthma medication, illness perceptions (primarily perceptions of the consequences of illness) were shown to influence adherence to treatment both directly and indirectly via treatment beliefs (about the necessity and potential harm of medication), and treatment beliefs were the strongest predictors of adherence (Horne & Weinman, 2002). The results of a recent synthesis of qualitative research on adherence to medications also suggest that beliefs about treatment need to be incorporated in any theoretical model applied to adherence to treatment. Pound et al. (in press) found that concerns about the safety of medicines and the potential risks of using them, such as tolerance or addiction, emerged as the main reasons why people do not adhere to OM.

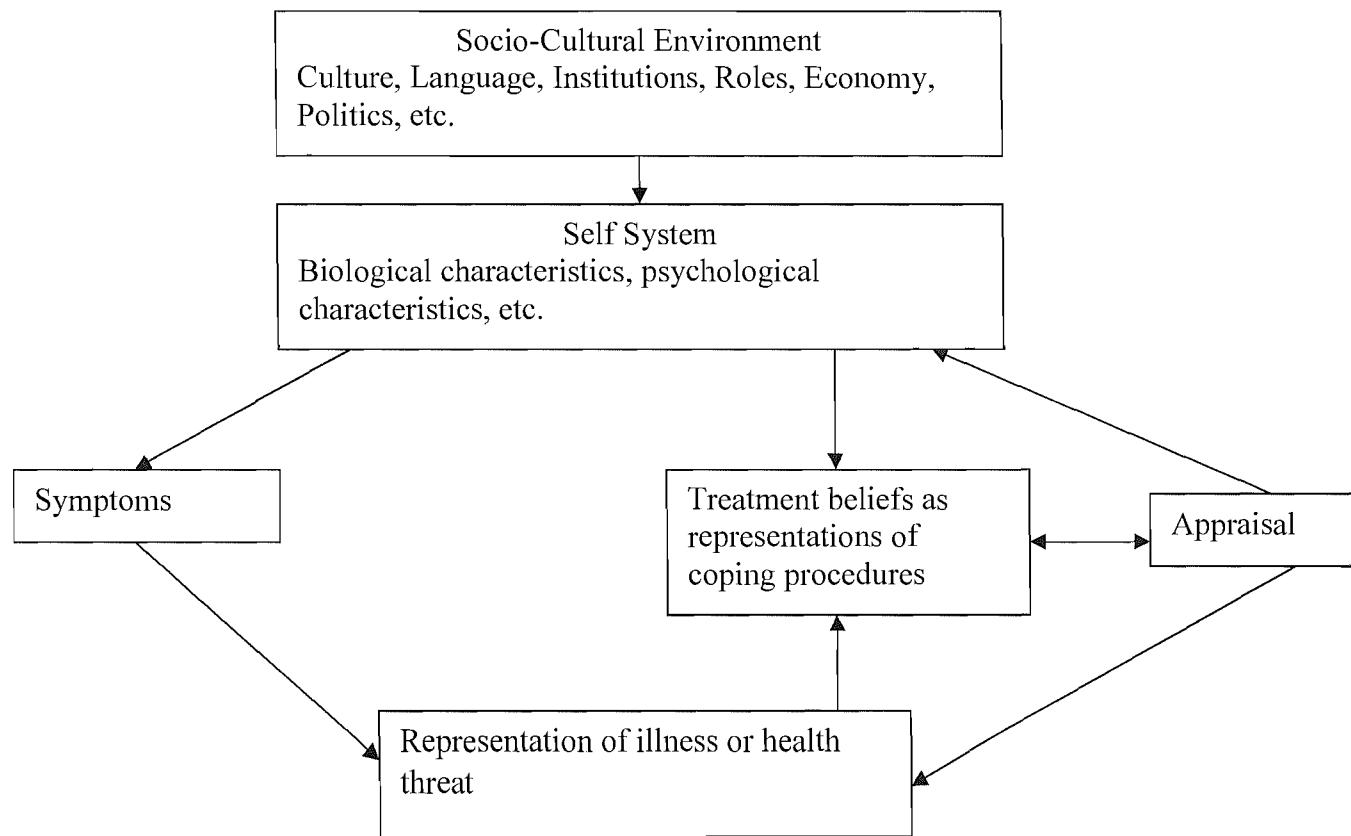


Figure 4. The self-regulatory model.

Adapted from Brownlee, Leventhal and Leventhal (2000); Leventhal, Hudson and Robitaille (1997).

Treatment beliefs have been incorporated into the coping strategies section of the self-regulatory model for three reasons. Firstly, treatment beliefs can be thought of as beliefs about, or cognitive representations of, coping strategies. Secondly, treatment beliefs are more proximal determinants of adherence to treatment beliefs than illness perceptions (Horne, 1997). Thirdly, treatment beliefs are conceptually different although related to appraisal, in that while appraisal processes might be expected to influence peoples' beliefs about treatment, these beliefs do not in themselves represent a form of appraisal. Thus treatment beliefs are more suitably positioned within the coping strategies box than the appraisal box of the self-regulatory model.

There has been no work to date that has applied the full self-regulatory model to CAM use, and so the utility of this framework in the CAM context has yet to be explicitly demonstrated. However, the framework can potentially incorporate a number of existing findings in the literature. According to the self-regulatory model, CAM use is conceptualized as a coping procedure that is initiated in response to cognitive and emotional representations of the illness threat. The decision to initiate CAM use is based on consistency between the representation of illness and the representation of CAM, while decisions to continue to use CAM are based on appraisals of CAM use which feed back and influence the representations of illness and coping procedures. The self-regulatory model thus emphasises the dynamic nature of CAM use and incorporates the distinction between initial and ongoing use. In terms of incorporating the factors associated with CAM use, according to the self-regulatory model health status (shown to be associated with CAM use) is seen as the stimulus, which is then represented in a structured way through (emotional and cognitive) perceptions of illness, which have been associated with CAM use. Perceptions of illness are conceptualized as structured around a number of central concepts, developed from a program of qualitative research, which can be measured by the Illness Perception Questionnaire (IPQ; Weinman, Petrie, Moss-Morris, & Horne, 1996). This aspect of the self-regulatory model has been investigated in the context of CAM use. Searle and Murphy (2000) worked within the self-regulation framework, using the IPQ to examine relationships between illness perceptions and adherence to homeopathy in a small prospective study. They found that the IPQ

could be used reliably in the context of homeopathy and that certain aspects of illness perceptions, primarily causal beliefs about illness, predicted self-reported adherence to treatment at follow-up.

Beliefs about holistic and natural treatments and participation in treatment can be incorporated as representations of coping procedures. Embodied experiences of treatment and perceptions of practitioners can be incorporated in the appraisal process, although this section of the model is less well-specified than the other sections of the model such as the representations of illness. Past experience of treatment could be seen to influence the representation of coping procedures and the initial evaluation of consistency between coping procedures and illness representations. Wider socio-cultural factors are also incorporated explicitly into the self-regulatory framework.

Overall, the self-regulatory model offers a useful framework to guide our thinking and research about peoples' use of CAM. In comparison with the social cognition models discussed above, the framework is dynamic, capable of incorporating changes over time, incorporates both cognitive and emotional aspects of the treatment experience, specifies the structure of illness representations, and is not limited to intentional behaviours. The recent incorporation of treatment beliefs into the self-regulatory framework further improves the specification of the model and its predictive utility. There are two major weaknesses of the framework in its current formulation: firstly, the emphasis on individual processes over dynamic interpersonal processes; and secondly, there is little detailed explication of the content of beliefs related to appraisal. This weakness is particularly relevant in relation to the current research question, as the literature review has shown the interpersonal context of CAM use is likely to be a key influence on the ongoing use of CAM.

#### *4.3.6 The Dynamic Model of Treatment Perceptions*

The dynamic model of treatment perceptions was developed in a grounded theory study of the use of chiropractic, and was tested in the context of exercise therapy for vestibular disease (Yardley, Sharples, Beech, & Lewith, 2001). The model is

shown in Figure 5. The dynamic model of treatment perceptions provides a way to think about peoples' experiences of and perceptions of treatment, how they relate to other factors including broader socio-cultural factors and treatment beliefs and illness perceptions, and how they relate to the ongoing use of treatment. The framework suggests that perceptions of treatment are shaped by communication in consultations and that this interaction influences ongoing use of treatment. The framework further suggests that experiencing improvement in symptoms influences ongoing use of treatment, both directly and through interaction with communication in consultations. According to the dynamic model of treatment perceptions, perceptions of treatment are organised around perceptions of treatment efficacy (or concrete experiences of symptom changes), perceptions of the therapist, and experiences of practical aspects of treatment. These perceptions of the experiences of treatment are influenced by socio-cultural context and broader beliefs and values, as well as abstract health-related beliefs and illness perceptions. The abstract beliefs and concrete experiences related to treatment interact and influence ongoing use of treatment. In particular, the model highlights the potential for interactions between abstract beliefs about treatment, concrete experiences of treatment efficacy, and therapist communication about treatment. The dynamic model of treatment perceptions incorporates a range of factors associated with CAM use, explicitly modelling experiences of treatment, health status, health and illness beliefs, and the broader socio-cultural context.

The main strength of the dynamic model of treatment perceptions is that, unlike the social cognition models and the self-regulatory model, this framework explicitly models the role of the patient's perceptions of the interpersonal context of CAM with a high degree of specificity. Furthermore, the model provides a detailed framework for thinking about the relationship between abstract beliefs and concrete experiences of treatment, and emphasises the dynamic nature of CAM use. The dynamic nature of the model is also a strength compared with the social cognition models of health. However, unlike the self-regulatory model, the dynamic model of treatment perceptions does not specify the content of abstract beliefs about treatment or illness perceptions and is comparatively untested. Overall, the dynamic model of treatment perceptions is a well-grounded, contextualised, and well-specified (in

terms of concrete perceptions) framework which is well-suited to guiding research into the process of treatment appraisal and is consistent with the broader framework provided by the self-regulatory model.

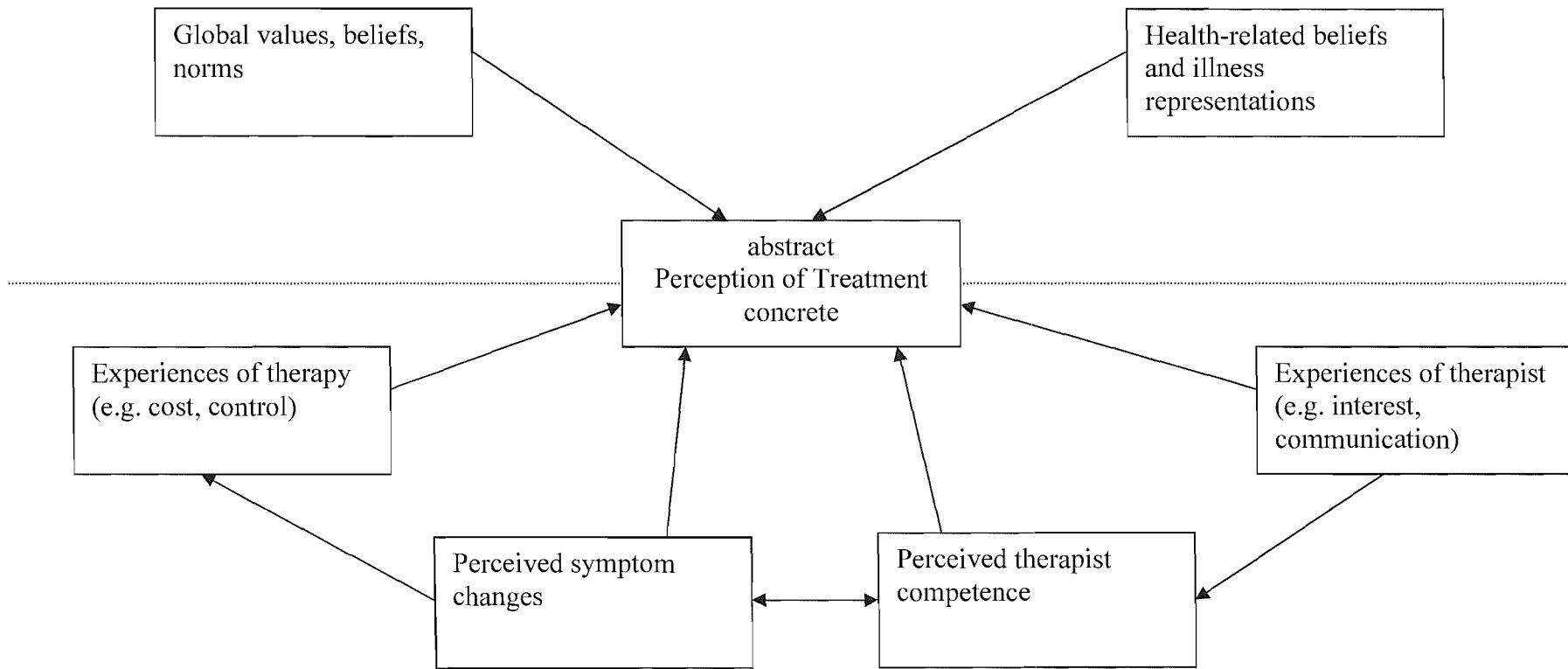


Figure 5. The dynamic model of treatment perceptions (Yardley et al., 2001).

#### *4.3.7 Theoretical Framework to Conceptualise Why People Return to CAM*

The theoretical framework used in this thesis is shown in Figure 6. The framework is primarily based on the dynamic model of treatment perceptions and its incorporation into the general framework of the self-regulatory model. By incorporating the dynamic model of treatment perceptions into the self-regulatory model, the strengths of each model can be utilised while lessening the impact of each model's weaknesses.

As outlined above, the self regulatory model has two main weaknesses that are relevant to its application in the current context: firstly, the model emphasises individual processes over dynamic interpersonal processes; and secondly, there is little detailed explication of the content of beliefs related to appraisal. Furthermore, a meta-analysis of studies using the self-regulatory model shows that while illness representations are consistently associated with coping strategies they do not explain all of the variance in coping strategies, highlighting the need to consider other predictors of coping strategies (Hagger & Orbell 2003). Incorporating the dynamic model of treatment perceptions into the self-regulatory model directly addresses the weaknesses of the latter model. Firstly, the dynamic model of treatment perceptions explicitly incorporates processes of interaction between therapists and patients and emphasises how patients' experiences of their therapist can influence their perceptions of treatment. Secondly, the dynamic model of treatment perceptions specifies the processes through which people come to hold particular perceptions of treatment. In other words, this model specifies the content of the self-regulatory model's appraisal construct, suggesting that symptom change, experiences of therapy and therapist, and therapist competence influence peoples' perceptions and thus appraisals of treatment.

The weaknesses of the dynamic model of treatment perception are lessened by its incorporation in the self-regulatory model. The dynamic model of treatment perceptions is under-specified in relation to abstract beliefs that might influence perceptions of treatment, for example illness perceptions. A major strength of the self-regulatory model is that the structure and content of illness perceptions have been subject to much empirical investigation and are highly specified, in this

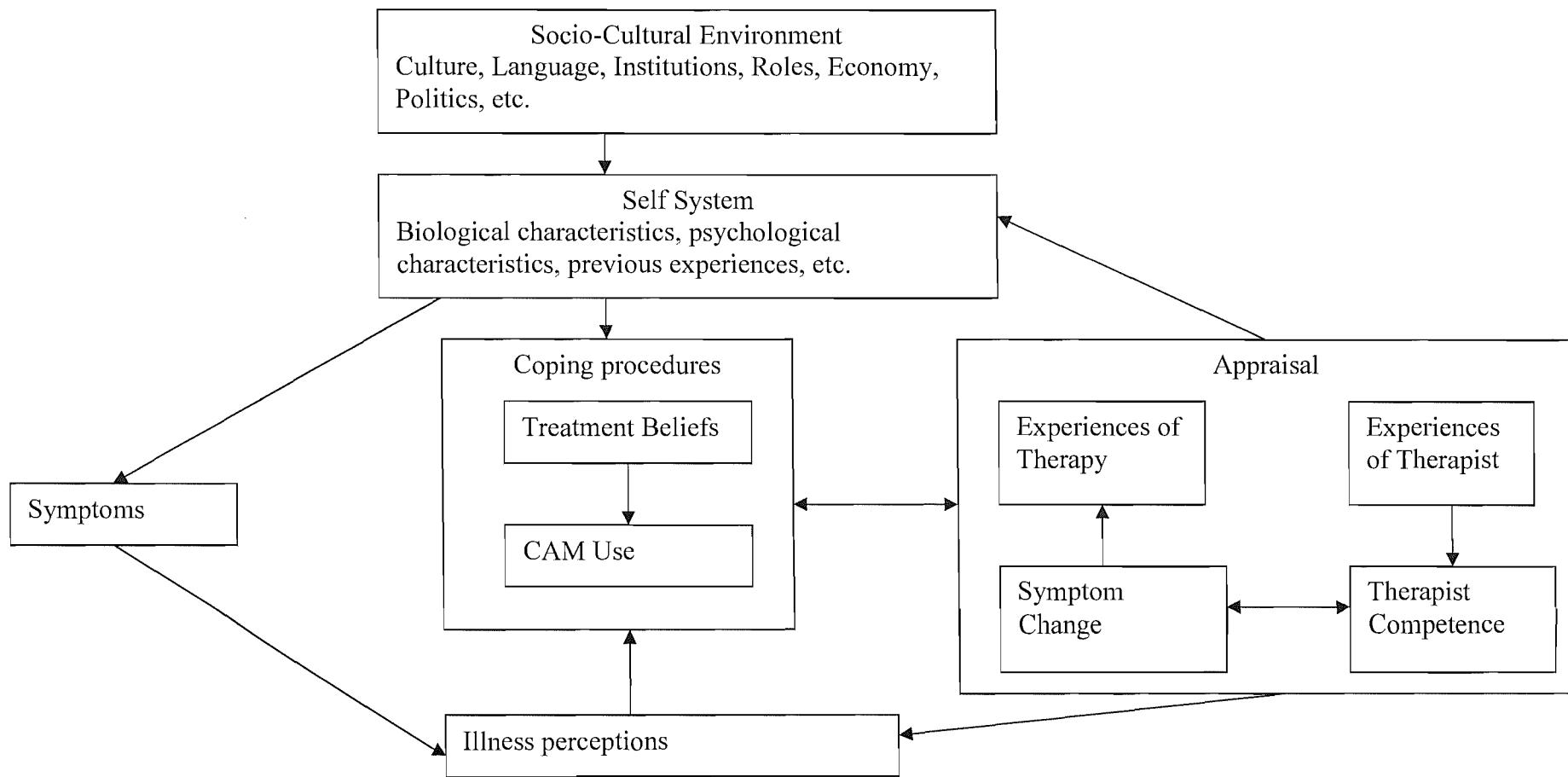


Figure 6. Theoretical framework.

respect the self-regulatory model thus complements the dynamic model of treatment perception. The second major weakness of the dynamic model of treatment perceptions is that it is untested. Again, the extent of empirical work that has been completed applying and testing the self-regulation model (see Hagger & Orbell 2003) compensates for this weakness of the dynamic model of treatment perceptions.

The models have been integrated as shown in Figure 6 taking into account the ways in which they complement each other. The concrete factors from the dynamic model of treatment perceptions that are expected to influence treatment perceptions (symptom change, experiences of therapy and therapist, and therapist competence) have been incorporated in the appraisal section of the self-regulatory model. However, the abstract factors from the dynamic model of treatment perceptions (global values, beliefs, norms, health-related beliefs and illness representations) have not been incorporated because these factors are under-specified in this model and are a strength of the self-regulatory model.

The framework incorporates those factors outlined in the literature review as important influences on ongoing CAM use, is dynamic, suggests links between broad groups of factors and incorporates factors at different levels of explanation. Following the self-regulatory model, CAM use is conceptualised as a coping procedure, which is represented in the form of abstract beliefs about treatment. According to the self-regulatory model, initial CAM use occurs when representations of the threat (i.e. perceptions of illness) are consistent with pro-CAM treatment beliefs. Ongoing CAM use is a result of continual appraisal of CAM. According to the dynamic model of treatment perceptions, this appraisal is based on concrete perceptions of the experience of therapy efficacy, practical aspects of therapy and perceptions of the therapist, and interactions between experiences of therapy and abstract beliefs about treatment. The self-regulatory model specifies the content of abstract beliefs about treatment and illness perceptions, while the dynamic model of treatment perceptions specifies the content of concrete perceptions of treatment experiences. Following the self-regulatory model, the framework incorporates feedback from the outcome of the appraisal process to

the experience of illness and interpretations or representations of that experience. A potential weakness of the framework is its complexity, which could make it difficult to operationalise in a single coherent research design. However, despite the potential difficulties, a complex theoretical framework is needed to guide the current research: As the literature review has suggested, ongoing CAM use is a complex phenomenon with multiple factors and issues that need to be taken into account.

#### *4.4 Conclusions*

A combination of qualitative and quantitative methodologies is used in the present research. The most appropriate framework for the current research question is the dynamic model of treatment perceptions in combination with the self-regulatory model. The framework makes specific predictions about the factors that influence ongoing use of CAM, and these predictions are explored empirically through qualitative and quantitative research. The qualitative study positions ongoing CAM use in relation to initial CAM use and the socio-cultural environment, and investigates the processes involved in decisions to continue using CAM. The quantitative studies focus on the relative influence of the following factors on CAM use: abstract beliefs about treatment, abstract perceptions of illness, and concrete perceptions of experiences of both treatment and the therapeutic relationship.

The framework suggests that abstract beliefs about treatment and concrete perceptions of experiences of treatment influence CAM use. Chapters 5 and 6 describe the development of a questionnaire to measure abstract beliefs about CAM, the CAM Beliefs Inventory (CAMBI), and the development of a questionnaire to measure concrete perceptions of experiences of treatment, the Treatment Process Questionnaire (TPQ). According to the theoretical framework, illness perceptions and abstract treatment beliefs are associated with CAM use. Chapter 7 reports a cross-sectional questionnaire study that tests these predictions by investigating the relationships between illness perceptions and abstract treatment beliefs and the use of different types of CAM. The theoretical framework also predicts that illness perceptions, abstract treatment beliefs and perceptions of concrete experiences of treatment are associated with ongoing CAM use. Chapter 8 reports a prospective questionnaire study that tests these hypotheses by investigating the predictors of

attendance at CAM, adherence to remedy use and adherence to lifestyle changes. Chapter 9 reports an ethnographic study that investigates the processes involved in ongoing CAM use and examines the socio-cultural context of ongoing CAM use.

The ethnographic work is presented after the quantitative work to stress that this was designed and conducted as a separate study that emphasised specific aspects of ongoing CAM use, rather than as an exploratory study intended to guide the quantitative work. Thus the empirical chapters first report on the work concerning the factors that predict adherence to CAM and then move on to report the work concerning the processes that are involved in ongoing CAM use.

## Chapter 5

### Developing a Measure of Treatment Beliefs: The Complementary and Alternative Medicine Beliefs Inventory

#### *5.1 Introduction*

To understand why people use CAM it is important to be able to measure the treatment beliefs of CAM users. The theoretical framework outlined in chapter 4 suggests that the influences on ongoing CAM use consist of abstract beliefs and concrete experiences of the embodied nature of treatment, and an interplay between abstract beliefs and concrete experiences. It is necessary to measure a range of CAM-related beliefs in order to determine how different beliefs relate to specific aspects of CAM use; for example different beliefs might be related to the use of different types of CAM. This chapter aims to extend our ability to measure CAM-related beliefs through the development of the CAM Beliefs Inventory (CAMBI).

From a review of the existing literature it is possible to identify four distinct dimensions of beliefs associated with CAM use: beliefs in holistic health, holistic treatments, natural treatments and participation in treatment (for details see chapter 3). Having holistic or post-modern value orientations involves believing that health and illness involve the whole person and was the most important attitudinal predictor of CAM use in a national US-based survey (Astin, 1998). In terms of holistic treatments, CAM users believe more strongly than OM users that the body has its own healing mechanisms (Furnham & Smith, 1988). CAM users also hold strong beliefs in the importance of participating in treatment and being involved in decision-making, and value the control offered to patients in CAM (Balneaves, Kristjanson, & Tataryn, 1999; Downer et al., 1994). Believing that natural treatments are safer and more effective than orthodox medicines and valuing treatments with no side effects is also associated with CAM use (Cassileth, Lusk, Strouse, & Bodenheimer, 1984; O'Callaghan & Jordan, 2003).

There are no well-developed existing questionnaires that measure all four of these aspects of relevant beliefs. Siahpush (1999) examined predictors of attitudes to CAM, including Natural Remedies, Holism and Rejection of Authority,

constructs which overlap with those beliefs identified above as related to CAM use. However, published alpha co-efficients for the scales indicate rather low reliability.

The Holistic Complementary and Alternative Medicine Questionnaire (HCAMQ; Hyland, Lewith, & Westoby, 2003) is a well-developed questionnaire based on extensive pilot work with very good face validity and reliability. The HCAMQ measures beliefs in holistic health and the scientific validity of CAM but does not measure beliefs related to participation in treatment or natural treatments. The HCAMQ was therefore included in this study as a validating measure, to compare scores on the CAMBI with scores on a previously validated measure of CAM-related beliefs.

The purpose of this study was to develop the CAMBI, a questionnaire capable of reliably measuring and distinguishing between beliefs in natural treatments, participation in treatment and holistic health and treatments. The aim was to: investigate whether four distinct dimensions would indeed emerge within this set of common CAM-related beliefs; confirm that reliable sub-scales could be constructed to measure the dimensions of beliefs identified in the data; and evaluate the validity of the scale, and its subscales, by examining the relationship of scale scores to CAM use and to scores on an existing well-validated measure of pro-CAM beliefs.

## *5.2 Method*

### *5.2.1 The CAMBI*

Existing research on CAM use was identified through computerised databases (Medline, PsychInfo, and Web of Knowledge), citation searching and hand searching of journals. A review of this literature was used to develop 57 items to measure beliefs in holistic health, holistic treatments, natural treatments, and participation in treatment. Five items with good face validity were taken from a previous study by Siahpush (1999). The newly constructed items went through a selection process following which 15 were included in the CAMBI (see Table 11). The researchers assessed the relevance of the items to the proposed underlying dimensions of treatment beliefs (their content validity). Additional criteria

included: commonly understood and non-technical terminology, neutral wording not involving leading questions or implicit value judgments, and simple grammatical construction. Five items were selected to measure beliefs in holistic health (items 12-15, 20), five for holistic treatments (items, 4-6, 16, 17), five for natural treatments (items 1-3, 18, 19) and five for participation in treatment (items 7-11). Five items were worded to represent anti-CAM beliefs to guard against positive response biases by encouraging respondents to use both ends of the response scale (items 9, 11, 14, 17 and 19).

A seven point Likert-type response scale was used, ranging from 1 (labelled *strongly disagree*), through 4 (*neither agree nor disagree*) to 7 (*strongly agree*). Items displaying anti-CAM beliefs were reverse-scored. High scores on the CAMBI items indicate pro-CAM treatment beliefs.

#### *5.2.2 The HCAMQ (Hyland et al., 2003)*

This 11-item questionnaire consists of two subscales (belief in the Scientific Validity of CAM and Holistic Health), and one overall composite scale. High scores on the HCAMQ indicate anti-CAM beliefs.

#### *5.2.3 CAM use*

The total number of CAM forms ever used was a proxy measure for extent of CAM use. A 39-item checklist (Furnham, 2000c) was used to measure the number of forms of CAM previously used by participants.

#### *5.2.4 Presentation of Questionnaires*

The questionnaires (Appendix A) were presented on a website hosted by the University of Southampton and were available for four months. The internet offers an efficient medium through which to recruit a potentially large and diverse sample in a limited time period (Birnbaum, 2000) and has previously been used in a survey of CAM use in people with inflammatory bowel disease (Hilsden, Meddings, & Verhoef, 1999).

Dreamweaver version 4 was used to construct the questionnaire website. Response scales were presented in a format as similar as possible to a paper version of the questionnaires. Radio buttons were used for Likert-type scales, check boxes for checklist items, and drop-down boxes for demographic items.

Responses were coded and stored in a text file on the website. Data retrieval was protected by password access. Data was transferred into SPSS for Windows (version 10) for analysis. Ethical approval was granted by the School of Psychology, University of Southampton, Ethics Committee.

#### *5.2.5 Participants*

Three hundred and twenty eight participants were recruited through advertisements and links placed on health-related websites and chat-rooms including [www.wellbeing.com](http://www.wellbeing.com) (a healthcare website, from which 56% of participants were recruited). The advertisements described the study as concerning peoples' opinions about health, illness and treatment and their use of CAM. The estimated response rate was 66% (calculated by comparing the number of completed questionnaires submitted to the number times the questionnaire website was accessed).

Eighty five percent of participants were female and 44% were aged less than 30. Demographically the participants were thus broadly typical of CAM users (Thomas, Nicholl, & Coleman, 2001). The majority of participants (61%) lived in the UK, 27% lived in the USA. The majority of participants (95%) reported having used at least one CAM form; the mean number of CAM forms used was 7.51 ( $SD = 5.47$ ). The most popular CAM forms used by participants were aromatherapy (used by 64% of participants), massage (63%), herbal medicine (56%), meditation (40%) and homeopathy (38%).

#### *5.2.6 Statistical Methods*

Factor analysis was used to examine the associations between responses to the questionnaire items and thus to determine the scale structure of the CAMBI. There was no a priori theoretical reason to expect the factors to be statistically independent and so oblique rotation was used (this technique permits factors to correlate with

each other). Items with factor loadings higher than 0.32 were interpreted as belonging to that factor (Tabachnick & Fidell, 2001). Cronbach's alpha statistics were calculated to determine the scales' internal consistency (the extent to which items on each scale were answered in the same way; values of above 0.6 are satisfactory for scales with fewer than 10 items, which demonstrate good validity and make sense conceptually; Loewenthal, 2001). Correlations were conducted to confirm that responses to the CAMBI were related to CAM use (i.e. to determine the criterion validity of the questionnaire). It was expected that scores on all subscales of the CAMBI would be positively correlated with CAM use. Previous research has found medium sized correlations between attitudes to CAM and measures of behaviour, for example CAM use (O'Callaghan & Jordan, 2003) and use of vitamins (Hyland et al., 2003) (where 0.3 is considered a medium sized correlation; Cohen, 1992). Medium sized correlations were thus expected between scores on the CAMBI and CAM use. Correlations were also conducted between scores on the CAMBI and the HCAMQ to confirm that both questionnaires measure related beliefs (i.e. to demonstrate the congruent validity of the CAMBI). It was expected that scores on all subscales of the CAMBI would be negatively correlated with scores on the HCAMQ subscales. Siahpush (1999) found medium correlations between attitudes to CAM and beliefs related to CAM (such as beliefs in holism and natural remedies). Medium correlations were thus expected between the scales of the HCAMQ and CAMBI. Because the CAMBI contains items related to beliefs in participation in treatment and the HCAMQ does not contain such items, weaker correlations were expected between these subscales than between other subscales of these questionnaires (no specific hypotheses about the strength of such relationships were made). Bonferroni corrections were made for each set of correlations and alpha was set at 0.05 to protect against type I errors (i.e. spurious significant results as a consequence of conducting more than one significance test).

### *5.3 Results*

#### *5.3.1 Factor Analysis*

Preliminary factor analyses suggested that items 18, 19, and 20 did not emerge consistently with other items, contributing to unstable and difficult to interpret

factor solutions. These items were excluded from the questionnaire. The scree test from an initial principal component analysis suggested a three-factor solution (see Figure 7). Three factors were extracted using principal axis factoring with direct oblimin rotation. The factor loadings from the pattern matrix are shown in Table 11. The three factors were moderately correlated (Factors 1 and 2,  $r = -.16$ ; Factors 1 and 3,  $r = -.31$ ; Factors 2 and 3,  $r = .37$ ). An overall scale including all items can thus be calculated, measuring belief in complementary and alternative approaches to health and illness.

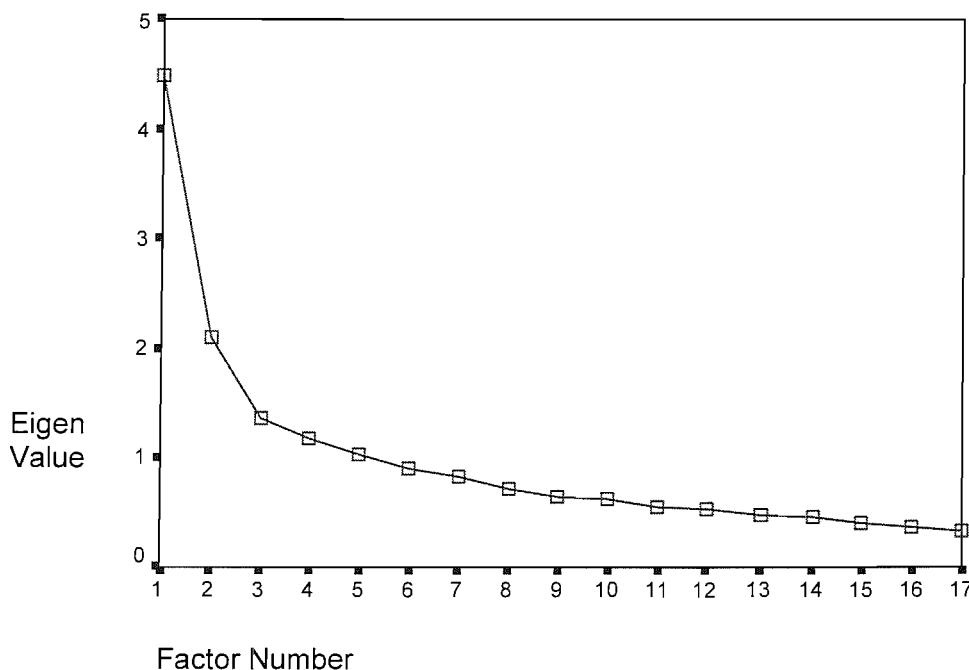


Figure 7. Scree plot from principal component analysis of CAMBI items

Factors were interpreted by examining the items with high loadings on each factor. Six items loaded highly on Factor 1, constituting a subscale measuring belief in Natural Treatments. Five items loaded highly on Factor 2, constituting a subscale measuring belief in Participation in Treatment. Five items loaded highly on Factor 3, and a sixth had a low loading of 0.25 (item 16). These items constitute a subscale measuring belief in Holistic Health. Item 16 was retained despite its low loading because removing it reduced the scale's reliability (Cronbach's alpha would have decreased from 0.73 to 0.69).

