

**Classical Chinese Medicine in
Community Health with a Focus on
Self-Care: Participant, Staff and
Practitioner Perspectives on a Pilot
Program**

by Alaia Harvie

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the degree of

Masters of Health Services (Research)

under the supervision of Dr Amie Steel, Dr Jon Wardle

University of Technology Sydney

Faculty of Health

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Certificate of Original Authorship

I, Alaia Harvie, declare that this thesis, is submitted in fulfilment of the requirements for the award of Master of Health Services (Honours) Thesis, in the Faculty of Health, at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Alaia Harvie:

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Statement of author contributions to jointly authored works contained in this thesis

This thesis contains three articles, presented in Chapters 2, 4 and 5, which have been written in joint authorship and accepted for publication in peer-reviewed journals. For all of these papers, I have been primarily responsible for the development of the research question; data analysis and/or synthesis; and drafting the manuscript and subsequent revisions. Support in all these areas was provided by Dr Amie Steel. Further support and feedback was provided by Dr Jon Wardle.

Published works by the author incorporated into the thesis

Of the drafted manuscripts presented in this thesis, all have been submitted and accepted for publication. The manuscripts contained in this thesis are as follows:

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Abstract

Introduction: This thesis examines the experience of participants, staff and practitioners of a community-health program based on the concepts of classical Chinese medicine (CCM), delivered in rural Scotland. The classical texts of Chinese medicine highlight the primary importance of lifestyle recommendations and self-care techniques for illness prevention and health maintenance. Such recommendations include aligning daily activities with cycles observed in the natural environment and adopting moderation and balance in relation to: exercise and resting periods, dietary intake, alcohol consumption and emotional outlook. This advice reflects concepts incorporated into many traditional cultures and aligns with contemporary World Health Organisation guidelines developed in response to the global rise in chronic and lifestyle illness. The potential application of CCM concepts as a core intervention to enhance community health outcomes and contribute to health behaviour change has been largely unevaluated in a Western context. **Methods:** A CCM community health program delivered in rural Scotland was evaluated using qualitative methods. Eighteen in-depth, semi-structured, interviews were conducted with program participants (n=11), staff and practitioners (n=7). A Framework Approach was applied in the analysis of the two sub-samples separately to derive emergent themes. **Results:** Themes were identified from the program participant data in four key areas: *Improvements in health and self-awareness; Self-direction, adaptability and prior exposure; Personalised support, self-reflective tools, sustaining engagement; and Cultural barriers, accessibility and strengthening networks.* Themes derived from the staff and practitioner interviews were: *Cultural challenges within the local region; Integration with the existing local health care network; and Team dynamics, co-creation and communication integrity.* Central to topics from both samples were issues of cultural alignment; consistency, clarity and professionalism of communication; connection and networking; balanced team dynamics; and the alignment of timelines and resources to project scope. **Conclusion:** This thesis presents the first known evaluation of a CCM community health program that teaches practical daily skills for illness prevention and health maintenance within a whole system of care and delivered in a Western setting. The study findings highlight the potential for further investigation of the application of CCM lifestyle measures to improve health outcomes and the teaching of CCM concepts as a method for

enhancing patient self-efficacy and supporting health behaviour change.

Recommendations drawn from the study for future similar projects include: further integration of complementary programs with the existing dominant health care system; consideration of cultural alignment relative to the local populace; and the need for secure funding streams when designing community health initiatives.

1. INTRODUCTION

(i) Thesis introduction

This thesis presents an exploration of a pilot community health program, delivered in a setting outside of Asia, which has drawn its core material of health promotion practices from the concepts of classical Chinese medicine (CCM). In the introductory chapter, the thesis aims and scope are outlined, and CCM is introduced within context of the broader field of Chinese medicine and with reference to its practices of self-care. The relevance of lifestyle medicine, in the global context, is also introduced and a brief overview provided of the CCM program evaluated in this thesis.

Chapter two details a published systematic literature review, which was undertaken to assess the extent to which Chinese medicine self-care practices, in settings outside of Asia and/or the Asian diaspora, have been evaluated. Also assessed were the health outcomes of such practices. This is followed by the methodology chapter, which details the qualitative approach undertaken in our study, as well as outlining, in detail, the setting and components of the CCM program evaluated.

Chapters three and four provide the published results of the study, detailing emergent themes from two separate cohorts of interview participants: the CCM program participant group; and the staff and practitioner group. Following this, the discussion chapter examines some of the emergent themes in further detail as well as notes the limitations of the study and describes future directions for research in this field. The thesis is summarised in the concluding chapter.

1.1 Chapter introduction

In providing background to the thesis, the introductory chapter outlines the aims and scope of the research objectives, following by a detailed discussion of CCM, within the context of the broader field of Chinese medicine. CCM and its associated self-care practices overlap significantly with TCM, as well as with numerous aspects of traditional medicine and culture found throughout Asia and the Asian diaspora: therefore, an understanding of the historical context, and literary background of CCM, provides insight for the reader in terms of where components of the CCM program evaluated in this thesis have been drawn. This chapter also introduces the perceived need by global and UK-based health care organisations, for pro-active

lifestyle change and the promotion of positive socially-connected health behaviours, inclusive of self-care, in community settings. The approach of CCM in relation to these objectives, as well as a brief overview of the CCM program evaluated, is also provided.

1.2 Background

CCM encompasses a broad understanding of health inclusive of physical, emotional and social aspects and recommends specific lifestyle practices for the individual and the community in order to support and maintain health throughout life.^{1,2} Lifestyle practices such as these may be considered self-care, with self-care defined as the 'care taken by individuals towards their own health and well-being'.³ Many such practices, drawn from within CCM, are easy to adopt and have the potential to be integrated into daily routines,⁴ yet are often not incorporated into modern life beyond Asia or the Asian diaspora. These practices have also typically taken a background role in the published literature, with studies in the field of Chinese medicine primarily focused on singular therapies, such as acupuncture and herbal medicine, or on specific stand-alone practices, such as qigong and taichi.⁵⁻⁹ Central tenets of CCM also include goals of building patient empowerment and self-efficacy from within a framework which intrinsically views the individual in relationship with their environment, both social and physical. In these aspects, CCM finds alignment with the principles of preventative medicine, public health and community health care¹⁰ and may warrant further investigation of its lifestyle and self-care components.

1.3 Aims and scope of thesis

1.3.1 Research question

This study aims to examine the experience of participants, staff and practitioners of a community based CCM program, with a focus on self-care, delivered in rural Scotland, and thus asks the following research questions:

In assessing the background to the program and its stated focus:

- What self-care techniques, drawn from CCM concepts, have been studied in settings outside of Asia and/or the Asian diaspora?
- Have self-care techniques, drawn from CCM concepts, been shown to hold value in improving health?

From the perspective of program participants:

- What are the participants' perceived health outcomes, if any, of partaking in the program?
- To what extent do participants feel they were able to adopt the recommended practices of the program?
- Which factors do participants perceive to support them in adopting the program practices?
- Which factors do participants perceive to be limitations on a [positive participant experience](#) of the program?
- What recommendations do participants have for program improvement?

From the perspective of program staff and practitioners:

- What is the experience of staff and practitioners in delivering the program and working with the program team?
- What is the experience of staff and practitioners of promoting and recruiting for the program in the local region?
- To what extent do staff and practitioners engage with the recommended practices of the program?
- Which factors do staff and practitioners perceive to limit the [ongoing delivery and positive delivery experience](#) of the program?
- What recommendations do staff and practitioners have for program improvement?

1.3.2 Research aim

1. Provide an overview of the experience of participants, staff and practitioners, engaged with a CCM community health program delivered in a rural Western context.
2. Explore the use self-care techniques, drawn from the concepts of CCM and their potential for improved health.

1.3.3 Research objectives

1. Examine the experience of CCM program participants relative to adoption of the recommended program practices, engagement with the program and perceived health outcomes.
2. Examine the CCM program participants' perception of limitations of the program and to identify any recommendations for program improvement.

3. Examine the experience of staff and practitioners in delivering a CCM program in a rural Western context.
4. Explore the factors which staff and practitioners felt most impacted successful delivery of the CCM program and thus, identify recommendations for improved program delivery.
5. Examine the use of self-care practices, drawn from CCM concepts, in relation to improved health and/or health behaviour.

1.3.4 Significance and scope

To the authors' knowledge, this study is the first to examine the experience of participants, staff and practitioners of a community health program, based primarily on CCM concepts of lifestyle and self-care and delivered in a Western context. The study's results provide an insight into the potential of CCM lifestyle techniques, delivered within the context of this specific integrated program, as well as provide further information relevant to the design and delivery of future projects in the field of community health and community CCM and/or Traditional Chinese Medicine (TCM) programs.

Evaluation of TCM self-care practices show a tentative trend toward positive findings relative to health improvement and health care objectives.⁶ These practices - including but not limited to TCM dietary and lifestyle practices, self-acupressure and self-moxibustion⁶ - have evolved from concepts and practices embedded in the medicinal paradigm of CCM. A small number of studies in the United Kingdom (UK) have also shown positive findings when investigating TCM based lifestyle changes delivered alongside a course of traditional acupuncture.^{11,12} This study adds to and expands the existing research by examining a CCM program which has, instead of placing the therapy as central, placed the lifestyle intervention and its associated CCM philosophy at the core of the program. The study also explores the strengths and challenges of recruiting for, delivering and participating in the program, from numerous perspectives.

The scope of the study additionally touches on the wider role which traditional medicine frameworks from around the globe, many of which hold similarity to that of CCM,^{2,13-15} may be drawn upon to support key WHO targets aimed at supporting health and wellbeing objectives in the coming decades.¹⁶ This overlap with WHO objectives can be seen in areas of: community health; promoting harmonious social networks; and supporting economic and environmental sustainability.¹⁶ In exploring the role of CCM self-care, delivered in a community setting, the study furthermore

aligns with goals of the WHO Traditional Medicine (TM) Strategy 2014 – 2023, which aims to support and develop the role TM can play in maintaining the health of populations. The strategy also aims to encourage the safe and effective use of TM by integrating practitioners and practices into existing health systems where appropriate.¹⁷ The TM Strategy furthermore aims to broaden accessibility to TM, especially for poorer populations,¹⁷ an aspect which aligns with the CCM program in its trialling of low-cost and group sessions.

1.4 Classical Chinese Medicine and 'TCM'

1.4.1 Classical Chinese medicine – an introduction

The classical texts of Chinese medicine summarise key perspectives on medicine, health and social structure, which were held by scholars and practitioners in China, preceding and up to the time of their compilation in the Han dynasty (c. 206BCE-220CE); perspectives which continued to hold influence throughout the centuries which followed.¹⁸ This influence extended into the field of traditional Chinese medicine (TCM), a sub-section of China's previous medical system, as it was redesigned and named by the Chinese government in the 1950s and which incorporated some elements of classical Chinese acupuncture and classical Chinese herbal medicine.¹⁹ This adapted version of the previous medical system however, in its systematisation and attempted alignment with modern biomedical disease categories and terms, is viewed by several scholars and practitioners in the field as a narrower and heavily modified version of China's historical medical tradition.¹⁹⁻²² This adapted system, however, is the version which is most often taught and practiced in the present day both within and beyond China.^{19,23} Most notable to the topic of this thesis is the fact that many of the broader concepts of Chinese medicine - drawn from classical sources and relative to classical concepts, philosophy and self-care and health maintenance practices - are discussed in TCM texts yet are rarely studied or explored to the level of understanding and complexity suggested as necessary by commentators within the field.^{19,20,23-27} These concepts and their associated lifestyle practices have also been exposed to minimal critical examination in a contemporary Western setting.⁶

1.4.2 A comparison of Classical Chinese Medicine and Traditional Chinese Medicine

Due to the shared philosophical background of CCM and TCM a distinct comparison of the two paradigms is challenging.¹⁹ Furthermore, terms from both categories are

being used in contemporary writing,^{28,29} scholarly discussions^{23,27,28,30} and approaches to clinical practice,³¹⁻³³ with a degree of flexibility and variation between settings. In some studies and clinical practice settings 'traditional acupuncture' or 'TCM acupuncture' is being used to define a multi-faceted, individualised, approach to Chinese medicine treatment, often inclusive of lifestyle recommendations, which draw heavily on a CCM philosophy.³⁴⁻³⁷ In other settings 'TCM' is being used to reference the application of a single therapeutic technique, such as moxibustion,³⁸ or acupuncture,³⁹ according to a pre-defined clinical plan, atypical of the responsive approach many authors consider to be definitive of the profession.^{29,40} The term 'TCM' is also being used to reference the application of pre-defined and standardised formulae, drawn from the historical Chinese *Materia medica*, yet often prescribed according to a biomedical disease diagnosis only.^{6,41,42} Similarly, this approach is considered by numerous practitioners and scholars to sit outside of the individualised, differentiated approach typical of a 'TCM' treatment,^{29,40} In response to this situation, the term 'Classical Chinese Medicine' has emerged as a way of differentiating an integrated, individualised approach to treatment, within the Chinese medicine sphere, which aligns with the concepts and approaches typical of the medical paradigm recorded in the classical Chinese literature.^{19,23,32,43-45}

As an overview, some of the distinctions which could be drawn between CCM and TCM approaches have been described in the following table.^{19,25} (Table 1)

Table 1: Comparison of CCM and TCM

Aspect of approach	CCM	TCM
Philosophical paradigm	Naturalist ¹ philosophy	Pragmatist philosophy
Clinical approach	Acknowledging complexity and multi-dimensionality	Focuses on the elimination of complexity and more structured interpretations
Knowledge base	Retains relationship with other traditional arts and sciences	Technical and more specialised trade
Environmental context	Body is seen as a microcosm which follows and is influenced by macrocosmic laws	Body is seen as an independent entity
Language	Terms hold multiple layers of meaning and are often symbolic and/or representative	Terms tend to be specific and more narrowly defined
Human body structure	Views bodily terms as functional systems	Views bodily terms as material entities
Physician role	Aspires to self-cultivation in order to effectively practice medicine	Bound by legal structures and formal training which often does not incorporate self-cultivation methods
Training	Highly individualised, from teacher to student	Highly standardised, institutionalised
Concept of Health	Defined as 'nourishing life'	Defined as absence of illness
Diagnostic technique	Primarily subjective, via patient feedback and physician perception	Increasingly objective, through incorporation of instrument data in the form of tests
Clinical outcome	Based upon physician's assessment and patient's subjective well-being	Increasingly based upon instrumental data
Diagnostic framework	Highly individualised, based upon classical syndromes	Increasingly standardised, often stemming from existing biomedical disease names
Treatment approach	Flexible: utilising any number of therapies according to relevance to case	Rigid: increasingly applied based upon research feedback from single-therapy interventions
Scope of practice	Inclusive of all illness, minor ailments to serious and complex	Limited, often as supplement to existing biomedical approach
Integration of medicinal systems	Based upon CCM framework, e.g. an allopathic medicine substance may be integrated into existing CCM formulae, based upon an understanding of its therapeutic CCM effect	Based upon allopathic medicine criteria, usually based upon effects of an isolated substance or chemical component of an herb selected from the historical Chinese <i>Materia medica</i>

Adapted from a table compiled by Fruehauf, H. 1999¹⁹

1.4.3 Terms used in this thesis

Within this thesis the term TCM is used to refer to traditional Chinese medicine as practiced in the present day by acupuncturists trained in traditional acupuncture or traditional Chinese herbal medicine approaches or when a person, practitioner or author specifically mentions TCM in reference to such. Classical Chinese medicine (CCM) refers to philosophy, practices or concepts which may also be included in TCM but which are reflective of the paradigm recorded and detailed in the classical texts of Chinese medicine. It's relevant to note that there is some inherent overlap between these terms. Traditional East Asian medicine, classical East Asian medicine or simply, East Asian medicine, are other terms which are being used by some contemporary clinicians and scholars, which acknowledge the strands of classical medicine which have emerged from and evolved throughout the greater region of East Asia, inclusive of China.²² The general term Chinese medicine is used in this thesis to refer to the broader field of Chinese medicine encompassing both TCM and CCM practices and philosophies. Complementary and alternative medicine (CAM) is referred to in some sections, in reference to literature which examines the broader field of CAM, inclusive of Chinese medicine approaches.

1.5 CCM key concepts and self-care lifestyle practices

1.5.1 CCM concepts and practices within the broader Chinese medicine paradigm

Due to the lack of integration of many CCM lifestyle concepts in the current practice of Chinese medicine, it's relevant to examine where these concepts originate and to identify their place within the medical paradigm. The following section provides a brief background on written references to such practices, via the classical Chinese medical literature, and explores why the practices may be considered of significance in application to health and well-being. The classical texts are considered, by numerous scholars in the field,^{1,20,33,43,44,46,47} to provide the cornerstone of the medicine, and have been conceptually drawn upon in the design of the CCM

¹ Naturalist – referencing philosophy which draws on observance of cycles, systems and rhythms inherent in nature as well as humankind's place within it 24. Neal E. Introduction to Neijing Classical Acupuncture Part I: History and Basic Principles. *Journal of Chinese Medicine* 2012.

program examined in this thesis; therefore, an understanding of their context is key to understanding the overall design and implementation of the program as it was described by its developers.

1.5.2 Classical concepts of the Han dynasty

Principles espoused in classical Han dynasty texts such as the *Huang Di Nei Jing* (Yellow Emperor's Internal Classic), reflect a merging and simultaneous co-existence of Daoist, Confucian and Buddhist schools of thought.⁴⁵ These principles draw on ideologies relating to: the nature of change and impermanence in the human lifecycle; cycles within the natural environment, based upon the cosmos and the seasons; and the interaction between humanity and the greater environment.¹ These concepts align with key foundational components of traditional medicine philosophy from around the world; philosophies from which routines of daily living, social and life perspectives are drawn, and which have been linked with increased longevity and sustained vitality.¹³

1.5.3 Literary style of classic texts

The nuances, analogies and meaning-dense characters typical of the writing style in CCM texts, however, often pose challenges for translators, scholars and practitioners referencing such texts, especially in the contemporary setting.^{2,48,49} These challenges have led to differing interpretations of passages from classical sources relative to clinical application,^{33,43,46,50} as well as, according to several practitioners and teachers in the field, highlight the need for in-depth and appropriately guided study of classical material.^{25,27,44,45,47,51} The literary style of classical Chinese medical texts differs significantly from the narrative structure common to modern writing.^{1,24} Written in a style referred to in Chinese as 'written spoken language' or 'ancient Han language' the structure is largely holographic in nature, utilising symbolism and ancient characters which may be interpreted to differing levels of understanding dependent on the level of perception held by the reader.²⁴ The holographic nature of such writing is often seen as an outline, a descriptive image, or passage, which could be reflected in numerous ways according to context and which may also appear repeated in other, more detailed and nuanced passages throughout the text.^{1,24} Interestingly, the symbolism, holographic writing style and multi-layered meanings within classical texts has also made them accessible to a wider lay audience, with direct interpretations easily comprehended from certain passages, such as relative to lifestyle recommendations, recorded in the

Huang Di Nei Jing,^{1,45} or in relation to methods for self-improvement and navigating social or familial aspects of life, as recorded in the *Dao De Jing*,⁴⁹ another key Han dynasty classic. This wider readership infers both that a simple interpretation can be taken from these texts, but also that a more thorough understanding can be missed by those not versed in a contextual understanding.²

1.5.4 CCM concepts as recorded in key classical texts: the *Dao De Jing*

The *Dao De Jing* (Way of Virtue) is a classical Chinese text, which has had significant impact within Asia and throughout the world.^{52,53} In similarity to the *Huang Di Nei Jing* and other texts of the Han era, the *Dao De Jing* provides reference to observing the way in which fundamental elements and forces within nature and the greater cosmos are reflected in daily human life.⁵² Furthermore, the *Dao De Jing* passages present a theme of recognising the value of living harmoniously in relationship to these forces and prescribe a path of self-reflection and self-cultivation.⁵²⁻⁵⁴

In the title of the text, the initial word, *Dao*, is most often translated into English as: the *Way* or *Path*. As with other Han dynasty characters simple translation is challenging.^{2,55} In one commentary, the term *Dao* is considered to refer, in its broader sense, to: '*metaphysically . . . the way things are; psychologically, . . . the way human nature is constituted, the deep, dynamic structure of our being; ethically, . . . the way human beings must conduct themselves with others; spiritually, . . . the guidance that is offered to us, . . . the way of inner work*'.⁵² The second term in the text's title, *De*, considers how this expression of the *Dao*, often translated as *virtue*, may be considered in day-to-day reality and has been considered to be referring to the quality of human actions as an aspect of alignment with nature and the universe, rather than only referencing an ethical or intellectual understanding of virtue.⁵²

In alignment with the naturalist perspective, which was reflected in Han dynasty texts, another phrase from the *Dao De Jing* may be translated as: '*Man follows the Earth, Earth follows Heaven, Heaven follows the Dao*'.⁴⁹ Here the theme of following nature is again revisited in detailing the concept that humans are best guided to follow nature on Earth, that Earth follows the structure of the cosmos and that the cosmos follows, '*that which cannot be named*', that which is referred to as the *Dao*.⁴⁹ Although such phrases may be easily misinterpreted by contemporary English-oriented readers as being ephemeral or esoteric, the realist nature of words within the phrase, such as heaven and its reference to the sky or the cosmos; the phrase Earth, referring to a literal sense of how nature is ordered in the natural planetary

environment; and *Dao* referring to the way in which the patterns of nature emerge and repeat, details a more grounded interpretation of the passages.⁵⁶ This level of interpretation, especially in relation to cycles and rhythms repeated in nature, has been drawn upon by those designing the CCM program assessed in this thesis.

1.5.5 CCM lifestyle concepts as recorded in key classical texts: *Huang Di Nei Jing*

The *Huang Di Nei Jing* similarly reflects principles of harmonious living and alignment with nature.¹ Passages in the *Huang Di Nei Jing*, however, also contain specifics in advice relative to rising and resting times through the seasons, the need to be mindful of certain emotions based on the time of the year and the resultant difficulties one may encounter when living against such rhythms.¹ These concepts and the recommended lifestyle structures are built on throughout the text, inclusive of a description of the emergence and causes of illness and disease.¹

Analysis of texts such as these provides some insight into the theoretical background of traditional cultural practices common throughout Asia. These practices include: rising with the sun; undertaking active tasks in the morning; resting at the sun's peak close to noon; undertaking quieter activities in the evenings; dressing appropriately to the time of day and appropriate to one's individual constitution and according to the weather; adjusting dietary intake and levels of activity according to the seasons.^{4,45} Within CCM philosophy as recorded in the *Huang Di Nei Jing* these practices are suggested to sustain one's health and vitality; and as such this vitality is considered to be a foundation to preventing illness and overcoming disease.^{25,45} Although such practices draw on a foundation common to many traditional cultures,^{25,57} there is little evidence to suggest that such practices are known of and/or

followed by the community in the United Kingdom (UK), beyond those with existing exposure to Chinese medicine.

1.6 Chinese medicine uptake in the United Kingdom

Detailed data on the uptake and use of TCM and other Chinese medicine therapies in the UK are not currently available.⁵⁸ Analysis in 2012, of overall CAM use in England and Wales, however, drawn from 2001 census data, indicated a CAM practitioner workforce at a provider to population ratio of 1:11,400.⁵⁸ This provider category included acupuncturists, dieticians, massage therapists, orthoptists, osteopaths and psychotherapists and can be considered relative to a provider to

population ratio of 1:2052 for general medical practitioners, in England, in 2001.⁵⁸ The British Acupuncture Council, in 2020, states that it is the 'largest professional self-regulatory body for the practice of traditional acupuncture in the UK' and indicates a membership of approximately 3000 practitioners, in an estimated UK population of 63.2million.⁵⁹ From the data available⁵⁸⁻⁶⁰ it can be estimated that Chinese medicine uptake in the UK, as it sits within the broader field of CAM, has been minimal over the past decade and therefore surmised that lifestyle components, typically integrated with Chinese medicine, would be relatively unknown within the general non-Asian community in the UK.

1.7 Lifestyle medicine in the allopathic and CAM health care system

Lifestyle medicine, as discussed within the allopathic medicine literature, focuses on numerous areas of health behaviour similar to that of CCM.⁶¹⁻⁶⁴ Recommendations for both physical and mental health include: improved dietary choices; maintaining regular exercise; limiting or reducing alcohol intake; avoiding cigarette smoking; maintaining social connection; feeling a sense of place and purpose.^{61,62} Such recommendations have been shown to reduce early mortality^{65,66} and reduce the risk of chronic disease.⁶⁷ Barriers to health behaviour change, however, include social and demographic influences, such as the influence of family members or immediate social networks,⁶⁸ as well as significant challenges for those of lower socio-economic demographics, including limited access to affordable quality food, and high levels of emotional stress.⁶⁹ Challenges also exist in the effective delivery of lifestyle interventions to patients, for primary care physicians, as well as for health care professionals in acute and community care settings.⁷⁰ Limitations upon consult time; the prioritisation of a patient's primary presenting problem; as well as a perceived limited skillset for initiating and supporting behaviour change in patients, have been cited as barriers by health care professionals in the UK, despite practitioners acknowledging the value in initiating such lifestyle change in their patients.⁷⁰

In light of the global rise in NCDs and chronic illness,⁷¹ and the link between a balanced lifestyle and health outcomes,⁶⁵⁻⁶⁷ exploration of innovative ways in which to engage the wider global community in positive health behaviour change is warranted. Practitioners in the CAM workforce, such as traditionally trained practitioners of Chinese medicine, typically hold significant background in health care systems focused on preventative medicine.⁷² Furthermore, patients attending CAM appointments report experiences of empathy, empowerment and patient-centred care, within a context of shared decision making, leading to active patient

participation.⁷³ As such, CAM practitioners, including Chinese medicine practitioners, may be uniquely positioned to play a role in initiating and supporting lifestyle change in the population. Although some work has been undertaken in examining the role Chinese medicine practitioners could play in community health programs, such as in low-cost community acupuncture clinics,^{74,75} the concept of sharing CCM concepts as the predominant driver for health behaviour change in the community, separate to therapeutic intervention, remains unexamined.⁶

1.8 Non-communicable disease, self-care and health behaviour change

1.8.1 Overview

Non-communicable diseases (NCDs) inclusive of heart disease, stroke, cancer, diabetes and chronic lung disease are estimated to cause 70% of deaths worldwide.⁷⁶ This rate is even higher in the UK where NCDs are estimated to account for 89% of all deaths, with cancer (28%) and cardiovascular disease (25%) the most predominant NCDs.⁷⁷ Those living with NCDs also experience many years of decreased quality of life and poor health.⁷⁸ Mortality from NCDs is higher in low-income and middle-income countries as well as among lower socio-economic groups in high income countries.⁷⁹ The World Health Organisation (WHO) identifies four major risk factors contributing to the global rise of NCDs: tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets.⁷⁶ These risk factors are similar in the UK and although tobacco use and the prevalence of high blood pressure is decreasing, obesity is projected to rise well above global targets in the UK in the coming decades.⁷⁷

1.8.2 WHO response to the rise in NCDs

The WHO aims to address the rise of global NCDs through several initiatives, including the Global Health Promotion Programme.⁸⁰ The program was developed in line with the Shanghai Declaration on Promoting Health and includes strengthening community engagement through health literacy; preventing NCDs through healthy workplaces and schools; action at the local level through the Healthy Cities Initiative; social mobilisation for health; and promoting good governance for health through policy.⁸⁰ There is increasing acknowledgement by the WHO of the need for inter-sector collaboration for governments to support health and wellbeing within society, as well as acknowledgement of the inter-relationship between health and sustainable development.¹⁶ As summarised by the WHO in 2012, health is being considered as a precondition to sustainable development, inclusive of social, economic and

environmental aspects and further to this, responses supporting the social and environmental determinants of health are being considered as key to developing inclusive, equitable, economically sound and healthy societies.¹⁶

1.8.3 Targeted Actions in the UK

The UK public health guidance on promoting health behaviour change from the National Institute for Health and Clinical Excellence (NICE), in 2007, outlines an overwhelming need for change in the UK in order to reduce the causes of mortality and morbidity.⁸¹ The guidelines also outline targeted actions which include: 'investing in interventions and programmes that identify and build on the strengths of individuals and communities . . . [in order to, amongst other objectives]: improve self-efficacy; promote resilience and build skills; and develop and maintain supportive social networks and nurturing relationships'.⁸¹ Further government guidance on health in the UK, draws on the Marmot Review,² which investigated the impact of the social determinants of health and advised a collaborative and inclusive approach to preventative health care in the UK: an approach which is advised to be supported concurrently between the NHS, organisations, communities and individuals.⁸³

Projects have since been established in the UK which aim to engage a wide range of professionals and community members to support individuals to initiate and sustain positive health behaviour change.⁸⁴ Active listening skills, empathy and the ability to signpost individuals to appropriate additional support, have been highlighted by those in health professions as key to assisting individuals to initiate and sustain change.⁸⁴⁻⁸⁷ It's also been noted that a level of empathy, inclusive of understanding the social and economic pressures some individuals may be facing, as well as a degree of connection which aims to understand patients' motivations, is key in providing support,⁸⁵ elements which were highlighted by users of CAM therapies as being already existing and integral to their experience of CAM appointments.⁸⁸

1.8.4 Self-care trends

² Marmot Review, 'Fair Society Healthy Lives': independent review to propose the most effective strategies for reducing health inequalities in England from 2010. 82. Marmot M, Allen J, Goldblatt P, et al. Fair Society Healthy Lives: Strategic Review of Health Inequalities in England post-2010. London: The Marmot Review; 2010.

An overview of the types of self-care, being adopted by individuals, outside of primary health care consultations is also relevant, with 'self-care' defined as the care adopted 'by individuals towards their own health and well-being'.³ In a 2016 analysis of self-care trends in the UK, United States (US), Australia and Japan, researchers found that motivations for self-care included: a desire to be self-directed, cost-effectiveness and convenience.⁸⁹ The study also found that the self-care approaches most commonly adopted included: supplements (vitamins), use of devices (blood pressure monitors), physical activities (yoga and fitness) and information-seeking activities (books, internet search engines).⁸⁹ Reliable sources of information on self-care were perceived, by those surveyed to be: 1) family, relatives, friends and colleagues, followed by 2) information obtained online, and 3) information obtained from pharmacies.⁸⁹ The study also found that the prevalence of self-care decreased with age, in the demographic studied (aged 25-59 years), in the UK, US and Australia.⁸⁹

The findings from the 2016 study⁸⁹ bring into consideration the importance and potential influence of information sharing within social networks, as well as highlight a need for accurate health resources that are readily accessible by the general public. The importance of engaging the middle to older population in self-care activities is also highlighted by the finding that self-care engagement is tending to decrease with age.⁸⁹ Engaging the middle and older population in social activities, which encompass both social connection and physical activity, such as in regular group exercise, has furthermore been shown to not only increase social function, but also to improve other aspects of health such as mental acuity and physical vitality.⁹⁰⁻⁹⁴ Consideration of how best to engage this sector should thus be considered in the design and development of programs for community health.

1.9 Health behaviour change and traditional medicine

1.9.2 Health awareness within traditional cultures

In acknowledging the need for positive lifestyle change and for collaboration within social sectors for both health and sustainable development,¹⁶ the WHO is echoing many of the holistic principles espoused in numerous traditional cultures for sustaining health and harmony in society.^{2,13,95} By embodying principles observed in nature, that is, those seen in the greater external environment; and by acknowledging and applying such principles of harmony and change in daily

life,^{13,14,30} traditional communities have a history of educating their members in health awareness and thus promoting health literacy from within. Health literacy, as defined in the present day, describes an individual's ability to understand key health information and to be able to navigate the health system available to them in response to their own needs of health and wellness.⁹⁶ In examining the potential of traditional medicine frameworks, relative to self-care and health behaviour change in the current era, it may be relevant for researchers and health professionals to consider and evaluate a definition of health literacy which is inclusive of the many systems of health knowledge passed down through traditional cultures. These traditional frameworks typically include a pro-active, patient-centred approach to wellness¹³ and yet, have been largely overlooked in the research and practice of global health behaviour change.

1.9.3 A health framework interwoven with daily life

One key aspect of health and lifestyle behaviours drawn from systems of traditional medicine is that they are inherently interwoven with a holistic perspective, one which offers a course of reasoning and a framework from which to understand *why* certain lifestyle measures should be adopted.²⁹ For example, within CCM substances consumed in one's diet, as food, liquids or embellishments, are considered to have an inherent nature or thermal quality, which falls somewhere in a gradient between 'hot' and 'cold'; this nature then defines the rational parameters of their use within diet and within medicine.^{44,51,97} The framework suggests that if an individual understands that an apple may be considered 'cold' or 'cooling' and lamb to be 'hot' or 'warming',⁹⁷ they may then reflect upon which food is the best to be eaten in the summer or winter months, with very little formal training necessary. Thus, a basic understanding of temperature paired with reflection on how they feel internally, along with knowledge of the *nature* of certain foods, may be applied to guide dietary choices. It is further suggested by those interpreting CCM concepts for a lay audience that this framework can then be extended to reflection upon how an individual may feel in response to the season or time of year and appropriate foods chosen accordingly.⁴

The CCM concept of the nature of foods and/or substances, referencing an inherent warming, cooling or neutral quality,^{44,51} is one also found in other traditional cultures.¹³ This type of traditional knowledge, based in a philosophical framework of understanding, has customarily been used to guide choices and inform daily lifestyle habits, within a cultural context, with the aim of maintaining or supplementing

health.^{13,44,98,99} Examination of these habits, within a contemporary context, may warrant further exploration, especially in relation to aspects of self-efficacy and in supporting individuals to self-navigate their health choices, as well as in relation to the potential of such lifestyle practices on lowering the risk of NCDs.

1.10 CCM approaches in community health care programs

Chinese medicine approaches, when delivered as a whole-system of care, may have the potential to bring patients into a realm of greater understanding, relative to their current state of health.¹⁰⁰ In studies which have examined the influence of TCM lifestyle advice, delivered within the context of traditional acupuncture treatments, the Chinese medicine perspective of understanding has been shown to empower patients¹⁰⁰ and to be associated with increased self-efficacy post-treatment.^{11,12} This increase in self-efficacy has then also been associated with reductions in pain and disability at twelve months post-intervention.^{11,12} These findings suggest that the scope for Chinese medicine lifestyle advice, being utilised as a supporting intervention for patients experiencing pain and chronic illness, may warrant further attention, especially in community and public health programs.