Table 11  
*Factor Loadings of the CAMBI*

Item	Factor		
	1	2	3
1.Treatments should have no negative side-effects	<b>.47</b>	.03	.04
2.It is important to me that treatments are non-toxic	<b>.40</b>	-.02	-.03
3.Treatments should only use natural ingredients	<b>.53</b>	.09	-.02
4.It is important for treatments to boost my immune system	<b>.61</b>	-.12	-.01
5.Treatments should enable my body to heal itself	<b>.67</b>	-.14	-.10
6.Treatments should increase my natural ability to stay healthy	<b>.61</b>	-.25	-.02
7.Treatment providers should treat patients as equal partners	.10	<b>-.52</b>	.05
8.Patients should take an active role in their treatment	.20	<b>-.64</b>	.09
9.Treatment providers should make all decisions about treatment (r)	-.25	<b>-.61</b>	-.25
10.Treatment providers should help patients make their own decisions about treatment	.06	<b>-.50</b>	-.02
11.Treatment providers should control what is talked about during consultations (r)	-.14	<b>-.38</b>	-.20
12.Health is about harmonizing your body, mind and spirit*	.31	.01	<b>-.40</b>
13.Imbalances in a person's life are a major cause of illness*	<b>.38</b>	.20	<b>-.43</b>
14.Treatments should concentrate only on symptoms rather than the whole person* (r)	-.20	-.12	<b>-.71</b>
15.Treatments should focus on people's overall well-being	.29	-.17	<b>-.47</b>
16.I think my body has a natural ability to heal itself*	.24	-.18	-.25
17.There is no need for treatments to be concerned with natural healing powers (r)	.12	-.02	<b>-.46</b>
18.I prefer natural remedies to medicine <sup>a</sup>	---	---	---
19.Treatments should make use of modern scientific technology (r) <sup>a</sup>	---	---	---
20.Health is about more than just keeping your body fit* <sup>a</sup>	---	---	---

\*Item developed by Siahpush (1999)

(r) Indicates reverse scored items

<sup>a</sup> Items 18, 19 and 20 were excluded prior to factor analysis.

### 5.3.2 Reliability

Cronbach's alpha values were satisfactory for all subscales. For Natural Treatments alpha = .75, for Participation in Treatment alpha = .68, for Holistic Health alpha = .73, and for the whole CAMBI alpha = .81.

Subscales were constructed by summing scores on each item that loaded onto the appropriate factor. According to the Kolmogorov-Smirnov test the distribution of the subscales was significantly different from the normal distribution (Table 12). Therefore non-parametric analyses were conducted.

Table 12

*Descriptive Statistics for the CAMBI*

Scale	<i>n</i>	<i>M</i>	<i>SD</i>	Kolmogorov-Smirnov	
				<i>z</i>	<i>df</i>
Natural Treatments	328	33.93	4.98	.091*	328
Participation in Treatment	328	29.34	4.14	.124*	328
Holistic Health	328	33.86	5.22	.078*	328
CAMBI	328	97.13	10.76	.034	328

\* $p < .001$

### 5.3.3 Criterion Validity

Spearman's correlation coefficients between the CAMBI and CAM use were all positive and significant; higher scores on the CAMBI were associated with increased use of CAM (Table 13). In particular the Holistic Health subscale correlated well with CAM use (Spearman's rho = .47). This pattern of correlations supports the criterion validity of the CAMBI.

Table 13

*Spearman's Correlations between the CAMBI and CAM use*

Scale	1	2	3	4	5
1. CAMBI	--	.74*	.82*	.64*	.39*
2. Natural Treatments		--	.42*	.29*	.18*
3. Holistic Health			--	.36*	.47*
4. Participation in Treatment				--	.22*
5. CAM Use					--

\* $p<.005$ .

### 5.3.4 Congruent Validity

Spearman's correlation coefficients between the CAMBI and the HCAMQ were all negative and significant, demonstrating good congruent validity of the CAMBI (Table 14).

Table 14

*Spearman's Correlations between the CAMBI and the HCAMQ*

Scale	1	2	3	4	5	6	7
1. CAMBI	--	.74*	.82*	.64*	-.55*	-.44*	-.46*
2. Natural Treatments <sup>a</sup>		--	.42*	.29*	-.38*	-.30*	-.34*
3. Holistic Health <sup>a</sup>			--	.36*	-.53*	-.46*	-.40*
4. Participation in Treatment <sup>a</sup>				--	-.28*	-.19*	-.30*
5. HCAMQ					--	.92*	.59*
6. HCAMQ Scientific Validity of CAM						--	.26*
7. HCAMQ Holistic Health							--

\*  $p<.0024$ .<sup>a</sup> subscales of the CAMBI

### 5.4 Discussion

The CAMBI is a 17-item questionnaire with satisfactory validity and reliability measuring three aspects of CAM-related treatment beliefs. This study has shown that three distinct dimensions of CAM-related treatment beliefs can be identified,

beliefs in natural treatments, participation in treatment, and holistic health. As predicted, high scores on all three subscales were associated with use of a high number of CAM forms.

The three-factor structure departed from the four aspects of treatment beliefs that the items were designed to measure. The hypothesised dimension of holistic treatments did not emerge as a distinct concept: items relating to a belief in natural healing abilities belonged to the holistic health scale while items relating to belief in the need for treatments to utilise natural healing resources belonged to the natural treatments scale. While not predicted, this pattern of subscales does have face validity and demonstrates that it is possible to distinguish between more than one underlying dimension of CAM-related treatment beliefs.

The highly pro-CAM sample of internet-users who participated in this study meant that it was not possible to make direct comparisons between the beliefs of CAM users and non-users. However, as our aim was to distinguish between different treatment beliefs which are related to CAM use, it was appropriate to employ a pro-CAM sample which was demographically typical of CAM users. It is important to acknowledge however that there could be important differences between CAM users who are internet users and those who are not. Moreover, given the age profile of our sample it is likely that it included many relatively healthy CAM users. The applicability of the CAMBI to less healthy CAM users is thus unknown and further tests of the validity of the CAMBI in well-defined chronic illness groups are necessary to investigate the contexts within which the CAMBI can appropriately be employed. The CAMBI has a number of other limitations: the CAMBI has not been shown to differentiate between people who use CAM and people who do not use CAM; the test-retest reliability of the CAMBI has not been examined; and the divergent validity of the CAMBI has not been assessed. These limitations need to be addressed in future studies.

In comparison with existing questionnaires, the CAMBI is similar in content to the scales developed by Siahpush (1999). Both questionnaires measure beliefs in holistic health and natural treatments and both include a scale relating to

patients' roles in treatment. However, the Holistic Health and Natural Treatments scales of the CAMBI demonstrated somewhat higher internal consistency than previously reported for the corresponding Siahpush subscales (Siahpush, 1999).

As expected, the pattern of correlations between the CAMBI and the HCAMQ showed that beliefs in natural treatments and holistic health (from the CAMBI) are associated with beliefs in holistic health and attitudes to CAM (from the HCAMQ), while beliefs in participation in treatment are less strongly associated with the HCAMQ scales. These associations provide further support for the validity of the CAMBI while suggesting that the CAMBI is a broader measure of treatment-related beliefs than the HCAMQ. However, the holistic health scale from the CAMBI had a slightly stronger correlation with the scale measuring attitudes to CAM from the HCAMQ than it did with the holistic health scale from the HCAMQ, which was unexpected. The difference between the size of these correlations was small (0.46 compared to 0.40) and could be a result of error variance – replicating this study would help to determine if this is the case or if the holistic health scale from the CAMBI does indeed have a consistently stronger relationship with the HCAMQ's attitudes to CAM scale than with the HCAMQ's holistic health scale. Overall, the HCAMQ and the CAMBI have shown similar psychometric properties. Both questionnaires provide good measures of somewhat different treatment beliefs in the context of CAM use.

In conclusion, the CAMBI measures and is able to distinguish between beliefs in natural treatments, participation in treatment, and holistic health. However, important psychometric properties of the CAMBI including its test-retest reliability and divergent validity remain unknown and need to be evaluated.

## Chapter 6

### Developing a Measure of Treatment Experiences: The Treatment Process Questionnaire

#### *6.1 Introduction*

The theoretical framework described in chapter 4 suggests that the influences on ongoing CAM use consist of abstract beliefs and concrete experiences of the embodied nature of treatment, and an interplay between abstract beliefs and concrete experiences. This chapter reports the development of the Treatment Process Questionnaire (TPQ), a measure of perceptions of the experience of treatment, in particular communication with therapist, efficacy of treatment and practical aspects of treatment.

The theoretical framework suggests that perceptions of symptom change are an important aspect of the concrete experience of treatment. The Revised Illness Perception Questionnaire (Moss-Morris et al., 2002) can be modified slightly to incorporate this aspect of treatment perceptions, and so perceptions of symptom change are not included in the present questionnaire. Other aspects of the treatment experience in CAM, not emphasised in the theoretical framework, include taking remedies (in the context of homeopathy or herbalism), and performing exercises (in the context of osteopathy or chiropractic). These additional aspects of the treatment experience, while important, are not well suited to measurement by a generic questionnaire.

Reviews of the adherence literature have highlighted the need to incorporate the patient's perspective in research on adherence, and to understand the ways in which provider-client interactions can influence adherence and outcomes (Muehrer 2000; Vermiere, Hearnshaw, Van Royen, & Denekens, 2001; World Health Organisation, 2003). A number of studies have shown that patients' beliefs before treatment can influence adherence (e.g. Horne & Weinman, 2002). However, Donovan and Blake (1992) drew attention to the importance of changes in patients' perspectives during the treatment process in explaining non-adherence to medication. Research on adherence to non-pharmacological interventions also suggests that adherence

may be influenced by patients' perceptions of the process of treatment, and has identified three key dimensions: the experience of the consultation, including therapist-patient communication and perceptions of the therapist's competence; perceptions of treatment efficacy; and practical issues, such as cost (Yardley, Sharples, Beech, & Lewith, 2001).

This study focuses on the dimensions of perceptions of the treatment process that were identified by Yardley and colleagues (Yardley, Sharples, Beech, & Lewith, 2001). These dimensions of the experience of treatment were identified through a grounded theory study which was conducted primarily in the context of chiropractic and which resulted in the dynamic model of treatment perceptions. This model forms a major part of the theoretical framework developed in chapter 4 (section 4.3.7) and forms the basis of the current study. The dynamic model of treatment perceptions specifies in detail the aspects of perceptions of treatment that were qualitatively related to peoples' overall perceptions of non-pharmacological treatments. According to the theoretical framework in order to investigate the quantitative predictors of adherence to CAM it is necessary to measure: patients' perceptions of the experience of the consultation in broad terms, including perceptions of communication during the consultation and perceptions of the therapist's competence; patients' perceptions of the efficacy of treatment, in other words their confidence that the treatment will help them with their health problem; and patients' perceptions of practical aspects of treatment, such as the degree to which they perceive their treatment as offering value for money. Research on doctor-patient relationships has identified a number of other dimensions that form part of the treatment experience. While these other dimensions are important, the following analysis shows that they do not directly relate to the theoretical model used to guide the current research and have not generated questionnaire measures which are both suitable for use in the CAM context and which directly assess the dimensions of patient perceptions of treatment identified in the theoretical framework.

Doctor-patient communication is a key feature of doctor-patient relationships that has been studied extensively. Two main approaches have been used to assess

doctor-patient communication (Arora 2003). The first is the use of observational instruments to analyse actual communication behaviours that are employed during consultations by doctors and/or patients (for a review of this literature see Ong, de Haes, Hoos & Lammes, 1995). This approach is not relevant to the current research as the theoretical framework specifies that it is patients' perceptions of therapist communication, rather than the communication *per se*, that will influence behaviour. The second approach to assessing doctor-patient communication uses questionnaires to measure patients' perceptions of communication, and so does need to be considered in relation to the present research. The contexts in which these questionnaires have been developed make them unsuitable for use in the present research with people with a range of illnesses in the CAM context: some of these questionnaires have been developed in specific illness contexts (e.g. musculoskeletal complains, Hershkovitz, Rothschild, Rose, Hornick, & O'Toole, 2001) while others have been developed in the context of conventional medicine (e.g. Safran et al., 1998) and so terminology such as 'doctor' would need to be altered and such questionnaires would need to be re-validated for use in the CAM context.

Quantitative measures of patient satisfaction have been developed that include concepts such as doctor-patient communication (e.g. the Patient Satisfaction Questionnaire, Grogan, Conner, Norman, Willits, & Porter, 2000). However, such questionnaires are worded for use in primary care settings and are not easily applied elsewhere. Furthermore, satisfaction with and perceptions of treatment are conceptually different. Perceptions of the treatment process are about the experiences that patients have of the consultation and treatment, rather than their explicit evaluations of these experiences. Indeed, qualitative research shows that the relationship between patient evaluations of treatment experiences and descriptions of those experiences is complex and descriptions and evaluations of the same experiences do not consistently map onto each other (Williams, Coyle & Healy, 1998). Measures of patient satisfaction do not necessarily assess perceptions of the experience of treatment, as ratings of satisfaction are to an extent dependent on expectations (Williams 1994). Two patients could rate their satisfaction with doctor-patient communication very highly. However, the nature of communication experienced by these two patients could be very different. For example, if one

patient had low expectations of doctor-patient communication and thought that these expectations had been met, they might rate their satisfaction highly, while another patient who held high expectations and whose expectations were met might also rate their satisfaction highly. This confound between satisfaction and expectations means that satisfaction measures do not necessarily assess perceptions of experiences of treatment, and so are not consistent with the theoretical framework guiding this research.

Patient-centredness has been used to describe a body of research on doctor-patient relationships. In broad terms, patient centredness is about valuing patients as individuals (e.g. Coyle & Williams 2001), and is part of the move away from paternalistic and authoritarian models of doctor-patient relationships in general practice. Patient-centredness in general is therefore relevant to the study of patients' experiences of CAM, in that treating patients as individuals is part of the ethos of many CAM therapies. However, there are three major problems with drawing on the literature on patient-centredness to inform the present research. First, the broad nature of patient-centredness and the ambiguity of this term have contributed to a lack of conceptual and theoretical clarity in this area (Mead & Bower 2000a). Second, the literature on patient-centredness has emerged from and is grounded in the primary care context, which is fundamentally different to the CAM context. A number of issues, such as paternalistic models of doctor-patient relationships, that have influenced the development of patient-centredness as a concept are absent from the CAM context. Third, patient-centredness tends to be viewed as a property of consultations and is thus often assessed using observational methods to analyse pre-defined patient-centred characteristics in recorded consultations (Mead & Bower 2000b). The theoretical framework used to guide the current research is not concerned with the actual characteristics of consultations; instead patients' perceptions of their concrete treatment experiences are hypothesised to predict their subsequent behaviour. Therefore it would be inappropriate to apply the concepts and measures developed in the literature on patient-centredness to the present research.

Mead and Bower have defined a number of specific dimensions of patient-

centred care: the biopsychosocial perspective, which involves the incorporation of social and psychological as well as biomedical factors in doctors' explanations of health and illness; the doctor-as-person perspective, which involves the extent to which doctors are aware of the influence of their personal characteristics on their medical practice; the patient-as-person perspective, which involves the doctor understanding the personal meanings that illness has for individual patients; sharing power and responsibility, which involves developing more egalitarian doctor-patient relationships; and therapeutic alliance, which involves doctors attending to social and emotional aspects of consultations in order to improve therapeutic relationships and outcomes (Mead & Bower, 2000a). While these dimensions of patient-centredness could be investigated in the context of CAM use it would be inappropriate to incorporate them in the current research as they are not directly related to the constructs included in the theoretical framework.

As discussed previously (chapter 3), there has been little quantitative research to date concerning perceptions of treatment experiences in the CAM context. Hence, there are no established measures of relevant treatment experiences in the context of CAM use. Patients' perceptions of practitioners' empathy have been quantitatively assessed in the context of CAM (e.g. Mercer, Reilly, & Watt, 2002). However, this aspect of the treatment experience is not included in the present theoretical framework. A number of studies have investigated abstract perceptions of the efficacy of CAM in the context of exploring attitudes to CAM, but not in the context of perceptions of concrete treatment experiences. For example, Vincent, Furnham and Willsmore (1995) examined abstract beliefs about the efficacy of a range of CAM modalities and the relationship between these beliefs and CAM use. Perceptions of efficacy and the experience of treatment have also been investigated in terms of the patient-provider relationship, but these studies have tended to focus on single CAM modalities, and so the resultant questionnaire items are not suitable for use in other modalities (Cherkin & MacCornack, 1989).

The aim of this study was to develop a questionnaire (the TPQ) that measured perceptions of key aspects of the treatment process and could be used in a range of settings. The objectives were to develop suitable questionnaire items, and to

establish the questionnaire's factor structure, reliability and concurrent criterion validity.

## 6.2 Method

### 6.2.1 Development of the TPQ

Twenty questionnaire items developed from qualitative research (Yardley et al., 2001) assessed perceptions of: inter-personal aspects of the consultation (the therapist's communication about treatment and interest in patients), therapist's competence, confidence in the efficacy of the treatment, and practical aspects of treatment (see Table 15). A seven-point Likert-type response scale was used, from 1 (*strongly disagree*) to 7 (*strongly agree*).

The items went through a process of development and were selected from a larger initial pool of items on the basis of the following criteria: use of commonly understood and non-technical terminology; use of neutral wording not involving leading questions or implicit value judgements; use of simple grammatical construction; no double-barrelled statements; no hidden assumptions. Five items were deliberately worded to represent negative perceptions of treatment. The use of such wording can help to encourage the endorsement of negative beliefs by suggesting that the researcher is open to the expression of these beliefs, and can help to guard against positive response biases by encouraging respondents to use both ends of the response scale. The items were also reviewed by a number of CAM therapists.

The questionnaire contained two additional items concerning the form of CAM treatment currently being used by participants and a broad measure of the stage of treatment (i.e. whether patients were new to a therapist or returning for ongoing treatment).

### 6.2.2 Design

This was a cross-sectional pilot questionnaire study. The study was conducted using a convenience sample of CAM users, as this is the population used for the main questionnaire study. The only questionnaire measure employed was the TPQ

(see Appendix B). It was not possible to include any validating measures to examine the congruent validity of the TPQ as there are no suitable established measures.

Table 15

*Treatment Process Questionnaire Items*

Practical Aspects
1. My treatment offers value for money
2. I find it difficult to travel to my appointments for my treatment
3. I can always get appointments at a convenient time
4. Seeing my therapist can be too much effort
5. My treatment is too expensive for me
Therapist Competence
6. My therapist is an expert in my treatment
7. My therapist knows how to treat my health problem
8. I trust my therapist
9. I have confidence that my therapist is well-qualified to treat me
10. My therapist is a competent provider of my treatment
Therapist Communication
11. My therapist provides explanations of my treatment that make sense to me
12. When my therapist talks about my health problem it does not make sense to me
13. My therapist is interested when I talk about my health problem
14. I am comfortable talking to my therapist about my health problem
15. My therapist wants to help me with my health problem
Confidence in Treatment Efficacy
16. I am confident that my current treatment will help my health problem
17. I am confident that my current treatment will help my physical symptoms
18. I am concerned that my current treatment will not be effective
19. I am confident that my current treatment will improve my well-being
20. I am confident that my current treatment will help me to stay healthy

### 6.2.3 Procedure

The inclusion criteria for participation in this study were that participants should be currently attending a private clinic for a form of CAM therapy, be over 18, and able to read and write in English. Questionnaires were distributed to patients by

reception staff at three private clinics providing a range of CAM therapies over a period of approximately three months. Reception staff asked as many patients as possible, after they had attended for an appointment, to take a questionnaire pack away with them. Each questionnaire pack included an introductory letter (emphasising the independence of the research from the clinic), the questionnaire, a freepost reply envelope and a debriefing sheet. Completed questionnaires were returned to the researcher.

Demographic items were not included in this pilot study to ensure the anonymity of participants responding to this potentially sensitive questionnaire. A common difficulty with questionnaires asking patients about their treatment is that there are often strong ceiling effects towards very positive evaluations or perceptions of treatment, particularly in the context of patient satisfaction surveys (Williams, Coyle, & Healy, 1998). Presenting the questionnaire independently from the treatment context can help to guard against such response patterns (by emphasising the independence of the research from the treatment provider), as can offering full anonymity to participants. Because the questionnaires were distributed by clinic staff it was felt that not asking for demographic details was a reasonable measure to take that might help to prevent false ceiling effects. Ethical approval was granted by the School of Psychology, University of Southampton, Ethics Committee.

#### *6.2.4 Statistical Methods*

Factor analysis (principal axis factoring with direct oblimin rotation) was used to identify subscales of the TPQ which measure different aspects of treatment experiences. There was no a priori theoretical reason to expect the factors to be independent. Therefore, oblique rotation was chosen. Initial analysis suggested that the five items measuring practical aspects of treatment were inconsistently related to the other items, and so these items were excluded from the factor analysis. The scree test from an initial principal components analysis suggested a two-factor solution. Items loading higher than 0.32 on each factor were interpreted as characterising that factor (Tabachnick & Fidell, 2001). Cronbach's alpha was used to examine the reliability of the resulting subscales. Concurrent criterion validity was examined using Mann-Whitney tests to compare scores between new and

returning patients.

### *6.3 Results*

#### *6.3.1 Participants*

One hundred and eighteen completed questionnaires were received. The response rate was 54%. The majority of participants were attending appointments for homeopathy (64%), with smaller numbers attending for herbalism (8%), osteopathy (10%), acupuncture (8%) or a combination of homeopathy with herbalism or acupuncture (9%). The majority of participants were attending for a follow-up appointment (70%); 12% were attending the clinic for the first time (18% did not respond to this item).

#### *6.3.2 Data Screening*

Examination of the distribution of scores on individual items showed that the scores were skewed in the positive direction. That is participants tended to rate their experiences of treatment and therapist positively. Extreme outliers were defined as cases scoring more than three standard deviations from the mean on any individual item. Sixteen outliers were identified and removed from the data set. Three cases were identified with missing data points; these cases were also removed from the data set for the purposes of the factor analysis, which was conducted on 99 cases.

#### *6.3.3 Factor Analysis*

The scree test from an initial principal component analysis suggested a two-factor solution (see Figure 8). Two correlated factors ( $r = -.53$ ) were identified (see Table 16), that assessed perceptions of the therapist and perceptions of the efficacy of the therapy. The items loading heavily onto Factor 1 all relate to perceptions of the therapist, for example 'I trust my therapist', while the items loading heavily on Factor 2 all relate to perceptions of the efficacy of the therapy, for example 'I am confident that my current treatment will help my health problem'. Two subscales were therefore computed by summing scores on constituent items. Both subscales had good reliability: the 10 item Perception of Therapist scale (score range 10 to 70) had an alpha of .91 ( $n=101$ ), while the 5 item Perception of Therapy scale

(range 5 to 35) had an alpha of .92 ( $n=100$ ). The five items relating to different practical aspects of treatment did not form a coherent, reliable subscale (Cronbach's alpha = 0.55) and were therefore treated as independent items in the analyses of validity.

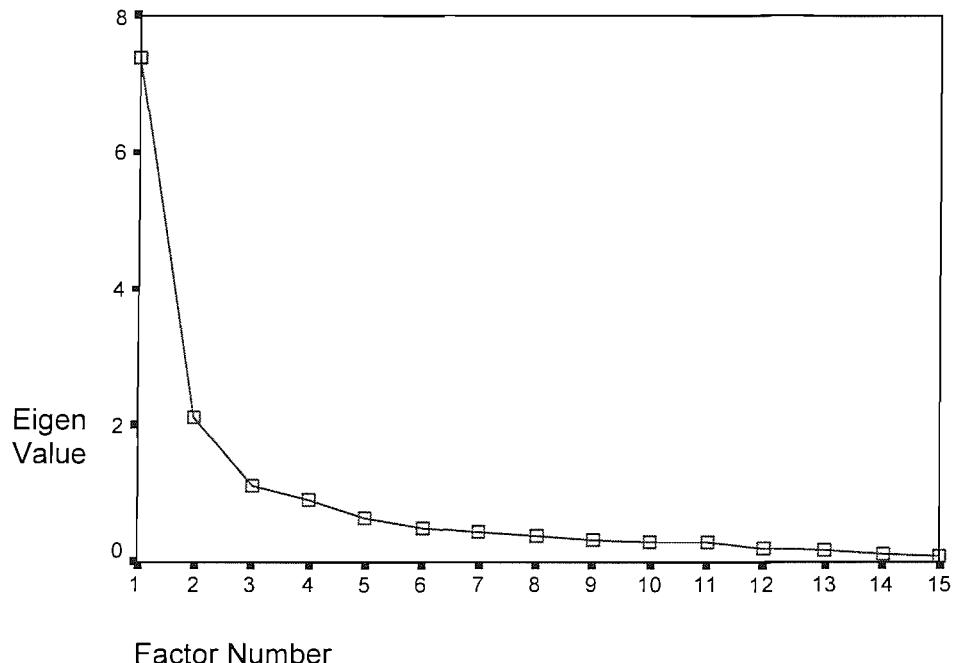


Figure 8. Scree plot from principal component analysis of TPQ items

Table 16

*Factor Loadings of Treatment Process Questionnaire Items*

Item	Factor 1	Factor 2
<u>Perception of Therapist</u>		
8. I trust my therapist	<b>.85</b>	-.00
9. I have confidence that my therapist is well-qualified to treat me	<b>.82</b>	-.05
14. I am comfortable talking to my therapist about my health problem	<b>.80</b>	.06
15. My therapist wants to help me with my health problem	<b>.79</b>	.09
10. My therapist is a competent provider of my treatment	<b>.76</b>	-.04
13. My therapist is interested when I talk about my health problem	<b>.68</b>	.04
6. My therapist is an expert in my treatment	<b>.62</b>	-.19
7. My therapist knows how to treat my health problem	<b>.53</b>	-.32
11. My therapist provides explanations of my treatment that make sense to me	<b>.53</b>	-.05
12. When my therapist talks about my health problem it does not make sense to me*	<b>-.52</b>	-.04
<u>Perception of Therapy</u>		
16. I am confident that my current treatment will help my health problem	-.01	<b>-.94</b>
17. I am confident that my current treatment will help my physical symptoms	.07	<b>-.86</b>
19. I am confident that my current treatment will improve my well-being	.08	<b>-.83</b>
18. I am concerned that my current treatment will not be effective*	.10	<b>.81</b>
20. I am confident that my current treatment will help me to stay healthy	.07	<b>-.65</b>

\* Item reverse-scored before included in subscale

Items displaying negative perceptions of treatment were reverse-scored before they were summed to form the subscales. High scores on the subscales indicate positive experiences of therapist and therapy. Mean scores on the subscales were located towards the positive ends of the scales (Table 17).

Table 17

*Descriptive Statistics for the TPQ*

Scale or Item	<i>n</i>	<i>M</i>	<i>SD</i>
Perception of therapist	101	64.93	5.54
Perception of therapy	100	29.19	4.68
Combined scales	99	94.05	9.03
Value for money	99	5.26	1.14
Difficult to travel	102	2.67	1.80
Appointments convenient	102	5.76	1.57
Too much effort	102	1.79	1.16
Too expensive	102	3.73	1.62

*6.3.4 Concurrent Criterion Validity*

Eighteen participants did not complete the questionnaire item asking them whether they were attending follow-up appointments, and so were excluded from this analysis. Table 18 shows the mean scores on the TPQ according to whether participants were new to their therapy and therapist (14% of participants) or attending follow-up appointments (86%). Returning patients scored significantly higher than new patients on both Perception of Therapy and Perception of Therapist.

Table 18

*Comparison of TPQ Scores of New and Returning Patients: Means with Standard Deviations in Brackets*

Scale or Item	Patient status	
	New ( <i>n</i> =11)	Returning ( <i>n</i> =70)
Perception of Therapist	60.91* (6.39)	65.92 (4.60)
Perception of Therapy	25.81* (3.95)	29.56 (4.61)
Value for money	4.45* (0.69)	5.31 (1.11)
Difficult to travel	2.55 (1.64)	2.83 (1.88)
Convenient appointments	5.55 (1.44)	5.79 (1.59)
Too much effort	2.36 (1.43)	1.81 (1.18)
Too expensive	4.18 (0.87)	3.79 (1.73)

\* Comparison between groups significant  $p < .05$  (Mann-Whitney test).

#### *6.4 Discussion*

The TPQ is a 20-item questionnaire consisting of two subscales with good reliability measuring perceptions of therapist and perceptions of therapy, and five individual items measuring perceptions of practical aspects of treatment. Factor analysis suggested a clear two-factor structure for the 15 items relating to perceptions of therapist and therapy. While items had been developed to measure two aspects of perceptions of therapist, communication and competence, according to the factor analysis one latent factor was underlying all items relating to perceptions of the therapist. Patients who were new to treatment perceived their therapist and therapy less positively than patients who were attending follow-up appointments. This provides preliminary evidence of the concurrent criterion validity of the TPQ.

A potential limitation of the TPQ is that practical aspects of treatment could only be assessed by single items, which in this study did not demonstrate strong concurrent validity. These items were developed to measure perceptions of cost, value and convenience, which are conceptually distinct aspects of treatment experience and could reasonably be expected to independently influence ongoing use of treatment. Therefore, these five items will be used as individual items in the main questionnaire study.

In this study distributions of scores on the TPQ were positively skewed, which could potentially limit sensitivity to differences in perceptions. However the statistically significant concurrent validity of the TPQ scales suggests that the skewed distribution of scores might reflect the generally positive perceptions of the participants in this sample.

Participants in the present study were using a range of very different CAM therapies, and the content of the TPQ should be suitable for use in other contexts where patients' experiences of consultations and treatment could influence their adherence to treatment, for example rehabilitation, physiotherapy, occupational therapy, lifestyle interventions such dietary advice or exercise, and mental health interventions such as counselling; future research is needed to establish the validity of the TPQ in other such contexts. The results of this pilot study should not

however be generalised beyond the current sample without caution, as the response rate (although comparable with similar studies) was low.

Overall, the results provide evidence of the factor structure, reliability and concurrent criterion validity of the TPQ, and suggest that this measure of perceptions of treatment experience can be used across a range of CAM modalities and can distinguish between perceptions of therapist, therapy, and practical aspects of treatment. However, more extensive development work is now required to provide a full examination of the psychometric properties of the TPQ. In particular the test-retest reliability, the predictive criterion validity, and the divergent validity of the TPQ were not examined in this study and need to be assessed in future research.

## Chapter 7

### Treatment Beliefs and Illness Perceptions and CAM Use

#### *7.1 Introduction*

This chapter reports an initial cross-sectional study that investigated the relationship between treatment beliefs, illness perceptions and current CAM use. While there is evidence that certain demographic and social factors influence CAM use, this study focuses on the role of beliefs in CAM use after social and demographic factors have been taken into account. Previous literature exploring the beliefs of people who use CAM was discussed in chapter 3. In summary, CAM use has been shown to be associated with beliefs in holistic health, natural treatments and participation in treatment (Astin, 1998; Balneaves, Kristjanson, & Tataryn, 1999; O'Callaghan & Jordan, 2003). There is also evidence that dissatisfaction with OM practitioners and treatments is associated with CAM use (Furnham & Kirkaldy, 1996; Moore et al., 2000). Multivariate studies suggest that treatment beliefs predict CAM use when controlling for other factors. O'Callaghan and Jordan (2003) found that treatment beliefs accounted for 13% of the variance in CAM use, and beliefs in natural remedies and participation in treatment were significant independent predictors of CAM use. However, the proportion of variance in CAM use which remains unexplained suggests that factors other than treatment beliefs are associated with CAM use.

The relationship between illness perceptions and CAM use has received less attention in the literature, but a small number of studies suggest that CAM users have poorer self-reported health than non-users (Astin, Pelletier, Marie, & Haskell, 2000), have longer illness durations than non-users (Kelner & Wellman, 1997), and hold beliefs that emotional factors are important in health and illness (Furnham & Beard, 1995). Searle and Murphy (2000) found that beliefs in stress and one's own behaviour as causes of illness were associated with both adherence to and understanding of homeopathy. Overall the evidence suggests that certain treatment beliefs and illness perceptions are important predictors of CAM use. However, few studies have investigated illness perceptions in CAM use and there have been no multivariate studies investigating both treatment beliefs and illness perceptions.

using well-validated questionnaires.

There is limited understanding to be gained by treating different forms of CAM as essentially interchangeable (Kelner & Wellman, 1997). Vincent and Furnham (1996) showed that people using osteopathy, homeopathy and acupuncture hold somewhat different beliefs. For example, homeopathy patients felt more strongly about the naturalness of treatments, while users of acupuncture were more sceptical and critical of OM. Given this need to treat CAM forms as a diverse range rather than a homogenous group of therapies, this study classified CAM forms into five groups of CAMs with common characteristics in order to investigate the beliefs of people who use specific types of CAM (namely alternative medical systems, mind body interventions, biologically based therapies, manipulative and body based methods, and energy therapies).

The theoretical framework developed in chapter 4 suggests that both treatment beliefs and illness perceptions might be related to CAM use. The framework also suggests that treatment beliefs are likely to be more proximal determinants of CAM use. However, the framework does not make any specific predictions about which specific illness perceptions and treatment beliefs are related to use of different forms of CAM. Relatively few studies have either systematically investigated multivariate associations between CAM use and different beliefs (particularly illness perceptions) or addressed whether people who use different forms of CAM hold different treatment beliefs and perceptions of illness. This study therefore investigated a range of both treatment beliefs and illness perceptions in a multivariate design in order to evaluate the relative importance of different beliefs in the current use of different types of CAM. The specific hypotheses were:

1. Current CAM use will be associated with treatment beliefs (beliefs in natural treatments, holistic health and participation in treatment, and dissatisfaction with and scepticism towards orthodox medicine).
2. Current CAM use will be associated with illness perceptions (including perceptions of longer duration, increased severity, and the role of emotional factors as causes of illness).
3. The predictors of current use of different types of CAM will differ.

## 7.2 Method

### 7.2.1 Design and Procedure

This was a correlational internet-based questionnaire study, in which self-selected participants completed a number of online questionnaire measures of treatment beliefs, illness perceptions and number and type of CAM forms currently used (see Appendix A). The primary dependent variable was current CAM use (a dichotomous measure of whether or not participants were currently using any form of CAM). Secondary, derived, dependent variables consisted of current use of different types of CAM (dichotomous measures of whether or not participants were currently using each of five different categories of CAMs).

The internet was used to recruit participants and collect responses to questionnaires. Participants were recruited via links on health-related websites and bulletin boards. The links transferred participants to the questionnaire website, hosted by the University of Southampton, where information about the study was presented and consent was obtained. Although this approach restricted the sampling frame of this research to self-selected computer-literate internet-users, the internet offers an efficient medium through which to recruit a potentially large and diverse sample in a limited time period (Birnbaum, 2000). Online recruitment enabled participants with potentially different experiences of CAM to be drawn from geographically diverse locations. A broad sample, including CAM users and non-users, was desirable to facilitate a rigorous test of the hypothesised relationships between beliefs and CAM use.

The questionnaires were presented online using Dreamweaver version 4. Responses were coded and stored in a text file on the website. Data retrieval was protected by username and password access, and data-files were transferred into SPSS (version 9) for statistical analysis. Ethical approval was granted by the School of Psychology, University of Southampton, Ethics Committee.

The sample for this study included some of the participants who took part in the study reported in chapter 5. Participants from that study were included in this

study if they:

1. Considered themselves to currently have a health problem,
2. Chose to complete the optional section of the questionnaire, and
3. Completed the optional section of the questionnaire with a minimum of missing responses (five or fewer missing data-points).

Twenty participants were excluded from this study as they did not meet the final criterion.

### *7.2.2 Questionnaires*

#### *7.2.2.1 Treatment beliefs.*

Beliefs in natural treatments, holistic health and participation in treatment were measured by the CAM Beliefs Inventory (CAMBI), a valid and reliable 17-item questionnaire with a seven-point response scale (chapter 5). High scores on the CAMBI scales indicate strong beliefs in the respective aspect of treatment. Beliefs about the potential harm caused by the overuse of prescription medicines were measured by the general scale of the Beliefs about Medicines Questionnaire (BMQ), a valid and reliable 8-item questionnaire with a 5-point response scale (Horne, Weinman, & Hankins, 1999). High scores on the BMQ-General scales indicate beliefs that prescription medicines do not potentially cause harm and are not overused. Attitudes to GPs were measured using a scale developed by Furnham and Kirkaldy (1996). This questionnaire consists of 6 items measuring evaluation of one's GP across a range of dimensions on a 5-point scale, for example 'At your last visit to your general practitioner how satisfied were you with your treatment'. High scores on the GP scale indicate a positive evaluation of GPs.

#### *7.2.2.2 Illness perceptions.*

Eight dimensions of perceptions of illness were measured by the revised Illness Perceptions Questionnaire (IPQ-R), a well-validated and reliable questionnaire (Moss-Morris et al., 2002). The IPQ-R was reworded to make it acceptable to participants who would not consider themselves to have an illness; all occurrences of the word 'illness' were replaced with 'health problem'. The identity subscale consists of the number of symptoms (from a list of 14 common symptoms) associated with one's current health problem. Six items measure beliefs about

the timeline of a health problem in terms of the degree to which it is chronic (timeline acute-chronic), for example ‘my health problem is likely to be permanent rather than temporary’. Six items measure beliefs in the severity of the consequences of the health problem (consequences), for example ‘my health problem is a serious condition.’ Six items measure beliefs in personal control over the health problem (personal control), for example ‘I have the power to influence my health problem.’ Five items measure beliefs in the ability of treatment to control the health problem (treatment control), for example ‘my treatment will be effective in curing my health problem.’ Five items measure the coherence of understanding of the health problem (illness coherence), for example ‘I have a clear picture or understanding of my condition.’ Four items measure belief in the cyclical nature of the health problem (timeline cyclical), for example ‘the symptoms of my condition change a great deal from day to day.’ A 6-item scale measures emotional representations of the health problem (emotional representation), for example ‘I get depressed when I think about my health problem.’

Causal beliefs about health problems are assessed by eighteen items covering a range of possible causes, including stress, pollution and alcohol. Preliminary factor analyses suggested that three items did not emerge consistently with other items, contributing to unstable and difficult to interpret factor solutions. These items were thus excluded from further analysis, and so the full factor analysis was conducted using 15 items. Principal axis factoring with direct oblimin rotation was conducted on the causal beliefs items (Table 19). Higher factor loadings indicate greater overlapping variance between the factor and the variable, with factor loadings greater than 0.32 indicating that there is at least 10% overlapping variance between factor and variable. The rule of thumb when interpreting the results of factor analyses is therefore to interpret factor loadings of at least 0.32 (Tabachnick & Fidell, 2001). Three subscales were computed that measured beliefs in emotional factors (e.g. ‘my emotional state’), external agents (e.g. ‘a germ or virus’), and lifestyle (e.g. ‘smoking’) as causes of illness.

Table 19

*Factor Loadings from the Pattern Matrix for Causal Beliefs Items from IPQ-R*

Item	Factor		
	1	2	3
12. Emotional state e.g. feeling down, lonely, anxious, empty	<b>.92</b>	.03	-.04
10. Family problems or worries	<b>.88</b>	.06	-.09
9. My mental attitude, e.g. thinking about life negatively	<b>.84</b>	-.03	-.04
1. Stress or worry	<b>.82</b>	.02	.02
17. My personality	<b>.70</b>	-.05	.07
11. Overwork	<b>.61</b>	.07	-.02
7. Pollution in the environment	.11	<b>.66</b>	-.02
18. Altered immunity	-.03	<b>.64</b>	.09
3. A germ or virus	-.06	<b>.59</b>	.00
6. Poor medical care in my past	.05	<b>.53</b>	.00
14. Alcohol	-.01	-.09	<b>.73</b>
15. Smoking	-.11	.11	<b>.62</b>
4. Diet or eating habits	.21	.18	<b>.44</b>
8. My own behaviour	<b>.37</b>	-.13	<b>.39</b>
13. Ageing	.04	.07	<b>.36</b>

#### 7.2.2.3 CAM use.

A 39-item checklist was used to measure the number of CAM modalities currently used by participants. The items on the checklist were derived from information produced by the Research Council for Complementary Medicine and have previously been used in a factor analytic study of the classification of complementary medicine (Furnham, 2000c). Participants were asked to click a checkbox next to each form of CAM they were 'currently using'. The same checklist was used to measure the number of CAM forms used by people close to participants (others' CAM use): participants were asked to click a checkbox next to each form of CAM which a close friend or family member had 'ever tried'. A checkbox was also included for any additional form of CAM used, and participants were asked to name any such forms of CAM.

Three CAM researchers used a Delphi process of consensus building to classify the

CAM forms according to the five NCCAM categories of CAM modalities: Alternative medical systems (e.g. homeopathy), mind-body interventions (e.g. meditation), biologically based therapies (e.g. herbal medicine), manipulative and body-based methods (e.g. chiropractic), and energy therapies (e.g. crystal and gem therapy). Two dichotomous measures were based on these categories, current use of at least one therapy from the category, and knowing a close friend or family member who has used at least one therapy from the category (others' use).

#### *7.2.2.4 Demographic characteristics.*

Individual items measured demographic characteristics that have been associated with CAM use: gender, age, education, and geographic location. Location was included because the web-based presentation of the questionnaires had the potential to collect data from an international sample of participants.

#### *7.2.3 Statistical Methods*

The sample size required for this study was estimated based on the sample size required to evaluate the multiple correlation and individual predictors in multiple linear regression. As noted in chapter 5, previous research has found medium sized correlations between attitudes to CAM and measures of behaviour (e.g. Hyland, Lewith, & Westoby, 2003; O'Callaghan & Jordan, 2003). Assuming a medium effect size, Tabachnik and Fidell (2001) recommend the use of the following rules of thumb for calculating sample sizes for multiple regression, where  $m$  is the number of independent variables in the analysis.

1. To test the multiple correlation:  $N > 50 + 8m$
2. To test individual predictors:  $N > 104 + m$

So, for 23 independent variables (6 variables related to treatment beliefs, 13 related to illness perceptions, and 4 related to demographic factors), 234 participants are required to test the multiple correlation, and 127 to test individual predictors.

In order to carry out multivariate statistical analyses it is necessary to make a number of assumptions about a data set; the degree to which these assumptions are met influences the validity of any statistical analysis (Tabachnick & Fidell, 2001). Therefore prior to analysis the data were screened for missing data, multivariate

outliers, multicollinearity and singularity, and distributions of variables.

Bivariate associations between demographic variables, beliefs and CAM use were assessed using Pearson's correlations. Alpha was set at .05 and Bonferroni corrections were made for each set of correlations.

Initial examination of the distribution of the dependent variables (current use of different forms of CAM), showed that logistic regression would be more appropriate than the planned linear regressions. Scores on the dependent variables were not normally distributed and fewer than half the participants had ever used each individual type of CAM (see below, section 7.3.2). Therefore, the data was more accurately represented by acknowledging this bimodal distribution and converting the dependent variables into dichotomous variables. Hierarchical logistic regressions were conducted to test the strength of any independent relationships between demographic variables, beliefs and CAM use. Six regressions were conducted to examine the predictors of current CAM use in general and in each of the five different types of CAM. Demographic variables, including others' CAM use (the number of CAM forms ever used by people close to the participants), were entered in Block 1 and all measures of treatment and illness beliefs were entered into Block 2 of each model. Any significant effect of belief variables thus represented a significant amount of variance in CAM use accounted for above and beyond the variance accounted for by demographic variables. Variables were forced into the models within each block.

### *7.3 Results*

#### *7.3.1 Participants*

Participants completed the questionnaires between December 2002 and May 2003. During this time 924 visits to the introductory page were recorded, and 546 questionnaires were submitted, giving an estimated response rate of 59%. The data for this study are from 247 participants who considered themselves to currently have a health problem and completed the (optional) IPQ-R. Two hundred and ninety nine submitted questionnaires were excluded from the analysis because: 206 potential participants did not consider themselves ill and so did not complete the optional

IPQ-R; 20 did consider themselves ill but declined to complete the IPQ-R; 71 considered themselves ill and clicked the link to the IPQ-R but did not complete it; 2 questionnaires were excluded as multivariate outliers.

Forty percent of participants were aged under 30, 28% were aged between 31 and 40, 18% were aged between 41 and 50, and 13% were aged between 51 and 60. Forty five percent of participants left full-time education aged 18 or younger, 36% left education aged 19 or older and 19% had not yet left education. Seventy seven percent of participants were resident in the UK, and 15% were resident in the USA. Sixty five percent of participants reported having a health problem that had lasted for at least one year. The majority of participants were female (92%), and because of the highly uneven gender split in this sample gender was not included in any analyses.

### *7.3.2 CAM Use*

Ninety seven percent of participants had tried at least one CAM form in the past ( $M = 7.66$ ,  $SD = 4.89$ ). Sixty two percent of participants were currently using at least one CAM modality (the highest number of CAM forms currently used was 22,  $M = 1.84$ ,  $SD = 2.71$ ). Thirty four percent of the sample was currently using mind-body therapies, 34% were using biologically based therapies, 23% were using manipulative and body-based methods, 17% were using alternative medical systems and 10% were using energy therapies.

The number of CAM modalities used by others close to participants ranged from 0 to 39 ( $M = 7.75$ ,  $SD = 6.98$ ). The count measure of other people's CAM use showed significant skew-ness and was converted into a categorical variable with four levels: very low (0-2 modalities used), low (3-5), high (6-11), very high (12 or more). Sixty five percent of the sample knew people who used mind-body therapies, 70% knew people who used biologically based therapies, 73% knew people who used manipulative and body-based methods, 65% knew people who used alternative medical systems and 34% knew people who used energy therapies.

### 7.3.3 Questionnaire Scales

The measures of treatment and illness beliefs had acceptable reliability and the distributions of all subscales approximated the Normal distribution (Table 20). The distributions of certain demographic variables were significantly skewed and so these were converted into dichotomous variables. Age was transformed into younger (aged 18 to 29) and older (aged over 30). Age left education was transformed into younger (aged 18 or younger) and older (aged over 18). Location was transformed into UK and non-UK. Duration of illness was transformed into less than one year and one year or longer.

Table 20

*Descriptive Statistics and Reliability of Questionnaire Scales*

Scale	<i>M</i>	<i>SD</i>	Cronbach's $\alpha$	Kolmogorov-Smirnov <i>z</i>
Holistic Health	33.22	5.45	0.71	1.41
Participation in Treatment	29.36	3.91	0.61	1.27
Natural Treatments	33.75	5.35	0.79	1.59
Attitudes to GP	19.58	6.77	0.93	1.37
Medication Overuse	10.23	2.97	0.71	1.60
Medication Harm	14.16	2.53	0.64	1.48
Identity	4.38	3.29	0.80	1.78
Severity	3.34	1.77	0.82	1.76
Timeline acute/chronic	20.79	6.25	0.91	1.11
Consequences	19.42	6.06	0.87	1.36
Personal control	21.75	5.04	0.87	1.21
Treatment control	13.72	3.26	0.80	1.90
Illness coherence	17.95	5.39	0.91	1.95
Timeline cyclical	13.46	3.78	0.81	1.62
Emotional representations	19.65	6.35	0.92	1.08
Cause emotions	16.93	7.33	0.91	1.50
Cause external agent	9.07	3.73	0.71	1.37
Cause lifestyle	11.15	4.10	0.69	1.32

#### *7.3.4 Hypotheses 1 and 2: Treatment and Illness Beliefs and Current CAM use*

Correlations between demographic characteristics, beliefs and current CAM use were small and few reached statistical significance (Table 21). Others' CAM use was the only demographic characteristic to correlate significantly with CAM use ( $r = 0.30, p < .002$ ). The only beliefs to correlate significantly with CAM use were holistic health beliefs ( $r = 0.28, p < .002$ ) and beliefs in emotions as a cause of illness ( $r = 0.23, p < .002$ ).

Table 21

*Pearson's Correlations between CAM Use, Demographic Characteristics and Beliefs*

Variable	Current CAM Use
Other CAM use	0.30*
Age	-0.01
Education	-0.05
Location	0.01
Holistic Health	0.28*
Participation in Treatment	0.00
Natural Treatments	0.05
Attitudes to GP	0.01
Medication Overuse	-0.15
Medication Harm	-0.09
Identity	0.11
Timeline acute/chronic	-0.13
Consequences	0.11
Personal control	0.15
Treatment control	0.17
Illness coherence	0.13
Timeline cyclical	0.06
Emotional representations	-0.07
Cause emotions	0.23*
Cause external agent	0.12
Cause lifestyle	0.08
Severity	0.02
Duration	-0.10

\* $p < .002$

Table 22 summarises the regression coefficients predicting current CAM use. A test of the full model against a constant-only model was statistically reliable, showing that the set of demographic characteristics and belief variables distinguish between participants who do and do not currently use CAM ( $\chi^2 (25) = 75.33, p <.01$ ). Demographic characteristics accounted for 14% of the variance in CAM use. Knowing a close friend or family member who uses between 6 and 11 CAM forms (compared to 0 to 2 CAM forms) increased the odds of current CAM use by 161%. The addition of treatment beliefs and illness perceptions in Block 2 significantly improved the model (Block 2  $\chi^2 (19) = 49.08, p <.01$ ). The model including demographic characteristics, treatment beliefs and illness perceptions accounted for 36% of the variance in current CAM use (Nagelkerke  $R^2 = 0.36$ ). The only treatment belief to emerge as a significant independent predictor of current CAM use was holistic health. A one point increase in the strength of holistic health beliefs (as measured by the CAMBI on a seven point scale) increased the odds of CAM use by 14%. People with beliefs that their illness has serious consequences, those who have a strong understanding of their illness and people who strongly believe that emotional factors caused their illness were also significantly more likely to be currently using CAM. The model correctly classified 84% of people currently using CAM and 58% of those not currently using CAM, giving a reasonable overall predictive success rate of 74%.

Table 22

*Hierarchical Regression Analysis for Beliefs Predicting Current CAM Use*

Variable	Odds ratio	95% Confidence interval	
		lower bound	upper bound
<u>Block 1</u>			
Age	0.91	0.45	1.84
Education	0.66	0.32	1.35
Live UK	1.06	0.46	2.46
Other CAM use very low (reference category)			
Other CAM use low	0.97	0.41	2.30
Other CAM use high	2.61*	1.09	6.22
Other CAM use very high	2.57	0.98	6.74
<u>Block 2</u>			
Holistic Health	1.14**	1.05	1.24
Participation in Treatment	0.95	0.87	1.04
Natural Treatments	0.94	0.86	1.02
Attitudes to GP	1.04	0.99	1.09
Medication Overuse	0.99	0.86	1.14
Medication Harm	0.91	0.77	1.07
Identity	0.98	0.87	1.11
Timeline acute/chronic	0.98	0.90	1.06
Consequences	1.11*	1.02	1.20
Personal control	0.97	0.89	1.05
Treatment control	1.12	0.98	1.27
Illness coherence	1.07*	1.00	1.16
Timeline cyclical	1.02	0.93	1.13
Emotional representations	0.93	0.86	1.01
Cause emotions	1.09**	1.02	1.16
Cause external agent	1.09	0.98	1.20
Cause lifestyle	0.97	0.87	1.08
Severity	0.96	0.78	1.19
Duration	0.90	0.38	2.12

\* $p<.05$ \*\* $p<.01$

### *7.3.5 Hypothesis 3: Different types of CAM*

Pearson's correlations were computed between types of CAM use and demographic characteristics (Table 23), treatment beliefs (Table 24), and illness perceptions (Table 25). Again, the correlation coefficients were small in size. Age, education and location did not correlate significantly with the use of any category of CAM. Knowing someone else who has used a category of CAM was positively associated with currently using that category of CAM, and this correlation reached significance for mind-body interventions, biologically based therapies and energy therapies.

Beliefs in holistic health were positively correlated with use of all types of CAM, and reached significance for mind-body interventions, biologically based therapies and energy therapies. Attitudes to GP were weakly correlated with CAM use; a small negative correlation with use of alternative medical systems reached significance. Beliefs that prescription medications are overused and can cause harm were negatively correlated with use of all types of CAM, and this correlation reached significance for alternative medical systems (medication overuse and harm) and biologically based therapies (medication overuse).

Having a strong illness identity was positively associated with use of all CAM types, and reached significance for mind-body therapies and energy therapies. Believing in emotions as a cause of illness was significantly positively correlated with use of mind-body and biologically based therapies, but showed only weak correlations with use of other CAM types. Beliefs that one's illness has serious consequences and that one can control the illness were positively correlated with use of all CAM types, and reached significance for mind-body interventions.

Table 23

*Pearson's Correlations between Current Use of CAM Categories and Demographic Characteristics*

Scale	Alternative Medical Systems	Mind-Body Interventions	Biologically Based Therapies	Manipulative Methods	Energy Therapies
Age	0.00	-0.02	0.06	0.09	0.13
Education	0.01	-0.04	0.02	-0.01	0.03
Live UK	-0.02	-0.14	0.07	0.00	-0.01
Other use Alternative Medical Systems	0.17	0.08	0.18*	0.08	0.05
Other use Mind-Body Interventions	-0.02	0.24**	0.03	0.00	0.05
Other use Biologically Based Therapies	0.11	0.18*	0.22*	0.13	0.11
Other use Manipulative Methods	0.08	0.17	0.19*	0.16	0.08
Other use Energy Therapies	0.04	0.22*	0.14	0.25**	0.27**

\* $p<.006$ \*\* $p<.001$

Table 24

*Pearson's Correlations between Current Use of CAM Categories and Treatment Beliefs*

Scale	Alternative Medical Systems	Mind-Body Interventions	Biologically Based Therapies	Manipulative Methods	Energy Therapies
Holistic Health	0.17	0.34**	0.21**	0.16	0.24**
Participation in Treatment	-0.05	-0.10	-0.03	-0.07	-0.06
Natural Treatments	0.10	0.02	0.06	0.14	0.09
Attitudes to GP	-0.18*	0.12	-0.04	0.02	-0.10
Medication Overuse	-0.21**	-0.11	-0.19*	-0.08	-0.15
Medication Harm	-0.23**	-0.02	-0.10	-0.02	-0.10

\* $p<.008$ \*\* $p<.002$

Table 25

*Pearson's Correlations between Current Use of CAM Categories and Illness Beliefs*

Scale	Alternative Medical Systems	Mind-Body Interventions	Biologically Based Therapies	Manipulative Methods	Energy Therapies
Identity	0.14	0.20*	0.13	0.18	0.19*
Timeline acute/chronic	-0.01	-0.12	-0.08	0.05	-0.01
Consequences	0.08	0.21*	0.13	0.09	0.12
Personal control	0.05	0.22*	0.14	0.04	0.10
Treatment control	-0.03	0.12	0.07	0.00	-0.02
Illness coherence	0.04	0.01	0.08	0.09	0.03
Timeline cyclical	0.07	0.12	0.04	0.09	0.13
Emotional representations	0.04	0.05	0.01	-0.05	0.02
Cause emotions	0.06	0.26*	0.21*	0.10	0.11
Cause external agent	0.17	0.09	0.16	0.05	0.10
Cause lifestyle	0.01	0.10	0.16	0.00	0.12
Severity	0.04	0.12	0.01	0.10	0.06
Duration	0.06	-0.10	-0.07	0.04	0.05

\* $p<.004$ \*\* $p<.001$

Table 26 summarises the regressions to predict current use of types of CAM.

Demographic characteristics, treatment beliefs and illness perceptions accounted for approximately 27% of the variance in use of alternative medical systems; 48% of the variance in use of mind-body interventions; 30% of the variance in use of biologically based therapies; 26% of the variance in current use of manipulative and body based methods; and 31% of the variance in current use of energy therapies.

Tests of the full models against constant-only models were all statistically significant, indicating that demographic characteristics, treatment beliefs and illness perceptions as a set distinguish between people who do and do not use alternative medical systems ( $\chi^2 (27) = 43.62, p <.05$ ), mind-body interventions ( $\chi^2 (27) = 104.07, p <.01$ ), biologically based therapies ( $\chi^2 (27) = 59.89, p <.01$ ), manipulative and body based methods ( $\chi^2 (27) = 46.10, p <.05$ ), and energy therapies ( $\chi^2 (27) = 54.70, p <.01$ ).

For use of alternative medical systems, the addition of treatment beliefs and illness perceptions in Block 2 significantly improved the model fit (Block 2  $\chi^2 (19) = 33.82, p <.05$ ). The significant independent predictors were having strong beliefs in holistic health, believing that it is not important to participate in treatment, and believing that orthodox medicines can cause harm. In terms of the predictive ability of the model, 19.5% of current users of alternative medical systems and 97.1% of people who were not currently using alternative medical systems were correctly classified by the model; overall 84.2% of cases were correctly classified.

For use of mind-body interventions, the addition of treatment beliefs and illness perceptions in Block 2 significantly improved the model fit (Block 2  $\chi^2 (19) = 75.80, p <.001$ ). The significant independent predictors were having strong beliefs in holistic health, not believing in the importance of natural treatments, holding a positive evaluation of one's GP, believing one's illness has serious consequences, and believing that emotional factors are a cause of one's illness. In terms of the predictive ability of the model, 58.3% of current users of mind body interventions and 87.1% of people who were not currently using such interventions were correctly classified by the model; overall 77.3% of cases were correctly classified.

For biologically based therapies, the addition of treatment beliefs and illness perceptions in Block 2 significantly improved the model fit (Block 2  $\chi^2$  (19) = 37.47,  $p < .01$ ). The significant independent predictors were *not* knowing someone else who has used mind body interventions, knowing someone else who has used biologically based therapies, having strong beliefs in holistic health, and believing one's illness has serious consequences. In terms of the predictive ability of the model, 44.7% of current users and 82.7% of people who were not currently using biologically based therapies were correctly classified by the model; overall 69.6% of cases were correctly classified.

For manipulative methods, the addition of treatment beliefs and illness perceptions in Block 2 did not significantly improve the model fit (Block 2  $\chi^2$  (19) = 20.53,  $p = .36$ ). The significant independent predictors were *not* knowing someone else who has used mind body interventions, and knowing someone else who has used energy therapies. The predictive ability of this model was relatively poor: 26.3% of current users and 95.3% of people who were not currently using manipulative and body-based methods were correctly classified by the model; overall 79.4% of cases were correctly classified.

For energy therapies, the addition of treatment beliefs and illness perceptions in Block 2 significantly improved the model fit (Block 2  $\chi^2$  (19) = 30.90,  $p < .05$ ). The significant independent predictors were knowing someone else who has used energy therapies, having strong beliefs in holistic health, and believing that it is not important to participate in treatment. In terms of the predictive ability of the model, 36% of users of energy therapies and 99.1% of people who were not currently using energy therapies were correctly classified by the model; overall 92.7% of cases were correctly classified.

Table 26

*Summary of Hierarchical Logistic Regression Analysis for Illness and Treatment Beliefs Predicting Current Use of Categories of CAM*

Variable	Odds ratio (95% confidence interval)				
	Alternative Medical Systems	Mind-Body Interventions	Biologically Based Therapies	Manipulative Methods	Energy Therapies
<u>Block 1</u>					
Age	1.10 (0.44, 2.74)	0.69 (.031, 1.53)	1.22 (0.60, 2.48)	1.32 (0.59, 2.94)	3.00 (0.75, 11.97)
Education	0.81 (0.34, 1.93)	0.47 (0.21, 1.06)	1.04 (0.52, 2.08)	0.97 (0.45, 2.10)	1.17 (0.34, 4.07)
Live UK	0.70 (0.26, 1.87)	0.41 (0.17, 1.02)	1.49 (0.66, 3.74)	0.82 (0.34, 1.96)	1.06 (0.26, 4.27)
Other use AMS	2.50 (0.79, 7.91)	0.64 (0.25, 1.62)	1.00 (0.44, 2.27)	1.23 (0.50, 3.07)	0.64 (0.15, 2.77)
Other use MBI	0.39 (0.14, 1.09)	1.40 (0.55, 3.54)	0.33* (0.14, 0.78)	0.37* (0.14, 0.97)	0.24 (0.05, 1.25)
Other use BBT	1.20 (0.36, 4.01)	2.11 (0.70, 6.38)	2.78* (1.05, 7.37)	0.99 (0.35, 2.84)	1.88 (0.29, 12.06)
Other use MM	1.75 (0.52, 5.90)	1.18 (0.40, 3.52)	2.31 (0.91, 5.87)	2.43 (0.84, 7.03)	1.18 (0.22, 6.39)
Other use ET	0.93 (0.38, 2.32)	1.34 (0.60, 2.99)	1.21 (0.59, 2.46)	2.83* (1.29, 6.24)	7.58** (1.87, 30.70)
<u>Block 2</u>					
Holistic Health	1.13* (1.01, 1.27)	1.29** (1.16, 1.45)	1.11* (1.02, 1.20)	1.04 (0.94, 1.15)	1.33** (1.09, 1.62)
Participation in Treatment	0.89* (0.80, 0.99)	1.01 (0.91, 1.12)	0.96 (0.88, 1.04)	0.91 (0.83, 1.01)	0.85* (0.74, 0.99)
Natural Treatments	0.95 (0.86, 1.06)	0.89* (0.80, 0.97)	0.93 (0.85, 1.01)	1.07 (0.97, 1.17)	0.91 (0.77, 1.06)
Attitudes to GP	0.96 (0.90, 1.02)	1.10** (1.03, 1.17)	1.02 (0.97, 1.07)	1.01 (0.96, 1.07)	0.94 (0.86, 1.04)

Variable (Block 2 continued)	OR (95% CI)				
	Alternative Medical Systems	Mind-Body Interventions	Biologically Based Therapies	Manipulative Methods	Energy Therapies
Medication Overuse	0.96 (0.79, 1.15)	1.02 (0.86, 1.21)	0.91 (0.78, 1.05)	0.99 (0.84, 1.16)	1.10 (0.84, 1.44)
Medication Harm	0.81* (0.67, 0.98)	0.95 (0.79, 1.13)	0.99 (0.85, 1.16)	1.01 (0.85, 1.21)	0.91 (0.69, 1.20)
Identity	1.04 (0.89, 1.21)	1.07 (0.93, 1.22)	1.02 (0.90, 1.15)	1.10 (0.96, 1.26)	1.13 (0.91, 1.39)
Timeline acute/chronic	1.01 (0.92, 1.12)	0.98 (0.90, 1.07)	0.99 (0.92, 1.07)	1.04 (0.96, 1.13)	1.02 (0.89, 1.17)
Consequences	1.00 (0.90, 1.10)	1.13** (1.03, 1.24)	1.10* (1.01, 1.20)	1.01 (0.93, 1.11)	1.09 (0.94, 1.27)
Personal control	1.05 (0.94, 1.17)	1.04 (0.94, 1.15)	1.02 (0.93, 1.11)	1.01 (0.92, 1.11)	1.05 (0.90, 1.23)
Treatment control	0.91 (0.79, 1.06)	1.07 (0.92, 1.24)	1.01 (0.88, 1.14)	0.99 (0.85, 1.14)	0.96 (0.76, 1.22)
Illness coherence	1.05 (0.96, 1.15)	1.01 (0.93, 1.09)	1.06 (0.99, 1.14)	1.03 (0.95, 1.12)	1.04 (0.91, 1.18)
Timeline cyclical	0.99 (0.87, 1.13)	0.98 (0.87, 1.10)	0.98 (0.88, 1.08)	1.05 (0.94, 1.17)	1.07 (0.89, 1.29)
Emotional representations	1.05 (0.95, 1.15)	1.00 (0.91, 1.09)	0.99 (0.91, 1.07)	0.94 (0.86, 1.03)	1.01 (0.88, 1.15)
Cause emotions	1.00 (0.93, 1.08)	1.08* (1.01, 1.16)	1.04 (0.98, 1.10)	1.06 (0.99, 1.14)	1.00 (0.90, 1.12)
Cause external agent	1.09 (0.97, 1.23)	1.07 (0.96, 1.19)	1.09 (0.99, 1.20)	0.99 (0.89, 1.11)	1.03 (0.87, 1.22)
Cause lifestyle	0.92 (0.81, 1.05)	0.98 (0.87, 1.09)	1.03 (0.93, 1.13)	0.97 (0.87, 1.08)	1.06 (0.90, 1.26)
Severity	1.04 (0.79, 1.37)	1.01 (0.79, 1.29)	0.91 (0.73, 1.14)	1.07 (0.84, 1.37)	0.88 (0.58, 1.33)
Duration	1.01 (0.35, 2.95)	0.88 (0.35, 2.18)	0.75 (0.34, 1.68)	0.89 (0.36, 2.19)	0.89 (0.20, 3.97)

\* $p < .05$ ; \*\* $p < .01$

## 7.4 Discussion

Overall, the results provide strong support for the hypothesis that beliefs in holistic health are associated with CAM use. However it was hypothesised that a range of treatment beliefs would be associated with CAM use, namely beliefs in natural treatments, holistic health and participation in treatment, and negative beliefs about orthodox medicine. There was no evidence in the present study that any treatment beliefs other than stronger beliefs in holistic health are consistently associated with current CAM use. The overwhelming majority of participants in this study (97%) had used CAM in the past. Thus the results of this study are directly relevant to the question of why people *return* to CAM.

### 7.4.1 Treatment Beliefs, Illness Perceptions and CAM Use

The concept of holistic health is relevant to a range of CAM modalities: holistic health beliefs were associated with use of alternative medical systems, mind-body interventions, biologically based therapies and energy therapies. Previous research has also highlighted the relevance of holistic health beliefs in CAM use in general (Astin, 1998), CAM use in cancer (Downer et al., 1994) and use of homeopathy (Furnham & Smith, 1988).

There was some evidence to support the hypothesis that illness perceptions are also associated with CAM use. People with a strong understanding of their illness, strong beliefs that their illness has serious consequences and a belief that their illness was caused by emotional factors were more likely to be using CAM. Having a strong understanding of one's illness relates to the emphasis found in a range of CAM modalities on the importance of the individual in health, illness and treatment and the concept of illness as an opportunity for personal development and learning. This is supported by qualitative research suggesting that CAM use as part of the self-management of chronic illness relates to individuals gaining a sense of personal empowerment (Andrews, 2002; Foote-Ardah, 2003). Beliefs that one's illness has serious consequences overlaps conceptually with perceived need for treatment, which is one of the most important and immediate predictors of health care utilisation in general (Rosenstock, 1966), thus it is likely that such beliefs are not specific to CAM use. Strong beliefs in emotional factors as causes of illness

reflect an emphasis in many CAM modalities on the importance and relevance of psychological factors in health, illness and treatment. This is illustrated by the association between these beliefs and the use of mind-body interventions. Mind-body interventions, such as yoga, hypnosis and talk therapies, emphasise the role of psychological and emotional factors in health and illness; it is not surprising therefore that people who use these therapies have strong beliefs in the role of emotions in illness.

Surprisingly, beliefs in personal control were not significantly associated with CAM use in this study. Previous research has found that CAM users believe they can control the course of their illness and have higher beliefs in internal locus of control than non-users (Furnham & Bhagrath, 1993; McGregor & Peay, 1996). It is also notable that perceptions of the duration and severity of illness were not associated with CAM use. Perhaps this is a result of the very general sample of people employed in this study. Previous research demonstrating links between perceptions of the duration and severity of illness and CAM use have tended to be illness-specific studies for example irritable bowel disease (Moser et al., 1996) and low back pain (Cherkin & MacCornack, 1989), although Kelner and Wellman (1997) found that people with a variety of illnesses who visited complementary practitioners reported longer illness durations than those who visited orthodox practitioners.

While the aim of this study was to examine the predictors of CAM use after taking into account the role of demographic characteristics, the associations between CAM use and demographic characteristics must be acknowledged. Age, education and location were not associated with CAM use in this study. This is most likely a result of the narrow range of demographic characteristics represented in this self-selected pro-CAM sample and should not be interpreted as evidence that these characteristics are not associated with CAM use. Knowing other people who use CAM emerged as a strong predictor of CAM use. People were more likely to use CAM in general and biologically based therapies and energy therapies if they knew other people who used these therapies. This suggests that word of mouth could contribute to peoples' decisions to use specific CAM forms. Previous qualitative research has also

suggested that people talk to their friends and relatives when investigating specific CAM forms and deciding whether to use them (e.g. Boon, Brown, Gavin, Kennard, & Stewart, 1999).

#### *7.4.2 Use of Different Types of CAM*

While this study was not designed to test the differences between predictors of different types of CAM, comparing the size of the relationships between beliefs and CAM use across different types of CAM suggests interesting directions for future research. Beliefs that prescription medication can cause harm predicted use of alternative medical systems. People who use alternative medical systems, such as homeopathy, naturopathy or traditional Chinese medicine, could be seeking a form of treatment which involves taking remedies but avoids the perceived potential harm caused by equivalent orthodox prescription medications. In comparison to the general importance of holistic health beliefs, beliefs about orthodox prescription medicine were only weakly correlated with the use of different types of CAM. This suggests that beliefs about orthodox prescription medicines are less relevant to CAM use than those treatment beliefs that are more explicitly congruent with CAM.

Although this generally pro-CAM sample tended to have high scores on participation in treatment, this was less true of users of alternative medical systems and energy therapies. One possible explanation is that when people decide to use these types of CAM, they are taking an active, participatory decision in relation to their health care and then when they are actually having treatment, they are more willing to hand back some control to their CAM practitioner and hence place less importance on participating in the actual treatment itself. There is some evidence to suggest that in cancer CAM users might indeed be less interested in participating in and having control over CAM treatments once they have decided to use CAM (Montbriand, 1995).

Low beliefs in the importance of natural treatments and more positive evaluations of one's GP were associated with use of mind-body interventions. The use of mind-body interventions is not inconsistent with weak beliefs in natural treatments. This suggests that for this group of people the use of mind-body interventions in

particular does not represent a move away from or rejection of orthodox medicine but represents a pull towards a holistic form of treatment. The finding that beliefs about the harm and overuse of prescription medicines were weak predictors of CAM use in this study further supports this argument. Previous research has also suggested that negative attitudes to orthodox medicine are not held by all CAM users. For example Conroy, Siriwardena, Smyth, and Fernandes (2000) found that positive attitudes to doctors and medicine were associated with CAM use in a sample of general practice patients in Dublin.