To date, community-focused Chinese medicine approaches delivered in Western settings have primarily centred on the delivery of low-cost traditional acupuncture by trained TCM practitioners in multi-bed settings to provide more affordable access to treatment for low-income patients.^{101,102} In addition to this, non-traditional, symptom-based acupuncture is also being increasingly delivered by physiotherapists, pain specialists, nurses and some physicians in hospital and primary care settings in the UK, US¹⁰³, Europe¹⁰⁴ and Australia.¹⁰⁵ Such practitioners, however, typically have comparatively little, if any, training of practicing acupuncture from within an holistic Chinese medicine framework, typical of the medicinal paradigms with which the therapy has been historically associated.¹⁰⁵⁻¹⁰⁸ These frameworks have been described as holistic and as providing a whole system of care,³⁷ in that they are designed to assess and treat co-morbidities and/or multiple symptoms concurrently²⁹ and draw on several modalities, including lifestyle advice, in treatment approach.³⁷ In consideration of this overview, community approaches to health care which predominantly aim to instigate lifestyle change in participants, based on conveying an understanding of CCM concepts, outside of traditional acupuncture treatment, appears to be an innovative and under investigated area, in regions outside of Asia. Further research in this area, if shown to be positive for health improvement, could

provide an avenue of low-cost and accessible patient-support within health maintenance programs, due to the simple nature of the practices.

1.11 Chinese medicine as a system of medicine

Chinese medicine has existed as a complete system of medicine, for over two thousand years, responsive to the full spectrum of illness and incorporating a wide range of modalities.^{1,33} These modalities, dating back to the Han dynasty, have been recorded as including: over 270 herbal formulae, complex in the specifics and nuances of their application;^{32,33} acupuncture needling practice, utilising a spectrum of tools, (nine versions of acupuncture needles were specifically documented in the *Huang Di Nei Jing*);¹ external techniques, inclusive of cupping (the raising of skin and muscular tissue, with glass or bamboo cups, to release internal tissue adhesions)¹⁰⁹ and *gua-sha* (the releasing through the skin of internal inflammation through creating an external abrasion);¹¹⁰ warming therapy, through moxibustion;¹¹¹ and an array of lifestyle techniques.¹¹² Lifestyle practices recorded include detailed physical, breathing and meditation practices (most commonly referred to in the present day as qigong practices);¹¹² dietary approaches;^{44,97} resting practices and seasonal and cosmological observances.¹

As a system of medicine, the WHO acknowledges that Chinese medicine has historically been guided by a paradigm which incorporates the differential diagnosis of syndromes;¹¹³ which tends to focus on the dynamics of process and polarity,¹¹⁴ as symbolised by yin-yang theory;¹¹³ and which considers concepts of *blood*, *body fluid* and *qi*¹¹³ (of which the latter term may be translated as: energy, metabolism, movement, breath, bioelectricity),⁴⁸ applied in broader and/or more nuanced ways than that of the same terms used in contemporary allopathic medicine.²⁹ Aspects of this philosophy continue to provide context and guidance in the contemporary practice of Chinese medicine, inclusive of TCM and CCM approaches.^{29,115,116}

In similarity to other traditional medicine approaches,¹¹³ Chinese medicine, when practiced in accord with the philosophical framework from which it has historically been associated, presents as an individualised and multi-faceted approach to health care, both in patient assessment and therapeutic application.²⁹ As such, it presents as a complex intervention,¹¹⁷ embedded in a whole system of care.¹¹⁸ In recent decades research applied to traditional systems such as Chinese medicine are suggested to most appropriately align with using a Whole-Systems Research (WSR) approach.¹¹⁸

WSR, which emerged as a term in 2003, advocates for evaluation of effectiveness, - that is, the benefit of an intervention in a real-world setting, such as that of clinical practice - over a focus on efficacy - the benefit of a treatment in a constructed clinical or research environment.¹¹⁹ Furthermore, WSR recommends trial design which aims to: accommodate diverse population groups and/or which recognises individualisation of participants; focuses on mixed-methods studies; and which considers the increased use of patient-reported outcome measures (PROMs).¹²⁰ As such, interventions adopting traditional or CCM approaches to care, especially when multi-faceted in therapeutic approach, may be best evaluated using a WSR approach. The CCM program evaluated in this thesis represents a program delivered in a real-world setting, adopting a whole system of care approach and therefore aligns with recommendations for adopting a WSR approach; as such, the study adopted qualitative evaluation, based on patient-reported feedback.

1.12 CCM program evaluated in this thesis

The CCM program evaluated in this thesis is described, by those who designed and delivered the program, as being based on the fundamental principles of CCM. The program was initiated by a Scottish-based organisation, with a stated goal of improving health and wellbeing within community. Central to the program's approach was the sharing of a contextual understanding of CCM, with the aim of providing insight and self-care direction for participants, in relation to their everyday health and well-being.

The basic overview of the program included: undertaking outdoor activities, such as a walk, or simple qigong practice, in the morning; having a siesta or brief rest around midday; and undertaking quieter activities in the evening, along with taking a hot water foot bath before bed. In addition to these basic, CCM-based, lifestyle components, the program also incorporated aspects of western-style fitness, social engagement and aimed to build community connection. The program classes were run at a central hub, in a professional suite of a university campus building in the local town.

With an approach which incorporated simple-to-follow lifestyle practices; aerobic exercise; social engagement; and a low-cost membership design, the CCM program meets numerous objectives cited by health-care organisations as being necessary in improving the health and well-being of communities around the world. For these reasons, an evaluation of this innovative program, was chosen as the topic of this thesis.

1.13 Chapter summary

Principles of living in harmony with the natural world, inclusive of one's social environment, are found in CCM as well as in other traditional medicine paradigms globally.^{1,2,13} These principles, embodied in traditional lifestyle practices, may be observed in: following routines of rest and activity; making appropriate choices relative to lifestyle, dress and diet; responding to individual and environmental factors; and in maintaining a balanced and harmonious outlook on life.^{1,2,13} The WHO is currently encouraging a global focus on health promotion in support of reducing the impact of NCDs, which are primarily being linked to large sectors of society being susceptible to physical inactivity and the harmful use of substances, including inappropriate dietary intake.⁸⁰ Investigation into the adoption of traditional lifestyle practices, including those associated with CCM, has been limited in contemporary Western settings.⁶ However, exploration of such initiatives may be able to provide insights into community uptake, accessibility and acceptance, as well as into the potential benefits of traditional medicine programs for promoting and sustaining health behaviour change.

2. SYSTEMATIC LITERATURE REVIEW: Traditional Chinese Medicine Self-Care and Lifestyle Medicine Outside of Asia

2.1 Chapter Introduction

The therapies and practices drawn from the traditions of Chinese medicine are numerous and include an array of self-maintenance aspects such as exercise routines, seasonal and individualised dietary choices and resting habits; practices which, within Asia, often overlap with cultural practices already integrated into daily living. This project aims to assess the viability of integrating a number of CCM self-care practices, drawn from CCM philosophy, into daily routines in a generalised Western context. Thus, a literature review was undertaken to assess the extent to which self-care practices, as individual practices or as a whole system of care, drawn from the traditions of Chinese medicine, have been evaluated when implemented in settings outside of Asia and/or the Asian diaspora. While the focus of this thesis is on CCM, search terms relating to traditional Chinese medicine were also employed for the literature review. Due to the relatively limited use of the term CCM in the published literature, as well as due to the significant overlap and influence of CCM upon TCM in practice, it was deemed appropriate by the authors to include the term TCM in the literature search. Furthermore, studies which focused solely on Tai-Chi or Qigong techniques were excluded. Tai-Chi and Qigong practices are typically more in-depth in learning and in practice than the nature of lifestyle techniques forming the core of the CCM program evaluated in this thesis and were considered to be beyond the scope of inclusion relevant to the aims and objectives of the study. Thus, for the purposes of this review, TCM and/or CCM self-care techniques are defined as techniques which the participant may apply themselves, drawn from the field of TCM and/or CCM, outside of Tai-Chi or Qigong.

2.1.2 Publication of review

The review comprising this chapter has been published as follows:

Harvie A, Steel A, Wardle J. Traditional Chinese Medicine Self-Care and Lifestyle Medicine Outside of Asia: A Systematic Literature Review. *J Altern Complementary Med* 2019; **25**(8): 789-808

A copy of the manuscript can be found in the Appendix (A).

2.2 Traditional Chinese Medicine Self-Care and Lifestyle Medicine Outside of Asia: A Systematic Literature Review

2.2.1 Background

Traditional medicine practices from China and East Asia, including acupuncture, moxibustion, cupping and the prescribing of herbal medicine, are increasingly being practiced outside these regions and are increasingly integrated into contemporary health care.¹²¹⁻¹²⁸ These therapies are most commonly practiced in an integrated model referred to as Traditional Chinese Medicine (TCM) which has its foundation in a medical system designed as a whole system of care which prioritises assessment of the patient in a holistic context.^{1,29} Within this system, patient care has historically focused as much on health maintenance and prevention, through encouraging patients to adhere to simple health and lifestyle practices, as it has on the treatment of illness.¹ Thus, self-care practices, which may be considered as activities undertaken by an individual to 'prevent disease, evaluate symptoms and restore health',¹²⁹ are inherent to TCM.

Lifestyle or health-promoting practices from East Asia have become somewhat known in the West via specific manifestations such as Tai Chi and Qigong, exercises which typically combine a set form of movements, breathing techniques and guided imagery¹³⁰ and which are increasingly the topic of scientific investigation.^{5,7-9} A broader concept of lifestyle practices, however, is referred to in the foundational texts of medicine in China, which date back to the classical era c.300-200BCE.¹ These texts provide guidance on easily adopted preventative health care measures including: minimising alcohol intake; engaging in exercise routines which include both aerobic and resting practices; having an awareness of the impact of temperature and environmental conditions; and adopting appropriate dietary adjustments specific to the individual.¹ This perspective on health and lifestyle care has been shown to not only be culturally integrated, but also to be retained by members of Asian migrant communities,¹³¹⁻¹³³ who report including practices on 'self-care, use of herbs, lifestyle, hot-cold balance' in daily life,¹³³ which align with these traditional perspectives.

TCM self-care, thus incorporates health behaviour practices, which draw on these classical perspectives, and could also include self-moxibustion, self-acupressure or even self-acupuncture, the latter of which is not common to TCM, but is being used in some contemporary Western healthcare settings. Self-moxibustion is the self-applied burning of moxa (the dried herb *Artemisia vulgaris*), prepared in rice-grain sized threads, or larger cigar-shaped poles, and either applied to the skin, or held above the skin surface, respectively, to instigate a healing response.¹³⁴ Self-acupressure involves the patient using their thumb, fingers, or in some cases, a massage tool, to

apply therapeutic pressure to selected acupuncture points on their own body. Techniques of acupressure are incorporated into both *tuina* (TCM massage therapy) and *shiatsu* (Japanese acupressure therapy). Self-acupuncture involves the patient inserting acupuncture needles to specified therapeutic acupuncture points on their own body.

Non-communicable chronic and lifestyle illnesses are becoming an increasing part of disease burden globally. In response, the World Health Organisation (WHO) has recommended implementation of a number of high-impact measures which are notably similar to TCM lifestyle practices, recommending improvement to individual levels of physical activity; reducing salt/sodium intake, alcohol intake and tobacco use; as well as providing increased access to medical care and early intervention strategies. The implementation of such measures is perceived to far outweigh the calculated economic and social cost of not applying such interventions.⁹¹ The WHO has also developed a Traditional Medicine Strategy, recommending the integration of traditional medical systems where evidence suggests there may be evidence of health benefit. For this reason, examination of the practices of TCM self-care may offer insights – including those beyond currently recommended initiatives – into implementing health behaviour change in communities globally. However, to date there has been little formal examination of how traditional systems of medicine have been used to promote self-care in integrative settings. This review aims to remedy this information gap, by assessing and analysing the primary research into TCM self-care techniques, in communities outside of Asia and/or Asian migrant communities, relative to outcomes of health and wellbeing.

2.2.2 Methodology

2.2.2.1 Data Sources and Searches

Electronic searches were conducted in AMED, CINAHL, EMBASE, PubMed and MEDLINE for articles from inception until in July 2018, using terms related to TCM and self-care. Representative search terms are shown in Table 1. Searches were conducted with no date or language restrictions.

2.2.2.2 Selection Criteria

This review included original research reporting on the therapeutic application of TCM in self-care, inclusive of singular therapeutic interventions which have been drawn from TCM. As TCM practices may be culturally embedded in some Asian communities,

studies were excluded if the interventions were delivered in a setting within Asia or Asian communities, in order to consider self-care techniques as healthcare interventions which may be generalised to a wider population and to gauge their success in naïve populations. Studies were also excluded if they only reported Tai Chi or Qigong interventions as both of these practices have been, comparatively, extensively explored in the literature^{5,7-9}. Furthermore, Tai Chi and Qigong practices often involve a set form, involving a combination of specific physical movements, guided imagery and breathing exercises¹³⁰ which can be more complex, in learning and application, than other TCM lifestyle recommendations.

2.2.3 Results

2.2.3.1 Study selection

All identified citations (n=2109) were downloaded into EndNote referencing and management software program. Of the 2109 downloaded citations, 390 were discarded as duplicates and a further 1237 discarded by title (AH). The remaining 482 citations were filtered by abstract with a further 331 identified as not fulfilling the inclusion criteria and being discarded. A random sample of articles were screened by title and abstract by the other authors (AS, JW). The 151 retained citations were then screened by full text and a further 22 articles discarded due to not directly incorporating a TCM self-care component or merely comprising a report or discussion of the topic area. A further 90 papers examined a Tai Chi or Qigong self-care component only and were therefore discarded, leaving 39 articles, of which 12 were discarded based on being set in an Asian country or Asian community. An additional nine articles were located via manually searching through the reference list of included articles. A random sample of papers were screened by a second author (AS). Details of this process are summarised in Figure 1.

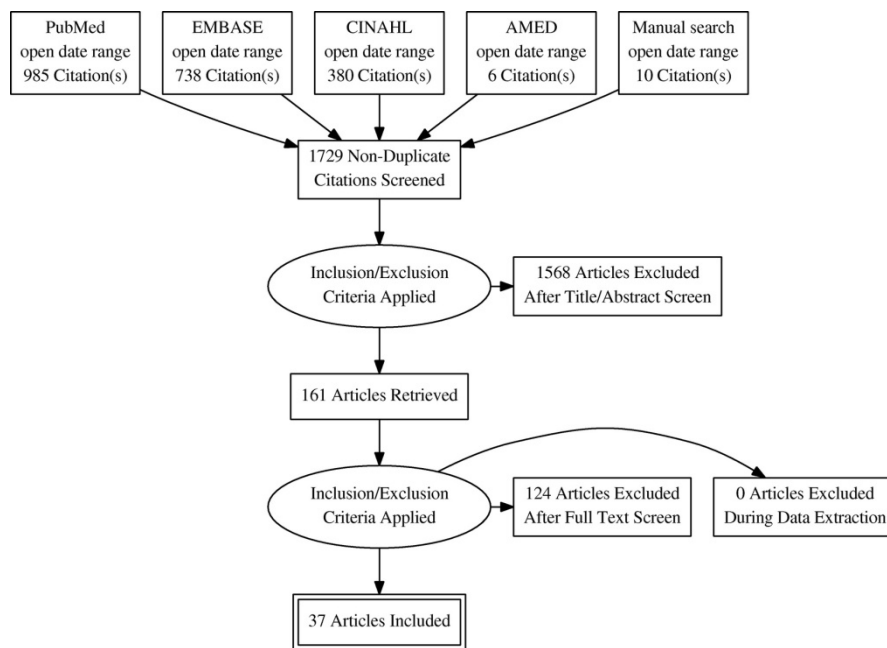


Figure 1. PRISMA flow diagram. PRISMA. Preferred Reporting Items for Systematic Reviews and Meta-Analyses

2.2.3.2 Data extraction, risk of bias assessment and synthesis

Data were extracted from selected papers into a summary table, formatted into domains of study design, nature of the TCM self-care intervention, control, outcome measures, practitioner standard of training, duration of intervention, sample population, condition examined, blinding, summary of findings and data quality. The summary table was prepared by two reviewers (AH, AS). Data extraction was completed by one reviewer (AH) and periodically checked by a second reviewer (AS) with discrepancies resolved through discussion until reaching consensus. Articles were categorised according to study design for risk of bias and quality assessment, however, also categorised according to nature of TCM self-care intervention for further analysis and discussion. For the purposes of this review, studies on self-applied *tuina*, *shiatsu* and acupuncture were categorised together. Risk of bias and quality of evidence were appraised with the Consolidated Standards of Reporting Trials (CONSORT) 2010 Checklist¹³⁵ for the randomised controlled trials; Case Report Statement and Checklist (CARE)¹³⁶ for the case series and case studies; Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist¹³⁷ for the clinical audits, hospital survey and longitudinal descriptive study; Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines¹³⁸ for the qualitative studies.

2.2.3.3 Study characteristics

A total of 37 articles were identified for inclusion in the review. Articles were dated between 2003 and 2018, with the majority of studies (n=22) being conducted in the past five years. Twenty-six of the articles retrieved were randomised clinical trials^{11,139-163} of which eleven were undertaken in the United States (USA),^{139,145-147,150-153,161-163} three in Iran,^{140,142,159} and five in the United Kingdom (UK),^{11,148,154,155,158} with single RCTs being drawn from Australia,¹⁵⁶ Denmark,¹⁴³ Italy,¹⁴¹ Portugal,¹⁵⁷ Uganda¹⁴⁹ and Germany¹⁴⁴ and one study being conducted in both Australia and China.¹⁶⁰ Studies reviewed which were not RCTs include two case studies^{164,165} and a case series,¹⁶⁶ undertaken in the UK, USA and Canada respectively; three clinical audits¹⁶⁷⁻¹⁶⁹ and one hospital survey¹⁷⁰ undertaken in the UK; and a longitudinal descriptive study, undertaken in Germany.¹⁷¹ The article data is summarised in Table 3.

2.2.3.4 Risk of Bias Assessment

Assessed against CONSORT,¹³⁵ the majority of the self-care RCTs adhered closely to the guidelines, with transparent reporting of study methodology (Supporting Information A).