Strong beliefs that one's illness has serious consequences were associated with current use of mind-body interventions and biologically based therapies. While beliefs in serious consequences of illness were associated with CAM use in general it is interesting that these beliefs were associated with the use of these two specific types of CAM. It is possible that people view mind-body interventions and biologically based therapies as particularly potent forms of CAM. Adrian Furnham's (2000c) factor analytic study of CAM modalities supports this explanation: three of the five therapies rated as most effective by Furnham's participants (relaxation, counselling and yoga) are classified as mind-body interventions in the present study.

It is notable that none of the treatment and illness beliefs measured in this study predicted use of manipulative and body-based methods. One possible reason for this is that these therapies tend to be relatively mechanistic (and are thought of as such; see Yardley, Sharples, Beech & Lewith, 2001), especially when compared with therapies classified in the other four categories (e.g. compare chiropractic and homeopathy). It is possible that a different set of beliefs about treatment are relevant to the use of manipulative and body-based methods, other than beliefs about holistic health, natural remedies, participation in treatment and attitudes to orthodox medicine.

Overall, this study supports the hypothesis that different beliefs are associated with the use of different types of CAM and highlights the need to focus on the use of specific categories of (or even individual) CAM modalities, rather than

investigating CAM use in general. Future research is needed to examine the relationships between beliefs and the use of different types of CAM in specific illness populations and to test the explanations of the associations found in this study.

#### *7.4.3 Limitations*

It must be acknowledged that the sampling methods used in this study somewhat limit the generalisability of the findings. The participants were mostly young, well-educated female internet users who chose to take part in a survey on attitudes to complementary medicine. The lack of associations between CAM use and demographic characteristics was probably a consequence of the limited range of demographic characteristics represented in this sample. The self-selected sample may have limited the strength of associations found between beliefs and CAM use in that the participants tended to report pro-CAM treatment and illness beliefs and were demographically typical of CAM users (Thomas, Nicholl, & Coleman, 2001). Although all participants reported currently having a health problem, information about diagnosis was not collected. One possible extension of this work would thus be to investigate associations between CAM use and illness perceptions in specific illness groups.

While the sample limits the generalisability of the present findings, nevertheless this study does suggest that treatment beliefs and illness perceptions are related to CAM use and that such relationships are dependent on the type of CAM use in question. The possibility of similarities between users of different forms of CAM and the small proportion of non-CAM users in this sample would be expected to minimise any differences in CAM-related treatment beliefs between individuals and across different types of CAM. If the sample had included a greater proportion of people who were not using CAM, stronger associations would be expected between beliefs, demographic characteristics and CAM use. Thus the significant associations found between CAM use and beliefs are likely to be relatively robust.

### *7.5 Conclusions*

In a sample of people who had used CAM in the past, beliefs in holistic health are strong predictors of current CAM use, in particular use of alternative medical systems, mind body interventions, biologically based therapies and energy therapies. Pro-CAM beliefs in holistic health were more important predictors of CAM use than negative attitudes to orthodox medicine. Illness perceptions are associated with CAM use. People with a strong understanding of their illness, strong beliefs that their illness has serious consequences and a belief that emotional factors cause their illness were more likely to be using CAM. While cross-sectional research such as the present study helps to establish a picture of the beliefs of people who use different types of CAM, important questions remain to be answered. For example, are holistic health beliefs strongly held before CAM use is initiated, or does the process of choosing and experiencing CAM lead to changes in peoples' beliefs about treatment? Longitudinal research is now needed to gain detailed insight into the processes by which treatment beliefs develop and influence CAM use.

## Chapter 8

### Why do People Adhere to CAM? A Prospective Questionnaire Study

#### *8.1 Introduction*

This chapter reports a longitudinal study of the relationship between treatment beliefs, perceptions of experiences of treatment and ongoing use of treatment. As previous literature (see chapter 3) and the studies reported in chapters 5 and 7 have demonstrated, beliefs about treatment are associated with CAM use. More specifically, beliefs in holistic health, natural treatments and participating in treatment are associated with CAM use. As highlighted in the literature review (chapter 3), there has been little research into adherence to and ongoing attendance for CAM. Searle and Murphy (2000) conducted a prospective questionnaire study and showed that illness perceptions, particularly perceptions of the causes of illness, are associated with adherence to homeopathy. There is some qualitative evidence that patients' experiences of treatment and their relationship with their practitioner might be important determinants of ongoing CAM use (e.g. Andrews, 2003; Lee-Treweek, 2002). Qualitative studies also suggest that abstract beliefs about participation in treatment, holistic and natural treatments, and dissatisfaction with OM might have a role in explaining why people return to CAM (Low, 2004; Luff & Thomas, 2000; Mercer & Reilly, 2004). According to the theoretical model presented in chapter 4, abstract beliefs about treatment, perceptions of illness, and concrete experiences of treatment will predict ongoing use of treatment. In the context of CAM use, therefore, it was hypothesised that:

1. Treatment beliefs (beliefs in holistic health, natural treatment and participation in treatment) and illness perceptions will predict adherence to CAM.
2. Positive perceptions of treatment experiences will predict adherence to CAM.
3. An improvement in symptoms will predict adherence to CAM.
4. Concrete experiences of treatment will predict adherence to CAM when controlling for abstract beliefs and demographic characteristics.

The aim of this study was to evaluate which of these predictors is most important in predicting adherence to CAM, and to investigate the relationship between abstract beliefs and concrete experiences of treatment. Through examining the relationship between concrete experiences of treatment and adherence to CAM the study also examined the predictive criterion validity of the Treatment Process Questionnaire (TPQ). It was hypothesised that:

1. Concrete experiences of treatment as measured by the TPQ would correlate with adherence to CAM.
2. These correlations will be found across all forms of therapy and forms of adherence investigated.

## *8.2 Method*

### *8.2.1 Design*

This was a prospective postal questionnaire study in which beliefs and experiences were assessed at baseline and adherence to CAM was assessed at three month follow-up. At baseline all participants had experienced at least one consultation with their chosen therapist. Some participants had only had one consultation with their practitioner at baseline while for others the baseline measures were taken well into ongoing courses of treatment.

### *8.2.2 Questionnaires*

Patients' treatment beliefs, illness perceptions, and perceptions of the experience of treatment were assessed by questionnaire. The Beliefs about Medicines Questionnaire (BMQ; Horne, Weinman, & Hankins, 1999) was not used in this study as these scales did not predict current CAM use in the previous study (chapter 7), and an attempt was made to keep the number of questionnaires to a minimum to reduce the burden on participants. Two separate questionnaire packs were used to measure beliefs and experiences in order not to overburden participants.

Questionnaire Pack 1 (Appendix C) consisted of the TPQ, a measure of perceptions of the therapy, perceptions of the therapist, and perceptions of practical aspects of attending appointments (see chapter 6). Perceptions of health change were measured using a single item 'overall, how much has your health changed in the last week?'

which was scored on a 7-point Likert-type scale where 1 was labelled *greatly improved* and 7 was labelled *greatly deteriorated*. Participants also provided demographic and background information: Age, income, gender, education, and therapy history (including whether they had just seen the therapist for the first time or not and whether they had just used the therapy for the first time or not).

Questionnaire Pack 2 (Appendix D) consisted of the CAM Beliefs Inventory (CAMBI) and the Revised Illness Perceptions Questionnaire (IPQ-R; Moss-Morris et al., 2002). The CAMBI was used to measure beliefs in holistic health, natural treatments and participation in treatment (see chapter 5). The IPQ-R was used to measure illness perceptions (see description in chapter 6). Participants also completed a 39 item checklist of CAM forms (Furnham, 2000c), reporting whether they had previously used each type of CAM and reporting whether they knew a close friend or family member who had used each type of CAM.

Questionnaire Pack 3 (Appendix E) consisted of measures of adherence. Adherence was measured by self-report of adherence to therapist's recommendations concerning a) taking remedies, b) making lifestyle changes, and c) attendance at appointments. Participants reported whether they had been given any advice on these issues and then rated the degree to which they adhered to that advice on a seven-point Likert scale where 1 was labelled *not at all* and 7 labelled *completely*. In order to reduce pressure to report high adherence these items were introduced using socially normative wording to increase the acceptability of non-adherence, as follows: 'We are interested in any advice you have been given by your therapist, and whether you have continued using your therapy. Sometimes people decide they no longer want to continue with their therapy or therapist. We are interested in your experiences and feelings on these issues. There are no right or wrong answers.' While possible bias in self-reports of adherence is a concern, self-report measures are concordant with other measures of adherence, such as electronic measures, and questionnaire methods show higher concordance with other measures than do interview methods (Garber, Nau, Erickson, Aikens, & Lawrence, 2004).

### *8.2.3 Participants*

The participants were patients at five private clinics providing a range of CAM therapies on a private basis. The clinics were located in London and the South of England. One clinic principally offered chiropractic treatment, one Traditional Chinese Medicine, and the remaining three principally offered homeopathy.

### *8.2.4 Procedure*

Participants were recruited by reception staff at the clinics, who approached patients after their appointments, asked if they would be willing to take part in a questionnaire study and (if they were willing to take part) handed them a copy of Questionnaire Pack 1, including an introductory letter, information sheet and consent form. An incentive was also included in this questionnaire pack: a voucher for Boots Advantage Card points, worth 100 points (equivalent to £1 when redeemed for products). The use of a token pre-paid incentive such as this has been shown to almost double the odds of response in postal questionnaire studies, thus increasing the response rate and possibly improving the representativeness of responses (Edwards et al., 2002). On receipt of Questionnaire Pack 1, Pack 2 was mailed directly to participants. Three months following receipt of Pack 1, Pack 3 was mailed to participants. Follow-up reminders were used to encourage people to complete the study. Ethical approval was granted by the School of Psychology, University of Southampton, Ethics Committee.

### *8.2.5 Statistical Methods*

The sample size required for this study was estimated based on the sample size required to evaluate the multiple correlation and individual predictors in multiple linear regression. As noted in chapter 7, previous research has found medium sized correlations between attitudes to CAM and measures of behaviour (e.g. Hyland, Lewith, & Westoby, 2003; O'Callaghan & Jordan, 2003). Assuming a medium effect size, Tabachnick and Fidell (2001) recommend the use of the following rules of thumb for calculating sample sizes for multiple regression, where  $m$  is the number of independent variables in the analysis.

1. To test the multiple correlation:  $N > 50 + 8m$
2. To test individual predictors:  $N > 104 + m$

So, for 34 independent variables, 322 participants are required to test the multiple correlation, and 138 to test individual predictors. Participants were using different therapies and the adherence measures were not relevant to all therapies (e.g. adherence to remedies was unlikely to be relevant for people using chiropractic). Because of this, 322 participants who would be given advice about each aspect of treatment assessed in the adherence measures were required. Participants were not included in the analysis of adherence to attendance, or remedy use, or lifestyle change, if they reported not having been given advice about these aspects of treatment.

Prior to analysis the dataset was examined in terms of missing data, distributions of variables, outliers and multicollinearity and singularity. Cases with missing data on more than 10% of items or on the majority of items on any one scale were removed from the analyses. Two cases were removed from analyses involving treatment beliefs and six cases were removed from analyses involving illness perceptions. All other missing values were replaced with the mean score for Likert scale items, the median score for ordinal level variables and the mode score for categorical variables. Participants who dropped out of the study before completing either questionnaire pack 2 or 3 (see below) were excluded from the analyses of measures from these questionnaire packs.

Univariate outliers were defined as being values greater than  $+$ / $-$  3.29 standard deviations than the mean on any scale (Tabachnick & Fidell, 2001). One outlier existed on CAMBI participation in treatment scale, two on IPQ-R illness coherence, one on IPQ-R personal control, one on IPQ-R treatment control, and two each on TPQ perceptions of therapy and therapist. There were two outliers on own past CAM use and three on others' CAM use. The influence of these outliers was minimized by replacing them with scores one value more extreme than the next most extreme value on the scale (Tabachnick & Fidell, 2001).

Because the distributions of adherence scores were significantly skewed, non-parametric statistics were used to examine associations between adherence to CAM and demographic characteristics, treatment beliefs, illness perceptions and

experiences of treatment. Mann-Whitney U tests were computed to see if there were significant differences in adherence between different demographic groups.

Associations between adherence variables and continuous variables (i.e. scores on questionnaire subscales) were tested using Spearman's rho correlations.

Because the adherence scores were skewed, they converted into dichotomous variables using median splits in order to examine the predictors of high (compared to low) adherence in logistic regressions. Sequential stepwise logistic regression analyses were conducted to predict adherence to recommended remedy use, lifestyle change and attendance. Forward likelihood ratio method was used to determine entry of individual variables into the models. Demographic characteristics were entered in Block 1 of each model. The regressions were conducted to examine the hypothesis that experiences of treatment will add to the prediction of adherence above and beyond abstract beliefs and demographic characteristics. So, beliefs were entered in Block 2 of the models and measures of experiences were entered in Block 3. Variables were only included in the regression analyses if they showed significant bivariate associations with the dependent variable. This selection of variables was necessary because the sample size achieved (240) was insufficient, according to the calculations presented above (which required 322 participants), to enter all of the independent variables into the regression analysis. Bonferroni corrections were not used in this study because only including in the regressions the variables that showed significant bivariate associations with the dependent variable acts as a control for type I errors.

Spearman's rho correlations between the measures of adherence and demographic characteristics, treatment experiences and treatment and illness beliefs were computed for each therapy separately. Unfortunately the numbers using each therapy were low and varied and it was not possible to make direct comparisons at the level of individual correlations.

Spearman's rho correlations were computed between the measures of adherence and scores on the TPQ for both the whole sample and for each therapy separately.

### 8.3 Results

#### 8.3.1 Participants

Of the 279 people who completed and returned the first questionnaire pack, 32 participants (11%) did not complete the second questionnaire pack and a further seven participants (3%) did not complete the third questionnaire pack, yielding a sample of 240.

The majority of participants (64%) were attending osteopathic or chiropractic appointments, 22% were attending homeopathic appointments and 12% were attending appointments for Traditional Chinese Medicine (including acupuncture). One in five participants completed the first questionnaire pack following their first appointment with the CAM practitioner. The remaining 80% of participants had previously seen the CAM practitioner; in other words they were recruited during the course of treatment. The majority of participants (61%) had used the therapy before with the same practitioner, 15% were completely new to the CAM therapy and 24% were new to their practitioner but had used the therapy previously. Over two thirds of participants had a health problem which had lasted for at least one year, 18% had a health problem which had lasted between one and six months, and 7% were attending for a health problem that had lasted for less than one month. Participants had used between 1 and 31 CAM therapies in the past ( $M = 8.84$ ,  $SD = 5.68$ ). Participants knew close friends or family who had used between 0 and 37 CAM therapies in the past ( $M = 9.25$ ,  $SD = 6.42$ ).

The majority of participants were female (74%). Twelve percent of participants were aged between 18 and 29, 16% aged between 30 and 39, 19% aged between 40 and 49, 24% aged between 50 and 59, 19% aged between 60 and 69, and 10% were aged over 70. Thirty six percent of participants had an income between £10,000 and £19,999, 32% had an income less than £10,000 while the remainder had an income of £20,000 and above, with 8% having incomes above £40,000. A large proportion of participants were educated to degree level (39%), 23% left school at 18, 29% at 16 and 8% at under 16.

### 8.3.2 Questionnaire Scales

Table 27 shows the descriptive statistics and reliability of the questionnaire scales. The reliability of the scales was good (alpha >.7; Loewenthal, 2001) for all but one subscale (participation in treatment). Five scales were significantly different from the Normal distribution according to the Kolmogorov-Smirnov statistic and so non-parametric statistics were used. On visual inspection of the distributions the TPQ scales and Illness Coherence were highly skewed and were converted into dichotomous variables for the regression analyses.

Table 27

*Descriptive Statistics and Reliability of Questionnaire Scales*

Scale	<i>M</i> ( <i>n</i> )	<i>SD</i>	Cronbach's $\alpha$	Kolmogorov-Smirnov <i>z</i>
Holistic health	33.13 (245)	5.09	0.71	0.97
Natural treatments	33.58 (245)	5.27	0.78	1.39
Participation in treatment	27.95 (245)	4.26	0.59	1.39
Attitudes to GP	21.27 (245)	5.94	0.92	1.14
Perceptions of therapist	63.3 (279)	7.19	0.91	2.93*
Perceptions of therapy	29.99 (279)	4.83	0.89	2.50*
Consequences	16.55 (241)	5.55	0.86	1.22
Emotional representations	15.93 (241)	5.04	0.87	0.96
Illness coherence	20.02 (241)	4.18	0.91	3.22*
Personal control	22.51 (241)	4.09	0.82	1.96
Timeline acute chronic	19.95 (241)	5.63	0.90	1.59
Timeline cyclical	12.01 (241)	3.67	0.80	1.57
Treatment control	18.73 (241)	3.21	0.76	1.53
Cause mental attitude	8.97 (234)	3.69	0.80	1.78
Cause smoking	3.14 (234)	1.45	0.82	4.35*
Cause virus	4.23 (234)	2.16	0.76	3.33*

\**p*<.001

### *8.3.3 Adherence*

Participants reported high rates of adherence to therapists' recommendations. The vast majority (202, 84%) reported being given advice about attendance at follow-up appointments and 150 (74%) reported complete adherence to that advice ( $M = 6.4$ ,  $SD = 1.36$ ). Eighty two participants (34%) reported being given advice about taking remedies and 52 (63%) reported complete adherence to that advice ( $M = 6.2$ ,  $SD = 1.35$ ). One hundred and forty three participants (60%) reported being given advice about changing their lifestyle and 17 (12%) reported complete adherence to that advice ( $M = 5.0$ ,  $SD = 1.44$ ).

### *8.3.4 Bivariate Analyses*

Table 28 shows the mean adherence scores for people in different demographic categories. Women (compared with men) reported significantly higher adherence to lifestyle change ( $z = -2.01$ ,  $p < .05$ ). People who had seen a therapist for the first time reported significantly lower attendance for their follow-up appointments than those who had seen a therapist whom they had seen before ( $z = -2.59$ ,  $p < .05$ ). People who were using a therapy they had not used before reported significantly lower attendance than those who had used the therapy before ( $z = -3.13$ ,  $p < .01$ ). People who were attending for a follow-up appointment reported significantly higher adherence to lifestyle change than those attending with a new illness ( $z = -2.30$ ,  $p < .05$ ). Adherence to lifestyle change differed significantly according to form of therapy: people using homeopathy reported significantly higher adherence to lifestyle change than people using osteopathy/chiropractic ( $z = -3.86$ ,  $p < .01$ ) or traditional Chinese medicine ( $z = -3.48$ ,  $p < .01$ ).

Table 28

*Adherence According to Demographic Group*

Characteristic	Remedy Use			Lifestyle Change			Attendance		
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
Gender Male	6.0	1.36	14	4.52	1.58	33	6.5	1.03	51
Gender Female	6.29	1.35	68	5.15	1.37	110	6.32	1.46	151
New therapist	6.23	1.09	13	4.44	1.71	25	5.95	1.65	37
Previous therapist	6.25	1.40	69	5.11	1.36	118	6.46	1.28	165
New therapy	6.43	.85	14	4.75	1.80	20	5.78	1.78	30
Previous therapy	6.21	1.43	68	5.03	1.38	123	6.47	1.25	172
New illness	6.63	0.76	19	4.41	1.59	29	6.05	1.73	39
Follow-up	6.13	1.47	63	5.14	1.37	114	6.44	1.25	163
Chiropractic	5.75	1.82	12	4.8	1.42	93	6.4	1.29	127
Homeopathy	6.25	1.37	52	5.78	1.41	32	6.53	1.32	49
TCM	6.59	0.80	17	4.63	1.09	16	5.96	1.69	23

Spearman's rho correlations were computed between the measures of adherence and demographic characteristics, treatment beliefs, illness perceptions, and treatment experiences (Table 29). Attendance at follow-up appointments was associated with increased age, positive perceptions of one's therapist and therapy, believing one's illness is not cyclical in nature and having low beliefs in mental state as a cause of illness. Education and reporting treatment as being too much effort correlated negatively with attendance. Adherence to recommended lifestyle change was associated with increased duration of health problem, positive perceptions of one's therapist, finding it difficult to travel to appointments, finding treatment too expensive, and believing in viruses as a cause of illness. Adherence to remedy use was associated with increased age, finding it difficult to travel to appointments, strong beliefs in holistic health and negative perceptions of one's GP.

Table 30 shows the correlations between the measures of treatment experiences, treatment beliefs and illness perceptions. Overall the larger correlations were within groups of variables, for example between different measures of concrete experiences or different measures of abstract beliefs.

Table 29. *Spearman's Correlations between Demographic Characteristics, Experiences of Treatment, Abstract Beliefs and Adherence*

Characteristic	Attendance	Lifestyle change	Remedy use
Age <sup>1</sup>	.16*	-.07	.22*
Income <sup>1</sup>	-.01	-.01	.01
Education <sup>1</sup>	-.14*	.05	.09
Duration of health problem <sup>1</sup>	.02	.19*	-.15
Past CAM use <sup>1</sup>	-.07	.11	.22
Other CAM use <sup>1</sup>	-.06	.13	.10
Perceptions of therapist <sup>1</sup>	.21**	.17*	.22
Perceptions of therapy <sup>1</sup>	.20**	.07	.11
Health change <sup>1</sup>	.11	-.02	-.12
Value for money <sup>1</sup>	.10	-.01	.12
Difficult to travel <sup>1</sup>	.06	.17*	.23*
Convenient appointments <sup>1</sup>	.06	.02	.07
Too much effort <sup>1</sup>	-.14*	-.02	.05
Too expensive <sup>1</sup>	-.02	.19*	.15
Natural treatments <sup>2</sup>	.02	.04	.10
Participation in treatment <sup>2</sup>	-.03	.14	-.05
Holistic health <sup>2</sup>	.06	.13	.25*
Attitudes to GP <sup>2</sup>	.01	.08	-.23*
Timeline acute chronic <sup>2</sup>	.09	.10	-.02
Consequences <sup>2</sup>	-.08	.13	.14
Personal control <sup>2</sup>	-.10	-.10	-.04
Treatment control <sup>2</sup>	-.07	-.11	.00
Illness coherence <sup>2</sup>	.09	.05	.04
Timeline cyclical <sup>2</sup>	-.16*	.10	.03
Emotional representations <sup>2</sup>	-.10	.00	.02
Cause mental attitude <sup>2</sup>	-.23**	-.08	-.11
Cause smoking <sup>2</sup>	-.11	-.07	-.17
Cause virus <sup>2</sup>	-.08	.19*	.11
Identity <sup>2</sup>	-.02	.10	-.05

<sup>1</sup> For correlations with attendance  $n=202$ , lifestyle change  $n=143$ , remedy use  $n=82$ .

<sup>2</sup> For correlations with attendance  $n=198$ , lifestyle change  $n=140$ , remedy use  $n=80$ .

\* $p<.05$ ; \*\* $p<.01$

Table 30

*Spearman's Correlations between Treatment Beliefs, Illness Perceptions and Treatment Experiences (n=232)*

	1	2	3	4	5	6	7	8	9	10	11	12
1Natural treatments	--	.03	.39**	-.03	.01	-.02	.09	.06	.04	.09	.19**	.11
2Participation in treatment		---	.28**	-.03	.13	.04	-.01	.07	.09	.02	-.05	.07
3Holistic health			---	-.07	.14*	-.04	.01	.33**	.20**	-.03	.02	.28**
4Attitudes to GP				---	.08	.07	-.08	.05	.03	-.12	-.17**	-.13*
5Illness coherence					---	-.11	-.29**	.24**	.40**	-.22**	-.24**	-.25**
6Acute/chronic						---	.34**	-.08	-.43**	.21**	.17*	-.04
7Consequences							---	-.18**	-.43**	.25**	.63**	.24**
8Personal control								---	.46**	-.09	-.19**	.11
9Treatment control									---	-.19**	-.30**	-.04
10Cyclical										---	.24**	.18
11Emotional representations											---	.38**
12Cause mental attitude												---
13Cause smoking/ alcohol												
14Cause virus												
15Identity												

	13	14	15	16	17	18	19	20	21	22	23
1Natural treatments	.06	.08	-.07	-.17**	.10	.16*	.11	.00	.13*	.04	-.03
2Participation in treatment	-.07	.03	-.05	-.03	.10	.16*	-.03	-.08	-.02	-.08	-.03
3Holistic health	.07	.08	-.11	-.05	.10	.23**	.09	-.02	.05	.05	-.02
4Attitudes to GP	.03	-.05	-.04	.00	.13*	.03	.13*	-.04	.08	-.15*	-.17**
5Illness coherence	-.37**	-.39**	-.01	-.03	.14*	.23**	.22**	-.23**	.21**	-.23**	-.14*
6Acute/chronic	-.03	.03	.11	.16*	.02	.03	-.02	.06	-.06	-.04	.10
7Consequences	.00	.26**	.30**	.03	.10	-.05	-.07	.23**	-.09	.02	.28**
8Personal control	.08	-.03	-.08	-.05	.16*	.23**	.14*	-.17**	.07	-.12	-.20**
9Treatment control	-.06	-.25**	-.12	-.13	.16*	.22**	.25**	-.11	.10	-.14*	-.20**
10Cyclical	.00	.07	.26**	-.05	-.04	-.17*	-.10	.11	.02	.10	.10
11Emotional representations	.14*	.24**	.22**	.02	-.08	-.17**	-.12	.18**	-.15*	.13*	.23**
12Cause mental attitude	.46**	.48**	.02	.03	-.06	-.07	-.09	.18**	-.20**	.22**	.05
13Cause smoking/ attitude	---	.46**	-.08	.04	-.04	-.03	-.11	-.02	-.14*	.08	-.14*
14Cause virus	---	.02	.02	.03	-.01	-.11	.15*	-.12	.07	.05	
15Identity		---	.06	-.07	-.08	-.12	.05	-.11	.01	.18**	
16Health change T1			---	-.06	-.18**	-.07	.09	-.13*	.14*	.22**	
17Perceptions of therapist				---	.50**	.37**	.02	.30**	-.35**	-.04	
18 Perceptions of therapy					---	.36**	-.05	.30**	-.27**	-.18**	

	13	14	15	16	17	18	19	20	21	22	23
19Value							---	-.09	.45**	-.30**	-.29**
20Travel							---	-.20**	.32**	.20**	
21Time							---	---	-.32**	-.03	
22Effort							---	---	---	.20**	
23Expense									---	---	

\* $p < .05$

\*\* $p < .01$

### *8.3.5 Regression Analyses*

The regression model to predict attendance at appointments is summarized in Table 31. The predictor variables as a set accounted for approximately 23% of the variance in attendance and were reliable predictors of adherence to attending appointments ( $\chi^2 (6) = 33.58, p = .000$ ). The addition of concrete experiences of treatment in Block 3 significantly improved the model fit ( $\chi^2 (1) = 4.16, p = .041$ ). In the final model the following variables predicted increased attendance: older age, lower education, not using a new therapy, lower beliefs that one's illness has a cyclical timeline, lower beliefs in mental attitudes as a cause of illness, and more positive perceptions of one's therapist. The odds ratio of 2.11 for Perceptions of Therapist shows that people who scored above the median on this scale were twice as likely to strongly adhere to recommendations to attend appointments as people who scored below the median.

Table 31

*Summary of Sequential Logistic Regression to Predict Attendance (n=196)*

Predictors	B	Wald	OR	95% CI	
				lower	upper
<b>Block 1</b>					
Age	0.17	1.75	1.19	0.92	1.53
Education	-0.20	1.43	0.82	0.59	1.14
New Therapy	-1.33	8.09**	0.26	0.11	0.66
<b>Block 2</b>					
Time cyclical	-0.10	3.55	0.90	0.81	1.00
Cause mental attitude	-0.11	4.37*	0.90	0.81	0.99
<b>Block 3</b>					
Perceptions of therapist	0.75	4.02*	2.11	1.02	4.38
Constant	3.27	10.28**	26.21		

Note. Variables entered according to forward likelihood ratio (criteria for inclusion  $p < .15$ ). Variables not meeting entry criteria: new therapist (Block 1), perceptions of therapy and too much effort (Block 3).

OR = odds ratio

CI = confidence interval

\* $p < .05$

\*\* $p < .01$

The regression model to predict adherence to lifestyle change recommendations is summarized in Table 32. The predictor variables as a set accounted for approximately 24% of the variance in adherence and were reliable predictors of adherence to lifestyle changes ( $\chi^2 (4) = 25.10, p = .000$ ). The addition of concrete experiences of treatment in Block 3 improved the model fit and this improvement reached borderline significance ( $\chi^2 (1) = 3.76, p = .053$ ). In the final model the following variables predicted increased adherence to lifestyle change: female

gender, use of homeopathy, attendance for a new illness and positive perceptions of one's therapist. The odds ratio of 2.06 for Perceptions of Therapist shows that people who scored above the median on this scale were twice as likely to strongly adhere to recommendations to change their lifestyle as people who scored below the median.

Table 32

*Summary of Sequential Logistic Regression to Predict Adherence to Lifestyle Change (n=140)*

Predictors	<i>B</i>	Wald	OR	95% CI	
				lower	upper
<b>Block 1</b>					
Gender	-0.77	2.75	0.46	0.19	1.15
Homeopathy	1.66	12.04**	5.27	2.06	13.46
New Illness	1.05	4.57*	2.84	1.09	7.42
<b>Block 2</b>					
<b>Block 3</b>					
Perceptions of therapist	0.72	3.68	2.06	0.99	4.30
Constant	-1.63	10.25**	0.20		

Note. Variables entered according to forward likelihood ratio (criteria for inclusion  $p < .15$ ). Variables not meeting entry criteria: duration of health problem (Block 1), cause virus (Block 2), difficult to travel and too expensive (Block 3).

OR = odds ratio

CI = confidence interval

\* $p < .05$

\*\* $p < .01$

The regression model to predict adherence to remedy use is summarized in Table 33. The predictor variables as a set accounted for approximately 30% of the variance in remedy use and were reliable predictors of adherence to remedy use ( $\chi^2 (4) =$

19.60,  $p = .001$ ). The addition of concrete experiences of treatment in Block 3 significantly improved the model fit ( $\chi^2 (1) = 3.83, p = .050$ ). In the final model the following variables predicted increased adherence to remedy use: older age, stronger beliefs in holistic health, more negative attitudes to one's GP, and finding it difficult to travel to appointments.

Table 33

*Summary of Sequential Logistic Regression to Predict Adherence to Remedy Use (n=79)*

Predictors	<i>B</i>	Wald	OR	95% CI	
				lower	upper
<b>Block 1</b>					
Age	0.61	7.46**	1.84	1.19	2.86
<b>Block 2</b>					
Holistic Health	0.10	3.56	1.11	1.00	1.23
Attitude to GP	-0.11	5.08*	0.90	0.81	0.99
<b>Block 3</b>					
Difficult to travel	1.06	3.61	2.88	0.97	8.60
Constant	-2.40	1.36	0.09		

Note. Variables entered according to forward likelihood ratio (criteria for inclusion  $p < .15$ ). No variables failed to meet entry criteria.

OR = odds ratio

CI = confidence interval

\* $p < .05$

\*\* $p < .01$

### *8.3.6 Therapy-Specific Analyses*

The correlations between the measures of adherence and demographic characteristics, treatment experiences, treatment beliefs and illness perceptions for people using homeopathy are shown in Table 34, for chiropractic and osteopathy Table 35 and for traditional Chinese medicine Table 36. Perceptions of therapist and therapy are relatively consistently associated with adherence in all three therapy groups, while the treatment beliefs and illness perceptions which are associated with adherence differ across therapy.

### *8.3.7 Predictive Criterion Validity of the TPQ*

Table 29 shows the correlations between scores on the TPQ and adherence to remedy use, lifestyle change and attendance across all therapy groups. Perceptions of the therapist correlated positively with adherence to lifestyle change and attendance, while perceptions of the therapy correlated positively with attendance. The single items from the TPQ were also associated with adherence: finding it difficult to travel to appointments correlated positively with adherence to remedy use and lifestyle change; finding the therapy too expensive correlated with adherence to lifestyle change; finding the therapy not too much effort correlated with increased attendance.

Scores on the TPQ were also significantly correlated with aspects of adherence in each separate CAM group. In the homeopathy group, perceptions of the therapist were positively correlated with adherence to remedy use and attendance; perceptions of the therapy were positively correlated with attendance; finding the therapy offers value for money was positively correlated with adherence to remedy use (Table 34). In the chiropractic and osteopathy group, perceptions of the therapy and therapist were positively correlated with attendance; negative perceptions of the therapist and finding appointments inconvenient were significantly correlated with adherence to remedy use (although only 10 cases were included in the analyses of remedy use in this group; Table 35). In the traditional Chinese medicine group perceptions of the therapist were positively correlated with adherence to remedy use and lifestyle change, while perceptions of the therapy and finding the therapy value for money were positively correlated with adherence to lifestyle change (Table 36).

Table 34

*Spearman's Correlations between Predictor Variables and Adherence: Homeopathy*

Characteristic	Attendance	Lifestyle change	Remedy use
	(n=48)	(n=31)	(n=51)
Age	.43**	-.06	.42**
Income	-.08	-.34	-.08
Education	-.12	-.07	-.11
Duration of health problem	.02	.07	-.12
Past CAM use	.15	-.04	.19
Other CAM use	.20	.22	.08
Perceptions of therapist	.34*	.27	.31*
Perceptions of therapy	.39**	.09	.25
Health change	-.18	-.14	-.13
Value for money	.18	-.04	.29*
Difficult to travel	.03	-.14	.08
Convenient appointments	.09	.27	.19
Too much effort	-.15	-.20	-.14
Too expensive	-.18	.15	.17
Natural treatments	.24	.17	.21
Participation in treatment	-.11	.18	-.28*
Holistic health	.20	.10	.21
Attitudes to GP	-.14	.07	-.21
Timeline acute chronic	.03	.27	.03
Consequences	-.05	.18	.10
Personal control	-.13	-.09	-.05
Treatment control	-.03	-.32	-.01
Illness coherence	-.04	-.06	-.03
Timeline cyclical	.19	.36*	-.00
Emotional representations	-.21	.05	-.07
Cause mental attitude	-.27	-.45*	-.25
Cause smoking	-.12	-.16	-.23
Cause virus	-.19	-.11	-.14
Identity	.10	.05	-.02

\* $p < .05$ \*\* $p < .01$

Table 35

*Spearman's Correlations between Predictor Variables and Adherence:  
Chiropractic and Osteopathy*

Characteristic	Attendance	Lifestyle change	Remedy use
	(n=123)	(n=91)	(n=10)
Age	.06	-.07	-.30
Income	.07	.09	.51
Education	-.14	.08	.70*
Duration of health problem	.01	.17	-.21
Past CAM use	-.04	.10	.46
Other CAM use	-.04	.05	.37
Perceptions of therapist	.19*	.02	-.69*
Perceptions of therapy	.25**	.08	-.62
Health change	.13	.02	-.01
Value for money	.03	.03	-.51
Difficult to travel	-.08	.19	.28
Convenient appointments	.09	-.07	-.64*
Too much effort	-.14	.09	.39
Too expensive	.08	.11	.28
Natural treatments	.00	.06	-.24
Participation in treatment	.06	.03	.20
Holistic health	.09	.09	.43
Attitudes to GP	-.00	.09	-.50
Timeline acute chronic	.10	.12	.24
Consequences	-.08	.08	.56
Personal control	-.04	-.06	-.09
Treatment control	-.02	-.09	-.40
Illness coherence	.14	.10	-.43
Timeline cyclical	-.31**	-.01	.40
Emotional representations	-.11	-.04	.67*
Cause mental attitude	-.25**	-.01	.37
Cause smoking	-.20*	-.09	.04
Cause virus	-.20*	.00	.34
Identity	-.08	.15	.36

\* $p < .05$

\*\* $p < .01$

Table 36

*Spearman's Correlations between Predictor Variables and Adherence: Traditional Chinese Medicine*

Characteristic	Attendance (n=22)	Lifestyle change (n=16)	Remedy use (n=17)
Age	.05	.02	.44
Income	.02	.10	-.03
Education	-.04	.02	.29
Duration of health problem	-.07	-.02	-.12
Past CAM use	-.49*	.32	.14
Other CAM use	-.35	.16	-.25
Perceptions of therapist	.08	.50*	.70**
Perceptions of therapy	-.22	.74**	.32
Health change	.13	-.38	-.14
Value for money	-.18	.53*	-.12
Difficult to travel	.23	.25	.29
Convenient appointments	-.07	.37	.29
Too much effort	-.24	-.18	-.07
Too expensive	-.04	-.29	.20
Natural treatments	-.15	-.14	-.12
Participation in treatment	-.38	.57*	.30
Holistic health	-.22	.42	.17
Attitudes to GP	.11	.07	.18
Timeline acute chronic	.30	-.30	-.03
Consequences	-.04	-.18	.05
Personal control	-.31	-.16	-.15
Treatment control	-.28	.56*	.19
Illness coherence	-.24	.59*	.14
Timeline cyclical	.05	.18	.01
Emotional representations	.39	-.16	.03
Cause mental attitude	-.19	.33	-.01
Cause smoking	-.08	-.02	-.54*
Cause virus	.06	-.02	.20
Identity	-.09	-.40	-.12

\* $p < .05$

\*\* $p < .01$

#### *8.4 Discussion*

This study was one of the first to use a longitudinal design to investigate the relationship between beliefs and experiences of treatment and adherence to CAM. Abstract beliefs about treatment and illness and concrete experiences of treatment are important predictors of adherence to CAM in this population of CAM users. The results provide support for three of the four hypotheses: Treatment and illness beliefs did predict adherence to CAM; positive perceptions of concrete treatment experiences did predict adherence to CAM, although negative perceptions of concrete treatment experiences were also associated with adherence; concrete experiences of treatment did predict adherence to CAM when controlling for abstract beliefs and demographic characteristics. A relationship between improvement in symptoms and adherence to CAM was not detected, but this hypothesis was inadequately tested (see below). The associations between concrete perceptions of treatment and adherence provide evidence for the predictive validity of the TPQ.

##### *8.4.1 Limitations*

The demographic characteristics of the study sample are generally consistent with those of CAM users in general, in that the majority of participants were female and educated beyond age 16 (Thomas, Nicholl & Coleman, 2001). The participants in this study had used a high number of CAM forms in the past and a small minority was completely new to CAM. The participants used a range of CAM forms and were drawn from a number of private practice clinics. While there were consistencies across these different CAM forms, this study was not able to investigate in detail the predictors of adherence to these specific types of CAM. Further work is needed to investigate the validity of these findings in specific populations. For example, it is unclear the degree to which the findings would be replicable in a population who were less experienced CAM users, or who were drawn from a specific illness population, or who use specific types of CAM.

The sample might have influenced the results in three main ways. Firstly, the participants were experienced CAM users in that they had used a large number of CAM forms in the past. It is probable that many of them had already decided to

continue to use and adhere to CAM, and so the predictors of adherence found in this study might not be relevant to people with less experience of CAM. It is likely that this study therefore overestimates the importance of factors that predict adherence to CAM which have an impact later on in peoples' experiences of CAM compared to those factors which might have an impact earlier in peoples' experiences of CAM. For example, it is possible that perceptions of one's therapist predict adherence when people have seen their therapist more, and perceptions of therapy might predict adherence when people are newer to a therapy and have only experienced a small number of consultations with their therapist.

Secondly, the mixed illness group that constituted this sample is likely to have reduced the size of relationships found between illness perceptions and adherence. It is possible that different aspects of illness perceptions are related to adherence in different illness groups, and a mixed illness group is likely to mask any such differences. Furthermore, the measure of illness perceptions used, the IPQ-R, is a generic measure of illness perceptions, which does not tap the range of perceptions that are important in specific illnesses: illness-specific versions of the IPQ-R are available and are better measures of illness perceptions in specific illness groups. Future research should use such measures to investigate the relationship between illness perceptions and adherence to CAM in samples drawn from specific illness populations.

Thirdly, the majority of the participants (64%) were using chiropractic or osteopathy. In Chapter 7 it was suggested that treatment beliefs are not as relevant to explaining the use of manipulative methods, such as chiropractic and osteopathy, as they are to explaining the use of other types of CAM. Therefore this characteristic of the sample might have resulted in weaker relationships between treatment beliefs and adherence to CAM than would be expected for other types of CAM. This could have contributed to the finding that treatment beliefs only predicted one of the three types of adherence assessed in this study (adherence to remedy use).

The study has two notable limitations. Firstly, there was no objective

measurement of adherence to therapists' recommendations. While there is some evidence that self-report questionnaire measures of adherence to medications are concordant with other measures, such as electronic measures (Garber et al., 2004), future research would benefit from incorporating some objective measures of adherence. For example, adherence to remedy use could be measured through a combination of self-report and objective recording of prescription filling, in clinics which provide their own pharmacy. Adherence to appointments could be measured through involving practitioners in recording their recommendations for individual patients, and then observing actual attendance at appointments.

The second major limitation to this study surrounds the measurement of perceived health change. The use of a single item was insufficient to measure such a complex concept as perceived health change. As such this study was unable to provide a good test of the role of perceived health change in adherence to treatment. Future research would benefit from using appropriate patient-centred measures of health status such as the MYMOP (Paterson, 1996), which enables patients to select the aspects of their health which are most important to them in the context of their treatment and to assess these aspects of health over the course of treatment. Given these limitations, it is possible to explain the main results of this study as follows.

#### *8.4.2 Predictors of Adherence*

Attendance at appointments was predicted by beliefs that one's illness is not cyclical in nature, beliefs that one's illness is not caused by mental attitude and positive perceptions of the therapist. If one believes that one's illness is cyclical in nature then attending appointments on a regular basis is illogical. The association between not believing in mental attitude as a cause of illness and attending appointments is more difficult to interpret as it conflicts with the general emphasis in CAM on the importance of the mind in health and illness; it is possible that patients' beliefs do not have to be congruent with CAM in order for them to adhere to CAM. The strong association between positive perceptions of one's therapist and adhering to appointments clearly demonstrates the importance of patients' experiences of the therapist patient relationship in explaining why people continue to see their CAM therapists, and again supports previous qualitative research (Lee-Treweek,

2002).

Adherence to lifestyle change was predicted by demographic characteristics and positive perceptions of therapist. Patients who experience their therapist as competent and trustworthy are more likely to adhere to any lifestyle changes recommended to them. This supports previous qualitative research that highlights the importance of therapeutic relationships in ongoing CAM use (Lee-Treweek, 2002) Adherence to lifestyle change was associated with beliefs in viruses as causes of illness, finding it difficult to travel to appointments and finding the therapy too expensive (all in bivariate analyses only). The association with beliefs in viruses as causes of illness may be because recommended lifestyle changes in CAM can emphasise the need for patients to enhance their immune systems and so protect against viral causes of illness. Searle and Murphy (2000) also found that perceptions of causes of illness predicted adherence to homeopathy, although they used different scales to measure causal beliefs. Making lifestyle changes is an aspect of treatment that is self-managed and does not require attendance at appointments, which can explain why patients who find it difficult to travel to appointments and find treatment expensive are more likely to adhere to this comparatively low-cost and self-directed aspect of treatment.

Adherence to remedy use was predicted by stronger beliefs in holistic health, negative attitudes to one's GP and finding it difficult to travel to appointments. The association between beliefs in holistic health and remedy use most likely reflects the emphasis in homeopathic remedies on treating the causes of health problems rather than the symptoms. Previous qualitative research has suggested that beliefs in holistic health are important in ongoing CAM use (Mercer & Reilly, 2004). People who hold more negative attitudes to their GPs were more likely to adhere to remedy use possibly because they wanted to continue with CAM treatment and for it to be successful so that they would not need to go to their GP for treatment. Qualitative research has also suggested that negative experiences of GPs are important in ongoing CAM use (Luff & Thomas, 2000). Patients who find it difficult to attend appointments were more likely to engage in taking their remedies, which could be because this is a self-managed aspect of treatment that can be incorporated into

patients' daily routines.

The relationship between adherence to treatment and treatment outcomes has not been examined in the context of CAM. Research in the context of OM has shown that the relationship between adherence and outcomes is not necessarily straight forward (Horwitz & Horwitz, 1993). Research into the use of and efficacy of CAM needs to attend to the issue of patient adherence, to examine the relationship between adherence and outcome and to explore the possibility that factors that influence adherence might influence treatment outcomes either directly or indirectly.

#### *8.4.3 Validity of the TPQ*

The longitudinal design of this study provided a rigorous test of the criterion validity of the TPQ in that adherence was measured three months after the TPQ was completed. The overall pattern of results across both the correlational and regression analyses suggests that concrete experiences of treatment are relevant to explaining adherence to treatment. However it must be remembered that there was no objective measure of adherence in this study, and so this pattern provides weak evidence of the predictive validity of the TPQ. In chapter 6 the factor structure, concurrent criterion validity and internal consistency of the TPQ were established. The two subscales of the TPQ again demonstrated good internal consistency in this sample. However, the test-retest reliability of this instrument remains unknown. As in chapter 6, the distributions of scores on both subscales were positively skewed, which could potentially limit sensitivity to differences in perception. Nevertheless, both subscales of the TPQ and the single items showed a number of significant correlations with adherence, suggesting that the skew might simply reflect the predominantly positive views of this sample. There is some preliminary evidence for the predictive validity of the TPQ in patients using homeopathy, traditional Chinese medicine and osteopathy and chiropractic.

As discussed in chapter 6, there are no existing measures of patients' perceptions of the process of treatment that are suitable for use in a CAM context. While patient satisfaction measures are similar in nature to the TPQ they tend to focus on outcomes rather than the process of treatment, and tend to use specific wording,

such as 'doctor', that is not applicable in all health care settings. The evidence from the current chapter supports the assertion made in chapter 6 that the TPQ might be suitable for use in a range of contexts including other forms of CAM and more conventional treatments such as physiotherapy. The caution remains that future research is needed to establish the validity of the TPQ in other such patient and therapy groups. It is also necessary to test the divergent validity of the TPQ with respect to the related constructs of therapeutic alliance, patient-centredness and empathy. Overall the psychometric properties of the TPQ established in chapter 6 and the present study are promising. The two core scales of the TPQ appear to measure perceptions of important aspects of the treatment process with good internal consistency and preliminary evidence of concurrent and predictive criterion validity.

#### *8.4.4 Theoretical Framework*

The theoretical framework suggested that patients' illness perceptions, treatment beliefs and perceptions of the concrete experience of treatment would influence ongoing use of treatment. The results of this study thus provide support for the applicability of this theoretical framework to understanding why people adhere to CAM. All three major factors suggested by the theoretical framework were associated to some degree with adherence to CAM. As discussed above, previous qualitative studies have suggested that illness perceptions, treatment beliefs and experiences of treatment are relevant to ongoing CAM use. As discussed in chapter 4, illness perceptions and treatment beliefs have been associated with adherence to conventional medicines (Horne & Weinman, 2002). The current study adds to this literature by investigating concrete perceptions of treatment in the same study as abstract treatment beliefs and illness perceptions, demonstrating the importance of all three factors in developing theoretically grounded explanations of adherence to CAM.

This study demonstrates the importance of considering not only abstract beliefs but also concrete experiences when attempting to explain adherence to CAM. Within the theoretical framework the explication of the appraisal of treatment use was based on the qualitatively derived dynamic model of treatment perceptions (Yardley, Sharples, Beech, & Lewith, 2001). This study provides quantitative evidence

that the qualitatively derived factors, perceptions of the concrete experience of both therapist and therapy, are indeed important influences on the ongoing use of treatment. Thus the integration of the dynamic model of treatment perception and the self-regulation model provides a useful theoretical development which facilitates the investigation of the factors predicting adherence to treatment. Future research is needed to investigate the detailed links between perceptions of therapist, therapy and health change which are specified in the theoretical framework but which were not directly assessed in this study.

The theoretical framework was derived from the self regulation model, developed in the context of OM (Leventhal & Cameron, 1987), and the dynamic model of treatment perceptions, developed in the context of CAM (Yardley, Sharples, Beech, & Lewith, 2001). While this study tested the model in the context of CAM, there is no a priori reason why the model could not be applied and tested in the context of OM. Indeed, in the context of OM, reviews of the adherence literature have highlighted the need to incorporate the patients' perspective in research on adherence, and to understand the ways in which provider-client interactions can influence adherence and outcomes (Muehrer, 2000; Vermiere, Hearnshaw, Van Royen & Denekens, 2001; World Health Organisation, 2003). The theoretical framework used in this study together with the TPQ could prove valuable in research on adherence to conventional treatments.

### *8.5 Conclusions*

Treatment beliefs (beliefs in holistic health and negative attitudes to GPs), illness perceptions (that one's illness is not cyclical or caused by mental attitudes), and experiences of treatment (positive perceptions of one's therapist and finding it difficult to travel to appointments) are associated with adherence to CAM. These findings are consistent with the theoretical framework. The results also suggest that perceptions of the therapist are more important predictors of adherence to CAM than perceptions of the treatment itself. Further research is needed to examine the role of perceived health changes in adherence to CAM, to test the validity of the findings in specific illness populations, and to examine the relationship between adherence and outcomes in CAM. Both the theoretical framework and the TPQ proved

valuable in this study of adherence to CAM. Further research is needed to test the validity and utility of the framework and the TPQ in the context of adherence to conventional treatments.

## Chapter 9

### The Processes of Ongoing CAM use: A Qualitative Study

#### *9.1 Introduction*

A small number of existing studies have looked at the factors promoting adherence to CAM and in particular the nature of CAM consultations (chapter 3). Previous literature is incorporated in the analysis section of this chapter where it is used to illustrate common findings across different settings. This chapter presents an in-depth analysis of the processes involved in the ongoing use of CAM, based on ethnographic field-work conducted in two high-street CAM clinics. Ethnography provides a means to investigate ongoing CAM use from the perspectives of both patients and therapists and to incorporate a range of data types (e.g. textual, visual) from a range of sources (e.g. field-notes, interviews) in an attempt to produce a comprehensive analysis of the research topic (see chapter 4). The question addressed in this study is: What processes occur as people use CAM? Related to this overarching question, I also aimed to identify and examine the range of factors that contribute to the processes involved in CAM use.

#### *9.2 Methods*

##### *9.2.1 Setting*

Field work was conducted in two high-street CAM clinics, which had been open for approximately 18 months. These clinics were run by and located within the premises of a well-known high street company (the sponsors of my research) primarily known for being a pharmacy, which also retails a range of other products, including beauty and personal hygiene products. One of the shops was located on a high-street, the other in a town centre shopping centre. These sites offered an opportunity to investigate CAM use in an accessible and affordable setting. The high-street setting offered an excellent opportunity to examine the use of CAM in the context of its increasing popularity. The clinics offered aromatherapy massage, herbalism, homeopathy, osteopathy and reflexology. I decided to focus on these specific CAM therapies as they constitute a range of types of therapy. For example, direct physical contact between therapist and patient is central to aromatherapy massage, reflexology and osteopathy, but is less central in herbalism and

homeopathy in which consultations are focussed on talk and discussion between therapist and patient.

### *9.2.2 Conducting Field Work*

Spending time in a field setting is a key feature of ethnographic research, which has its origins in anthropology (e.g. Malinowski, 1922). Ethnographers argue that in order to achieve an understanding of the social and individual processes at work in a particular setting it is necessary to join that setting and to spend sufficient time there to gain familiarity with the particular culture and players involved. Time is required to achieve this insider viewpoint and to be accepted and trusted within a group.

Participant observation is central to ethnographic research (Bowers, 1996). Ethnographers are typically participant observers, taking part in events in the field setting and observing these events. This dual role is fundamentally problematic and the extent to which it is possible both to participate in and observe events in order to generate valid and interesting data is debateable. One cannot simultaneously be a complete participant, with all that entails in terms of involvement in events, and an observer, with all that entails in terms of detachment from events. The positions taken by ethnographers range from total observer to total participant, and are discussed in detail by Hammersley and Atkinson (1995). In the clinics there was no obvious participatory role for me to take which would facilitate both making observations and interviewing and talking with participants. Early on in the field work it was clear that the term 'group' could only be used very loosely in the setting. While the therapists in the field were a constant collection of people who were present during the period of field work and could be thought of as a group, the people coming in for therapy were very much a collection of individuals, and could only be considered a group by placing the label of 'CAM users' on them. The changing schedules of the therapists and the different regularity and frequency with which patients attended the clinics meant that membership of the field setting was in a dynamic state of flux and that taking a participatory role in the 'group' would be difficult and limiting. I therefore decided to take on a role as an interviewer-observer as opposed to a participant observer. At this point the research moved away from being a traditional ethnography, and became a qualitative study of

two CAM clinics in which I spent time in the clinics in order to gain access to patients and therapists, and to observe the clinics' environments and procedures.

#### *9.2.3 Ethical Issues*

Ethical approval was granted by the School of Psychology, University of Southampton, Ethics Committee. Ethical issues can be complex when field work is undertaken for a prolonged period of time and the researcher becomes a trusted and accepted member of a setting. Before the start of the fieldwork I met with all therapists in the clinics to discuss my work and to ask for their informed consent to take part in specific aspects of the research.

My identity in the setting was as a student interested in complementary medicines. It was thought that as a naïve researcher with no obligation to the clinics I would be able to gain the trust of participants and to ask simple questions which are important in qualitative research but can appear obvious or even stupid to participants. I did not wear a uniform and did wear an identity card from the University which helped me to remain somewhat distanced from the staff at the clinics. This was important to reinforce my identity as a researcher both for staff and patients.

#### *9.2.4 Data Generation and Collection*

I spent a period of three months in the two clinics. Both clinics opened five days a week, Monday to Friday; one opened regularly on Saturdays (the other infrequently on Saturdays) and infrequently on Sundays. The therapists worked part-time and their schedules could vary from week to week. I attended the clinics on week days and week-ends to gain access to the range of people attending for different therapies. I recorded a range of interactions and documents: 59 interviews (48 with patients and 11 with therapists), 35 photographs of the setting; 107 pieces of documentary evidence (e.g. price lists, advertisements, flyers, patient forms); field notes from 46 visits to the field settings. Audio-tapes and notes were used to record interviews wherever possible; if participants did not want to be recorded notes were made during and immediately after interviews. I conducted interviews with all therapists who consented. I asked therapists to tell their patients about my research project if they thought it was appropriate, and I directly approached patients before and

after their appointments to ask them to either chat briefly with me or take part in an interview. I intended to interview people using each of the different therapies, and to talk to people who had been using the therapies for different lengths of time. I therefore spent time in the waiting areas and by the reception desks and invited as many people as possible to talk with me.

#### *9.2.5 Analytic Methods*

Audiotapes were transcribed verbatim and field notes were typed up both during and immediately following the field-work. All the data, both textual and visual, was imported into Atlas.ti, a software package which was used to facilitate data organisation, management and analysis. Computer assisted qualitative data analysis does not provide a short-cut to or quality guarantee of qualitative analysis. Rather, it provides a means to handle a large amount of qualitative data and to sift through that data without the volume of paper necessary to go through the same procedure by hand (Barry, 1998). Atlas.ti presents data in context: quotations can be selected, highlighted, coded and sorted while remaining in the context of the original text. When examining the occurrences of text coded with the same code across different interviews it is thus possible to easily switch between these different instances while retaining their original contexts.

The analysis began during the field work, when initial impressions of both potential themes and the direction of the research were noted. These initial impressions and observations guided future interviews, for example talking with the therapists highlighted the issue of the provision of beauty and health services in the same setting, and so I incorporated this into my interview questions with patients and made focussed observations on this aspect of the setting. Following the field work I reviewed and immersed myself in the data. I then proceeded by analysing all of the textual data at a detailed level, using descriptive, open coding and in vivo codes to describe the data. The analysis went on to incorporate both this low-level focus and a more process-oriented approach which was focussed on the research question. Thus a combination of inductive and deductive approaches was used reflexively to develop an answer to the research question that was grounded in the data. Specific analytic techniques employed were drawn from grounded theory (Strauss &

Corbin, 1998) and included examining the range of instances of different codes and the ways in which these could be organised (axial coding), comparing different instances of the same codes and the contexts in which they were present (constant comparison), and searching for cases that did not fit the emerging analysis (deviant case analysis). Following Charmaz (1990), the data were considered to be socially constructed throughout both the field work and the more formal analysis. The analysis thus constitutes a re-construction of the data informed by the researcher both as participant in the generation of the data and as an academic analyst. Quotations were selected to present typical illustrations of the main themes, to provide examples from a range of individuals using different therapies, and to highlight interesting issues (on theoretical and applied grounds) involved in the processes discussed.

### *9.3 Analysis*

#### *9.3.1 Participants*

I interviewed 46 people (42 women and 4 men) who were attending the clinics for aromatherapy (12 people), herbalism (3), homeopathy (8), osteopathy (13), or reflexology (12). I interviewed nine therapists: Paula, an aromatherapist; Julie and Rachel, herbalists; Ian and John, homeopaths; Tim and Sally, osteopaths; and Kelly and Lara, reflexologists. All participants have been given, or chose their own, pseudonyms to protect their anonymity.

#### *9.3.2 Overview*

The analysis suggests that patients go through different processes in their use of CAM: the decision to use a particular therapy, finding a therapist, experiencing the therapy and evaluating the experience. These processes are illustrated in Figure 9. The following sections describe each process in turn, drawing on evidence from interviews and other data sources, and relating the processes to similar findings in the literature.

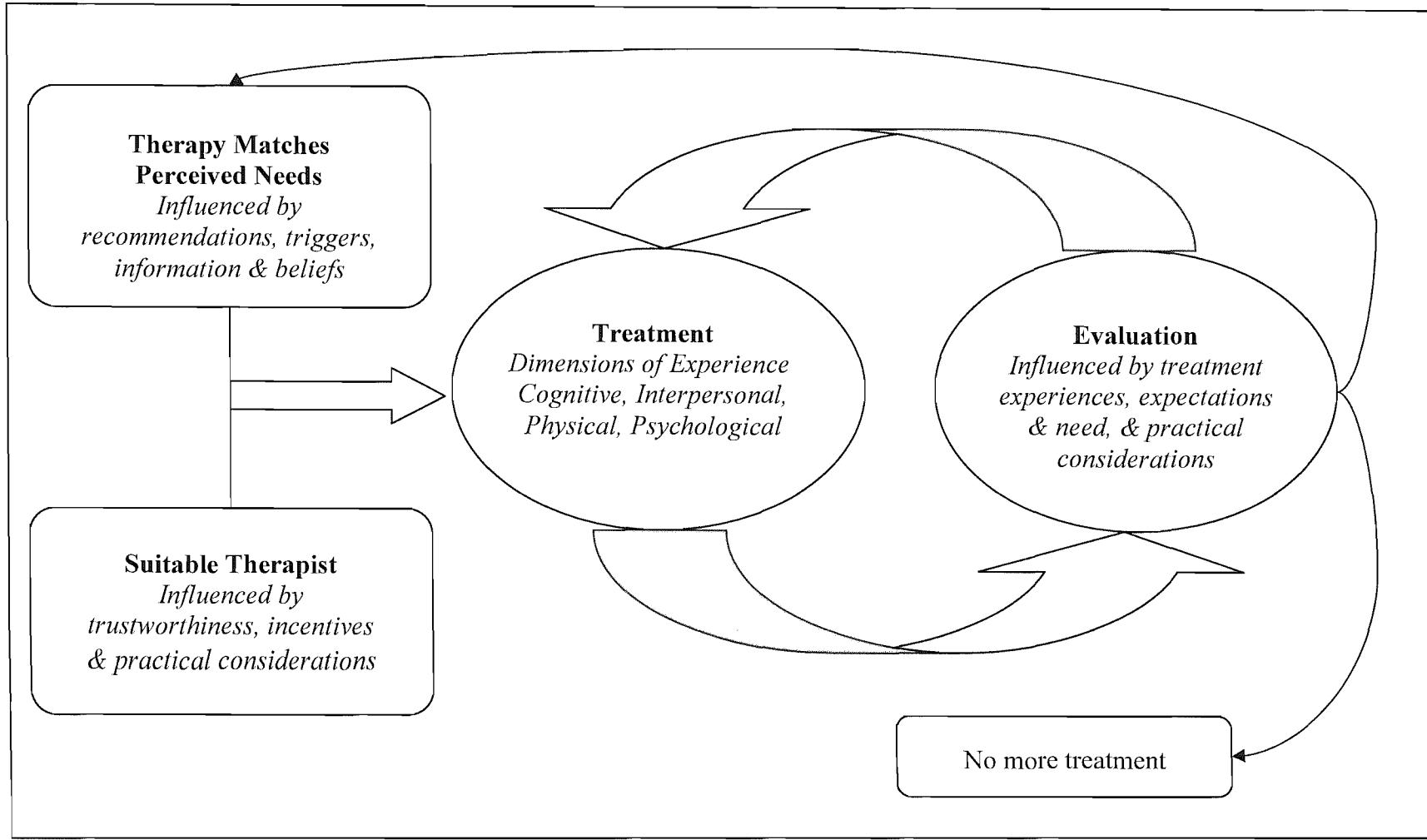


Figure 9. Processes in ongoing CAM use.

### *9.3.3 Finding a Therapy*

Deciding to use a form of CAM can be viewed as a process that involves matching the need for treatment to a specific form of treatment, a common-sense process of attempting to achieve coherence between representations of illness and treatment that is central to the self-regulation model (e.g. Leventhal, Brissette, & Leventhal, 2003). This process can be influenced by recommendations from other people, triggers including symptoms, information, and beliefs about the therapy. The idea that using CAM involves a process of matching perceived needs and therapies has also been noted in the context of CAM use in IBD: ‘The majority of participants emphasized the importance of being knowledgeable of their health needs and of selecting complementary health practices that met those needs’ (Scott, Verhoef, & Hilsden, 2003, p.25).

#### *9.3.3.1 Previous experience of a therapy.*

I interviewed 13 people who had used their therapy before attending the clinic. These people primarily justified their current use by talking about how it had successfully met their needs previously and how, based on their past experience, they expected the therapy to meet their current needs. Previous successful experience of CAM use has also been noted as an important factor for men with prostate cancer deciding to use CAM (Boon, Brown, Gavin, & Westlake, 2003). The matching process was also influenced by triggers which could be specific physical problems or a desire for improved general wellbeing, and belief that the treatment would be consistent with their health beliefs.

Seeing an osteopath for her back and neck problem was the obvious action for Abby to take, she had an established match between having this problem and having osteopathy. The recurrence of her previous problem triggered her to see an osteopath again. While her tendency to adjust to the problem meant that she did need to push herself to actually make an appointment, her choice of treatment appears to never have been in doubt.

Abby: Well because I've got neck and back trouble that I've had for quite some years anyway so I've been to osteopaths before [...] I think me I'm

one of those people that I tend to adjust to things so if my neck hurt I stop doing whatever it was and you suddenly realise I've been putting up with this and this is ridiculous why don't I just go and get it sorted.

Carol is an elderly lady who was attending the clinic for aromatherapy massage and has been using massage for many years. Carol's past experience influenced her current use of aromatherapy. This quotation illustrates the way that people who have previous experience of a therapy are confident in what they will gain from the therapy and link this explicitly to beliefs about their health.

Carol: Since I was sixteen I've always had massages and I enjoy them, they make me feel good. I think it is a part of looking after my body that a lot of people don't think of [...] It is a bit of luxury, that's the way I look at it. I don't smoke. I'd rather spend my money on aromatherapy. I've lost a lot of family members through heart problems. This is my luxury.

Carol talks about aromatherapy as both a luxury and as important for her health. This idea of CAM, particularly aromatherapy and reflexology, as a luxury recurred in a number of interviews. Less common was the juxtaposition of complementary therapies as both luxurious and important for health. Two aspects of aromatherapy appear to contribute to Carol's idea of it as a luxury, her enjoyment of it and the financial cost. Enjoying a treatment that benefits one's health contradicts a common representation that things that are good for you are not enjoyable (e.g. 'no pain no gain'). At a wider societal level the patterns of ill health in the UK have dramatically changed in the last century: the challenge facing both patients and the medical establishment is no longer acute, infectious disease, but is chronic illness (Department of Health, 1999). Given this, the notion that enjoyable treatments are important for one's health makes sense. Without any immediate threat to one's health an enjoyable treatment can be important in maintaining current health. Furthermore, the notion of paying for a beneficial treatment does not fit well with the provision of treatment on the NHS that is free at the point of use. Thus the treatment that one has to pay for can be considered luxurious, or non-essential. This links to previous studies showing that people often use CAM in order to improve

general wellbeing or maintain general health (Eisenberg et al., 1998; Thomas, Nicholl, & Coleman, 2001), which are most likely less common reasons for using OM through the NHS.

Kay had tried homeopathy previously for her eczema but it made her symptoms worse and she felt unable to stick to the treatment because she was starting a new job at the time. However this experience did not put her off using homeopathy and in the following quotation she talks explicitly about how her understanding of homeopathy, as compared with OM, provides a good match to her current feeling of general malaise and her desire for holistic and preventative treatment.

Kay: This time, I've got more of a general feeling that my body is not functioning properly. You can't go to your GP for this. Also I'm conscious of the time pressure on GPs. They look for specific causes and it could be a whole series of things and it would take ages to find it. I believe in homeopathic. It's convenient and affordable and you get a good service at [clinic]. Also, when you have general malaise homeopathy is better, it is a general, holistic approach. I think as well with my family history, the problems my mother and father have had, I want to prevent similar problems. I can't go to my GP for that, but homeopathy takes it into account.

Past experience was also an important factor in therapists' decisions to study and practice their chosen therapies. For John, a medically qualified homeopath, a combination of using homeopathy (for his dog) and wanting a change from OM led to his training in homeopathy.

John: I'd had a lot of time in general practice, and it was getting stale, I was getting fed up. My wife, who's a qualified nurse, was a carer for an old homeopath and GP. We had an old dog, and he was arthritic, and the homeopath suggested a homeopathic remedy and it seemed to work. At the same time I had a flyer through the door for the [...] homeopathic course. [...] It was time for something different, and it's such a different way of looking at patients, it really stimulated me.

### *9.3.3.2 Using a therapy for the first time.*

The majority of people I interviewed (35) were using a therapy that they had not used before coming to the clinic and did not have personal experience to draw on in developing a match between their need for treatment and a specific therapy. For many of these people, recommendations from trusted others played an important role in their treatment choices; they drew on the experiences of others to develop a match between their perceived needs and specific therapies. The importance of having recommendations or anecdotes about CAM from others has been reported previously, for example in older CAM users in the UK (Andrews, 2002), in people with epilepsy from India (Tandon, Prabhakar, & Pandhi, 2002) and people with a range of chronic illnesses from Canada (Thorne, Paterson, Russell, & Schultz, 2002).

Nikki decided to try osteopathy for her back problem after hearing about her friend's experience of osteopathy and thinking that her problem was not severe enough for OM. Again, there is a suggestion here that osteopathy is seen as a non-essential form of treatment, whereas OM is to be used only for severe conditions. I asked her why she decided to see the osteopath rather than her GP.

Nikki: Well to start with, there's a long waiting list, and my back problem, well, it hasn't seized up. It's nothing that would warrant a referral probably, it's just not that bad. My daughter had done sports massage [...] she recommended I should come to an osteopath. The real reason is that I had a friend who's back seized up, and she was going away to Canada, and [the osteopath] sorted it out within 2 weeks for her, so she could go away.

Some people did not receive recommendations, but had more active roles in finding a therapy that could match their needs. These people carried out their own research, by reading books or magazine articles, to find out about a therapy. People with breast cancer have been shown to investigate specific CAM forms through lay networks and reading (Boon, Brown, Gavin, Kennard, & Stewart, 1999). Debbie conducted her own research to investigate reflexology, which she was using for the first time at the clinic, and decided to try it after having discovered that it might

be able to help her health problem: 'I have an over active thyroid and um I was checking through my little book on alternative medicines and it suggested that it could be possibly helpful to have reflexology so I thought I'd try it.'

While Debbie was using reflexology alongside OM, for some people OM acted as a trigger to seek a different form of treatment. Danni had IBS, and a combination of life circumstances (she was about to sit finals at university), a worsening in her symptoms, and a negative experience of OM triggered her to try a different treatment. There is some evidence of matching between need and symptoms for Danni, as she says she had heard that herbalism could be good for her health problem. This was sufficient for her to try herbalism, possibly because of her need to 'do something'. Danni's talk about her experience of seeing her GP suggests that she sees herbalism as a way to meet needs other than her IBS. She feels she was not taken seriously or treated as an individual by her GP; perhaps this is an unspoken need that she feels herbalism can satisfy by providing a personal service.

Danni: I tried going to the doctors. But I heard of alternative medicines and herbal medicine is supposed to be quite good for it, it can help

I: How did it go with the doctors?

Danni: Not very well. They weren't very sympathetic. I feel like they don't take it seriously, they don't take the time. They have so many patients and everyone's different but they don't take that into consideration.

I: What do you think about the cost?

Danni: It is quite expensive. I wouldn't be able to do it normally. But I've got finals coming up so I had to do something, my symptoms were getting worse.

I asked people whether they had used other forms of CAM, and responses to this question also suggest that a process of matching a therapy to perceived needs is occurring, and that use of CAM is not indiscriminate. A common response was that they had never felt the need to use a particular CAM form. For example, Bridget (who was using aromatherapy) says about homeopathy 'I haven't been myself because I haven't got that many medical problems.' Safety issues and peoples'

beliefs about the rationale underlying form of treatment also arose in this context. Zoe believed that there was insufficient evidence and regulation of forms of CAM other than osteopathy:

Zoe: There's a lot more evidence to support you know osteopathy than some of the other alternatives [...] Also I think the other advantage of osteopathy is that there is professional training and um you know some of the other areas [...] all they need to do is just call themselves a [...] whatever and er away they go so you don't have that sort of quality assurance

Jill, who was using aromatherapy and had previously used chiropractic, had never used homeopathy because she did not believe it would work and was sceptical about the underlying rationale: for her, homeopathy does not make sense and so she would not use it.