Table 2: TCM self-care studies outside of Asia

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Abbott et al. (2014) <small>139</small>	USA	Unspecified & participants' home/private setting	RCT	None	4 weeks	Adults with functional constipation (n=100)	Unspecified	Constipation	Standardised: Perineal self-acupressure (3-5 min oral instruction) + standard care	Usual care	Primary: QOL (PAC-QOL) Secondary: Bowel function (BFI); Health & well-being (SF-12v2)	Improved: QOL (TED 0.59, p<.01), BFI (TED 13.8, p<.01), SF-12v2 Physical (TED 3.05, p<.01) and SF-12v2 Mental (TED 2.82, p<.07)	CONSORT: High
Abedian et al. (2015) <small>140</small>	Iran	Unspecified & participants' home/private setting	RCT	Single-blind	4 weeks	Menopausal women between ages 41-65 years (n=128)	Unspecified	Sleep	Standardised: Self-acupressure of four points [SP6, HT 7, GB20, YT] for 10 min; 6 nights week; 1-2hrs before sleeping.	Control 1: Sham acupressure [1-3 CUN away from true acupoints]. Control 2: Usual care	Primary: Sleep quality (PSQI)	Improved: Acupressure Group: PSQI (p≤0.001); Sham-Acupressure group: PSQI (p≤0.001).	CONSORT: Medium

Baccetti et al. (2014) 141	Italy	Centre of Traditional Chinese Medicine (TCM), public outpatient clinic of Florentine health care system & participants' home/private setting	RCT	None	6 weeks; follow-up at 4 months	Menopausal women (n=100)	Medical doctors with minimum 400 hrs post-graduate training	Hot flushes	Standardised: Group A: Acupuncture, x 2 week, for 6 weeks + TCM individualised self-care	Group B: Wait-list Acupuncture [delayed 6 weeks]: plus Individualised TCM diet + TCM self-massage for 6 weeks during wait period.	Primary: Menopausal symptoms, via interview questionnaire Time points: Group A: baseline; 6 weeks; Group B: baseline, 6 weeks, 12 weeks ; A & B: 4 months post treatment completion	Improved: Acupuncture + TCM self-care signific. greater than in Group B: hot flushes, 1.3 pts, sudden sweating 1.2 pts, sleep dis. 1.1 pts, headache, chest pain, vaginal dryness, 1.0 pt, irritability, bone pain, memory red, urination disorders 0.9 pts, depression 0.7 pts, genital itching 0.5 pts. [only s/s not sustained at 4 mo follow up]	CONSORT: High
Bardy et al. (2015) 172	UK	Unspecified & participants'	Qualitative study	None	4 weeks (following initial 6	Participants in multi-site self-acupuncture	'experienced therapists'	Cancer-related fatigue	Standardised: Acupuncture self-needling [SP6, ST36], x 1 week, 4	Usual care	Primary: Self-needling experience (patients);	Self-needling was found to be acceptable to, and manageable	CORE Q: Medium
No reported difference: TCM self-care alone													

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
		dorm room/private setting					Further details undisclosed		Standardised #2: Four, 1-1.5 hr (non-TCM) educational self-care sessions including nutrition & exercises		Time points: Baseline; post intervention	(p<0.001). Post-intervention: mean intensity of pain 14.40 ± 6.87 acupressure group; 10.65 ± 5.71 training group; 19 ± 5.41 control group.	

Bergman et al. (2014) <small>143</small>	Denmark	Unspecified & participants' home/private setting	RCT	Single-blind (observer-blind)	3 months	Patients with ischaemic heart disease (IHD) (n=213)	'professional instructor' (who had undergone a 4 week course + practical examination relevant to the techniques applied)	Stress; depression & QOL, in relation to IHD	Standardised (with self-analysis component): Self-measurement of pressure point sensitivity (PPS), x 2 day, & if high, self-acupressure [CV17, BL14, BL15] for 1min each, & reflection; daily online tracking	Usual care	Primary: PPS via a PPS algometer Secondary: Depressive symptoms; Quality of life (QOL) via online questionnaires (MDI – major depression inventory, WHO-5 (Wellbeing), SF-36 (Mental and physical QOL) Time points: Baseline; 3 months	Improved: At 3 months, PPS decreased 28% in intervention group and only 11% in control, (p<0.001); MDI decreased 22%, vs. 12% in control (p=0.040); WHO-5 increased to 71 vs 64.8 control, (p=0.015); SF-36 mental score sum increased to 55.3 vs. 53.5 control (p=0.08).	CONSORT: High
Blodt et al. (2018) <small>144</small>	Germany	App-based (Patients')	Two-arm RCT	Non-blinded	6 months (6 menstrual Cycles)	Women, 18-34 yrs, with self-reported	Acupressure pts for App rec. by group of experts;	Primary Dysmenorrhoea, women	Standardised: App-based self-acupressure (LI4, LR3, SP6) for 1	Usual care	Primary: Mean pain intensity, on days with	Improved: Mean pain intensity after 3 cycles (acupressure:	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
		everyday environment)				dysmenorrhea (n=221)	details of training undisclosed	18-34 years	minute daily, (or up to 5 times daily), for 5 days pre-menses.		pain, during 3 rd cycle	4.4; 95% CI, 4.0-4.7; usual care 5.0; 95%CI, 4.6-5.3; mean difference -0.6); after 6 cycles, (mean difference -1.4, 95% CI) reaching clinical relevance.	

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Brown et al. (2014) <small>166</small>	Canada	University of Alberta, Faculty of Rehabilitation Medicine affiliated clinics & participants' home/private setting	Casere series (pilot)	None	8 weeks	Participants with diagnosed musculoskeletal conditions & self-reported sleep problems (n=14)	Certified shiatsu therapist with > 10 yrs clinical and trainer experience, for protocol development	Sleep, in persons with chronic pain	Standardised: Hand self-shiatsu	1 week of baseline data	Primary: Objective sleep latency, via ActiSleep monitor Secondary: Self-reported sleep patterns, Sleep latency; Pain; (VAS), (PSQI) Time points: Baseline; 2 weeks post-intervention; 8 weeks post-intervention	Improved: trend emerged toward improved sleep latency & sleep duration, however, sample insufficient to draw statistical conclusions	CARE : High

Chen et al. (2013) <small>145</small>	USA	Baltimore, outpatient addiction treatment facility & participants' home/private setting	RCT	Non	12 weeks	Cocaine dependent patients (n=56)	'trained staff'	Cocaine addiction	Standardised: Integrative Meditation and Ear Acupressure (IMEA) via herbal seeds [Shenmen, Subcortex, HT, LR, LU] to be pressed 20 x, 4-5 x daily, for first 2-3 weeks	Usual care	Primary: Treatment retention rate; abstinence Secondary: Addiction related symptoms: anxiety, craving, depression, withdrawal symptoms via a number of validated tools Time points: Weeks 8 & 12	Improved: 80.8% in IMEA completed the 12-week study compared to 58.3% in Control (p= 0.08); Significantly fewer (88.5% versus 62.5%; p= 0.03) IMEA participants dropped out of treatment by week 8 compared to Control ; IMEA had a higher abstinence rate as measured by 6 or more consecutive weeks of negative urine tests for cocaine (65% versus 33%; p= 0.06).	CONS ORT: High
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Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Dibble et al. (2007) <small>146</small>	USA	Community oncology program w/ University Texas & 9 independent sites & participants' home/private setting	RCT	Double blind	21 days (one cycle of chemotherapy)	Women beginning their 2 nd or 3 rd cycle of chemotherapy for breast cancer with moderate nausea intensity scores on previous cycles (n=160)	Nurses and research assistants who received 2 hours training in study protocol + access to teaching video on protocol.	Chemotherapy induced nausea and vomiting (CINV) (acute and delayed)	Standardised : Self-acupressure with wristband to P6	Control #1: (Sham): Self-acupressure to SI3 Control #2: Usual care	Acute and delayed nausea and vomiting	Improved: Delayed CINV in treatment group (#1) No Significant difference: Acute CINV	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Enblom, Steinek & Börjesson (2017) 171	Sweden	2 University hospitals	Longitudinal descriptive, via questionnaires	None	5 weeks data per patient, gathered over 3 years	Radiotherapy (abdominal or pelvic) patients, with or without chemo. (n=200)	N/A	Nausea during radiotherapy; Type of CAM strategy (if any) adopted	Non-standardised: Any CAM self-care strategy (incl. acupuncture)	Type of CAM adopted;	Primary: Adoption of CAM self-care practice Secondary: Reduction in nausea Time points: Daily, through radiotherapy treatment (M-F; 5 weeks)	CAM self-care practicing patients without nausea practiced self-care more frequently than nauseous patients. 25% patients practiced CAM self-care (n=50); acupuncture (n=2); modifications of eating/drinking (n=45); physical exercise (n=3); resting (n=9); self-induced vomiting (n=1)	STROBE: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Fagan & Staten (2003) <small>167</small>	UK	participants' own home	Clinical audit	None	unspecified	Patients chosen according to condition; aged 35-73 years; (n=16)	GPs having undergone British Medical Acupuncture Society (BMAS) foundation training course, comprising 24 training hours <small>173</small>	Varied	Standardised: Self-acupuncture Audit of GP private practice patients; time varied (not specified)	None	Primary: Effectiveness in assisting condition Secondary: acceptability; frequency of treatment; needle retention times Time point(s): Post intervention (undefined)	Ten out of 16 patients reported their results to be good or excellent; No adverse affects reported.	STROBE: Low

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Filshie et al. (2005) <small>168</small>	UK	Royal Marsden Hospital, London & Surrey & participants' home/private setting	Clinical audit	None	Up to 6 years, average 9 months, (over 13 year period)	Patients who had been treated with acupuncture, via Royal Marsden Hospital, for hot flushes, majority of whom had breast cancer (n=194)	Consultants in anaesthesia and pain management, acupuncture training undisclosed	Hot flushes and Pain	Standardised: Acupuncture [SP6, LR3, LI4, TE5 + 2 sternal pts] (n=194) AND (followed by) self-acupuncture (press-studs) [SP6] (n=144) or self-needling [SP6] (n=14), or both at different times (n=9).	None	Primary: Estimated frequency of hot flushes Time Points: before and after program (1 mo. – 6 yrs)	114 patients (79%) using self-acupuncture studs had ≥ 50% reduction in hot flushes.	STROBE: Medium

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Harris (2005) <small>147</small>	USA	University of Michigan School of Public Health	Cross-over RCT	Single blind (participated blind)	3 days	Students attending course in research design and statistics (n=39)	Instructor trained in acupressure (3 yrs & 5 yrs); protocol refined by TCM acupuncturists (5 yrs experience)	Alertness	Standardised #1: Self-administered acupressure: stimulation*-relaxation**-relaxation [*LI4, ST36, KI1, UB10], [<small>**</small> YT, Anmian, HT7, LV3, SP6]. Standardised #2: Self-administered acupressure: relaxation-stimulation-stimulation	None	Primary: Alertness via Stanford Sleepiness Scale (SSS). Secondary: Assessment of influencing factors such as caffeine, previous night's sleep. Time points: Pre- and post-intervention daily; x 3 days	Improved: Stimulation acupressure treatment yielded 0.56 greater difference in score on the SSS, corresponding to less fatigue, compared to relaxation arm (p=0.019).	CONSORT: High

Hughes (2015) 148	UK	Christie NHS Foundation Trust	RCT (feebility)	Non	5 weeks	Cancer patients (breast, prostate, colorectal) with chronic insomnia (n=7)	Nurses with training from either British Medical Society or British Academy of Western Medical Acupuncture with at least 3 yrs experience treating cancer patients	Sleep	Semi-standardised #1: Practitioner administered ear-acupressure ear seeds + patient acupressure (1min each night) [Auricular: Shenmen; + any two according to symptoms: Insomnia 1,2 ; Heart; Liver; Kidney; Subcortex] Semi-standardised #2: Self-acupressure [HT7; + any two from: PC6; GB20; Ex8 (Anmian); KI6; BL62]	Usual care (n=2)	Primary: Sleep quality via Pittsburgh Sleep Quality Index (PSQI) Secondary: Impact of treatment via measure yourself concerns and well-being questionnaire (MYCaW). Time points: Pre and Post intervention (baseline & 5 weeks)	Improved: Auricular therapy: PSQI reduced from 12.5 at baseline to 8 at completion of treatment; Self-acupressure PSQI reduced from 15 to 11; No treatment: PSQI 14.5 at baseline & follow-up	CONS ORT: High
Ibanda (2018) 149	Uganda	Kiswa Health Centre (public)	RCT	Sing	6 months	Tuberculosis (TB) patients, newly	Undisclosed (study nurse)	TB	Standardised: Self-administered moxa, bilaterally, on leg point	Usual care	Primary: TB sputum negative	Improved: Higher rates of TB sputum negative in first	CONS ORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
		primary health care facility)				diagnosed (n=180)			[ST36], 3 – 7 moxa cones daily		<p>Secondary: Full blood counts; radiological analysis; renal & hepatic function; well-being</p> <p>Time points: baseline; 1-6 months</p>	month in moxa group (p=0.32); greater haemoglobin improvement in moxa group (p=0.03); adherence to drug therapy higher in moxa group (p=0.001)	

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Lee et al. (2010) <small>150</small>	USA	Community clinical oncology program associated with University of Texas M.D. Anderson Cancer Center & 6 independent sites	RCT secondary data analysis	Double blind	11 days	Patients with breast cancer, receiving chemotherapy, randomly assigned to active arm of PC 6 intervention (n=53)	Research assistants or nurses with at least 2 hrs training + access to video	Relationship between intensity of chemotherapy induced nausea and vomiting (CINV) (acute and delayed) and frequency of Pc6 self-acupressure	Standardised: Self-acupressure [PC6]; 3 min daily + when nausea occurred	Usual care	Primary: Nausea intensity, via daily log: Index of Nausea Vomiting and Retching (INVR) Secondary: Acupressure frequency Time points: Daily	Participants who used acupressure more frequently after peak of nausea (on day 4) were predicted to have a 0.97 point higher nausea intensity in acute phase (incidence rate ratio = 1.52, p<0.01)	CONSORT: Medium

Lee et al. (2012) 151	USA	Undisclosed & participants' home/private setting	RCT (pilot)	Non	4 weeks	Adult patients with atopic dermatitis (AD) recruited from a single academic centre (n=15)	medical doctor, further acupuncture &/or TCM training undisclosed	Eczema / Atopic Dermatitis	Standardised: Self-acupressure [LI11] using 1.2mm acupellet, 3min, 3 x week, for 4 weeks.	Usual care	Primary: Severity of itch & AD, measured on Visual Analogue Scale (VAS), Investigators Global Assessment (IGA), Eczema Area & Severity Index (EASI) Secondary: Eczema care: use x creams, medic, acupr. Time points: Baseline; 4 weeks (±3 days)	Improved: Trial group showed greater decrease in VAS (p=0.04), decrease in IGA (p=0.03), decrease in EASI lichenification score (p=0.03).	CONS ORT: High
Li et al. (2016) 152	USA	Research centre & Community	RCT (feasibility study)	Double-blind	8 weeks	Community-living older adults (n=150)	Research assistants trained by acupuncturist/co-investigator certified by	Knee osteoarthritis	Standardised: Self-acupressure protocol [YT, Anmian, HT7, SP6, KI3] daily, 5 x week, for 8 weeks + weekly	Control #1 (Sham): As intervention, applied on non-	Primary: Ease of sample recruitment and retention	Feasibility of study: 83% participants attended all 3 requested visits; 80% reported performing self-	CONS ORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
		residence					NCCAOM (min. 4 academic years of training) ¹⁷⁴		phone call from research assistant	acupoints + weekly phone call	Secondary: Treatment fidelity & adherence;	acupressure as instructed most of the time; 10% reported discomfort; 30 adverse events reported, most related to pre-existing health conditions.	
										Control #2: Usual care + weekly phone call	Tertiary: Tolerability & adverse events		
											Time points: Baseline; 4 weeks; 8 weeks		

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Li et al. (2017) <small>153</small>	USA	Community residence	RCT	Double-blind	8 weeks	Community-living older adults (≥65 yrs) with symptomatic knee osteoarthritis (OA) (n=150)	Research assistants (no further details given)	Knee osteoarthritis	Standardised: Self-acupressure protocol [YT, Anmian, HT7, SP6, KI3] once daily, 5 x week, for 8 weeks + weekly phone call from research assistant	Control #1 (Sham): As intervention, applied on non-acupoints* [*ST channel, LU channel, BL channel] + weekly phone call Control #2: Usual care + weekly phone call	Primary: Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain subscale. Secondary: Numeric Rating Scale (NRS) for pain; physical function Time points: Baseline; 4 weeks; 8 weeks	Improved: Both verum & sham acupr in WOMAC pain (mean diff -1.27 units, [95% CI, -1.95, -0.58] and -1.24 units [95% CI, -1.92, -0.55], respectively); NRS pain (-0.74 units [95% CI, -1.24, -0.24] & -0.51 units [95% CI, -1.01, -0.01] and WOMAC function (-4.83 units [95%CI, -6.99, -2.67] and -4.21 units [95% CI, -6.37, -2.04], respectively)	CONSORT: High