Jill: I have a [...] science background and I tend to go for stuff that I can see has got um I don't really care whether its been proven or not so long as I personally as as someone with a science background can see some kind of basis in reality for it [...]. Something like homeopathy where you know you're talking about um dilution of um er allegedly helpful stuff in water and then administering that as a treatment I really find that hard to swallow no pun intended [laughter]. But I can't see any basis in reality for that as something that could potentially work

#### *9.3.4 Finding a Therapist*

Finding a suitable therapist can occur at the same time as or after finding a therapy, and is influenced by the perceived trustworthiness of the therapist (e.g. their qualifications), practical considerations (e.g. transport), and incentives (e.g. special offers). For some people, knowing that their chosen therapy was available at the clinic appeared to be sufficient for them to book an appointment. Such knowledge was often based on having previous experience of the clinic, for example by using beauty services, as it was for Helen when she chose to see the homeopath: 'I came in here for facials and chiropody and I just thought I'd try it.'

This suggests that something about the clinic itself could encourage people to see a CAM therapist at the clinic. When I asked people directly what, if anything, about the clinic had encouraged them to see a CAM therapist, a number of people talked about trusting the clinic and the brand. Having used other services could engender trust in the clinic's service provision which could then extend to the CAM therapists. Direct experience of the services provided was not essential to promote trust in the therapist through a degree of trust in the clinic. Working for the company or knowing others who had successfully used other services provided by the clinics encouraged some participants to choose therapists at the clinics. For Jill, the clinic being part of a large business offered a safety net in that it helped her to trust the therapist and offered a way out if anything was to go wrong with her aromatherapy. Being able to trust the brand was a substitute for having a personal recommendation from someone who had seen the therapist before.

Jill: It's nice to come somewhere where you know ok you're gonna pay more but you know you know it's gonna be reliable and you know that if anything ever does go wrong then you've got [business] to hassle about it. [...] it's kind of a trustable name [...]. I would hesitate to go to a chiropractor or an aromatherapist or any other kind of complementary therapy person without actually having someone that I know saying oh you should go to them they're good you know. [...] these things aren't really regulated per se and you don't really know what you're getting you can spend good money. [...] Without that kind of recommendation [business] is like the next best thing really because at least you know the brand and you know that if it is rubbish [...] you can at least pick a fight with the manager and try and get your money back.

Personal recommendations from friends and relatives who had seen the therapist were important to other participants, including Jackie, who decided to see the homeopath at the clinic because 'my friend again she'd seen something, I think an advert, and she suggested it so I came here.' Other social links, such as knowing the therapist in other contexts or knowing of the therapist through friends also

encouraged people to choose that therapist. For example, Robby came to the osteopath at the clinic because:

Robby: My wife knows his partner [...] I think [Tim's partner] recommended to [my wife] or told [my wife] that Tim was an osteopath. [My wife] mentioned that I had this problem with my back and so it went from there.

Jill talked about the practical issue of the cost of treatment, and how the clinic being part of a large company gave her sufficient confidence in the standard of treatment to be willing to pay the financial cost. Choosing a therapist is therefore related to the issue of paying for one's treatment. Special offers which reduced the financial cost of treatment and increased awareness of the treatments encouraged some people to see therapists at the clinics. Georgia started seeing the osteopath after noticing an offer for free 15 minute consultations: 'I was shopping and I saw that they were doing free 15 minute appointments on a poster. So I asked her [the osteopath] and she thought she could help. It was a spur of the moment thing.' The issue of financial cost was commonly mentioned in the context of evaluating treatments and is discussed further below.

Knowing that a therapist is appropriately trained and qualified encouraged a number of participants to choose homeopaths (four of eight people) and reflexologists (two of seven people). The company put Vicky off coming to the clinic, but knowing that the homeopath was medically qualified encouraged her. After I had asked her how she found about the homeopath at the clinic she replied:

Vicky: I knew there was one here, but I was a bit daunted, by it being part of such a big organization. I don't really know why. I found him through the yellow pages and his surgery, and he said he did consultations at [clinic] if that was more convenient for me. And again, I looked at his medical background. It's good to have that as well.

Therapists' qualifications were not mentioned explicitly in the context of choosing a therapist by people choosing an aromatherapist, an osteopath, or an herbalist (three people). While people choosing aromatherapists, osteopaths and herbalists were concerned with the trustworthiness of their therapist, they did not express this in terms of their qualifications or training. This suggests that qualifications are just one way in which people assess the trustworthiness of a potential therapist.

The therapists also had ideas about why people came to see them, which reflected patients' own reasons. Rachel was not seeing many patients when I interviewed her, and said that initially the 'general feeling was that they would come here because they'd feel safer because it is [clinic]', and went on to say that she thought the patients she had seen 'come to see the person, who just happens to be in [clinic].' John highlighted the role of negative experiences of OM in encouraging people to try homeopathy:

John: I do get some who are looking for an alternative. If the drugs don't work, if they have an ongoing problem, or bad reactions to the drugs. They do know that it's a complementary thing and that maybe it can help them, although they may not know much about the philosophy behind it.

#### *9.3.5 Information Leaflets*

The clinics displayed information leaflets about a number of beauty and health services. It is interesting to examine the ways in which the leaflets presented CAM forms to potential patients, as this was one way in which people could decide if they felt their needs matched the therapies on offer. On the front of each leaflet was the name of the therapy, accompanied by an illustration. These illustrations tended to present the therapies in simple ways that hinted at the natural-ness of the therapies and the physical contact involved in osteopathy and reflexology. The illustration for aromatherapy was bubbles, for herbalism green leaves, for homeopathy a clean hand holding a phial, for osteopathy a view of a man's back with a pair of hands placed on it, and for reflexology a foot with a hand touching it. The other side of the leaflets contained written text about the therapies. This text emphasised the natural, holistic and individualised nature of the therapies, the 'conditions' for which

they could be helpful, and the experience of the therapist, as well as providing the duration and cost of a consultation.

- Aromatherapy was presented as ‘A holistic approach which uses natural aromas’. The individual nature of aromatherapy was presented as ‘Your experienced Aromatherapist will talk to you about your specific needs and then use different essential oils to tailor the treatment to you.’ The naturalness of aromatherapy was also emphasised: ‘The essential oils are extracted from herbs, flowers, roots, grasses and trees.’
- Herbalism was presented as ‘an alternative or complement to conventional medicine, which can be used to successfully treat many common ailments, boost your wellbeing and help you recover from illness naturally.’ The efficacy of herbalism was further emphasised, as was its ability to get to the cause of ill health ‘Herbal medicines have been used for thousands of years to help address underlying causes and symptoms of illness.’ The ‘experienced Medical Herbalist’ is said to be likely to recommend a herbal remedy which ‘will be tailor-made to your individual needs.’
- Homeopathy was presented as holistic, natural, potentially curative and individualised: ‘The essential aim is to stimulate your own healing resources...in order to improve your immediate condition, your overall health must be taken into consideration.’ Again, the prescribed remedy was portrayed as ‘specifically tailored to your individual needs.’
- Osteopathy was presented as ‘a non-invasive treatment which takes a close look at the causes of stress and strain within your body, addressing these problems and realigning your joints and muscles to help your body heal more quickly.’ The osteopath will be ‘experienced’ and ‘registered with the General Osteopathic Council’. The consultation itself will involve talk as well as physical treatment: ‘Your Osteopath will examine you, discuss your condition and potential causes and then give you treatment, as appropriate, including manipulation, massage and other techniques.’
- Reflexology was presented as holistic and natural: ‘A safe, non-invasive way of balancing mind, body and spirit, reflexology uses all the areas of the foot to stimulate your body’s own ability to self heal.’ Again, the reflexologist was portrayed as ‘experienced.’

It is perhaps surprising that, despite the differences between these CAM forms in terms of underlying philosophies and suggested mechanisms of action, the similarities between the presentations of these therapies to patients were much more noticeable than the differences. Given this, it is less surprising that of all the patients I talked to about their use of therapies at the clinics not one of them mentioned the information leaflets. Conceivably they could alert people to the availability of the therapies, and the safety of using the therapies at the clinics, but the degree of similarity between the leaflets is unlikely to assist people choosing a specific therapy in the matching process.

#### *9.3.6 The Exception to Finding a Therapy and Therapist?*

Nine of the people I interviewed did not go through the processes of finding a therapy and therapist. Instead they were given their therapy appointment as a present, in the form of gift vouchers, a pre-paid appointment or a prize. Four of these people saw a reflexologist and five saw an aromatherapist. This availability of reflexology and aromatherapy as gifts suggests a view of these therapies as something fundamentally different to OM, and as perhaps more akin to treats than treatments. The setting perhaps contributed to this idea of aromatherapy and reflexology as treats rather than treatments. Beauty and health services were both offered within each clinic, and both types of therapy shared reception desks, booking procedures and waiting areas. Aromatherapy products could be found on the shop floor alongside items such as bath products, in contrast to the over-the-counter homeopathic and herbal remedies which were located close to more conventional over-the-counter health care products, such as aspirins.

Although these nine people were given their therapy appointments there is evidence of matches between need for treatment and therapy used. For example, Bridget won a voucher that could be used for either aromatherapy or reflexology and chose aromatherapy because ‘I thought it sounded nice, and I like nice smells, so I thought I’d try something that I wouldn’t normally try.’ Bridget’s choice of therapy matched her desire to try something new and her liking nice smells. Even for those people that had no choice in the therapy there was some evidence of matching needs to

treatment. For example, Max's wife bought him an appointment for reflexology, knowing that he likes foot massages.

I was interested to find out what the therapists thought about the concept of gift vouchers for their therapies. Lara said 'I don't really mind, anything to get people in'. Paula held a similar view, but went on to argue that aromatherapy is a treatment rather than a treat, suggesting that the availability of aromatherapy products over-the-counter contributed to the view of aromatherapy as a treat:

Paula: I think it's because of this thing you have of the professionalizing of peoples' stress relaxing pampering stuff but I think that that's why people do it I think that happens with reflexology as well that they don't really see it as a treatment they see it as a treat I suppose it's up to us to educate them differently [laughs].

#### *9.3.7 Experiences of Therapies*

Experiencing a treatment is intimately related to evaluating that treatment. Peoples' descriptions of their consultations often incorporated explicit evaluations of their experiences, even when I interviewed people after their initial consultations. I interviewed 25 people after their first consultation with a therapist, 21 for their first ever experience of the therapy and four who had used the therapy before coming to the clinic. Twenty three people were interviewed after follow-up appointments.

Participants talked about four main aspects of their experience of treatment: interpersonal (e.g. contact with the therapist), physical (e.g. sensations such as touch or pain during treatment), psychological (e.g. relaxation) and cognitive (e.g. learning about treatment). Luff and Thomas (2000) in their qualitative study of CAM users in the NHS showed that their participants also reported learning about their therapies, and that both physical and psychological impacts of treatment were important components of treatment experiences.

Christine's physical experience of aromatherapy led her to change her attitudes towards it; here the physical dimension of her experience was directly linked to

the cognitive dimension. After her second appointment for aromatherapy, Christine said that the aromatherapy had had a dramatic physical impact on her, and elaborated on how the physical experience of treatment has changed her attitude towards aromatherapy and has given her increased hope. Thus the physical dimension of experience was also linked to the psychological dimension.

Christine: In 20 years I've always had some kind of back pain for two and a half weeks after I'd seen Paula I've had no back pain and so that's why I've come back [...] I didn't come to Paula because I thought that that's what she could cure. I just came because I felt like I could do with a bit of pampering really [...]. But my attitude's changed. I didn't come this time because I wanted pampering I came this time because she'd actually proved that it works, that something worked anyway. [...] It's helped me think that there is something different out there some hope without having to have great big major surgery.

When I asked Tina about her first ever appointment for osteopathy, she talked about physical, interpersonal and psychological aspects of her experience. Through physical examination and talk, the osteopath identified a problem and reassured Tina that it was not serious and that it could be treated through osteopathy.

Tina: I was impressed that she actually offered the treatment and offered chat and found a problem. But I wouldn't have been aware of it if she hadn't found it. It's not that bad, I thought it was something really bad.

When I asked Becky about her aromatherapist, Paula, whom she had just seen for the second time, it was clear that for Becky the interpersonal nature of aromatherapy massage, particularly being touched by the therapist, was integral to her physical and psychological experience.

Becky: She has [...] if I say healing hands it sounds pathetic doesn't it but you can feel an energy and if you've never had a massage it's very difficult to explain [...]. In the sort of relaxing process when you're first laying

down and when they sort of run their hands along you just to relax you and you can actually feel the heat and energy coming from well Paula's hands.

While participants did talk about these aspects of treatment separately (and not all participants talked about all four dimensions), the quotations discussed above show that they also spoke of them in an integrated way and that these dimensions of treatment are best thought of as being dynamically inter-related and to an extent integrated within the experience of treatment as a whole.

#### *9.3.8 Experiencing and Evaluating*

As the above quotations have suggested, peoples' talk about their experiences of treatment were not neutral descriptions, rather they incorporated within their descriptions evaluations and judgements about how they thought their treatment was meeting their needs and how their experiences related to their expectations. This process of appraisal can thus be seen as a further example of the ways in which people attempt to achieve common sense coherence between representations of illness and treatment, as suggested by the self-regulation model (Horne, 1997; Horowitz, Rein, & Leventhal, 2004). The appraisal process is represented in Figure 9, which shows experiencing and evaluating treatments as closely linked and cyclical. Similarly, Truant and Bottorff (1999) showed that women with breast cancer evaluated and modified their CAM use over time, and that the decision-making process continued over the course of CAM use, while Yardley and colleagues showed that experiencing and evaluating chiropractic and vestibular rehabilitation therapies are closely interlinked (Yardley, Sharples, Beech, & Lewith, 2001). The elements that feed into the process of evaluation (whether the outcome is positive or negative) are the experience of treatment, expectations and perceived need for treatment, and practical considerations.

##### *9.3.8.1 Positive evaluations of treatment: ongoing CAM use.*

Unsurprisingly, people who had been seeing their therapist for more than six months were positive in their evaluations of treatment. These people thus offer an opportunity to consider how the process of evaluation occurs in people who return to CAM over a period of time. Theresa had been seeing the homeopath for 18

months when I interviewed her. For Theresa the physical impact of homeopathy and her trust in Ian contribute to her ongoing use and positive evaluation of homeopathy in terms of her ongoing physical need: 'I was very impressed when I met Ian and realised he knew what he was talking about, and he's helped me no end.' The experience has not always been pleasant though, as the following quotation shows.

Theresa: The drops for the blood pressure [...] they're absolutely disgusting but it's brought my blood pressure down so they say the nastiest medicines are best don't they [...] And better to have a disgusting flavour first thing in the morning than swollen legs and breathlessness and all that sort of thing [...] from the other medication

While Theresa does not enjoy the process of actually taking her blood pressure remedy, she values its impact in terms of successfully lowering her blood pressure and doing so without provoking unpleasant physical side-effects which she had experienced from OM. Theresa gave me a number of examples of how homeopathy had met and continued to meet her predominantly physical needs for treatment. However, when I asked her about how she thought homeopathy might be working, she made it clear that this was not an important consideration for her.

Theresa: It seems to work so why not [...] and I feel it's not doing you any harm you know. Even if cos people say it's all in the mind it doesn't matter as long as it does the trick [...]. It's certainly not going through your kidneys and messing them up is it like conventional medicine [...]

I: Have you thought about maybe how it's working

Theresa: Well Ian explained. He's giving the problem to the body. [...] A great faith I've got in him I just take it [laughs]

Of the people I interviewed, Theresa had been seeing a therapist at the clinic for the longest period of time. Kay had seen the homeopath twice, but had extensive experience of using not only homeopathy but also osteopathy and chiropractic in the past. Kay sums up her ongoing use of CAM forms and the importance of previous experience when she says 'The proof was in the eating.' She goes on to explain

that the psychological dimension of experiencing CAM treatments through the therapeutic relationship also plays an important role in her ongoing use of CAM.

Kay: It worked [chiropractic/osteopathy], I walked out and so you keep going. My experiences as a child with eczema [with homeopathy] I think had the biggest impact on my use of alternative health. Also, I feel more in control with alternative medicine than I do with a GP. I've only ever found 1 GP that does this shift in power or control. It really makes a difference, coming out feeling you're doing something positive.

Cognitively oriented expectations and experiences of treatment can also lead to positive evaluations and ongoing use of CAM. Penny had been seeing the homeopath for four months. Her previous experience of the physical impact of homeopathy, combined with her strong belief in homeopathy, led her to positively evaluate her current experience and to continue seeing the homeopath although in four months she had not received any tangible benefit related to her health problem

Penny: I'll give it a few more times, yes.

I: And why do you think it will work?

Penny: Because it worked the first time. And from what I understand of homeopathy it should get to the root of the problem. It ought to work.

It is possible to examine the early stages of evaluation and the influences on the very first decision of whether or not to continue treatment by considering people who had seen their therapist only once and had little previous experience of CAM. The idea that it is too soon to pass judgement on whether a therapy 'works' was characteristic of interviews with people who had seen their therapist only once or twice. I interviewed Betty after her first ever reflexology appointment, which surpassed her expectations and had an immediate physical impact on her. Betty describes not only the physical experience of reflexology, but also the cognitive experience of learning about the treatment.

Betty: Well I didn't appreciate the treatment basis of it, not until I actually had it. I thought it would just be quite nice and relaxing. I was amazed at how it helped my feet, they feel so much better already. And I've got other problems as well, back pain, and I'm not sleeping very well at all [...] And she Lara can pick all that up through your feet. Lara was explaining it all to me. My feet feel wonderful now. They're quite painful most of the time, even sitting down, especially when I've been at work all day. I've got no pain now though, all I can say is wow!

Later on in the interview I asked Betty whether she thought she would come back for another reflexology appointment. Despite her positive experience, she does not commit herself to a judgement on reflexology: 'I'm still going to stay a bit sceptic though. I need more appointments and see what happens, then I'll know if it really is good.' I tried to find out from Betty what she would base this judgement on, how would she know if it really is good?

Betty: Well I think it is worth it just for my feet. The other stuff would be an extra benefit. I just think that if it can help with all the other things, then why don't doctors and hospitals use it?

Betty focuses on the immediate and direct physical benefit to her feet that she has found from reflexology. Talking about this benefit does not require her to take on board the principles underlying reflexology, and she is able to talk of reflexology as a foot massage, retaining her scepticism regarding the theoretical framework of reflexology as a form of health care. In a study of osteopathy Lee-Treweek (2001) similarly found a degree of scepticism in CAM users; patients would use osteopathy but reject the osteopath's explanations of their conditions. Betty's physical experience of treatment encouraged her to have more reflexology appointments to see what would happen.

Other participants also experienced some physical impact of their treatment and decided to come back and give it a chance. This process was often shaped by what their therapist had told them during their first consultation. I spoke with Jasmina

when she came into the clinic to pick up a repeat prescription from the herbalist, having had one consultation with her and taken the prescribed herbal preparation for one month. Jasmina told me that the herbs had had some effect on her, but is unsure exactly what effect or how the herbs have worked.

Jasmina: It was quite strange when I first took it um I could feel things like a funny sensation in my stomach so I knew it was doing something [...] maybe it's mind over matter or something I don't know but it seems to have um helped my periods this time round.

Later on Jasmina said that 'it seems to have done something to me but um obviously it's too soon to know one way or another.' I asked her how long she intended continue with herbalism, and she drew on advice from the herbalist in answering my question: 'Julie said it must be about three months before I can know so I think I'll give it 'til then.' Thus the physical and interpersonal dimensions of treatment contributed to Jasmina's evaluation and decision to continue using herbalism. The herbalist provided a timeframe within which Jasmina could continue experiencing and evaluating her treatment.

The role of therapists' communication in shaping patients' experiences of and beliefs about treatment was also documented in the context of chiropractic and vestibular rehabilitation (Yardley et al., 2001). Linda's talk after her second osteopathy appointment suggests one reason, financial cost, why participants value being given a time-frame by therapists. Financial cost is examined in more detail below, as this appears to contribute to negative evaluations and can be seen as limiting CAM use.

Linda: Yes, she said to come back in two weeks and see how it's going but that should be it

I: That's nice and quick

Linda: Yes, some people take you for a ride a bit keep you going for three months and it costs a fortune, so now I'm quite happy with Sally doing my neck today it's much gentler and I feel better now even [...]. It's very

difficult to say at this stage if it's going to get better or not. After two sessions you can't really know what the outcome's going to be, but she seems pleased with what she's done and she does know what she's doing but I'll have to wait and see

I: Ok and why did you come back today then

Linda: Because at the start she said I would need more than one session and then she said she'd say today how many more I needed, and that most people don't need more than five, so I was happy to come back today give it a chance

The cycle from treatment to evaluation and to more treatment can be broken when people consider their treatment to have been successful. In these cases people evaluate their experiences positively and, when asked if they would come back in the future for more treatment, are very positive about future use of the treatment if they had appropriate needs in the future. Robby thought his first ever experience of osteopathy was very successful, and on the basis of this success and his view of osteopathy as preferable to and more appropriate for back problems than seeing his GP he would use osteopathy again.

Robby: Tim explained didn't get too technical, explained what he felt had happened. [...] It was a very thorough examination and his treatment really targeted the area [...] I certainly feel better. Whether that's psychosomatic or not I don't know but I feel more reassured if you like. [...] Tim or his colleagues would have to know the structures of the bone, how they interact, what is right, what is wrong within the body so that they can detect any potential errors. And in that sense [...] if I have a joint or back problem I would rather talk to say Tim because I feel his examination would be better than a GP who is more likely to talk to me about what is happening, prescribe some anti- inflammatory drugs and tell me to go away and if in two weeks time it's not any better come back and see me [...].

I asked the therapists why they thought people came back to see them, and they talked about the impact of the treatment itself on the patients and the therapists

themselves as important factors in ongoing CAM use. For example, Sally said that her patients come back because 'the treatment's working and they can see that. Hopefully me.' John hopes that the reaction his patients have to their homeopathic remedies encourages them to attend follow-up appointments, and recognises his role in providing a time-frame.

John: Hopefully they come back because they've had some improvement. I make a point of explaining to them that it might take a while. I lay it down sort of like a contract to start with, that they may have to see my three or four times. Some may be cured and come back to review the situation. Most notice a response to the remedies, either good or bad, so they're encouraged to follow it up.

#### *9.3.8.2 Negative evaluations: deciding to stop using CAM.*

A number of participants talked about treatment episodes at other clinics which they evaluated negatively and so did not continue with. While Helen found some aspects of acupuncture positive, it did not meet her physical need for weight loss and was expensive: 'It was relaxing and I enjoyed it but I didn't lose weight and it was too expensive really.' Tess had also tried acupuncture in the past, and for her it was neither a pleasant experience nor successful in terms of her health problem and so she has not used it again.

Tess: I had acupuncture because I've got a very bad neck very stiff neck and um it didn't work for me but I think it was because I was anxious about having it done [...] I was anxious about having the needles put into me so that would have an impact [...] and I imagine that part of having a stiff neck is tension so that wouldn't help things and after they put them in when they start twisting them it just sort of made me think oh I'm not going through that again.

A combination of experiencing physical side-effects from a Chinese herbal remedy and feeling as if she was forced into her treatment by the therapist led Clair to stop using Traditional Chinese Medicine (TCM).

Clair: I tried TCM once, but I got bad effects from the herbs and he refused to change them. [...] I did not go to the third one [appointment], even though I'd paid for it I didn't want to go. There's an issue of trust with TCM.

Few participants evaluated their treatment at the clinic in negative terms and said they were unlikely to use the treatment again; those who did had been bought their appointments as gifts. While Max enjoyed his reflexology appointment and found it relaxing, he is not convinced that reflexology could have any impact on his health, 'I wouldn't put all my hopes in it,' and thinks it is too expensive for him to use again. For Max, reflexology was a luxurious treat, not a necessary treatment.

Max: [laughs] I've just paid the bill not at forty five quid [laughter] so no

I: Ok if it didn't cost so much

Max: Oh sure for a nice foot massage I wouldn't be coming back cos I thought it was any good for me but it was very nice.

Some participants, like Linda, who evaluated their treatment positively said that the financial cost would put a limit on their ongoing use. For example, Freya says that reflexology 'could be cheaper. I don't come very often.' Previous studies have also found that financial cost can act as a limiting factor on CAM use (Andrews, 2002; Luff & Thomas, 2000).

The therapists had a range of views about the financial cost of their treatments.

Kelly felt that the price of reflexology was too expensive, and was concerned to give people 'value for money' by explaining what she is doing to people and talking to them about reflexology:

Kelly: I think the service is very er very expensive and I feel for that that they should have the best treatment available really I feel as if I have to match my my price and if I just come in and say oh I have to do some forms and then just do their feet I I don't feel as if they've got really what they've paid for

In comparison, Ian feels that the price of homeopathy is reasonable.

Ian: People aren't used to paying for health care so they don't want to pay anything really or very little and I think that you've got to charge a price that reflects your professional qualities. Really I think it's 55 pounds for a consultation which I think is a very fair amount.

Paula recognises that the cost of aromatherapy is prohibitive for some people who come to see her at the clinic, and also acknowledges that she can do nothing about it. Andrews, Peter and Hammond (2003) conducted a study of CAM therapists who ran their own businesses and found that in that context therapists put their business interests second, for example by offering treatment at reduced rates for people who found the cost prohibitive. In the current clinic setting the therapists themselves did not control the amount of money charged for their therapy and so had little control over the business-side of therapy provision. Therapists however often took their clients' payment directly from them, walking with them to the reception desk and processing payment immediately after treatment, and so while they had little control they were involved in providing therapy as part of a business.

Paula: If it was vouchers or a present or they can't really afford it that's probably the last time I see them until their next birthday. And the people like old aged pensioners they're not getting paid so it's quite a lot of money for them and very often they would love to come back [...] that's a bit frustrating [...] there's nothing that I can do about it.

While the therapists acknowledged that financial cost could be a barrier to people coming back to see them, other reasons why people stopped coming to see them often remained a mystery. John said that often people will miss follow-up appointments and he will not know why, and then they will come back to see him much later: 'People don't turn up for the follow up and then pop up again six months or even years later, saying that you helped them before and they've got a new problem.'

#### *9.4 Conclusions and Implications*

Ongoing CAM use can be thought of as a cyclical process of treatment and evaluation which is embedded in the context of reasons for initially using a therapy, the clinic environment and the wider social context. Initial use of a therapy was based on a process of matching perceived needs to a specific therapy, which was influenced by personal recommendations, beliefs about therapies, and triggers related to health status. Choice of a suitable therapist was influenced by the perceived trustworthiness of the therapist, incentives, and practical considerations. Participants talked about physical, psychological, cognitive and interpersonal aspects of their experiences of treatment, evaluations of which were also influenced by expectations, perceived needs, and practical considerations.

This conceptualisation was grounded in and supported by a rigorous analysis of data of different types and originating from different sources. The inclusion of both patients' and practitioners' voices as well as observations of the clinic setting strengthens this study. The search for negative cases which did not fit with the emerging analysis revealed the group of participants who had been given their appointments as presents. This is one way in which CAM can be used which has not been well-documented in the literature, and appears at first glance to be very different from choosing one's own therapy and therapist. However, the same processes and influences involved in experiencing and evaluating CAM were found for this group of people. A range of experiences from different perspectives fed into and can be accounted for by the process-oriented framework which emerged from the analysis.

The field-work from which the analysis was derived was situated within one particular therapeutic setting and focussed on two clinics. This approach facilitated an in-depth study of ongoing CAM use in this setting, but could leave the transferability of the findings to other settings questionable. The incorporation of previous studies conducted in a range of settings into the analysis suggests that the main findings are relevant to other settings, although previous literature on CAM use in specific illness contexts, such as cancer, does suggest that such illness contexts are important influences on decisions to use CAM (e.g. Boon, Brown et

al., 2003). The financial considerations which many participants mentioned also suggest that because the clinics were providing CAM on a private basis the findings are not directly transferable to the provision of CAM on the NHS.

Keeping in mind the caution required in terms of the transferability of the analysis, the findings from this study have a number of implications for research and CAM provision. The processes involved in matching a therapy to one's perceived needs and choosing a suitable therapist show that people do not use CAM indiscriminately, but are active problem-solvers who use common sense when making their decisions. In order to help them make decisions, they search out information about therapies, and so reliable information about therapies needs to be made available to people who are considering using CAM. Schmidt and Ernst (2004) showed that the internet can be an unreliable and sometimes dangerous source of information about CAM in cancer. Further research is needed to examine patients' preferences for information about CAM, and to develop ways to meet the need for reliable information that is readily accessible to potential patients.

The use of CAM as both treatments and as treats suggests the existence of a group of CAM users who do not view certain forms of CAM as medical practices. The possible links between CAM use and use of beauty services might be unique to the clinics in this study, but might also suggest a different way of viewing the use of certain forms of CAM. Further research is needed to document the extent of such use and views, and to examine the ways in which practitioners respond to this phenomenon. Preventative and general wellbeing and health maintenance reasons for using CAM have been previously documented (Eisenberg et al., 1998; Thomas et al., 2001). Throughout the analysis the concept of need was shown to be far from simple, and indeed was insufficient to explain choice of CAM. Rather, choice of therapy involved a match between perceptions of need and beliefs about both CAM and OM. This study also showed that using CAM for general wellbeing can be seen as a necessary luxury, an interesting concept which does not fit well with NHS provision of CAM. The focus of this chapter was on the processes involved in CAM use; the concept of CAM as luxurious need constitutes a potentially fascinating focus for further research.

Peoples' experiences of treatments were analysed as falling into four domains, physical, psychological, cognitive and interpersonal. This is relevant to the question of what mechanisms underlie experiences of CAM, and suggests that researchers need to attend to a range of possible levels of experience and to develop sophisticated methodologies in order to do this. The close relationship between different dimensions of peoples' experiences and the range of experiences also has implications for research into CAM outcomes, suggesting that patient-centred outcome measures such as the MYMOP (Paterson, 1996) might be more appropriate than generic outcome measures that focus on a narrow range of experiences.

The overall process of ongoing CAM use is consistent with the theoretical framework outlined in chapter 4. As noted in the analysis, the process of matching a treatment to needs and the evaluation of experiences with reference to prior expectations of illness and treatment maps onto the concept of coherence from the self-regulation model (Leventhal et al., 2003) while the integration of a range of dimensions of experience with evaluation is consistent with the dynamic model of treatment perceptions (Yardley et al., 2001). This study adds to the understanding of these processes by specifying the factors that influence ongoing CAM use, providing detailed descriptions of these factors, and considering the specific ways in which ongoing CAM use can be influenced by the immediate clinic setting and the wider social context of participants.

This study has also highlighted important issues that need to be considered in relation to theory development and future studies of CAM use. The idea that some people see and use CAM as treats rather than treatments, involving an overlap between CAM and beauty treatments as well as other people having significant influences on CAM use through buying gift vouchers, was not anticipated and was not examined in the quantitative studies. Neither was the related perception of treatments as luxuries, which highlights the need to examine in more detail the relationship between enjoying treatments and their financial costs. Furthermore, these ways of viewing and using health care are not well theorised in the health psychology literature. The theoretical framework used to guide this research,

and other major health psychology theories, are primarily concerned with responses to illness or health threats. This study has introduced the idea that certain forms of CAM, particularly aromatherapy and reflexology, can be used in a very different way to how use of health care is traditionally conceptualised. Similarly, the finding that CAM use can be about general malaise or perceptions that one's body is not 'working properly' does not fit well with existing conceptualisations of perceptions of illness and need for treatment. These ideas are not addressed by traditional medically oriented symptom lists or by the IPQ-R (the measure used in the questionnaire studies; Moss-Morris et al., 2002).

The finding that peoples' experiences of CAM could be conceptualised as falling into four dimensions, interpersonal, physical, psychological and cognitive, highlights a limitation in scope of existing quantitative work on CAM use including the questionnaire studies reported in Chapters 7 and 8. The questionnaire studies primarily assessed peoples' interpersonal and, to an extent, physical experiences of therapy, but did not evaluate their psychological or cognitive experiences. This study highlights the broadness of CAM as an experience and the need to develop appropriate tools to quantitatively evaluate the whole range of dimensions of experiences of CAM in future studies. Similarly the finding that some participants saw their conditions as not serious enough for OM highlights a limitation of existing quantitative work, which has focussed on the relationship between CAM use and dissatisfaction with OM. This study suggests that dissatisfaction with OM is not the only belief related to OM that might be associated with CAM use.

The examination of the process of matching also resulted in new understandings that were not examined in the quantitative studies and that warrant further research. The focus on process showed that it is not necessary for people to buy into the philosophies of treatments in order to continue using them. This contrasts with the focus in the quantitative work on the theoretically predicted relationship between treatment beliefs and adherence to CAM, and provides a possible explanation for why treatment beliefs were not strongly associated with adherence to CAM (Chapter 8). The focus on the process of matching showed that when the participants evaluated their use of treatments they considered the coherence between their

needs and their potential and actual experiences and outcomes; participants' needs did not necessarily include a need for a certain type of treatment with a particular underlying philosophy. The finding that participants were often unwilling to commit themselves to an evaluation of treatment (citing the importance of trying something out or waiting to see what happens) also highlights that the timing of any self report measures related to appraisal of treatment requires further theorising and empirical study. Future quantitative studies would benefit from more sophisticated designs which directly assessed coherence between perceived needs and experiences over the course of treatment in order to test the validity of this insight based on qualitative methods.

Previous research, discussed in chapter 3, suggests that ongoing CAM use is related to illness perceptions (Searle & Murphy, 2000), experiences of treatment and therapeutic relationships (e.g. Andrews, 2003; Lee-Treweek, 2002), and beliefs about CAM and dissatisfaction with OM (Low, 2004; Luff & Thomas, 2000; Mercer & Reilly, 2004). This study has shown that these factors are important in ongoing CAM use in the private sector, and has drawn together these influences on CAM use to generate one model of the processes involved in ongoing CAM use and the factors that influence these processes.

## Chapter 10

### Discussion

#### *10.1 Introduction*

This thesis set out to develop an answer to the question, why do people return to CAM? The empirical work has demonstrated that in the UK at the start of the 21<sup>st</sup> century people return to CAM because they hold treatment beliefs and illness perceptions that are consistent with the form of CAM they are using, and have positive perceptions of their therapist. The findings of each empirical study have been discussed separately. This chapter summarises the findings of each study and takes an overview of the empirical research, integrating the findings and discussing the strengths, limitations and implications of the research as a whole.