Macpherson et al. (2017) ¹¹	UK	Private practice settings	Secondary	Non	5 months (with follow-up at 6, 12 months)	Participants randomised to acupuncture treatment group (n=160), within larger RCT ¹⁵⁴	Acupuncturists registered with British Acupuncture Council [3,600 hrs degree level training ¹⁷⁵] with min 3 yrs post-qualification experience	Chronic neck pain	Individualised #1: TCM lifestyle advice + TCM acupuncture (acu) + usual care Individualised #2: Alexander technique (Alex) + usual care	Usual care	Primary: Self-care, self-efficacy & lifestyle advice acted upon Secondary: Pain & disability, via Northwick Pain Questionnaire (NPQ) Time points: Practitioners: every treatment; Participants: Baseline, 3, 6 & 12 mo.	Improved: Acu lifestyle advice helped patients improve the way they live & care for themselves & enhanced self-efficacy (2017) Improved: Between-group reductions in NPQ score at 12 mo: 3.92% for acu (95% CI, 0.97 to 6.87 % points).(p=0.009) ; 3.79% points for Alex. (CI, 0.91 to 6.66 % points) (p=0.010). At 12 mo. reductions in NPQ: 32% acupuncture; 31% Alex. Self-efficacy improved for both groups. (2015)	CONSORT: Medium
Macpherson et al.	UK	Private practice settings	RCT	Non	5 months (with follow-	Primary care patients who consulted their GP for	Acupuncturists registered with British Acupuncture	Chronic neck pain	Individualised #1: TCM acupuncture (including TCM	Usual care	Primary: Pain & disability, via	Improved: Between-group reductions in NPQ score at 12	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
(2015) 154			three arm)		up at 6, 12 months)	chronic neck pain (n=517) (2015)	Council [3,600 hrs degree level training ¹⁷⁵] with min 3 yrs post-qualification experience Alexander teachers members of Society of Teachers of A.Technique.		lifestyle advice), x 12 sessions, + usual care Individualised #2: Alexander technique, x 20, one-to-one sessions, + usual care		Northwick Pain Questionnaire (NPQ)	mo: 3.92% for acupuncture (95% CI, 0.97 to 6.87 % points) (p=0.009); 3.79% points for Alex. (CI, 0.91 to 6.66 % points) (p=0.010). At 12 mo. reductions in NPQ from baseline: 32% acupuncture; 31% Alex. Self-efficacy improved for both groups.	
											Secondary: Self-efficacy, QOL, adverse events	Time points: Baseline, 3, 6 & 12 months	

Macpherson & Thomas (2008) 35	UK	Private acupuncture clinics (n=3)	Qualitative study	Non	3 months [with 12 month follow up]	Acupuncturists who had participated in an RCT ¹⁵⁸ assessing low back pain (n=6)	Acupuncturists registered with British Acupuncture Council [completion of 3,600 hours degree level training ¹⁷⁵ with min 3 yrs post-qualification experience]	Low back pain	Individualised: Self-care TCM advice within context of acupuncture treatment [course of 10 individualised acupuncture treatments]	Usual care	Primary: Descriptions of self-care advice provided Secondary: Rationale for self-care advice; strategies used to improve uptake of such advice; expected impact upon health Time points: Post-intervention (details unspecified) (2008)	Self-care advice seen by both participants and practitioners as an integral and interactive component of acupuncture treatment ³⁵	Improved: Weak evidence found of effect of TCM acupuncture on LBP at 12 mo; stronger evidence of small benefit at 24 mo. 158	CORE Q: Medium
Moliasiotis et al.	UK	Unspecified & participants'	RCT	Non	4 weeks (following initial 6	Breast cancer patients from	'trained acupuncturists'; no further details given	Cancer related fatigue	Standardised: Acupuncture self-needling [SP6, ST36], x 1 week, 4	Usual care/ No maintenance	Primary: General fatigue	No further improvement: with self-acupuncture	CONSORT: High	

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
(2013) 155		home /private setting		blinded trial)	1 week RCT)	previous acupuncture RCT (n=197)			weeks, following 6 weeks of practitioner delivered course of acupuncture, within multi-site RCT Standardised #2: Continuation of acupuncture [SP6, ST36], as administered by acupuncturist, x 1 week, 4 weeks.	ce treatment	Secondary: Mood, QOL, safety Time points: Post-intervention (shortly after trial had ended)	beyond initial clinic-based course; No statistical difference between trial arms (P = 0.18)	

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Mollart et al. (2016) <small>156</small>	Australia	2 outer metropolitan public hospitals in NSW & participants' home/private setting	RCT (feasibility study)	None	± 10 days	Healthy primigravid women at 40 weeks ±2 days gestation (n=67)	Trained midwife, attended 1-day workshop on acupressure; Advice to protocol sought from trained acupuncturist, who is considered an expert in the field	Post-date pregnancy	Standardised: Self-acupressure [SP6,LI4] every 2 hrs, [GB21] x 2 day, until spontaneous or induced labour begins	Usual care	Primary: Willingness of women to participate Secondary: Compliance with study protocol; Sample size estimation for future study Time points: Post-intervention	Interest found in use of acupressure for initiation of labour with high protocol compliance in study group	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Orpen, Harvey & Millard (2004) <small>170</small>	UK	42 hospitals & participants' home/private setting	Survey (via postal questionnaire)	N/A	undisclosed	Hospital staff respondents (n=30)	Various levels (E grade nurses → nurse consultant, medical staff, physiotherapists, pharmacist): further acupuncture training undisclosed	Pain	Undisclosed Details #1: Acupuncture administered at hospital Undisclosed Details #2: Self-acupuncture administered at home	none (N/A)	Primary: Assessment of self-acupuncture as taught to patients through UK hospitals Secondary: Assessment of use of acupuncture in pain clinics in UK hospitals	Acupuncture found to be popular with patients who attend chronic pain clinics with existing hospital services unable to meet demand.	STROBE: Medium

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Sousa et al. (2015) <small>157</small>	Portugal	Undisclosed & participants' home/private setting	RCT	Single blind	3 weeks	Professional orchestra musicians with PRMD as diagnosed by a physiotherapist (n=69)	Practitioner with > 30 yrs experience (formal training undisclosed)	Playing-related musculoskeletal disorders (PRMD) in professional musicians	Individualised: Self-applied tuina techniques according to a TCM diagnosis	Self-applied tuina techniques away from the commonly used acupuncture points	Primary: Pain intensity via Numeric Verbal Scale (NVS) Secondary: Frequency of practice Time points: Baseline, & 1,3,5,10,15, 20 days	Improved: Pain intensity significantly reduced: intervention group presented average of 5.03 (SD = 1.87); control average 3.8 (SD=1.8). Values at baseline not statistically different (p=0.51).	CONSORT: Medium

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Sprague & Chang (2011) <small>164</small>	USA	Undisclosed & participant's home/private setting	Single case study	N/A	6 months	Single 34 year old patient diagnosed with CRPS	Unclear, however authors have DO (Doctor Osteopathy) and MACOM, LAc (Licenced Acupuncturist)	Chronic complex regional pain syndrome (CRPS)	Standardised: Self-treatment via laser acupuncture pen device [large point prescription up to 20 points: 3min per point, daily] + disposable press needles + Acupuncture: 3xweek, 6 months Also: dietary modifications, pain medications, cardio workouts on elliptical machine, avoiding strenuous physical activity.	None N/A	Primary: Mental state (BDI), Pain: McGill Pain Questionnaire (MPQ), Disability (SDS) Time points: Baseline & post-intervention	Improved: At 6 months: SDS decreased to 4; BDI to 0; MPQ to 10; Overall program led to 70% reduction in pain	CARE : High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Teig et al. (2006) <small>169</small>	UK	General hospital & participants' home/private setting	Clinical audit (retrospective)	N/A	4 weeks to respond to questionnaire + a reminder call + text audit	Chronic pain patients who were taught self-acupuncture in the previous 3 years (n=52)	Nurse pain specialists; acupuncture training undisclosed	Chronic pain	Undisclosed Details: Self-acupuncture as taught by one of 3 nurse pain specialists, performed 'no more than once every two days'	None N/A	Primary: Pain relief (Visual Analogue Scale), QOL Secondary: Reasons for stopping self-acupuncture, Adverse events	Improved: QOL reported by 73.7% patients; 86.8% continued use of self-acupuncture; pain relief gained 5.7 (SD 2.6) on VAS. Adverse events reported included: bleeding from site:1; bruising:1; tiredness/fatigue:5; headache:1; increased pain:1; drowsiness:2.	STROBE: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Thomson et al. (2006) <small>158</small>	UK	Private acupuncture clinics (n=3)	RCT	None	3 months [with 12 & 24 month follow up]	Adults with LBP (n=241), referred from 18 GP clinics	Acupuncturists registered with British Acupuncture Council [completion of 3,600 hours degree level training ¹⁷⁵] with min 3 yrs post-qualification experience	Low back pain	Individualised: Self-care TCM advice within context of acupuncture treatment [course of 10 individualised acupuncture treatments]	Usual care	Primary: SF-36 bodily pain at 12, 24 months Secondary: Use of analgesics, pain disability, patient satisfaction	Improved: Weak evidence found of effect of acupuncture on LBP at 12 mo; stronger evidence of small benefit at 24 mo.	CONSORT: High
											Time points: Baseline, 3, 12, 24 months		

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Torkzahrani et al. (2015) <small>159</small>	Iran	Deziani hospital	RCT	None	Term to childbirth (sampling over 6 months)	Primigravida women with term pregnancy (n=150)	15 yrs experience as nurses/midwives; further TCM training undisclosed	Cervical ripening pre-labour	Standardised #1: Nurse delivered acupressure [SP6] for 2 min alternated with no acupressure, for 20min, for 1-5 days Standardised #2: Self-acupressure 'as above'	Usual care	Primary: Cervical ripening (Bishop score) Secondary: Record of application daily Time points: Every 48 hours, from term to labour	Improved: Mean Bishop score enhanced after 48hrs (p≤0.021) in researcher-performed acupressure group and in self-performed acupressure group (p≤0.007) compared to control.	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Walter & Curtis (2013) <small>165</small>	UK	GP clinic & participant's home/private setting	Single case report	N/A	2 ½ years	Woman with SOD type III, 46 yrs, (n=1)	General practitioner western medical acupuncture, further training undisclosed	Sphincter of Oddi dysfunction (SOD) type III; severe pain episodes	Standardised: Self electro-acupuncture intervention, applied weekly and with episodes of severe pain	N/A	Primary: Pain episodes (via pain diary) Secondary: Frequency of intervention application; Need for pain medication Time points: Baseline, and via diary records	Improved: Episodes of severe night time pain attacks & need for oxycodone & dihydrocodeine eliminated after 2 months of self-acupuncture and sustained for 12 months with ongoing monthly self-EA.	CARE : High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Wenham et al. (2018) ¹²	UK	Private practice settings	Qualitative study (nested within pragmatic RCT) ¹⁵⁴	Non	12 months	6 months (n=30); 12 months (n=26)	Acupuncturists registered with British Acu. Council [3,600 hrs degree level training ¹⁷⁵] with min 3 yrs post-qualification experience Alexander teachers members of Society of Teachers of A.Techn.	chronic neck pain (perspectives of participant in relation to self-efficacy and treatment)	Individualised: TCM acupuncture (including TCM lifestyle advice), x 12 sessions, + usual care Active 2: Alexander technique, x 20, one-to-one sessions, + usual care	Usual care	Primary: Participants' perceptions & experiences of interventions Secondary: Factors participants' associated with impact of interventions Time points: 6 & 12 months	5 key themes: 1) comparison w/ pre-trial experience of biomedical treatment & associated disempowerment; 2) pain reduction, movement freedom; 3) self-care, self-efficacy, self-empowerment & positive relationship w/ practitioner; 4) developing sense of embodiment; 5) all factors contr. to sust. benefits	CORE Q: Medium

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Zhang et al. (2014) <small>160</small>	Australia & China	RMIT Clinical Trial & Guangdong Provincial Hospital of Chinese Medicine	RCT	Single-blind	8 weeks (+ 12 wks follow up)	Adults with perennial allergic rhinitis (n=245)	Acupuncturists with 5 yr degree level training & over 10 yrs experience	Perennial allergic rhinitis (PAR)	Standardised: Ear acupressure (EAP) via stainless steel pellets, applied by practitioner, weekly, on 5 points [Shenmen, Internal nose, Wind Stream, Adrenal] & pressed by patient 3 times a day for ~ 10 seconds	Standardised Sham Treatment: EAP via stainless steel pellets, applied by practitioner, weekly, on 5 points not typically used to treat PAR & pressed by patient 3 times a day for ~ 10 seconds	Primary: Reduction of nasal & non-nasal symptom scores Secondary: QOL, change of relief medication usage, credibility of blinding Time points: Baseline-8 wks, 12 wks	Improved (in real EAP group compared to sham): Sneezing score (-0.39 [0.77, -0.01]); Runny nose score (-0.51 [-0.92, -0.01]); Total nasal symptom score (0.49 [-0.87, -0.10]); eye symptom score (-0.36 [0.67, 0.05]); QOL (0.50 [0.17, 0.83])	CONSORT: High

Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Zhang et al. (2012) <small>161</small>	USA	Clinic and community settings in West Texas metropolitan area & participant's home/private setting	RCT (feasibility study)	None	12 weeks	Postmenopausal women with knee OA (n=36)	Training material, including DVD, developed by licenced acupuncturist (in which state is unspecified)	Knee osteoarthritis (OA)	Standardised: Self-acupressure routine (10min) [8 local acupoints] + warm up, rubbing kneecap, gentle movement (9 min), 5 x week, for 12 weeks	Usual care	Primary: Feasibility of training self-acupressure to women with knee OA Secondary: Pain, stiffness, function (WOMAC); QOL (SF-36) Time points: Baseline, 6, 12 weeks	Self-acupressure for postmenopausal women with knee OA is easy to learn and safe to perform at home No statistically significant results observed for clinical outcomes.	CONSORT: High

Zick et al. (2011) 176	USA	Participant's home/private setting & study clinic	RCT (pilot study)	Sing le blind ed	12 weeks	Adult cancer patients with persistent moderate to severe fatigue (n=43)	Acupressure practitioner with at least two years actively seeing patients, various degrees (ND, TCM, L.Ac, Dipl Ac.)	Cancer-related fatigue, persistent (PCRF)	<p>Standardised #1: Self-acupressure: Relaxing [YT,Anmian,HT7, SP6,LR], 27 min total; x 2 day, for 12 weeks</p> <p>Standardised #2: Self-acupressure: Stimulating/ High Dose (HIS) [ST36, SP6, KI3, LI4, CV6, GV20]], 30 min total; x 2 day, for 12 weeks</p> <p>Standardised #3: Self-acupressure: Stimulating/ Low Dose (LIS) [ST36, SP6, KI3, LI4, CV6, GV20]], 30 min total; 3 x week, for 12 weeks</p>	None	<p>Primary: Fatigue (BFI)</p> <p>Secondary: Assessment of blinding, treatment compliance</p> <p>Time points: BFI: baseline & wks 1-12; treatment compliance: daily; beliefs & expectations: baseline, wk 12</p>	<p>Improved: Reduction in fatigue in all groups: RA 4.0±1.5, HIS 2.2±1.6, LIS 2.7±2.2; Self-administered RA caused greater reductions in fatigue compared to either HIS or LIS.</p>	<p>CONS ORT: High</p>
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Author & year	Country	Setting	Study design	Blinding	Duration	Participants	Practitioner Training	Conditions examined	Intervention: Self-care component (Standardised/Individualised)**	Control	Outcome measures	Summary of findings	Data Quality*** (Instrument/Rating)
Zick et al. (2016) <small>163</small>	USA	Participant's home/private setting	RCT	Single blind	10 weeks	Breast cancer survivors (n=288)	Acupressure educator, trained by acupuncturist with NCCAOM certification (min. 4 academic years of training) ¹⁷⁴	Cancer-related fatigue	Standardised #1: Self-acupressure: relaxing [YT,Anmian,HT7, SP6,LR3], 3 min per point; x 1 day, for 6 weeks Standardised #2: Self-acupressure: stimulating[GV20, CV6,LI4,ST36,SP 6,KI3], 3 min per point; x 1 day, for 6 weeks	Usual care (UC)	Primary: Fatigue (BFI) Secondary: Sleep quality (PSQI); QOL (LTQL) Time points: QOL: baseline, 6 weeks [end of treatment]; 10 weeks; BFI: baseline & weeks 1-10	Improved: Sleep Quality (significantly lower PSQI) with acupressure at week 6; QOL significantly improved to UC with relaxing acupressure at week 6 & 10.	CONSORT: High

There was a notable lack of blinding in twelve of the RCTs, however, this was largely reflective of the design of these trials as either pragmatic studies assessing a routine clinical practice^{11,154,155,158} or as studies directly assessing self-care techniques.^{139,141,142,144,145,148,151,159} Other items which scored weakly against the CONSORT include seven trials failing to detail how sample size was determined,^{11,145-147,150,151,157} a number of studies failing to detail the method used to generate,^{11,146,150} and type,^{141,146,150,151,157,159,161} of randomised allocation sequence applied and eleven of the RCTs failing to define dates of recruitment and follow-up.^{140,142,143,145-147,150-152,155,157} There was a notable lack of reporting on harms, with nine of the RCTs failing to mention whether there had been any adverse events.^{11,140-143,145,146,150,157} Seven of these were acupressure studies, one comprised of both acupressure and acupuncture,¹⁴¹ and one was a secondary analysis.¹¹ Clinical trial registration also rated poorly with thirteen RCTs being un-registered bringing into question positive reporting bias.^{11,141,145-148,150-152,157,159,161,162}

The case studies^{164,165} and case series¹⁶⁶ rated well against CARE¹³⁶ (Supporting Information B), however, all failed to clearly identify study methodology in their report title, as well as failed to comment on adverse events. The clinical audits and hospital survey varied in reporting integrity, when assessed against STROBE¹³⁷ (see Supporting Information C), which was chosen as being the most relevant reporting guidelines published for such studies, however, it may be that STROBE is not adequately reflective of the nuances of clinical audits. The longitudinal descriptive study rated well against STROBE.

There were also three qualitative studies; the first investigating the experience of practitioners and patients,¹⁷² in one of the included self-acupuncture RCTs,¹⁵⁵ and the other two studies exploring TCM self-care advice as a component of traditional acupuncture care, from both the practitioner³⁵ and patient¹² perspective, within a pragmatic RCT. These studies failed to comply with certain items in the COREQ guidelines,¹³⁸ with key information missing in all studies, in relation to the research team and any potential pre-existing relationships (Supporting Information D).

2.2.3.5 Categorisation of findings

Four key areas emerged in relation to the TCM self-care components evaluated within the included studies: *self-acupressure; self-acupuncture; self-moxibustion; adoption of prescribed lifestyle, diet and exercise advice based on a TCM diagnosis*. One study incorporated both self-care advice and self-acupressure, thus falling into two of the categories.¹⁴¹

Self-acupressure

The self-care component of TCM most commonly investigated was self-applied acupressure (n=23), assessed in relation to a biomedically diagnosed condition;^{139-148,150-153,156,157,159-163,166,171} this included one study on self-*shiatsu* (a Japanese variation of TCM acupressure techniques)¹⁶⁶ and one examining self-applied *tuina* (TCM therapeutic massage).¹⁵⁷ All but two of the acupressure studies^{166,171} were RCTs.

Conditions investigated in the acupressure studies varied widely (Table 2). Five studies examined women's health issues,^{141,142,144,156,159} four studies assessed acupressure in relation to mental state and/or quality of life (QOL),^{143,147,162,163} three studies examined quality of sleep for sample groups with chronic pain,¹⁶⁶ a diagnosis of cancer¹⁴⁸ and for women going through menopause,¹⁴⁰ with other studies assessing gastrointestinal complaints,^{139,146,150,171} skin conditions,¹⁵¹ allergic rhinitis¹⁶⁰ and addiction withdrawal.¹⁴⁵ Only four of the 20 acupressure studies evaluated musculoskeletal conditions,^{152,153,157,161} with two of these being feasibility studies primarily examining recruitment and retention rates.^{152,161}

Of the self-acupressure RCTs, three were double-blinded^{146,152,153} and seven single-blinded.^{140,143,147,157,160,162,163} Sample size ranged from 7¹⁴⁸ to 288 participants¹⁶³ with average sample size being 110 participants and over half the studies comprising of 100 participants or more.^{139-144,146,152,153,159,160,163} Duration of intervention ranged from 3 days¹⁴⁷ to approximately 3 months,^{143,145,161,162} with the average intervention time being 6 weeks.

Four of the self-acupressure RCTs prescribed an intervention based on an individualised diagnosis.^{141,143,148,157} Individualised *tuina* protocols, based on a differential TCM diagnosis ascertained by an experienced practitioner, were prescribed in a study examining playing-related musculoskeletal disorders in musicians, in Portugal.¹⁵⁷ Dietary recommendations were also made based upon an individualised TCM diagnosis in an Italian study.¹⁴¹ In evaluation of self-acupressure on stress, depression and QOL in ischaemic heart disease patients, one study incorporated daily self-assessment via testing pressure pain sensitivity (PPS) at certain acupuncture points.¹⁴³ After gauging PPS, a standardised self-acupressure treatment was then only applied if indicated and in an ear-acupressure study conducted in the UK, auricular points were added to standardised points, from a small subsample, according to weekly symptoms.¹⁴⁸ Remaining studies prescribed standardised acupressure point protocols according only to the pre-defined biomedical symptom or condition.

All excepting one,¹⁴¹ of the acupuncture RCTs which examined a specific condition (n=17) concluded positive findings^{139,140,142-148,151,153,157,159,160,162,163} or a trend towards improved health outcomes.¹⁶⁶ In some cases, however, conclusions were tentative due to study limitations which included small sample sizes^{145,147,148,151,157} and a lack of blinding (n=10).^{139-142,144,145,148,150,159,161} Although some studies compared two active acupuncture protocols,^{147,153,157,159,162,163} over a third (n=8) compared the primary intervention with usual care only^{143-146,148,151,156,161} or to baseline data.¹⁶⁶ Five studies included a sham acupuncture intervention, as a second^{140,152,153,157} or primary control arm,¹⁶⁰ incorporating the use of acupuncture points away from the recommended study protocol. The study which reported no benefit in self-acupuncture compared individualised TCM diet and self-acupuncture for those on a wait list, for the same protocol with the addition of acupuncture.¹⁴¹

Self-acupuncture

The majority of studies examining self-acupuncture protocols were UK based, with four studies evaluating outcomes of existing self-acupuncture protocols, being prescribed by GPs,¹⁶⁷ nurse pain specialists¹⁶⁹ or other hospital staff,^{168,170} in a GP practice and general hospital settings respectively, via post-treatment audits. One study documented a single case study of GP-prescribed self-administered acupuncture, with the addition of electro-stimulation, for a severe pain presentation¹⁶⁵ and a qualitative evaluation,¹⁷² nested within a multi-site RCT,¹⁵⁵ examined the practitioner and patient experience of teaching and adopting self-acupuncture as an intervention protocol. An American study documented a single case of daily self-administered laser stimulation on acupuncture points with the addition of disposable press needles.¹⁶⁴ All of the self-acupuncture studies assessing pain outcomes^{165,167-169} reported positive findings, with the qualitative study concluding self-acupuncture to be an acceptable and manageable intervention for patients.¹⁷²

Self-moxibustion

One RCT undertaken in Uganda examined the health outcomes of newly diagnosed tuberculosis patients, who self-administered rice-grain-size moxibustion daily, for six months, to the moxibustion point ST36, in combination with standard TB drug therapy.¹⁴⁹ Patients were trained in the moxa application, at their first visit, by the designated TB nurse.¹⁴⁹ Improved outcomes in becoming sputum negative were seen

in the moxa group in the first month and a significantly larger improvement in haemoglobin levels were noted in the moxa group at six months.¹⁴⁹

Adoption of prescribed lifestyle, diet and exercise advice based on a TCM diagnosis

Three studies, with results published in six papers, examined interventions which incorporated a TCM whole system approach to care.^{11,12,35} All based in the UK, the first examined, in addition to pain and disability outcomes, self-care efficacy and TCM lifestyle advice acted upon by patients,¹¹ following 12 sessions of treatment, within a pragmatic three-arm RCT for chronic neck pain, via practitioner reporting.¹⁵⁴ The second examined, qualitatively, the perspectives of participants,¹² in relation to self-efficacy and the TCM treatment provided, within the same RCT,¹⁵⁴ and the third study examined, from the practitioner perspective, descriptions of TCM self-care advice provided, as well as the TCM rationale, adopted strategies to improve uptake, and expected impact upon patient health,³⁵ within an RCT investigating traditional TCM-delivered acupuncture for back pain.¹⁵⁸ In both of these trials, self-care advice was individualised, integrated with TCM diagnostics and delivered as an inherent part of each treatment session, with practitioners reporting that advice was most commonly related to exercise, relaxation, diet, rest and work.¹¹ One of the self-acupressure studies, conducted in Italy, also incorporated aspects of a whole-system approach, with the two arms of the intervention comparing self-acupressure combined with differentiated TCM dietary modifications, with the same intervention alongside standardised acupuncture.¹⁴¹

2.2.4 Discussion

This review provides an overview of the known published research examining TCM self-care practices in cultural contexts outside of Asia, other than Qigong and Tai Chi. A number of important findings are highlighted in this review which warrant further consideration.

2.2.4.1 The limited number of TCM self-care studies in context of the broader TCM field

Firstly, a relatively low number of studies on TCM self-care practices have been published. This is surprising given the high rates of TCM use globally,^{177,178} reflected not only in number of consumers but also in national registration of traditional Chinese medicine as a health profession in numerous countries outside China, including national registration in Australia,¹⁷⁹ state registration of acupuncture in over 46 states in the US^{180 181} and provincial regulation of TCM and/or acupuncture in five Canadian

provinces, as well as significant recognition in other countries. Furthermore, there appears to be relatively little attention to holistic approaches to treatment in these studies. All but four of the studies,^{11,12,35,141} based their self-care intervention on acupuncture points or channels, rather than implementing and/or assessing a broader interpretation of TCM self-care. It may be that the promising body of evidence emerging from the research into acupuncture,³⁹ has placed 'acupuncture' (and its meridian architecture), in application as well as in language, in a highlighted position in relation to the perception of what it is that comprises holistic TCM healthcare. This focus has potentially placed in the background an interest in utilising, and assessing the value of, broader self-care aspects of TCM and foundational Chinese medicine philosophy and practice, despite their traditional place as being considered highly important for patient recovery, prevention of illness and long-term health.¹ Further to Tai Chi and Qigong, which falls outside the scope of this review, these broader aspects can include maintaining daily rhythms in line with twenty-four hour and seasonal cycles, supporting metabolism and immunity through dress and hygiene practices, and adjusting diet according to individualised differentiation and seasonal change.^{4,97} A focus on single therapies and treatments, outside of a TCM context, may not be congruent to the stated focus of TCM on holistic and patient-focused care. Its increasing use in research contexts may be related to the fact that single therapies are easier to integrate into other existing programs and into the design context of a randomised controlled trial, even if they may not be representative of TCM care in clinical practice.¹⁸²

2.2.4.2 Evaluation of TCM self-care practices within a whole system of care approach

Individualisation of treatment in TCM is also overlooked by most studies, even though it remains a core element of TCM practice. Of 37 articles retrieved, only three evaluated an individualised intervention delivered within TCM as a whole system of care,^{11,12,35} and only a further three applied an intervention based upon an individualised TCM diagnosis.^{141,143,157} In countries where professional registration is in place for TCM, registration standards require practitioners to undertake years of training, not only in acupuncture as a symptomatic treatment approach, but in TCM as a complete system of diagnosis and care, based in the constructs and paradigm of the medicine.^{179-181,183} Moreover, this ignores contemporary developments in practice of TCM such as individualised TCM diagnosis being codified for inclusion in the newest update of the International Classification of Diseases¹⁸⁴ and the fact that this

individualised approach has been repeatedly identified as one of the primary reasons that patients are attracted to complementary medicine approaches such as TCM.¹⁸⁵ This comprehensive and individualised approach is, however, only sparsely reflected in research methodology in studies examining TCM. Future research could more accurately assess the impact of TCM interventions as they occur in 'real-world' practice settings, if designed in line with flexible individualised diagnoses, adapted according to the patient's real-time presentation, as is the recommended practice for those who are professionally accredited in the field. With this in mind, researchers may benefit from employing the pragmatic clinical trial methodology¹⁸⁶ to interrogate TCM interventions.

2.2.4.3 Positive findings and the relationship between health, self-efficacy and self-care

Despite these limitations, there appears to be a promising emergent body of evidence for TCM self-care approaches. Of the TCM self-care studies which assessed health-related outcomes the majority concluded positive findings (n=24).^{11,139,140,142-145,147-149,151,153,157,159,160,162-167,169,171,187} However, there may be some issues with generalisability: only three studies^{11,12,157} prescribed an intervention based upon an individualised differential TCM diagnosis suggesting that, in similarity to acupuncture studies³⁹ effect size may be misrepresentative due to the limitations inherent in applying standardised intervention protocols. Such limitations include the simplification of more complex diagnoses¹¹ to align with the current practice and language of biomedicine, as well as the simplification of the TCM intervention itself, in order to allow replication and ease of assessment within the context of clinical trials. Nevertheless, the promising results of studies in this review suggest that further investigation of TCM self-care approaches in broader healthcare settings is warranted. Incorporation of individual TCM therapies within a whole system context appears to improve results of those treatments. In an analysis of patients receiving acupuncture treatment in context of a whole system of care approach, patients were found to have increased their self-efficacy, and for there to be an association between increased self-efficacy and significant reductions in pain and disability in relation to the condition assessed at 6 months post-intervention.¹⁵⁴ In secondary analyses of the same study, self-care advice provided by practitioners was most commonly related to exercise, relaxation, diet, rest and work,¹¹ with patients identifying a positive practitioner relationship, as well as a developing sense of embodiment and self-empowerment, as factors which contributed to sustaining long-term benefits.¹² In addition to self-efficacy,

a German study, outside of the citations included in this review, assessing an integrative medicine inpatient program (n=2,486), concluded that patients' stage of change, as well as their health locus of control (HLOC), that is, their beliefs in relation to control of health outcomes, were all predictors for health behaviour change.¹⁸⁸

This relationship between beliefs, understanding of one's health and improvement in self-efficacy is of interest relative to TCM self-care, which aims to engage the patient in an element of understanding as to why a certain practice may be affecting their health positively or adversely. This aspect of sharing knowledge and imparting understanding, within the TCM consult, may therefore encourage the patient to increase their internal HLOC in order to affect behaviour change. In a pragmatic UK study of self-care communication in TCM acupuncture consults, self-care advice was seen by practitioners as being integral to the patient's treatment and was found to be delivered in the context of a therapeutic relationship based on continuity, mutuality and trust,³⁴ thus providing ongoing support in the potential encouragement of self-efficacy. These findings of improved self-efficacy are similar to the results of a New Zealand study which examined the impact of self-care advice on patients receiving acupuncture for primary dysmenorrhoea.¹⁰⁰ Study participants reported that they felt the self-care advice received during appointment visits had been related to both an increase in self-efficacy and positive outcomes in relation to symptom control. These findings suggest that health promotion activity is intrinsically built into contemporary TCM practice – just as it was in historical TCM practice – even when TCM care is not specifically targeting self-care. These positive results suggest that this aspect of TCM care should be encouraged and supported through education and regulation initiatives, which can sometimes favour competency in individual treatments over holistic medical paradigms.¹⁸⁹

Also of interest is the finding in the acupressure self-care study, included in this review, which examined the effect of acupressure on cervical ripening at the initiation of labour, wherein Bishop scores were found to be significantly higher in the group where the acupressure was self-administered compared to when it was nurse-delivered.¹⁵⁹ Such a finding suggests that an increased internal HLOC may have improved patient outcomes in the self-acupressure group beyond the effects of the intervention itself and thus, provides a case for further investigation into the comparison of practitioner-applied, or patient-applied, interventions. Future research involving TCM self-care (and self-care more generally) should thus consider HLOC as a mediating factor upon study outcome and could consider including comparative interventions with HLOC as a control.

2.2.4.4 TCM self-care studies and the issue of safety

The majority of studies in the review assessed a standardised treatment protocol in relation to a pre-defined biomedical condition.^{147-153,155,156,159-165,168-171,190} Such an approach allows for the design of rigorous study methodology which can be more readily replicated and assessed in an RCT, however, brings with it the limitation of lacking the prescription of individualised diagnoses and treatments, which are the traditional and existent design of delivery for those practicing TCM, including in countries with legislated TCM registration in place.¹⁷⁹⁻¹⁸¹ It must therefore be carefully considered, whether such trials which are designed with symptomatic prescriptions, be they in acupuncture, herbal medicine or self-care techniques, are truly assessing a holistic TCM approach, or rather, simply assessing a singular TCM technique within a compromised context that may not accurately reflect real-world practice.

Further to this issue, is the concern of patient safety, beyond the baseline observations of soreness, bleeding, bruising or skin irritation at an acupressure or acupuncture site. With varying research-based evidence to indicate that acupuncture affects numerous internal systems, including the hormonal, circulatory, respiratory, and musculoskeletal systems,^{39,191-196} the ethical stance of applying standardised treatment, without assessing the patient's entire presentation, must be considered. In the context of this review, TCM treatment – whether practitioner-applied or self-applied – which is not carefully aligned with a comprehensive TCM diagnosis may place the subject at risk of adverse treatment effects, when viewed from the perspective of TCM. Although some studies indicate that individualised TCM treatment protocols are not superior to standardised interventions in relation to the primary condition examined,^{197,198} it must be noted that treatment outcome measures in these studies rarely extend to include other concomitant changes in baseline health status. Furthermore, slow and gradual changes would not warrant being noted as adverse events and positive changes in another aspect of the patient's health are not, in most RCTs, recorded unless pre-determined by the research team.

2.2.4.5 Individualised diagnoses VS simple TCM self-care approaches

The majority of studies reviewed applied a version of TCM self-care, similar to that of a prescribed standardised intervention, such as in the case of acupressure being applied to three set acupuncture points for patients with dysmenorrhoea.¹⁴⁴ Broader lifestyle approaches, which draw on a TCM perspective, however, aim to impart understanding, along with a lifestyle change, which has the potential to improve self-

awareness and self-efficacy.¹⁵⁴ For example, a TCM practitioner may recommend eating warm foods prior to and during a woman's menses, in line with the concept of encouraging improved blood flow and circulation, thus potentially leading to less menstrual pain;¹⁰⁰ advice which can be tailored further based upon the patient's presentation. Thus, it is the case that both, individualised advice and prescriptions can be recommended from a TCM perspective, as would occur in a real-world clinical setting and that general TCM concepts can be employed as self-care.

2.2.4.6 Review limitations and future areas of research

The findings of this review need to be considered within the context of certain limitations. Firstly, the retrieved articles for this review have been selected with a specific focus on self-reported TCM care practices engaged with by the patient, outside of Qigong and Tai Chi, as well as outside of Asia and Asian communities, employing search terms based upon categories used in the literature. However, despite our attempts to be as exhaustive as possible within the scope of the research question we acknowledge that this focus may have inadvertently resulted in some articles being missed, such as those which did not specifically identify as TCM or East Asian Medicine, as well as articles with broader scope, which may have incorporated a whole systems approach and individualised treatment. Thus the focus has landed primarily on physical activities undertaken by the patient, potentially resulting in the clustering of papers on self-acupressure and self-acupuncture. Secondly, the relative simplicity and degree of cultural integration of many TCM and foundational Chinese medicine self-care practices, even in settings outside of Asia, suggests that analysing these components in individual parts may provide a limited perspective on the topic. Future research could consider an approach which compares individual self-care components with existing cultural practices in context and the potential role such practices play in the overall health of an individual or community.