#### *10.2 Overview of Thesis*

##### *10.2.1 Background*

Chapters 2 and 3 reviewed the existing literature on CAM use, and showed that while a number of studies have examined why people use CAM, relatively few have examined why people return to CAM. In chapter 2 it was shown that people who use CAM tend to be female, middle-aged, and have higher educations and incomes compared to people who do not use CAM. People who use CAM are also likely to have chronic physical illness, psychological problems, and to undertake other healthy behaviours, such as exercise. In chapter 3 it was shown that CAM use is associated with treatment beliefs (beliefs in holistic health, natural treatments, and participation in treatment), illness perceptions (especially related to the causes of illness), and dissatisfaction with OM. A small number of studies suggested that these factors might also be associated with ongoing CAM use.

Chapter 4 set out the rationale for using qualitative and quantitative methods and proposed a suitable theoretical framework to guide the empirical research. The dichotomies between qualitative and quantitative approaches to research were broken down, and it was argued that using both qualitative and quantitative methods is not only valid but also valuable. The strengths and limitations of questionnaire and ethnographic research were shown to complement each other; it was argued

that a more comprehensive account of why people return to CAM could be reached by using both methods. A number of theoretical models from the field of health psychology were evaluated for their potential to guide the research into why people return to CAM. It was argued that the self-regulation model (e.g. Leventhal & Cameron, 1987) provided the most appropriate framework to guide the research, and that this model was improved by the incorporation of the dynamic model of treatment perceptions (Yardley, Sharples, Beech, & Lewith, 2001). The resulting framework suggested that, if CAM use is conceptualised as a coping procedure, ongoing CAM use will be influenced by illness perceptions, treatment beliefs, and appraisal processes during which patients evaluate their experiences of therapy, changes in symptoms, and their experiences of the therapist. The theoretical framework also positioned these processes within the context of the self-system and the socio-cultural environment. Chapters 2, 3 and 4 thus laid the foundations for the empirical work reported in the subsequent chapters.

#### *10.2.2 Questionnaire Development*

The need for and development of two new questionnaire measures, the CAM Beliefs Inventory (CAMBI) and the Treatment Process Questionnaire (TPQ) were described in chapters 5 and 6. Previous qualitative and quantitative research was used to generate items for both questionnaires. The psychometric properties of the CAMBI were examined through an internet-based study, which facilitated the quick collection of data from a large number of people. Factor analysis was used to examine the underlying structure of the CAMBI and to determine whether it was possible to distinguish between different dimensions of treatment beliefs. Correlations were used to examine the concurrent criterion and congruent validity of the CAMBI. The CAMBI was shown to measure three dimensions of treatment beliefs with satisfactory reliability and validity. The dimensions of treatment beliefs measured by the CAMBI are beliefs in holistic health, natural treatments, and participation in treatment.

The psychometric properties of the TPQ were examined through a postal questionnaire study. Factor analysis was used to identify subscales of the TPQ which measure different aspects of treatment experiences. Concurrent criterion

validity was examined using Mann-Whitney tests, and the predictive criterion validity of the TPQ was examined in chapter 8 using correlations. The TPQ was shown to measure two dimensions of perceptions of the treatment process with satisfactory reliability and validity. The additional test of the predictive validity of the TPQ conducted in chapter 8 confirmed the validity of the TPQ. The TPQ measures patients' perceptions of experiences of their therapist and their therapy. It was argued that the TPQ might prove to be a useful measure of perceptions of the treatment process in other domains of health care, such as rehabilitation. The development of the CAMBI and the TPQ was essential in order to follow the theoretical framework and examine why people return to CAM.

#### *10.2.3 Cross-Sectional Questionnaire Study: Beliefs, Perceptions, and CAM Use*

Chapter 7 presented a cross-sectional internet based questionnaire study, which demonstrated associations between current use of different types of CAM and treatment beliefs and illness perceptions. This study used the newly developed CAMBI alongside established questionnaire measures of illness perceptions and other treatment beliefs. Few studies had previously investigated illness perceptions and CAM use, and even fewer had reported multivariate research which investigated both treatment beliefs and illness perceptions in CAM use. Because of this lack of previous research, a cross-sectional study was an essential first step before embarking on a prospective study of adherence to CAM. Following the theoretical framework it was hypothesised that treatment beliefs and illness perceptions would be associated with current CAM use. It was hypothesised that different beliefs and perceptions would be associated with the use of different types of CAM. Correlations and logistic regressions were used to test the hypotheses.

Both treatment beliefs and illness perceptions emerged as significant predictors of CAM use, as did knowing other people who use CAM. Beliefs in holistic health were the most consistent predictors of CAM use. People with a strong understanding of their illness, strong beliefs that their illness has serious consequences and a belief that their illness was caused by emotional factors were also more likely to be using CAM. The use of the internet for this study again facilitated the quick collection of data from a large number of people, but did not

facilitate the collection of data from people using specific types of CAM only. Therefore it was not possible to make direct comparisons between the predictors of use of different types of CAM. However, the results did suggest that different beliefs and perceptions are associated with the use of different types of CAM, extending previous research and suggesting that future research on CAM use needs to consider focussing on specific types or individual forms of CAM. By showing that treatment beliefs and illness perceptions are associated with current CAM use, this study added to the evidence that suggested it would be worthwhile conducting a prospective examination of associations between these factors and ongoing CAM use.

#### *10.2.4 Prospective Questionnaire Study: Why do People Adhere to CAM?*

Chapter 8 reported the main, prospective, questionnaire study, an investigation of the psychological predictors of adherence to CAM. This postal questionnaire study used the CAMBI and the TPQ alongside established questionnaire measures of illness perceptions and other treatment beliefs. Participants were recruited from private CAM clinics which predominantly provided homeopathy, chiropractic, and traditional Chinese medicine. Participants completed the questionnaire measures of treatment beliefs, treatment experiences and illness perceptions and then completed self-report measures of adherence three months later. Three aspects of adherence were measured, attendance, adherence to recommended lifestyle changes, and adherence to remedy use. Following the theoretical framework it was hypothesised that treatment beliefs, treatment experiences, and illness perceptions would be associated with adherence to CAM. Correlations and logistic regressions were used to test the hypotheses.

The predictors of adherence to CAM included experiences of treatment, treatment beliefs, illness perceptions and demographic characteristics. The role of perceived health change in adherence was not tested satisfactorily; further research is needed to examine this issue, and could be conducted using a similar design to that employed in this study. Being older, having less education, using a therapy one had used before, having low perceptions that one's illness was cyclical, having low perceptions that one's illness was caused by mental attitudes, and having more

positive perceptions of one's therapist predicted increased attendance. Being female, using homeopathy, attending for a new illness, and having more positive perceptions of one's therapist predicted adherence to lifestyle changes. Being older, having stronger beliefs in holistic health, having more negative attitudes to GPs, and finding it difficult to travel to appointments predicted adherence to remedy use. The numbers of participants using different types of CAM were too low to allow direct comparisons between predictors of adherence to homeopathy, chiropractic, and traditional Chinese medicine. Overall the results were consistent with the hypotheses derived from the theoretical framework. The findings also suggested that perceptions of one's therapist are more important predictors of adherence to CAM than perceptions of one's therapy.

#### *10.2.5 Qualitative Study: The Processes of Ongoing CAM Use*

Chapter 9 presented a qualitative investigation of the processes involved in ongoing CAM use that drew on a range of evidence generated and collected during three months of ethnographic field work. Interviews were conducted with therapists and patients using aromatherapy, herbalism, homeopathy, osteopathy and reflexology; documents were collected and observations were made of the clinics' settings and procedures. Techniques from grounded theory were used to analyse the data. The aim of this study was to develop an understanding of the processes involved in ongoing CAM use and to identify and examine the factors that contribute to these processes.

Ongoing CAM use was shown to be a cyclical process, in which experiences of treatment were continuously evaluated. The whole process was shown to be embedded in the wider socio-cultural context, such as the provision of OM on the NHS. Experiences and evaluations were part of a whole process of CAM use, which also involved initial choice of treatment and therapist. Initial choice of treatment involved a process of matching between specific CAM therapies and patients' perceived needs, which was influenced by personal recommendations, beliefs about therapies, and health-related triggers. Choosing a suitable therapist was influenced by the perceived trustworthiness of the therapist, incentives and practical considerations. Participants were shown to experience and evaluate different but

inter-related aspects of treatment which could be thought of as cognitive, psychological, physical and interpersonal. Evaluations of CAM were also shown to be influenced by patients' expectations, perceived needs and practical considerations. The process-oriented model was consistent with the theoretical framework, suggested ways in which people experience and evaluate CAM, and highlighted the way in which health care decisions are embedded in the socio-cultural context.

### *10.3 Combining Qualitative and Quantitative Findings*

Both quantitative and qualitative methods were employed in the empirical research, in the form of questionnaire studies and an ethnographic study. The rationale for using both quantitative and qualitative methods was based on the argument presented in chapter 4 that such a combination of methods allows the strengths and limitations of each approach to complement each other, and facilitates the development of a more comprehensive account of why people return to CAM. The use of questionnaire methods allowed a large number of CAM users to be surveyed (526 in the cross-sectional and longitudinal studies), focussed on the role of patients' beliefs, perceptions and experiences, and produced evidence for the relative importance of different factors in ongoing CAM use. The ethnographic study focussed on a smaller number of CAM users (46), and produced an in-depth analysis of the processes involved in ongoing CAM use, which was situated in the immediate context of the clinics and the wider socio-cultural context.

The qualitative study provided insights into the results generated using quantitative methods and vice versa. The questionnaire studies were based on the theoretical framework developed in chapter 4. The applicability of this framework to CAM use was thus tested in both the cross-sectional and longitudinal studies. They showed that the self-regulation model combined with the dynamic model of treatment perceptions make valid predictions about the factors that influence ongoing CAM use. It was suggested that this model could be useful in future studies of adherence to other types of treatment. Qualitative research is not suited to testing theories, but is suited to generating theoretical insights and examining theoretical processes in the context of specific behaviours. This strength of qualitative research is most

evident when considering the relationship between treatment beliefs and CAM use.

The ability to examine the relative statistical importance of different psychological variables in predicting behaviour is a key strength of questionnaire methods. The prospective questionnaire study showed that treatment beliefs and illness perceptions predict adherence to CAM. People were more likely to adhere to recommendations from their CAM therapists if they held strong beliefs in holistic health, held negative attitudes to GPs, perceived their illness as not caused by mental attitudes, perceived their illness as not being cyclical, found it difficult to travel to appointments, and held positive perceptions of their therapist. However, questionnaire studies are not well-suited to suggesting why such variables are important predictors of behaviour. The theoretical framework suggested that people attempt to achieve common sense coherence between their representations of illness and treatment, and that this drive to coherence is a mechanism through which people decide to initiate and adhere to specific forms of treatment. By taking an inductive data-led approach in the qualitative work the ethnographic study was able to explicate the processes through which people initiate and continue CAM use which were grounded in the micro-level of individuals' experiences. The qualitative study suggested that beliefs are important because of the process of matching, which does continue during evaluation as people continued to evaluate the ways in which their treatment experiences were matching their perceived needs and their expectations which included beliefs about the nature of treatment. Thus the qualitative study was able to illustrate the way in which people attempt to achieve coherence between treatment beliefs, experiences and illness representations in the specific context of CAM use.

Using qualitative and quantitative methods can elicit findings that might appear to be incompatible. In the qualitative study, when participants talked about their expectations and evaluations of CAM, they often drew comparisons between CAM and OM. However, attitudes to GPs were not significant predictors of adherence to CAM in the questionnaire study. This suggests that previous experiences of and beliefs about OM allowed participants to develop their talk about CAM, but that these experiences were not necessarily key determinants of adherence to CAM.

Furthermore, the way in which the qualitative study was able to take into account the wider social context of health care suggested that CAM use might be very different to OM use. CAM use was talked about as a luxury, and people talked about using CAM for health problems that were not deemed serious enough for OM. This further suggests that the concept of dissatisfaction with OM is perhaps insufficient to account for the way in which people think about their CAM use in relation to OM. It is suggested that some people who use CAM do so in part because they want a form of treatment that is not available to them through OM as provided by the NHS in the UK, rather than because they are dissatisfied with OM. In this case then, the apparent incompatibility between quantitative and qualitative findings has been used to suggest a hypothesis for future research.

As argued in chapter 4, qualitative and quantitative approaches can complement each other by providing a balance across the strengths and weaknesses of different studies. The questionnaire study included people who were new and returning patients but, because the numbers recruited were too low, did not distinguish between these groups. From the qualitative study it was clear that people evaluate their treatment experiences starting with the first consultation. Thus an important issue for future research is to examine the role of experiences of the first consultation only. Similarly, the questionnaire study was limited in its focus on individual patients' beliefs and experiences. The qualitative study was able to balance this limitation by incorporating therapists' perspectives in addition to patients' perspectives, and by including analyses of the immediate clinic setting and the wider socio-cultural context. For example, the qualitative study suggested that the way in which CAM was provided in the clinics alongside beauty therapies had an impact on patients' experiences. Further qualitative research in other settings is needed to delineate the particular aspects of clinic settings that are important to patients and therapists, which could then be used to direct quantitative research into the relative importance of different aspects of clinic settings on behaviour.

There are a number of implications from the qualitative study that could have been incorporated in the quantitative work, had the qualitative study preceded the quantitative studies. The qualitative study suggested that peoples' experiences

of CAM can be conceptualised as related to four dimensions, physical, interpersonal, cognitive and psychological. As mentioned above (section 9.4), the questionnaire studies primarily assessed peoples' interpersonal and, to an extent, physical experiences of therapy, but did not evaluate their psychological or cognitive experiences. These dimensions of experience could have been assessed quantitatively had the results of the qualitative study been available to inform the design of the questionnaire studies. It would not have been appropriate to have changed the focus of the TPQ to reflect this, however, as the TPQ was designed to measure perceptions of those aspects of treatment described in the theoretical framework which was used to guide the research as a whole. Thus the development of appropriate questionnaire measures to assess these extra dimensions of experience would have been required, which would have been difficult considering the financial and time constraints of this PhD.

The qualitative work suggested that people do not always use CAM as a form of health care in direct response to an illness or health threat, but can use CAM as a treat rather than a treatment. This different way of using CAM was not investigated in the quantitative work. Had the qualitative findings been available to inform the quantitative studies these findings could have been taken into account by narrowing the focus of the questionnaire studies and explicitly concentrating only on CAM use as a response to an illness or health threat and excluded CAM use as a treat. The qualitative study also emphasised the importance of the matching process between perceived need for treatment and expected or actual outcomes and experiences of treatment. This emphasises the importance of focussing on specific therapies; in comparison the questionnaire studies focussed on specific types of CAM and limited individual therapies. Had the questionnaire studies been conducted after the qualitative study, the need to focus on specific individual therapies would have been incorporated in the design of these studies.

#### *10.4 Strengths, Limitations and Extensions of the Empirical Research*

The previous section not only explained how the findings from the qualitative and quantitative studies can be combined, but also highlighted the value of using qualitative and quantitative approaches in this research. Within the quantitative

studies two approaches were used, internet-based recruitment and data collection, and postal data collection. The use of the internet to conduct the questionnaire studies reported in chapters 5 and 7 enabled data collection to proceed relatively quickly and, once set-up, with little input from the researcher in terms of the time required for data collation. This practical advantage of using the internet enabled more time to be spent developing and conducting the main questionnaire and ethnographic studies. Using the internet also meant that data collection for these studies was not restricted to any particular geographic location, and so permitted the recruitment of participants from a range of backgrounds and with a range of experiences of CAM. However, the small proportion of people recruited through the internet who did not use CAM did potentially limit the power of some of the analyses in chapters 5 and 7. Having a small proportion of non-CAM users meant that the variance on some questionnaire scales was low and so the studies had limited ability to test relationships between scores on these scales and CAM use. Future research using the internet in this way would benefit from developing a more inclusive approach to recruitment. This could be facilitated by focussing on specific illness groups (who could be recruited from dedicated chat-rooms or email lists) rather than focussing recruitment strategies on more general health care sites and chat-rooms.

The use of the internet enabled data to be collected from people using a range of different types of therapy which was vital for chapter 7. However, because the participants had used such a number of different types of CAM, it was not possible to directly compare the predictors of the use of different CAM types. Research is needed which purposefully recruits participants from providers of different CAM types in order to further examine differences and similarities between the psychological predictors of the use of different CAM types. The internet also restricted the pool of potential participants to computer-literate English speakers who had access to the internet. However, participants were generally typical of CAM users in terms of their demographic characteristics, suggesting that the use of the internet could be a useful means of recruiting large numbers of CAM users to participate in research on CAM use.

The longitudinal study had two important limitations. Firstly, the number of participants was lower than desired. While reasonable numbers of participants were included in the analyses of adherence to attendance (196) and lifestyle changes (140), substantially fewer were included in the analysis of adherence to remedy use (79). Furthermore, the number of participants using each form of CAM was too low to examine the predictors of adherence separately for homeopathy, traditional Chinese medicine, and chiropractic or osteopathy. A balance had to be struck between recruiting sufficient participants to analyse the relationships between psychological factors and adherence to CAM, and recruiting specific groups of participants to facilitate the analysis of these relationships in different CAM forms. Future research is needed that focuses on adherence to individual CAM forms. The second limitation was the reliance on self-report measures of adherence. This was discussed in full in chapter 8; future research on adherence to CAM needs to incorporate objective measures of adherence.

Throughout the empirical research the participants were using CAM for a range of health problems and to improve or maintain their general well-being. While this enabled sufficient numbers of participants to be recruited and facilitated an examination of why CAM users in general return to CAM, it meant that illness-specific groups were not examined. The validity of the findings in illness-specific populations thus remains to be tested.

### *10.5 The Contribution of This Thesis*

Chapter 1 set out three key reasons for health psychologists to research CAM use. The research presented in this thesis contributes to these issues as follows.

*1. Research into CAM use is both timely and relevant to a substantial proportion of the UK population.*

As argued in chapter 1, by asking why substantial numbers of the UK population are using CAM now, research into CAM use can inform us about the delivery and use of health care in the early twenty-first century. Chapters 2 and 3 showed that the existing literature had focussed on factors associated with CAM use in general, few studies had previously examined the multivariate associations between treatment

beliefs, illness perceptions and CAM use, and the reasons why people return to CAM were poorly understood. By addressing the question of why people return to CAM this thesis extends our understanding of CAM use. People who use CAM go through a cyclical process of experiencing and evaluating treatment, and their illness perceptions, treatment beliefs and experiences influence their adherence to CAM.

*2. Understanding why people use CAM can help to broaden theoretical models of health care utilisation and decision-making.*

Few previous studies of CAM use had used theoretical models from health psychology to guide their research. This thesis shows that doing so is beneficial not just to research on CAM use, but also to the development of theoretical models themselves. The use of a theoretical framework was particularly valuable for this research given the lack of previous studies in the area of ongoing CAM use, enabling the development of hypotheses which drew on established health psychology theory and empirical findings from the broader literature on OM. Previous qualitative research on CAM use (Yardley et al., 2001) was also drawn on in order to increase the specification of the appraisal process of the self-regulation model (Leventhal & Cameron, 1987). The incorporation of treatment beliefs and perceptions of experiences (as appraisal processes) into the self-regulation model was supported by the empirical findings. This research thus supports and extends work by Horne and Weinman (2002), suggesting that the self-regulation model can be usefully extended to incorporate not only treatment beliefs but also perceptions of the treatment process. The theoretical framework now needs to be tested in other contexts, including adherence to conventional treatments, and in illness-specific populations.

*3. Understanding the beliefs of CAM users extends our understanding of health and treatment beliefs in general, and can help to develop our understanding of the role of beliefs in the initiation and maintenance of health behaviours.*

This thesis has contributed to our understanding of treatment beliefs per se, in addition to the contribution described above to our understanding of the role of beliefs in health behaviours. The development of the CAMBI showed that it is possible to distinguish between and measure three dimensions of CAM-related

treatment beliefs, beliefs in holistic health, natural treatments, and participation in treatment. The development of the TPQ showed that it is possible to distinguish between and measure perceptions of therapists and therapies. Both the CAMBI and TPQ had satisfactory validity and reliability, and will hopefully prove to be valuable questionnaire measures in future studies of both CAM use and adherence to OM treatments.

#### *10.6 Concluding Comments*

In setting out to determine why people return to CAM, this thesis presented unique research which makes a much needed and crucial contribution to a previously poorly understood area. The research benefited from two central strategies, firstly the use of health psychology theory and secondly the use of both qualitative and quantitative methods. The two questionnaires developed during the course of the thesis constitute potentially highly valuable measures for future research. To the author's knowledge, the longitudinal questionnaire study is the first major multivariate study of the predictors of adherence to CAM. People return to CAM because they hold treatment beliefs and illness perceptions that are consistent with the form of CAM they are using, and have positive perceptions of their therapist. In this context, beliefs and experiences are thus key determinants of health care behaviours.

## Appendix A: Web-Based Questionnaires

### **The Treatment Belief On-line Questionnaire**

Hi! Thank you for visiting this website. I am Felicity Bishop, a postgraduate research student in the Department of Psychology at the University of Southampton, UK.

I am asking you to take part in a study on this website. I am trying to find out why people use complementary and alternative treatments. I want to know your views about health, illness and different types of treatment. If you would like to help me, then please fill in my questionnaire. The questionnaire is about health, illness and different types of treatment. It should take you between 10 and 20 minutes to complete.

The questionnaire is anonymous. Your answers will only be used in this research project. Taking part is voluntary and you may change your mind and stop doing the questionnaire at any time. When the study is finished I will put a summary of the results on this website, so please check back if you want to know more!

So that the data we collect is as accurate as possible, please only complete this questionnaire once. **Please try to answer every question.**

If you have read and understood the details above, and are over 18 years of age, then please fill in my questionnaire. Please press the button below to show that you want to take part in this study, and then please complete the questionnaire.

If you would prefer to print out the questionnaire once you have completed it, please post the completed questionnaire to me at:

Ms Felicity Bishop  
Department of Psychology  
University of Southampton  
Highfield  
Southampton  
Hampshire, UK  
SO17 1BJ

If you have any questions please contact me, Felicity Bishop on [flb100@soton.ac.uk](mailto:flb100@soton.ac.uk)

YES

NO

**I agree to take part in this study**

**Thanks**

If you have any questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Phone (023) 80593995.

## *The Treatment Belief On-line Questionnaire*

*[This section is the CAMBI]*

We are interested in your views about treatments and health problems. The first part of this questionnaire is about treatment. By 'treatment' we mean any kind of health care, and a 'treatment provider' is a person who provides health care. There are no right or wrong answers. We are interested in your opinions. Please read each statement and indicate the degree to which you agree or disagree by selecting the appropriate number.

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

So, for each statement please select the number that best represents your view by clicking on the appropriate button.

A1.Treatments should have no negative side-effects

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

A2.It is important to me that treatments are non-toxic

<input type="radio"/>						
1	2	3	4	5	6	7

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A3.Treatments should only use natural ingredients

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
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A4.It is important for treatments to boost my immune system

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A5.Treatments should enable my body to heal itself

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A6.Treatments should increase my natural ability to stay healthy

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A7.Treatment providers should treat patients as equal partners

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A8.Patients should take an active role in their treatment

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A9.Treatment providers should make all decisions about treatment

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A10.Treatment providers should help patients to make their own decisions about treatment

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
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A11.Treatment providers should control what is talked about during consultations

1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
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A12.Health is about harmonizing your body, mind and spirit

1	2	3	4	5	6	7
---	---	---	---	---	---	---

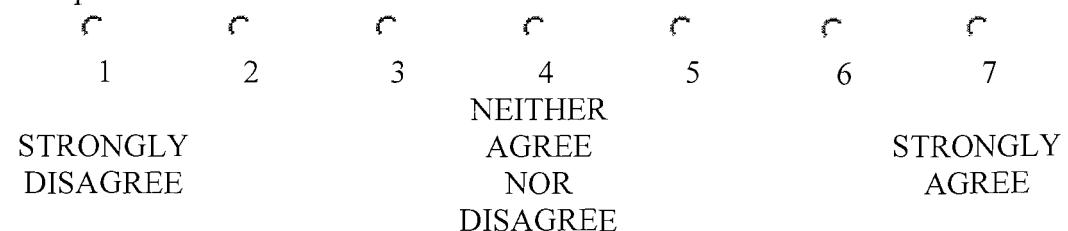
STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

A13.Imbalances in a person's life are the major causes of illnesses

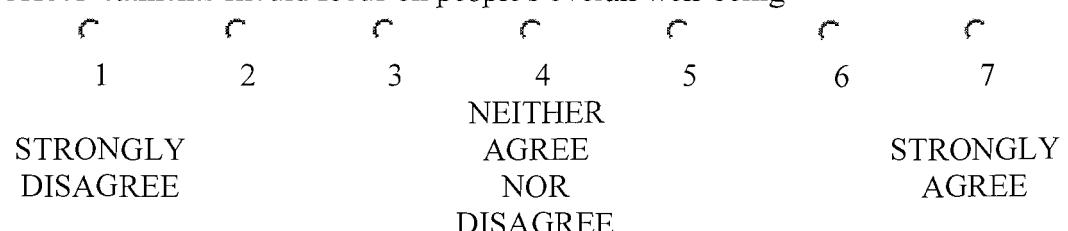
1	2	3	4	5	6	7
---	---	---	---	---	---	---

STRONGLY DISAGREE	NEITHER AGREE NOR DISAGREE	STRONGLY AGREE
----------------------	-------------------------------------	-------------------

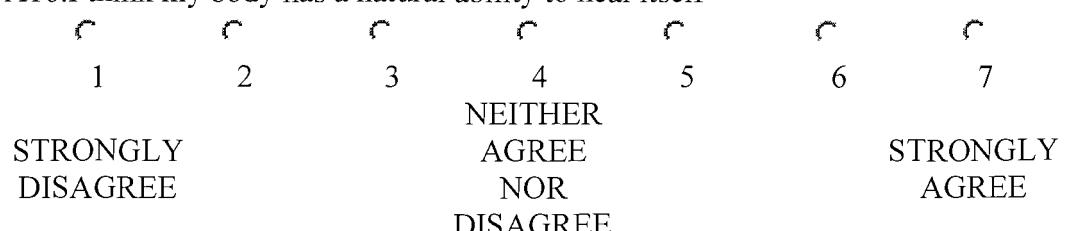
A14. Treatments should concentrate only on symptoms rather than the whole person



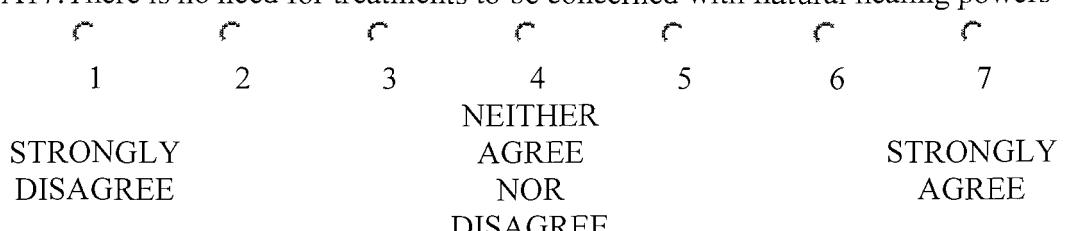
A15. Treatments should focus on people's overall well-being



A16. I think my body has a natural ability to heal itself



A17. There is no need for treatments to be concerned with natural healing powers



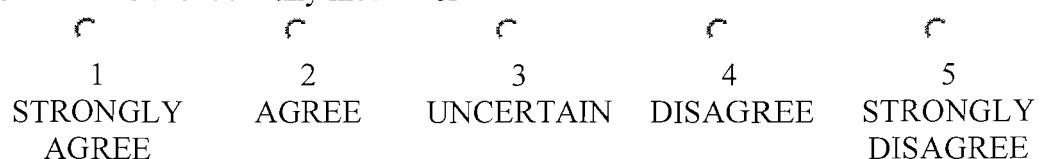
*You have completed this section of the questionnaire*

*Please now start the next section*

***[This section is the BMQ]***

**We would like to ask you about your personal views about medicines in general. These are statements that other people have made about medicines in general. Please indicate the extent to which you agree or disagree with them by selecting the appropriate option. There are no right or wrong answers. We are interested in your personal views. By medicines, we mean prescription medicines you might get from your GP, such as antibiotics.**

B1. Doctors use too many medicines



B2. People who take medicines should stop their treatment for a while every now and again

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B3. Most medicines are addictive

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B4. Natural remedies are safer than medicines

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B5. Medicines do more harm than good

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B6. All medicines are poisons

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B7. Doctors place too much trust in medicines

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

B8. If doctors had more time with patients they would prescribe fewer medicines

<input type="radio"/>				
1	2	3	4	5
STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DISAGREE

*[This section is the attitudes to GPs scale]*

We are also interested in your thoughts about your general practitioner (your GP). Please answer the following questions by circling the number that comes closest to your own opinion. The scale has 5 options:

1 NOT AT ALL	2	3	4	5 VERY MUCH
-----------------	---	---	---	----------------

B9. At your last visit to your general practitioner how satisfied were you with your treatment?



B10. Do you think your general practitioner is concerned with your well-being?



B11. Do you feel your general practitioner treatment is effective?



B12. Do you think your general practitioner listens to what you have to say?



B13. Do you believe that general practitioners can help their patients feel better generally?



B14. Does your general practitioner have enough time for you?



***HOLISTIC HEALTH QUESTIONNAIRE [This section is the HCAMQ]***

Listed below are a number of statements concerning your health and your attitude to complementary medicine. You must decide to what extent you agree or disagree with each statement. The options you have are:

- |                   |                      |
|-------------------|----------------------|
| 1. Strongly agree | 4. Mildly disagree   |
| 2. Agree          | 5. Disagree          |
| 3. Mildly agree   | 6. Strongly disagree |

For each statement you should select the number that corresponds most closely to your own view of that statement. Please do not leave out any statements.

	Strongly agree	Agree	Mildly agree	Mildly disagree	Disagree	Strongly disagree
B15. Positive thinking can help you fight off a minor illness	1	2	3	4	5	6
B16. Complementary medicine should be subject to more scientific testing before it can be accepted by conventional doctors	1	2	3	4	5	6
B17. When people are stressed it is important that they are careful about other aspects of their lifestyle (e.g. Healthy eating) as their body already has enough to cope with	1	2	3	4	5	6
B18. Complementary medicine can be dangerous in that it may prevent people getting proper treatment	1	2	3	4	5	6

- |                   |       |                 |                    |          |                      |
|-------------------|-------|-----------------|--------------------|----------|----------------------|
| Strongly<br>agree | Agree | Mildly<br>agree | Mildly<br>disagree | Disagree | Strongly<br>disagree |
| 1                 | 2     | 3               | 4                  | 5        | 6                    |

B19. The symptoms of an illness can be made worse by depression

B20. Complementary medicine should only be used as a last resort when conventional medicine has nothing to offer

B21. If a person experiences a series of stressful life events they are likely to become ill

B22. It is worthwhile trying complementary medicine before going to the doctor

Strongly agree	Agree	Mildly agree	Mildly disagree	Disagree	Strongly disagree
1	2	3	4	5	6

B23. Complementary medicine should only be used in minor ailments and not in the treatment of more serious illness

B24. It is important to find a balance between work and relaxation in order to stay healthy

B25. Complementary medicine builds up the body's own defences, so leading to a permanent cure

---

*You have completed this section of the questionnaire  
Please now start the next section*

---

In this section of the questionnaire we are interested in your past experiences of complementary and alternative treatments. Below is a list of treatments. Please click next to each treatment that you have tried.

- Acupuncture
- Acupressure
- Alexander technique
- Aromatherapy
- Art therapy
- Autogenic training
- Ayurveda
- Bach flower remedies
- Biochemic tissue salts
- Biorhythms
- Chiropractic
- Chelation and cell therapy
- Colonic irrigation
- Colour therapy
- Crystal and gem therapy
- Dance movement therapy
- Healing
- Herbal medicine
- Homeopathy
- Hypnosis
- Magnetic therapy
- Massage
- Meditation
- Music therapy
- Naturopathy
- Nutritional therapy
  
- Osteopathy

- Ozone therapy
- Reiki
- Reflexology
- Relaxation
- Shiatsu
- Spiritual healing
- Talk therapies/counselling
- Traditional Chinese medicine
- Therapeutic touch
- Visualization
- Voice and sound therapy
- Yoga
- Other form of complementary or alternative treatment

Other complementary or alternative treatments you have tried



Please use this list to tell us if anyone close to you has ever tried each treatment. By 'anyone close to you' we mean a family member or a close friend. Please click next to each treatment that anyone close to you has tried.

- Acupuncture
- Acupressure
- Alexander technique
- Aromatherapy
- Art therapy
  
- Autogenic training
- Ayurveda
- Bach flower remedies

- Biochemic tissue salts
- Biorhythms
- Chiropractic
- Chelation and cell therapy
- Colonic irrigation
- Colour therapy
- Crystal and gem therapy
- Dance movement therapy
- Healing
- Herbal medicine
- Homeopathy
- Hypnosis
- Magnetic therapy
- Massage
- Meditation
- Music therapy
- Naturopathy
- Nutritional therapy
- Osteopathy
- Ozone therapy
- Reiki
- Reflexology
- Relaxation
- Shiatsu
- Spiritual healing
- Talk therapies/counselling
- Traditional Chinese medicine
  
- Therapeutic touch
- Visualization
- Voice and sound therapy

- Yoga
- Other form of complementary or alternative treatment

Other complementary or alternative treatments anyone close to you has tried

*You have completed this section of the questionnaire  
Please now start the next section*

**We would like to ask you for a few details about yourself. These details will help us to analyse the questionnaires.**

Age:

Sex:  Male  Female

At what age did you finish full-time

Where do you live?

So far, approximately how long have you  spent on this questionnaire?

**If you have any comments about this study please type them in the text box below.**

*You have completed this section of the questionnaire  
The final section is about any health problems you have at present.  
If you **currently** have a health problem please now press **CONTINUE**  
and complete the final section of the questionnaire.*

*If you **have no** health problems at the present time, please now press **SUBMIT***

*The final section of the questionnaire should take approximately 10 minutes to complete.*

CONTINUE

(I DO HAVE A  
HEALTH PROBLEM  
AND WOULD LIKE TO  
COMPLETE THE  
QUESTIONNAIRE)

SUBMIT1

(I DO NOT HAVE A  
HEALTH PROBLEM  
AT PRESENT)

SUBMIT2

(I DO HAVE A HEALTH  
PROBLEM BUT DO  
NOT WANT TO  
COMPLETE THE  
QUESTIONNAIRE)

### **The Treatment Belief On-line Questionnaire:** **Final Section**

*[This section is the IPQ-R]*

In this section we are interested in any symptoms you are experiencing. Listed below are a number of symptoms that you may or may not have experienced since your health problem. Please indicate by selecting YES or NO whether you have experienced any of these symptoms since your health problem, and whether you believe that these symptoms are related to your current health problem.

For those symptoms you have experienced, please also indicate how severe each symptom has been in the last week. Please select from the drop down box a value from 1 to 7 to indicate how severe you think each symptom has been, where:

1	2	3	4	5	6	7
NOT AT						
ALL						
SEVERE						
					EXTREMELY	
					SEVERE	

	I have experienced this symptom since my health problem		This symptom is related to my current health problem		How severe is this symptom?	
Pain	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Sore throat	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Nausea	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Breathlessness	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Weight loss	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Fatigue	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Stiff joints	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
	I have experienced this symptom since my health problem		This symptom is related to my current health problem		How severe is this symptom?	
Sore eyes	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Wheeziness	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Headaches	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Upset stomach	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Sleep difficulties	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Dizziness	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Loss of strength	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> No	<input type="button" value="Please select"/>	
Approximately how long have you had your current health problem?						<input type="button" value="Please select"/>

In the next part of the questionnaire we are interested in your own personal views of how you now see your current health problem. Please indicate how much you agree or disagree with the following statements about your health problem by selecting the appropriate button.

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE		NEITHER AGREE NOR DISAGREE		STRONGLY AGREE	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1 My health problem will last a short time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1 My health problem will last a short time

2 My health problem is likely to be permanent rather than temporary

3 My health problem will last for a long time

4 This health problem will pass quickly

5 I expect to have this health problem for the rest of my life

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY	DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
	DISAGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE

6 My health problem is a serious condition

7 My health problem has major consequences on my life

8 My health problem does not have much effect on my life

9 My health problem strongly affects the way others see me

10 My health problem has serious financial consequences

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY	DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
	DISAGREE	DISAGREE	DISAGREE	DISAGREE	AGREE	AGREE

11 My health problem causes difficulties for those who are close to me

12 There is a lot which I can do to control my symptoms

13 What I do can determine whether my health problem gets better or worse

14 The course of my health problem depends on me

15 Nothing I do will affect my health problem

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 16 I have the power to influence my health problem
- 17 My actions will have no affect on the outcome of my health problem
- 18 My health problem will improve in time
- 19 There is very little that can be done to improve my health problem
- 20 My treatment will be effective in curing my health problem

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 21 The negative effects of my health problem can be prevented (avoided) by my treatment

- 22 My treatment can control my health problem

- 23 There is nothing which can help my condition

- 24 The symptoms of my condition are puzzling to me

- 25 My health problem is a mystery to me

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 26 I don't understand my health problem

- 27 My health problem doesn't make any sense to me

28 I have a clear picture or understanding of my condition

29 The symptoms of my condition change a great deal from day to day

30 My symptoms come and go in cycles

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE			AGREE STRONGLY AGREE
			AGREE	STRONGLY AGREE		

31 My health problem is very unpredictable

32 I go through cycles in which my health problem gets better and worse

33 I get depressed when I think about my health problem

34 When I think about my health problem I get upset

VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE			AGREE STRONGLY AGREE
			AGREE	STRONGLY AGREE		

35 My health problem makes me feel angry

36 My health problem does not worry me

37 Having this health problem makes me feel anxious

38 My health problem makes me feel afraid

We are interested in what you consider may have been the cause of your health problem. As people are very different there is no correct answer for this question. We are most interested in your own views about the factors that caused your health problem rather than what others, including doctors or family, may have suggested to you. Below is a list of possible causes of your health problem. Please indicate how much you agree or disagree that they were causes for you by clicking the appropriate button.

POSSIBLE CAUSES	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 1 Stress or worry
- 2 Hereditary - it runs in my family
- 3 A germ or virus
- 4 Diet or eating habits
- 5 Chance or bad luck

POSSIBLE CAUSES	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 6 Poor medical care in my past
- 7 Pollution in the environment
- 8 My own behaviour
- 9 My mental attitude e.g. thinking about life negatively
- 10 Family problems or worries

POSSIBLE CAUSES	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE

- 11 Overwork
- 12 My emotional state e.g. feeling down, lonely, anxious, empty
- 13 Ageing
- 14 Alcohol

POSSIBLE CAUSES	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
					DISAGREE
15 Smoking					
16 Accident or injury					
17 My personality					
18 Altered immunity					

*[End of IPQ-R]*

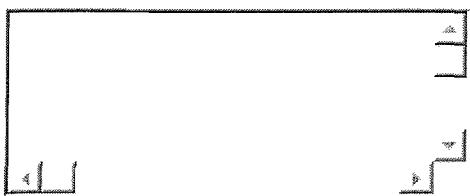
Are you currently receiving any treatment for your health problem?

Please select the type of treatment you are receiving from the following list (you can select more than one item if appropriate).

- Treatment from my GP or other primary care provider (e.g. nurse)
- Treatment from a hospital or clinic or other specialist treatment
- Other form of conventional medical treatment
- Acupuncture
- Acupressure
- Alexander technique
- Aromatherapy
- Art therapy
- Autogenic training
- Ayurveda
- Bach flower remedies
- Biochemic tissue salts
- Biorhythms
- Chiropractic
- Chelation and cell therapy
- Colonic irrigation
- Colour therapy
- Crystal and gem therapy

- Dance movement therapy
- Healing
- Herbal medicine
- Homeopathy
- Hypnosis
- Magnetic therapy
- Massage
- Meditation
- Music therapy
- Naturopathy
- Nutritional therapy
- Osteopathy
- Ozone therapy
- Reiki
- Reflexology
- Relaxation
- Shiatsu
- Spiritual healing
- Talk therapies/counselling
- Traditional Chinese medicine
- Therapeutic touch
- Visualization
- Voice and sound therapy
- Yoga
- Other form of complementary or alternative treatment

Other conventional, complementary or alternative treatments you have tried



Finally, approximately how long have you spent  completing this questionnaire?

*Thank you! You have completed the questionnaire  
Please now press **SUBMIT** to send us your responses*

**SUBMIT**

## **The Treatment Belief On-line Questionnaire**

### **Thank you for participating in this research study! Debriefing Statement**

The aim of this study was to find out what people think about treatments and illnesses. I expect that people who use complementary or alternative medicine will have different beliefs compared to people who use orthodox medicine. Your data will help me to design a larger study about why people use complementary and alternative treatments.

Once again, the results of this study will not include your name or any other identifying characteristics. The study did not use deception. You may see the results of this study on this website as soon as the project is finished.

If you have any questions please contact me Felicity Bishop at [flb100@soton.ac.uk](mailto:flb100@soton.ac.uk). Once again, thank you for taking part in this research. If you know anyone else who might be interested in this study please tell them about this website.

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: (023) 8059 3995.

## **The Use and Provision of Complementary Medicine Questionnaire Study**

I am Felicity Bishop a PhD student at the University of Southampton. I am requesting your participation in a study regarding your experiences of complementary medicine. This will involve filling in a questionnaire about your experiences of complementary medicine. It should take approximately 5 minutes to complete. Personal information will not be released to or viewed by anyone other than researchers involved in this project. Results of this study will not include your name or any other identifying characteristics.

Completion and return of this questionnaire will be taken as evidence of you giving informed consent to be included as a participant in this study, for your data to be used for the purposes of research, and that you understand that published results of this research project will maintain your confidentiality. Your participation is voluntary and you may withdraw your participation at any time.

A summary of this research project will be supplied upon request. To request a project summary please contact me, Felicity Bishop at 07929 735711 or [flb100@soton.ac.uk](mailto:flb100@soton.ac.uk).

If you have any questions please ask them now or contact me by telephone or email.

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ.

Phone: (023) 8059 3995.

*This questionnaire is about your experiences of the treatment you are currently having here (e.g. homoeopathy, herbalism, acupuncture)*

Please use this space to tell me what form of treatment you are receiving:

*In this questionnaire, we are interested in your experiences of the treatment you have just named. We are also interested in your experiences of the person who provides that treatment, your therapist. There are no right or wrong answers. We are interested in your opinions. Please read each statement and indicate the degree to which you agree or disagree by circling the appropriate number.*

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

*So, for each statement please circle the number that best represents your view.*

1. My treatment offers value for money

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

2. I find it difficult to travel to my appointments for my treatment

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

3. I can get always get appointments at a convenient time

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

4. Seeing my therapist can be too much effort

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

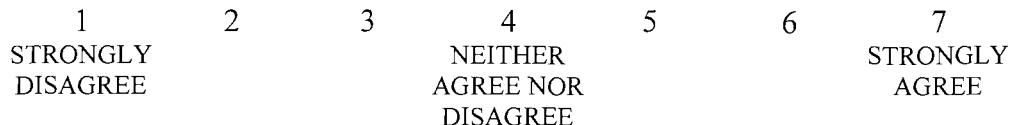
5. My treatment is too expensive for me

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

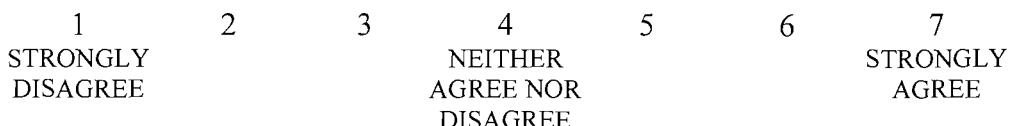
6. My therapist is an expert in my treatment

1	2	3	4	5	6	7
STRONGLY DISAGREE			NEITHER AGREE NOR DISAGREE			STRONGLY AGREE

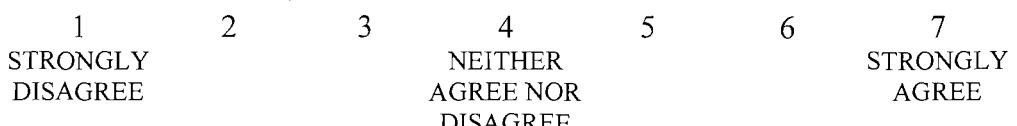
7. My therapist knows how to treat my health problem



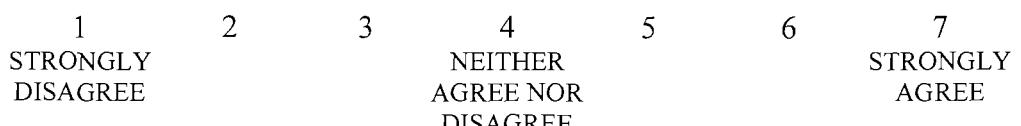
8. I trust my therapist



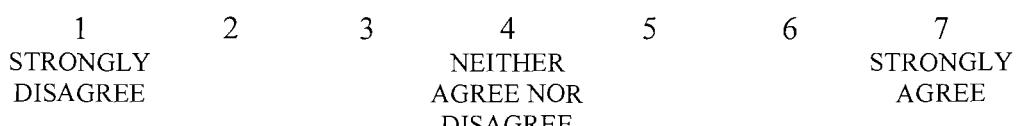
9. I have confidence that my therapist is well-qualified to treat me



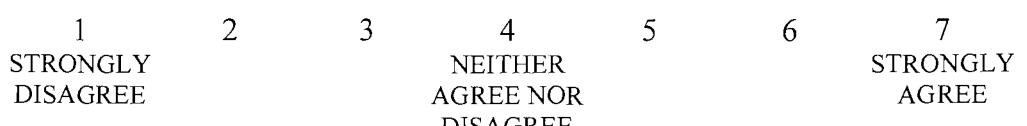
10. My therapist is a competent provider of my treatment



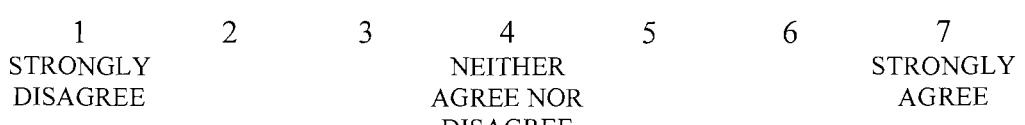
11. My therapist provides explanations of my treatment that make sense to me



12. When my therapist talks about my health problem it does not make sense to me



13. My therapist is interested when I talk about my health problem



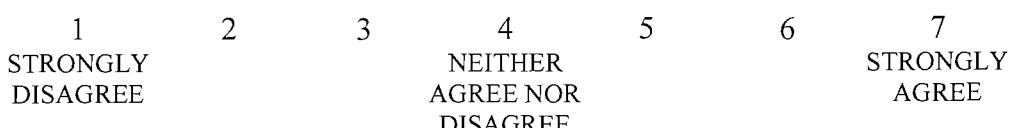
14. I am comfortable talking to my therapist about my health problem



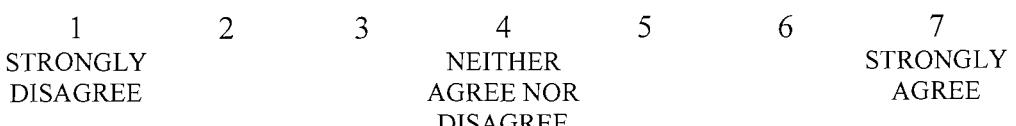
15. My therapist wants to help me with my health problem



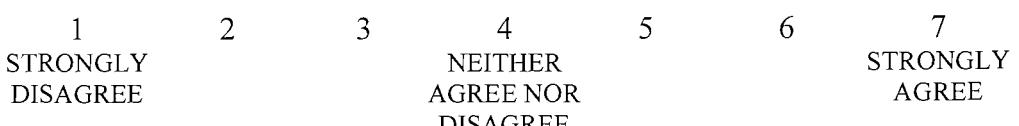
16. I am confident that my current treatment will help my health problem



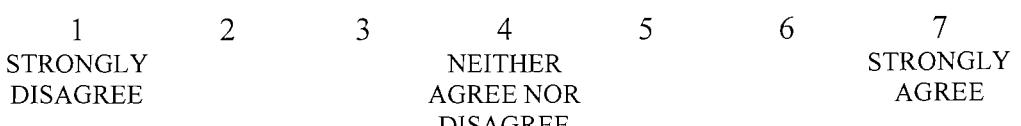
17. I am confident that my current treatment will help my physical symptoms



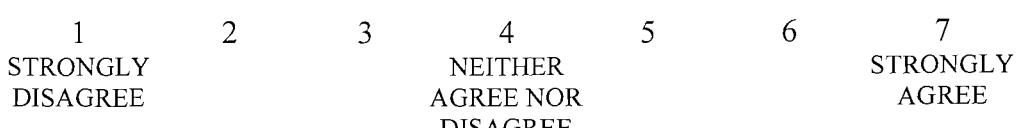
18. I am concerned that my current treatment will not be effective



19. I am confident that my current treatment will improve my well-being



20. I am confident that my current treatment will help me to stay healthy



**Thank you for your time!**

Please return this questionnaire to me using the freepost envelope provided.

## Appendix C: Prospective Questionnaire Pack 1

*This questionnaire is about your experiences of the treatment you are currently having here (e.g. homoeopathy, osteopathy, acupuncture)*

Please use this space to tell me what form of treatment you are receiving:

We are interested in the appointment you have just had and if you have had similar appointments before. Please tick the appropriate box for each question.

1) Was this the first time you have seen this therapist?

- YES, this was the first time I have seen this therapist.  
 NO, I have seen this therapist before.

If 'NO', approximately when did you last see this therapist?

---

---

2) Was this the first time you have used this treatment?

- YES, this was the first time I have used this treatment  
 NO, I have used this treatment before with this therapist  
 NO, I have used this treatment before with a different therapist

3) Was this your first appointment for a new health problem?

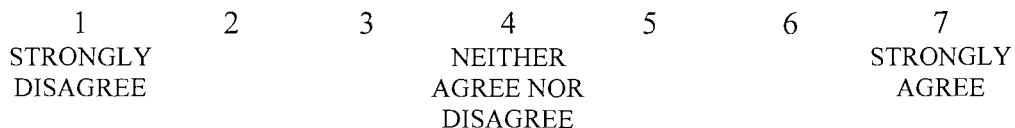
- YES, this was my first appointment for a new health problem  
 NO, this was a follow-up appointment for an ongoing health problem

4) Approximately how long have you had your current health problem?

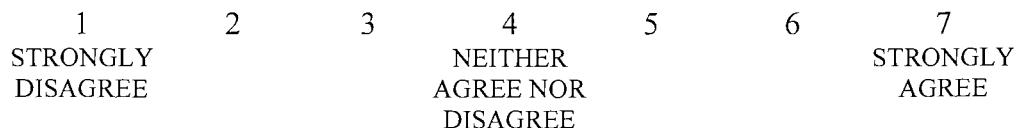
- Less than a week
- Between 1 week and 1 month
- Between 1 and 6 months
- Between 6 months and 1 year
- Longer than a year

*In this section of the questionnaire, we are interested in your experiences of your treatment. We are also interested in your experiences of the person who provides that treatment, your therapist.*

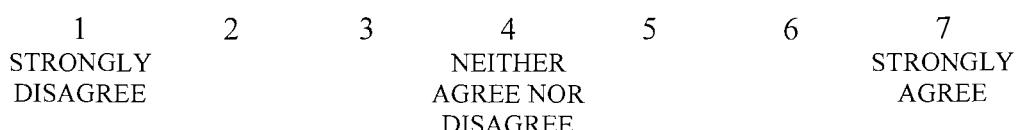
21. My treatment offers value for money



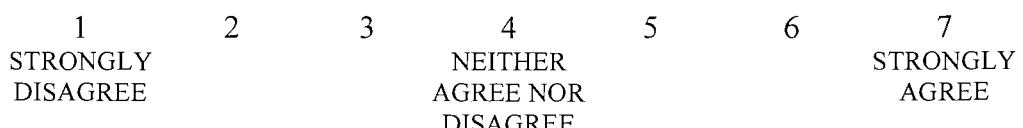
22. I find it difficult to travel to my appointments for my treatment



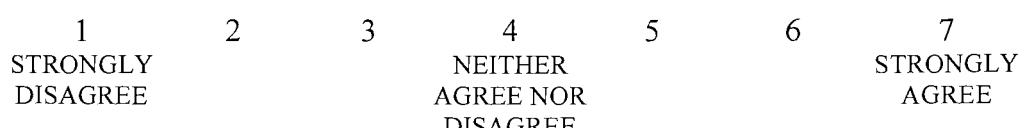
23. I can always get appointments at a convenient time



24. Seeing my therapist can be too much effort



25. My treatment is too expensive for me



26. My therapist is an expert in my treatment

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

27. My therapist knows how to treat my health problem

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

28. I trust my therapist

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

29. I have confidence that my therapist is well-qualified to treat me

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

30. My therapist is a competent provider of my treatment

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

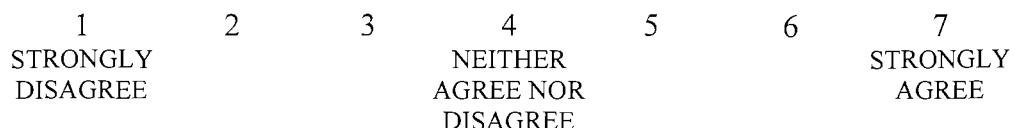
31. My therapist provides explanations of my treatment that make sense to me

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
---------------------------	---	---	---------------------------------------	---	---	------------------------

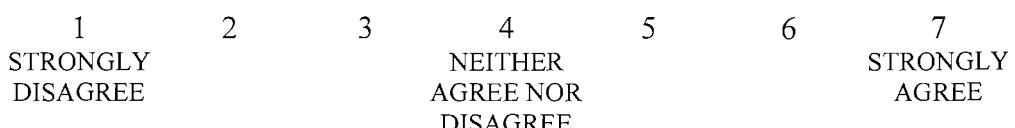
32. When my therapist talks about my health problem it does not make sense to me

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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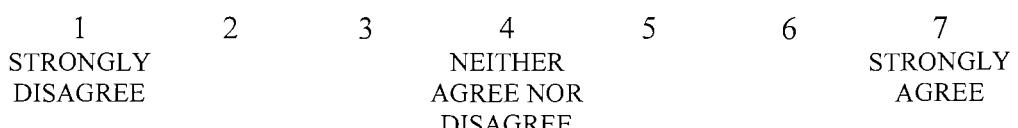
33. My therapist is interested when I talk about my health problem



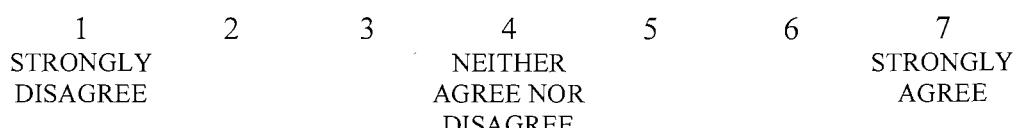
34. I am comfortable talking to my therapist about my health problem



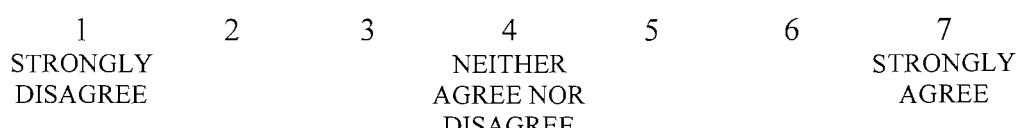
35. My therapist wants to help me with my health problem



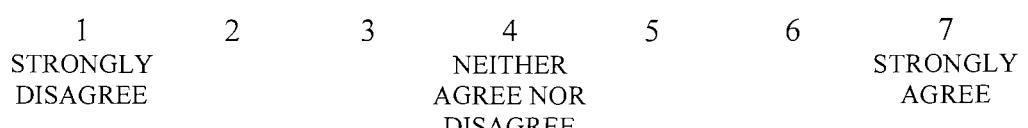
36. I am confident that my current treatment will help my health problem



37. I am confident that my current treatment will help my physical symptoms



38. I am concerned that my current treatment will not be effective



39. I am confident that my current treatment will improve my well-being



40. I am confident that my current treatment will help me to stay healthy

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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*In this section we are interested in any symptoms you are experiencing. Listed below are a number of symptoms that you may or may not have experienced since your health problem. Please indicate by circling YES or NO whether you have experienced any of these symptoms since your health problem, and whether you believe that these symptoms are related to your current health problem.*

*For those symptoms you have experienced, please also indicate how severe each symptom has been in the last week. Please write in the box a number from 1 to 7 to indicate how severe you think each symptom has been, where:*

1 NOT AT ALL SEVERE	2	3	4	5	6	7 EXTREMELY SEVERE
------------------------------	---	---	---	---	---	--------------------------

	I have experienced this symptom since my health problem		This symptom is related to my current health problem		How severe is this symptom? (Scale 1 to 7)
Pain	YES	NO	YES	NO	
Sore throat	YES	NO	YES	NO	
Nausea	YES	NO	YES	NO	
Breathlessness	YES	NO	YES	NO	
Weight loss	YES	NO	YES	NO	
Fatigue	YES	NO	YES	NO	
Stiff joints	YES	NO	YES	NO	
Sore eyes	YES	NO	YES	NO	
Wheeziness	YES	NO	YES	NO	
Headaches	YES	NO	YES	NO	
Upset stomach	YES	NO	YES	NO	
Sleep difficulties	YES	NO	YES	NO	
Dizziness	YES	NO	YES	NO	
Loss of strength	YES	NO	YES	NO	

Overall, how has your health changed in the last week?



*We are interested in any advice you have been given by your therapist, and if you intend to continue using your therapy. We are interested in what you think your therapist advised you to do, and your own personal intentions. There are no right or wrong answers. Please answer the following questions by circling the appropriate option.*

- 1) Has your therapist advised you to use a herbal or homeopathic remedy?

YES                    NO                    UNCERTAIN

If YES, how much do you intend to follow this advice?



- 2) Has your therapist advised you to make changes to your lifestyle (e.g. diet, exercise)?

YES                    NO                    UNCERTAIN

If YES, how much do you intend to follow this advice?



- 3) Has your therapist advised you to make one (or more) follow-up appointments?

YES                    NO                    UNCERTAIN

If YES, how much do you intend to follow this advice?



- 4) Do you intend to continue using this treatment at this clinic?

YES                    NO                    UNCERTAIN

- 5) Do you intend to continue using this treatment somewhere other than this clinic?

YES                    NO                    UNCERTAIN

6) Do you intend to try other treatments at this clinic?

YES

NO

UNCERTAIN

*Finally, we would like to ask you for a few details about yourself. These details will help us to analyse the questionnaires. Please tick one box for each item.*

1) Age

- 18-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70 and older

2) Sex

- Female
- Male

3) Income per year

- £0-£9,999
- £10-19,999
- £20-29,999
- £30-39,999
- £40,000 and above

4) Formal education (*please tick all appropriate boxes*)

- I did not complete secondary school (to age 16)
- I completed secondary school (to age 16)
- I completed sixth form or college (ages 16-18)
- I completed undergraduate study at a university or polytechnic
- I completed postgraduate study

**Thank you for your time! Please return this questionnaire to me using the freepost envelope provided.**

## Appendix D: Prospective Questionnaire Pack 2

We are interested in your views about treatments and health problems. The first part of this questionnaire is about treatment. By 'treatment' we mean any kind of health care, and a 'treatment provider' is a person who provides health care. There are no right or wrong answers. We are interested in your opinions. Please read each statement and indicate the degree to which you agree or disagree by circling the appropriate number.

*So, for each statement please circle the number that best represents your view.*

1. Treatments should have no negative side-effects

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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2. It is important to me that treatments are non-toxic

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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3. Treatments should only use natural ingredients

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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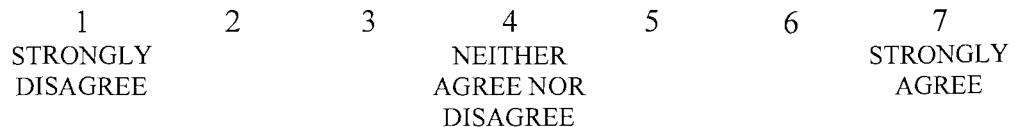
4. It is important for treatments to boost my immune system

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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5. Treatments should enable my body to heal itself

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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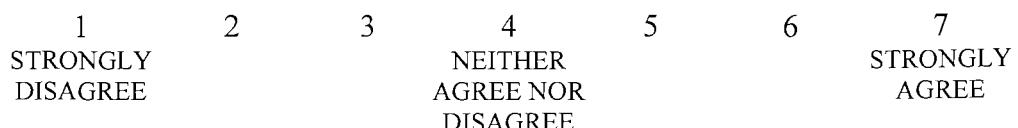
6. Treatments should increase my natural ability to stay healthy



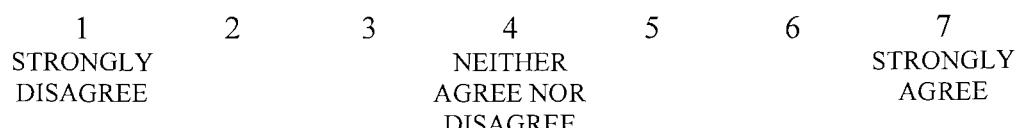
7. Treatment providers should treat patients as equal partners



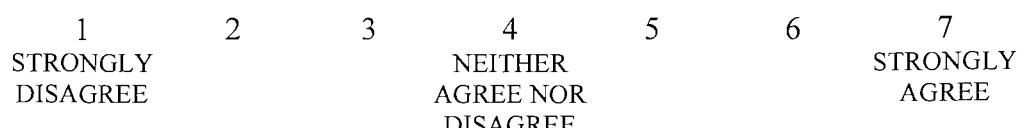
8. Patients should take an active role in their treatment



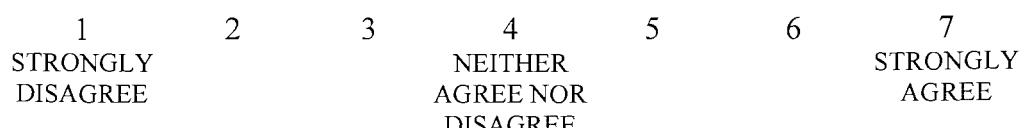
9. Treatment providers should make all decisions about treatment



10. Treatment providers should help patients to make their own decisions about treatment



11. Treatment providers should control what is talked about during the consultation



12. Health is about harmonizing your body, mind and spirit

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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13. Imbalances in a person's life are the major causes of illnesses

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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14. Treatments should concentrate only on symptoms rather than the whole person

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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15. Treatments should focus on people's overall well-being

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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16. I think my body has a natural ability to heal itself

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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17. There is no need for treatments to be concerned with natural healing powers

1 STRONGLY DISAGREE	2	3	4 NEITHER AGREE NOR DISAGREE	5	6	7 STRONGLY AGREE
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We are also interested in your thoughts about your general practitioner (your GP). Please answer the following questions by circling the number that comes closest to your own opinion. The scale has 5 options:

1  
2  
3  
4  
5  
NOT AT ALL  
VERY MUCH

1) At your last visit to your general practitioner how satisfied were you with your treatment?

1  
2  
3  
4  
5  
NOT AT ALL  
VERY MUCH

2) Do you think your general practitioner is concerned with your well-being?

3) Do you feel your general practitioner treatment is effective?

4) Do you think your general practitioner listens to what you have to say?

5) Do you believe that general practitioners can help their patients feel better generally?

6) Does your general practitioner have enough time for you?

We are interested in your past experiences of complementary and alternative treatments. Below is a list of treatments. Please circle YES or NO to indicate whether you or anyone close to you has ever tried each therapy. By 'anyone close to you' we mean a family member or a close friend.

Therapy	Have you ever tried the therapy?		Has anyone close to you ever tried the therapy?	
Acupuncture	YES	NO	YES	NO
Acupressure	YES	NO	YES	NO
Alexander technique	YES	NO	YES	NO
Aromatherapy	YES	NO	YES	NO
Art therapy	YES	NO	YES	NO
Autogenic training	YES	NO	YES	NO
Ayurveda	YES	NO	YES	NO
Bach flower remedies	YES	NO	YES	NO
Biochemic tissue salts	YES	NO	YES	NO
Biorhythms	YES	NO	YES	NO
Chiropractic	YES	NO	YES	NO
Chelation and cell therapy	YES	NO	YES	NO
Colonic irrigation	YES	NO	YES	NO
Colour therapy	YES	NO	YES	NO
Crystal and gem therapy	YES	NO	YES	NO
Dance movement therapy	YES	NO	YES	NO
Healing	YES	NO	YES	NO
Herbal medicine	YES	NO	YES	NO
Homeopathy	YES	NO	YES	NO
Hypnosis	YES	NO	YES	NO
Magnetic therapy	YES	NO	YES	NO
Massage	YES	NO	YES	NO
Meditation	YES	NO	YES	NO
Music therapy	YES	NO	YES	NO

Therapy	Have you ever tried the therapy?		Has anyone close to you ever tried the therapy?	
Naturopathy	YES	NO	YES	NO
Nutritional therapy	YES	NO	YES	NO
Osteopathy	YES	NO	YES	NO
Ozone therapy	YES	NO	YES	NO
Reiki	YES	NO	YES	NO
Reflexology	YES	NO	YES	NO
Relaxation	YES	NO	YES	NO
Shiatsu	YES	NO	YES	NO
Spiritual healing	YES	NO	YES	NO
Talk therapies/counselling	YES	NO	YES	NO
Traditional Chinese medicine	YES	NO	YES	NO
Therapeutic touch	YES	NO	YES	NO
Visualization	YES	NO	YES	NO
Voice and sound therapy	YES	NO	YES	NO
Yoga	YES	NO	YES	NO
Other form of complementary or alternative treatment	YES	NO	YES	NO

Please tell us the name of any other complementary or alternative treatments you have tried

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Please tell us the name of any other complementary or alternative treatments anyone close to you has tried

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In the next section of the questionnaire we are interested in your own personal views of how you now see your current health problem.

Please indicate how much you agree or disagree with the following statements about your health problem by ticking the appropriate box.

	VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
1	My health problem will last a short time					
2	My health problem is likely to be permanent rather than temporary					
3	My health problem will last for a long time					
4	This health problem will pass quickly					
5	I expect to have this health problem for the rest of my life					
6	My health problem is a serious condition					
7	My health problem has major consequences on my life					
8	My health problem does not have much effect on my life					
9	My health problem strongly affects the way others see me					
10	My health problem has serious financial consequences					
11	My health problem causes difficulties for those who are close to me					
12	There is a lot which I can do to control my symptoms					
13	What I do can determine whether my health problem gets better or worse					
14	The course of my health problem depends on me					

	VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
15	Nothing I do will affect my health problem					
16	I have the power to influence my health problem					
17	My actions will have no affect on the outcome of my health problem					
18	My health problem will improve in time					
19	There is very little that can be done to improve my health problem					
20	My treatment will be effective in curing my health problem					
21	The negative effects of my health problem can be prevented (avoided) by my treatment					
22	My treatment can control my health problem					
23	There is nothing which can help my condition					
24	The symptoms of my condition are puzzling to me					
25	My health problem is a mystery to me					
26	I don't understand my health problem					
27	My health problem doesn't make any sense to me					
28	I have a clear picture or understanding of my condition					
29	The symptoms of my condition change a great deal from day to day					

	VIEWS ABOUT YOUR HEALTH PROBLEM	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
30	My symptoms come and go in cycles					
31	My health problem is very unpredictable					
32	I go through cycles in which my health problem gets better and worse					
33	I get depressed when I think about my health problem					
34	When I think about my health problem I get upset					
35	My health problem makes me feel angry					
36	My health problem does not worry me					
37	Having this health problem makes me feel anxious					
38	My health problem makes me feel afraid					

We are interested in what you consider may have been the cause of your health problem. As people are very different there is no correct answer for this question. We are most interested in your own views about the factors that caused your health problem rather than what others, including doctors or family, may have suggested to you. Below is a list of possible causes of your health problem. Please indicate how much you agree or disagree that they were causes for you by ticking the appropriate box.

	POSSIBLE CAUSES	STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
1	Stress or worry					
2	Hereditary – it runs in my family					
3	A germ or virus					
4	Diet or eating habits					
5	Chance or bad luck					
6	Poor medical care in my past					
7	Pollution in the environment					
8	My own behaviour					
9	My mental attitude e.g. thinking about life negatively					
10	Family problems or worries					
11	Overwork					
12	My emotional state e.g. feeling down, lonely, anxious, empty					
13	Ageing					
14	Alcohol					
15	Smoking					
16	Accident or injury					
17	My personality					
18	Altered immunity					

**Thank you for your time!**

*Please return this questionnaire to me using the freepost envelope provided.* 301

## Appendix E: Prospective Questionnaire Pack 3

We are interested in any advice you have been given by your therapist, and whether you have continued using your therapy. Sometimes people decide they no longer want to continue with their therapy or therapist. We interested in your experiences and feelings on these issues. There are no right or wrong answers. Please answer the following questions by circling the appropriate option.

1. Has your therapist advised you to use a herbal or homeopathic remedy?

If YES, how much have you followed this advice?

1	2	3	4	5	6	7
NOT AT ALL						COMPLETELY

2. Has your therapist advised you to make changes to your lifestyle (e.g. diet, exercise)?

If YES, how much have you followed this advice?

1	2	3	4	5	6	7
NOT AT ALL						COMPLETELY

3. Has your therapist advised you to make one (or more) follow-up appointments?

If YES, how much have you followed this advice?

1	2	3	4	5	6	7
NOT AT ALL						COMPLETELY

4. Do you intend to continue using this treatment at this clinic?

5. Do you intend to continue using this treatment somewhere other than this clinic?

6. Do you intend to try other treatments at this clinic?

Thank you for your time!

*Please return this questionnaire to me using the freepost envelope provided.*

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