2.2.5 Conclusion

The positive findings indicated by results of studies into TCM self-care, in settings outside of Asia, beyond the sole practices of Tai Chi and Qigong, suggest a potential benefit from such practices and that this field warrants further investigation. The limited amount of research retrieved does not allow for definitive conclusions on the effectiveness of TCM self-care interventions. However, the trend towards positive results in the trials uncovered suggest potential benefit of TCM self-care practices, which, if assessed with greater validity in a real-world context, could potentially provide

benefit to health outcomes in community and population health programs, or be incorporated into health promotion initiatives. TCM self-care practices may also increase long-term health outcomes by increasing the patient's level of self-awareness, and internal health locus of control, thus leading to long-term health-related behaviour change.

2.3 Chapter summary

The literature to date examining TCM self-care techniques in settings outside of Asia has primarily focused on therapy style interventions. These interventions include self-moxibustion, self-acupressure and self-acupuncture, in which the patient steps into the role of self-management and applies the therapeutic intervention to themselves. This approach has the advantage of being highly cost-effective and has the potential to enhance patient self-empowerment and self-awareness. Self-applied treatments are limited, however, in most instances, by the patient relying on a diagnosis and prescription which is predetermined for the course of treatment and is usually not adjusted if and when their presentation changes. A broader application of TCM self-care techniques is identified in studies evaluating the prescription of TCM dietary and lifestyle recommendations, delivered within the context of a traditional acupuncture treatment. These prescriptions incorporate a holistic TCM diagnosis and prescription and may be responsively updated to the individual at each appointment, yet are limited to being prescribed to patients already attending the acupuncture clinic. Furthermore, some of the TCM lifestyle intervention studies found by this review, included both acupuncture and lifestyle advice, and lacked a control group to separate interventions, therefore the positive findings may relate to either aspect of intervention.

The limited number of studies, found by this review, which adopt a whole-system of care approach to self-care based upon Chinese medicine concepts, highlight the need to assess further examples of such interventions. The need for evaluation of similar programs is further reflected in the positive trend seen in the TCM self-care studies, especially in relation to patients' sense of self-awareness and patterns of long-term health behaviour change. The study undertaken in this thesis will assess an example of such a program, evaluating participant, practitioner and staff experiences of the program and outlining any perceived health outcomes.

3. METHODOLOGY

3.1 Chapter introduction

This study aimed to explore the experience of participants, staff and practitioners of a CCM program, with a focus on self-care, which was delivered in regional Scotland. In order to capture data based upon experience, a qualitative research approach was followed.¹⁹⁹ Details on the approach to data gathering, analysis, study sample and setting are provided below.

3.2 Qualitative health research

The process of qualitative analysis aims to examine and interpret descriptive accounts, which may be related to perceptions, behaviours or values,¹⁰ in order to 'elicit meaning, gain understanding and develop empirical knowledge'¹⁹⁹ One method of gaining descriptive accounts, utilised in qualitative health research, is that of in-depth interviewing, which is characterised by the researcher having a guided conversation with the subject or bringing up topics for discussion using open-ended questions.²⁰⁰ This type of research methodology is well-suited to exploring the subjective experience of patients or participants, in a social context, as well as appropriate for examining organisational culture.²⁰⁰ Such an approach is also appropriate for examining processes, which may be generalizable to other settings, although the specifics of the site or sample may not be.²⁰⁰ Limitations to this methodology include consideration of the biases of those providing the narrative data, as well as consideration of the perspectives of the researchers guiding data collection and coding, analysing and presenting the findings.²⁰⁰ Such limitations can be countered through adherence to well-defined research protocols, as well as through the inclusion of multiple narrative perspectives.²⁰⁰

One qualitative research approach, which is more deductive than some qualitative approaches, is the *Framework Approach*.²⁰¹ This applied research approach draws from the direct experience and observations of those studied, such as through narrative data, however, allows for the objectives to be set out in advance.²⁰¹ The data analysis process then follows a sequence of *data familiarisation; identification of a thematic framework; indexing; charting; and mapping and interpretation*.²⁰¹ Through this process themes are identified, and the range of experiences and thematic associations mapped, in a structure which is both directed by the research objectives as well as by findings that emerge directly from the data.²⁰¹ This approach is designed such that the process and interpretations are systematic and

can be viewed by others beyond the primary researcher, as well as tends to be conducted in shorter timeframes than other social research processes.²⁰¹

3.3 Settings and sample

3.3.1 Study setting

A privately funded non-government organisation, based in the highlands of Scotland, UK, developed a program based on CCM concepts with aim to offer a supportive arm of accessible health care to the community. Central to the program's approach was a focus on lifestyle change; conveying simple daily skills and increased understanding to participants within a CCM framework in order that they may be empowered to better manage their own health. The program was conceived of and initially developed by a local organisation, who stated their aims to be linked with improved health, economic and environmental sustainability and social connectivity. This organisation had been involved in a number of local community projects, over the prior seven years, including working with the local Transition Town project (aimed at local sustainability and environmental protection), establishing an annual Chinese New Year festival, working with local council-funded projects focused on health and living well and holding a number of international conferences.

Of the team initially developing the project, three were Chinese medicine practitioners, who worked together with the program manager, who came from a non-health related, managerial background. Two of those Chinese medicine practitioners became directly involved with delivering the project. These two practitioners also had an existing network within the local region, as they had private acupuncture practices, and had been involved with teaching Chinese medicine lifestyle and qigong practices, in small class settings, for the aforementioned local organisation. The CCM program, however, when rolled out, was established as a separate entity to that of the organisation, was based in a professional suite, within university buildings, in a nearby town and acquired an additional roster of staff to market and deliver the program.

The CCM program, which was designed as a three-month undertaking, was delivered through a membership approach which provided open access to numerous face-to-face hour-long classes being held at the program centre throughout the week. The majority of classes and the introductory content, which every participant engaged with, were based on a core CCM teaching, which focused on adjusting periods of rest and activity to align with the natural rhythm of the day: for example:

aerobic exercise, a brisk walk or outdoor qigong practices, were recommended for the morning; resting in a lying down posture, combined with abdominal breathing, was recommended following the midday meal; and a gentle stretch or quieter activities were encouraged in the evening. In addition to this, concepts of working with temperature to balance the body were included, both through diet and liquid intake, as well as linked with practices such as taking a hot water foot bath before bed.

Also on offer were classes in Western-style fitness and stretching, which were recommended as a part of the before midday activities, as well as less regular, yet more detailed, classes on topics of interest, such as CCM dietary approaches and different uses of daily drinking teas relative to health. Classes on CCM dietary approaches, for example, were described by program staff as classes which shared information on the CCM nature (such as neutral, cooling or warming) and flavour of foods (such as acrid, sweet, bitter, sour, salty or bland)⁴⁴ along with the theoretical associated effects of on health for such qualities. Membership also included access to low-cost acupuncture and bio-resonance treatments, however only if participants elected such treatments. Acupuncture was delivered by university-trained and British Acupuncture Council registered acupuncturists. Bio-resonance treatments were delivered by a practitioner trained in bio-resonance therapy, a treatment which utilises electromagnetic waves, via use of a machine, in response to the endogenous electromagnetic oscillations within the patient.²⁰² All participants attended a one-on-one monthly appointment with one of the centre's practitioners. During this appointment practitioner and participant would co-create a written individualised health focus and implementation plan for the participant for the coming month. Attendance at all classes and/or appointments, following the introductory class, was at the participant's discretion.

The organisation ran three pilots between November 2015 and September 2016. The initial program had 50 participants enrol, with smaller numbers on the subsequent two programs, which had a focus on digital monitoring and diabetes support respectively. The initial and second pilots focused on a general recruitment of those in the community who were interested in improving their health and being a part of the initiative. A small number of participants from the original program continued during the subsequent programs. Digital monitoring was achieved in the initial pilot via a wristband fitness tracker, Jawbone, worn by participants for up to 3 months, which were designed to track periods of rest and activity. On the subsequent two pilots digital monitoring was achieved via monthly readings from a

biometric machine, based in the clinic. On the last pilot, small, printed booklets, designed by the program staff, were provided to participants, which provided an overview of the basic CCM concepts and included a daily diary for self-tracking. The shift in focus, from general recruitment, to those living with diabetes, was described by CCM staff as a recommendation from their funding body.

For a detailed overview of the CCM program, please also see the template for intervention description and replication (TIDieR) checklist and guide, as designed by the EQUATOR network.²⁰³ (Appendix J).

3.3.2 Program participant sample

A list of program participants who had indicated they would attend interview (n=12) was provided to the researcher by the program manager. This list was compiled from an original thirty-one participants who were contacted individually, by the program manager, in October 2016. Of the twelve who agreed to attend interview, two of these were later unable to attend due to inconvenient scheduling, leaving ten interview participants. Follow-up and refinements to interview time and date were done by email, or via text message, by either the program manager or researcher. An eleventh interview was arranged informally, by direct contact between the participant and researcher, due to a coincidental meeting and discussion of the project, on the week of data collection. Due to the pragmatic nature of the study, working via the program manager in order to contact the other previous participants of the program, was a necessary constraint of participant recruitment in this study.

3.3.3 Program staff and practitioner sample

Staff of the program (n=9), referred to the researcher by the program manager and other key staff members, were contacted directly by the researcher (AH), by email, in September-October 2016. Three additional ancillary staff members were not contacted due to being no longer in contact with the organisation at the time of interviews. Of those contacted seven agreed to attend. Follow-up and refinements to interview time and date were done by email, or via text message, directly by the researcher. Due to the pragmatic nature of the study, recruitment of participants from the staff and practitioner cohort, was limited to those referred on by other staff and/or the program manager.

3.3.4 Interview venue and duration

Interviews were 25 to 70 minutes in duration, reflecting the breadth and depth of variation and amount of information each participant had to share. Interviews were primarily conducted in person at local venues which allowed ease of access for the interview participants. These venues included cafes, a meeting room at the organisation and in one case, the participant's workplace. At the café settings other patrons were often present at nearby tables. At the other settings, however, only the interviewer and participants were present, excepting in the case of two children, in attendance at separate interviews, both under 8 years, who were present as they were in the care of study participants. Two interviews were conducted by phone. All interviews were conducted between 31 October and 5 November, 2016.

3.3.5 Researcher background and relationships

The core content of the program delivered was known to the female researcher (AH), due to having previously worked and studied with the program director. This background allowed for insight into the reflections of participants as well as provided an opportunity to clarify feedback from a shared viewpoint. The researcher had a background of 20 years' experience in studying and practicing Chinese medicine and is a registered Chinese medicine practitioner and educator in Australia.

3.3.5.1 Program participants

The majority of program participants met the researcher for the first time at interview, with the exception of the researcher having been previously introduced to two program participants, by a program staff member, at the outset of the final phase of the program, in June 2016. A pre-existing professional relationship as co-workers had also existed between the researcher and two other program participant interviewees, two years prior to the study, for a period of 8 months. All study participants were made aware of the researcher's role as a post-graduate research student; however, they were only made aware of the researcher's background in Chinese medicine if it emerged as a relevant point of reference within the course of interview.

3.3.5.2 Program staff inclusive of practitioners

The majority of staff interviewed were introduced to the researcher three months prior to interview, with the exception of two online meetings and brief email communication between the researcher (AH) and program manager, six to twelve

months prior. Additionally, a pre-existing professional relationship as co-workers existed between the researcher and two staff interview participants, for a period of eight months, two years before the study.

3.3.6 Interview structure and administration

Due to the small sample of CCM program participants and the personal nature of the evaluation, the researcher aimed to conduct interviews in person wherever possible. Face-to-face interviews are an established method of data collection in qualitative research and allow the interviewer to observe and respond to expressions, body language and other cues in order to guide the process.²⁰⁴ During the interview process participants were provided opportunity to describe issues and experiences in their own words and were encouraged to discuss any relevant topics in relation to the program. Semi-structured interview questions were referenced only by the researcher during interviews (Appendix B, C). Interviews were recorded via a digital recorder, later transcribed verbatim by a transcription service and then re-checked and edited by the interviewer to ensure accuracy. Field notes were made during interviews, however, were primarily used to note prompts for further questioning on comments of interest rather than used as additional data. Repeat interviews were not carried out and transcripts were not returned to participants for comment or correction.

3.4 Data analysis

Transcribed interviews were imported into NVivo 11 data management software. A *Framework Approach*²⁰¹ was used (by AH and AS), to analyse data from the set of 18 semi-structured interviews conducted with participants (n=11) and staff (n=7) of the CCM program. The approach to data analysis, is often applied in health research,^{212,213} and allows themes to emerge from the original accounts of those studied, whilst still outlining the research objectives in advance.¹⁹² In line with a qualitative research approach, insights drawn from the data were provided further depth by the inclusion of quotes in order to convey participants' perspectives inclusive of detail and individual nuances. Quotes have been specifically selected which clearly summarise comments made by a number of participants or which highlight a key point of comparison, or finding of interest, as detailed in the written data summary.

3.5 Ethical considerations

Ethics approval for the study was granted by University of Technology, Human Research Ethics Committee (registration number ETH160459) and the study was conducted following the guidelines of the Declaration of Helsinki and Tokyo for experiments involving humans. Informed written consent was obtained from all interview participants. Interview data was accessed by the primary researcher only, with the exception of transcription assistance for which all data was already de-identified to ensure anonymity of participants. The written information supplied to each interview participant included contact details of all members of the research team and detailed aspects of the project for participants. Copies of ethical clearance, participant information sheet and participant consent form, can be found in the Appendix (D, E, F).

3.6 Chapter summary

This thesis adopts a qualitative research approach to explore the perceptions and experience of staff and participants engaged with a CCM community health program, run in a rural Western setting. Through data obtained from staff and participant interviews, using a *Framework Approach*,²⁰¹ the key directives of the research project were able to be evaluated, whilst also allowing for themes to emerge directly from the overall experience of program participants. In this way, by listening to those directly involved, both from the participant needs perspective and the delivery perspective, a multi-faceted evaluation of the program was obtained.

4. RESULTS – Classical Chinese medicine self-care: Participants' perspectives on a pilot program for community health

4.1 Chapter introduction

4.1.1 Qualitative data on the participants' perspective

This chapter details a qualitative evaluation of the CCM self-care program from the participants' perspective. Health care services are designed to meet the needs of individuals in society, most commonly those seeking support, guidance and/or treatment, in their health objectives. Thus, the views and experiences of those directly interfacing with health care programs can provide valuable insight into program shortfalls and points of value and have a place in program evaluation. In order to explore the participants' experience of this program, one-on-one, face-to-face or telephone interviews were undertaken and thematically analysed.

4.1.2 Publication of results

The written content comprising this chapter forms the majority of a paper which has been published as follows:

Harvie, A, Steel, A & Wardle, J. Classical Chinese medicine self-care: Participants' perspectives on a pilot program for community health. *EurJIM* 2020; Aug; 37

A copy of the full manuscript can be found in the Appendix (H).

4.2 A qualitative study on integrating CCM in community health focusing on a self-care approach: the participants' perspective

4.2.1 Introduction

In line with global trends, the prevalence of non-communicable disease (NCD) in the United Kingdom (UK) has increased in recent years,⁹¹ with most significant economic and social burdens from cardiovascular disease, cancer, chronic respiratory diseases and diabetes.²⁰⁵ As a result of these trends, UK national and public health services are calling for: new ways in which to engage the public about their health; the development of acceptable, affordable and scalable health care programmes; and the creation of a health culture that is “knitted into the fabric of our day-to-day routines”.²⁰⁶ For patients living with chronic illness and NCDs, the addition of self-care practices such as adopting dietary changes^{207,208} and improving exercise

routines,^{90,93,94} have been shown to lead to improved health outcomes. Self-care practices for the individual are also typically interwoven with a sense of self,^{188,209} close relationships and/or support networks²¹⁰⁻²¹² and with the community in which one lives. These latter features are particularly noteworthy given social connection,^{90,210,213,214} a positive community environment,^{215,216} patient empowerment,²¹⁷⁻²¹⁹ and an increased sense of self-efficacy^{188,209,211} have been shown to support patient well-being and physical and emotional health in relation to chronic illness. Interventions which target changes in an individual's self-care practices should be assessed in a real-world context, allowing for evaluation of a number of key factors which inform scalability including: acceptability (to both individuals and stakeholders); target reach (of eligible population); accessibility and cost-parameters; staffing skills required; and the degree of fidelity/adaptation required to retain effectiveness when up-scaled.²²⁰

Traditional medicine systems, including classical Chinese medicine (CCM), incorporate numerous recommendations for individual health promotion and illness prevention which align with current WHO recommendations on combating chronic illness and may be worthy of further investigation.^{1,91} Recommendations from CCM include advice on: dietary adjustments, specific to the individual and the environment; exercise and resting routines according to time of day and year; moderation in relation to alcohol intake; and balance in one's emotional perspective on life.^{1,2} The aim of this study is to examine the experience of program participants of a community-based classical Chinese Medicine (CCM) program, run in rural Scotland, in relation to self-reported changes in health and well-being.

4.2.2 Methods

4.2.2.1 Background

A privately funded newly established non-government organisation, based in the highlands of Scotland, UK, developed a program based on CCM concepts with aim to offer a supportive arm of accessible health care to the community. Community health in the region was served by existing conventional support, delivered through the National Health Service (NHS), as well as by some NHS funded health and wellbeing programs.²²¹ The CCM organisation, however, felt their program offered a unique contribution not already provided to community. The program was delivered by a small team comprising three Chinese medicine practitioners, a bio-resonance practitioner, a western fitness instructor and administrative staff. The program was

advertised online, through local flyers and by word of mouth, including through the delivering practitioners' local networks. Central to the program's approach was a focus on lifestyle change in accordance with CCM principles. The organisation ran courses between November 2015 and September 2016.

The three-month program was delivered through a membership system, which provided open access to numerous weekly classes being held at the program site. The majority of classes were based on a core CCM teaching, which focused on adjusting periods of rest and activity to align with the natural rhythm of the day. Participants were offered additional classes in Western-style fitness and stretching, and qigong. Less regular classes on topics of interest were also available, including on CCM dietary approaches and the daily drinking of tea, such as green, *oolong*, or *pu'erh* tea, considered within Asian culture to be supportive of cleansing, nourishing or digestive health, respectively.^{222,223} Membership included access to low-cost acupuncture and bio-resonance treatments and a one-on-one monthly appointment with one of the centre's health professionals. During this appointment practitioner and participant would co-create a written individualised health focus and implementation plan for the participant for the coming month. Membership cost for participants was initially set at £50/month, inclusive of all appointments, later adapted to a nominal membership fee of £10/quarterly and a pay-as-you-go system for appointments.

The organisation ran three pilots commencing in November 2015. The first pilot enrolled 50 participants. The second pilot (n=20) was a continuation of the program for interested participants from the first pilot and the third pilot (n=20) specifically targeted diabetes support. All three pilots incorporated digital monitoring; via a wristband fitness tracker – Jawbone – on the first two programs, which monitored adherence to the program recommendations by tracking activity and resting periods; and via monthly readings from a biometric machine, based at the centre, for the third program, measuring weight, muscle mass, heart rate and blood pressure. The third pilot also incorporated a self-reflective daily diary based upon the program's practices and a buddy system where each participant was encouraged to ask two friends to participate alongside them. A small number of participants from the first cohort participated in both of the subsequent programs.

4.2.2.2 Recruitment

A list of program participants was provided to the researcher by the program manager. This list was compiled from an original 31 participants who were contacted

individually, by the program manager, in October 2016 and invited to attend an interview with the researcher. The program manager selected previous program attendees whom were still in contact with the organisation and whom they felt would be amenable to attending interview. Of those contacted, 12 agreed to attend, however, two were unable to attend due to inconvenient scheduling, leaving ten interview participants. An eleventh interview was arranged informally, by direct contact between the participant and researcher, on the week of data collection.

4.2.2.3 Data Collection

Interviews were 30 to 50 minutes in duration and were semi-structured, with only the interviewer (AH) and interviewee present, excepting in two cases, where children were present. Interviews were primarily conducted in person at local venues (cafes, meeting rooms, participant's workplace) of the participant's choosing. Two interviews were conducted by phone. All interviews were conducted between 31 October and 5 November, 2016.

The core content of the program delivered was known to the primary researcher (AH), due to her having previously worked with the program director. The primary researcher also had a background of 20 years' experience in studying and practicing Chinese medicine and is a registered Chinese medicine practitioner and educator in Australia. A prior professional relationship, as co-workers, had existed between the primary researcher (AH) and two of the interview participants. The other interview participants were not known to the researcher. All study participants were made aware of the researcher's role as an investigator; however, they were not specifically made aware of the researcher's background in Chinese Medicine unless relevant to a shared context of understanding. Although some data was available on participant uptake of certain aspects of the program, this was not included in analysis due to a lack of detail across all participants.

An interview guide was referenced only by the researcher during interviews [Appendix B]. During the interview process participants were provided opportunity to describe issues and experiences in their own words and were encouraged to discuss any relevant topics in relation to the program. Interviews were recorded, via a digital recorder, later transcribed by a transcription service and then re-checked and edited by the interviewer to ensure accuracy.

4.2.2.4 Data analysis

Transcribed interviews were imported into NVivo 11 data management software, analysed and coded by AH, then checked for clarity and consistency by AS. A Framework Approach was used to analyse data through a process of *data familiarisation, framework identification (Supplement B), indexing, charting and mapping*.²⁰¹ This structured systematic approach to qualitative data analysis, often utilised in health research,^{224,225} sets out the research objectives in advance yet remains grounded in the original accounts and observations of those studied.²⁰¹ Participants were not provided an opportunity to give feedback on the findings. Additional data analysis was also undertaken on staff and practitioner feedback, to provide further perspective on the program delivery and has been published elsewhere.²²¹

4.2.2.5 Ethical clearance

Ethics approval for the study was gained through University of Technology, Sydney, Human Research Ethics Committee (registration number ETH160459). Informed written consent was obtained from all interview participants at the time of interview. Participation in the interview process was not a requirement of program enrolment.

4.2.3 Results

4.2.3.1 Participant overview

The eleven participants interviewed were aged between 35 and 80 years, with the majority being between 50 and 69 years (Fig.2). Eight were female and three were male. Between them they shared a diverse range of occupational backgrounds; primary and secondary teachers, professionals, health practitioners, artists, community facilitators, administrators and retirees (Fig.3). Eight of the participants had spent three consecutive months or more on the program, and three had spent less than two months on the program. Details of participant co-morbidities at baseline were not available.

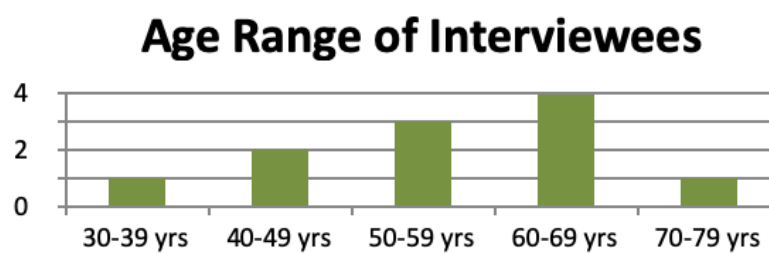


Figure 2. Age range of those who attended interview

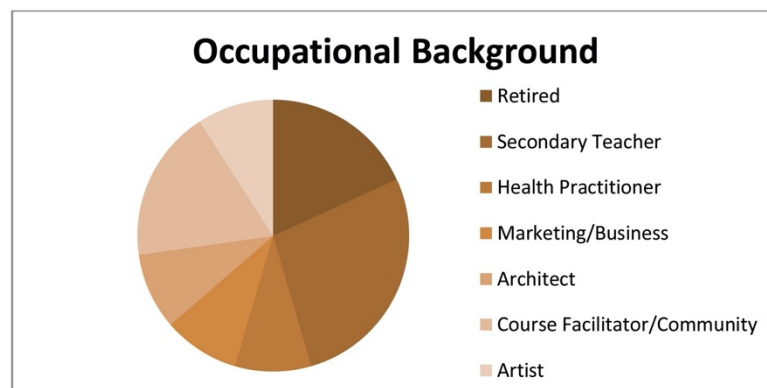


Figure 3. Occupational background of those who attended interview

Just under half of the interview participants had prior experience and knowledge of the teachers and practitioners of the program, due to having attended courses with the same teachers prior to program onset. Furthermore, prior positive exposure to Eastern medicine was specifically noted by some interview participants as influencing their decision to join the program. Other reasons for joining, noted by interview participants, included: wanting to pro-actively improve one's lifestyle and state of health in relation to a specific health condition; health maintenance; supporting a partner or friend to address their health issues by joining the program as a buddy; wishing to access the low-cost acupuncture appointments; interest in the digital tracking component; connection with others; and wishing to support the program as it was perceived to be a positive opportunity for others in the community.

4.2.3.2 Emergent themes

Themes emerged from the data in four key areas: *Improvements in health and self-awareness; Self-direction, adaptability and prior exposure; Personalised support, self-reflective tools, sustaining engagement; and Cultural barriers, accessibility and strengthening networks.*

Improvements in health and self-awareness

Of those interview participants who attended three months or more of the program, all perceived improvements in physical health and emotional well-being (Table 3). Many noted improved energy levels and metabolism, accompanied by an increased sense of calm, improved mood and emotional outlook. Other specific improvements noted included weight loss, improved digestion, improvements to joint problems, improved immunity, increased flexibility and less shortness of breath, along with a self-reported improvement to blood glucose levels, via private general practitioner feedback, for one of the diabetic participants.

My energy levels are much more consistent... I'm a lot, I think, calmer, than I used to be. I feel stronger, physically stronger. (OR)

I'm definitely fitter than I was, I mean I can walk further without getting breathless...I was lighter than I had been, my [health condition] was much better...because of the [CCM program]. (QR)

Participants also noted experiencing an increase in self-awareness in relation to their health, resulting from taking a pro-active approach to health management. A number of participants commented that positive changes, both physical and emotional, could take some time to observe, with one participant commenting that changes could also be profound, especially with reference to a sense of increased overall awareness in life.

I think for me it is a very subtle difference, but it is quite profound as well ... I don't think I felt [changes] immediately, about a month, maybe 2 to 3 months I could gradually feel that this is helping in daily life and also to be aware of my body and mind. (YN)

Table 3: Improvements to health and well-being reported by interview participants

Improvements to health and well-being reported by interview participants who spent 3 months or longer on CCM program			
<u>GENERAL HEALTH & METABOLISM</u>	<u>PHYSICAL HEALTH</u>	<u>MENTAL STATE:</u>	<u>SELF-AWARENESS</u>
ENERGY: more energy; improved consistency in energy	JOINTS: injuries improved	EMOTIONAL OUTLOOK: less depression; less negative cycles	ENERGY: increased awareness of energy levels
DIGESTION: improved; eating less to maintain energy	MUSCLES and TENDONS: increased flexibility		CONNECTION: awareness of links between lifestyle and experience of well-being
IMMUNITY: improved; sinus condition improved		STABILITY: less irritability; less anger; sense of calm	
RESPIRATION: less shortness of breath	GENERAL: feeling stronger		POSITIVITY: positive sense of self when taking a pro-active approach to health
WEIGHT: weight loss			
GENERAL: blood glucose levels improved			

Self-direction, adaptability, prior exposure

Self-direction, adaptability and a background of prior exposure to complementary and alternative medicine (CAM), was expressed by many interview participants and may have predisposed them to successful adoption of the CCM practices in daily life. In some cases, this included incorporating family members and children into their daily practice routine. Organisation and self-discipline, in relation to following the program recommendations, were reported by some participants as being necessary in order to see positive changes in their state of health.

I'm an organised-ish person, and I'm used to working at how I'm going to fit this, that and the other into a day. I'm also fairly disciplined. I think you have to be disciplined for this. (OR)

Other participants noted health changes from adopting only certain aspects of the program. For example, one interview participant, a health care professional themselves, described the positive feedback given by their own patients, after recommending only one of the lifestyle practices to them.

This hot foot bath thing [the evening practice], I mean, I did say to one person, ...he wasn't sleeping. ... why don't you just give this a go, ... and he's been completely transformed by it. ...He simply just thought it's fantastic, and then he said to his mother, ... who's a very anxious lady and who hasn't slept forever, ... so he told her to try these hot foot baths, and she's been transformed by it as well. (QR)

Practices suggested for times of day which didn't conflict with typical working hours were described by participants as being the easiest to integrate into daily routines (Fig. 4).

Because of the varying times at the end of my working days ... [the afternoon practice] was hard to commit to it, if you like, and for it to become part of my pattern. What I liked about the early morning exercises was they just became part of my life, in a way that just felt very healthy. (AG)

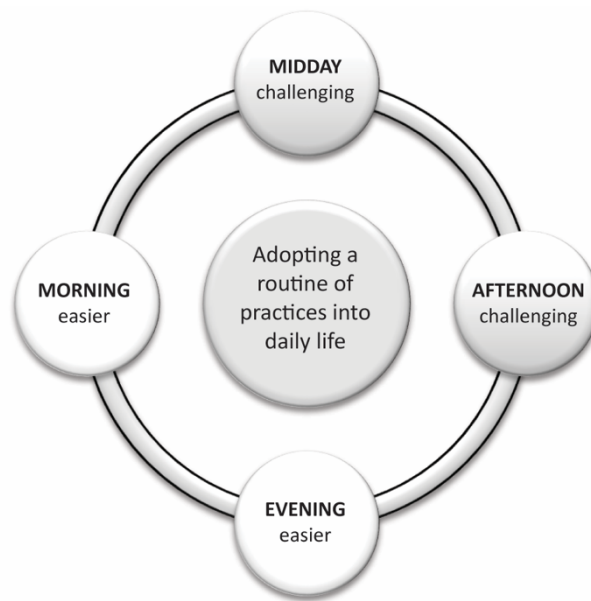


Figure 4. Ease of integrating practices according to timings, as reported by interview participants

Observing results, in terms of health outcomes, was also mentioned by participants as being a key element in encouraging continuation of the practices and integration into a daily routine.

It's like anything else, it's always very easy to make excuses for not doing things, but ... it was ... the easiest thing to integrate into your daily life once you accept it and felt the results. (QW)

All but one of the interview participants mentioned prior experience in using complementary and/or alternative medicine, with over half of the interview participants having specific experience with forms of East Asian medicine including acupuncture, shiatsu, qigong and tai chi. The experience of many participants with East Asian medicine was reported by them to have been positive, potentially resulting in a pre-existing or predisposed appreciation for the classical or traditional Chinese medicine (TCM) theory, incorporated into the program.

With TCM I feel, and know from personal experience, that they are able to diagnose the whole package at the beginning and give you practices, and maybe foods and drinks that you can take, to make yourself better, and I know again from personal experience that it works.(OR)

Personalised support, self-reflective tools, sustaining engagement

Participants shared positive feedback in relation to the practical aspects of the program that focused on personalised support and increased self-reflection, such as the buddy system and daily diary, which were included on the diabetes pilot. These aspects were noted by participants to both increase self-awareness and to provide support to ongoing engagement. There was also initial excitement, expressed by some participants, in relation to the Jawbone fitness tracker, included on the initial pilot. However, due to technical difficulties with the tracker and an expressed lack of administrative support, many participants' interest in the digital tracking soon faded. Personalised support thus emerged as both a strength, in the incorporation of the feedback tools, buddy system and in methods of content delivery, and a weakness, in terms of a lack of connection and support between the administrative team and participants, at certain points of the program.

I think one of the things that I was excited about was . . . I really like that whole Jawbone monitoring piece . . . to generally raise your own awareness about what you're actually doing . . . [however, when there were technical issues] the response was . . . not pro-active . . . they may have held that better in the first 3 months. (FG)

The buddy system was particularly positively perceived by participants who had engaged on the diabetes phase, with participants mentioning that having friends participating with them had brought support, in terms of social connection and humour, as well as encouraged continuation of the practices.

What was lovely was it, cause it was [myself and my two buddies] that went together, so that really helped, doing it together like that ... and then, sharing those [appointments] together, ... there was just a lovely humour about them (AG)

The method of program delivery adopted by the teachers was also mentioned positively by a number of participants, who noted it as having provided a significant impetus for changing habits and adopting lifestyle change.

The way they explained it, just really made sense and now it's like, I've moved on from that [lifestyle habit], ... because they just explained it in such a way that I went, yeah, okay, that make sense, of course. (AG)

Of the participants who had engaged on the diabetes phase of the program, all expressed a positive experience with the incorporation of the daily diary, which was valued in different ways by various participants; in some cases assisting them to acknowledge the lifestyle changes they had already made and how they might further improve and for others, simply bringing an awareness to their daily patterns and dietary choices. One participant mentioned that they had been surprised by the lack of detail in the diary, including no mention of GI (glycaemic index) units, yet they also noted that the simplistic approach had still been beneficial.

I found the diary very, very useful. And the little thing at the end of the day just to sit and reflect you know, from what you've done and what you've achieved, what you haven't done. (YU)

The food diary is very basic, but actually it still brought my attention to what I was eating . . . it was nice, it wasn't out of a, sort of like a guilt, oh, she told me and now I'm going to have to write this in my diary, so I'd better not have it; it was just, bringing a greater consciousness, awareness, to what I was eating. (AG)

[Cultural barriers, accessibility, strengthening networks](#)

Various barriers to participation were cited by participants. Themes which arose relative to improving the design and long-term success of the program included: a need for further cultural alignment with a typical working day; increased focus on strengthening external and internal networks: between the program and the existing health care network, between staff and program participants, as well as between the

program participants themselves; and for improved program accessibility to the wider community. A common barrier to engaging with all the recommended practices was seen to be the overlap of the midday and afternoon practices with work and/or family commitments within the current UK context. A number of interview participants mentioned others who had left the program early due to difficulties in fitting the recommended care routine to the patterns of daily life. In one case a participant cited the inability for them to accommodate the practices within their existing schedule as resulting in raising their own awareness of their lifestyle and the pressures and limitations on their time throughout the day.

In the first consultation ... we introduced ourselves, and there was this woman, ... and she said, 'I can't possibly do all these things, I start work at 5 in the morning, I have ..., 30 minutes tea break at lunch, I stand during my work.' ... She couldn't do any of the exercises. (IM)

The social and cultural context of the UK was also considered by participants to play a role in how comfortable participants would feel in following the practices, particularly in relation to the concept of taking a short rest around midday. This was highlighted by one participant in relation to how this differed from their perceived cultural norms in other countries.

In India like, it's quite normal, or in North Africa as well, you walk in [to a shop] and someone's sleeping, having a little nap, no-one thinks anything of it, if they need a sleep, they sleep, ... If someone was sat in a shop having a powernap and you walked in in the UK, people would be like, 'Hm-mm, hello', [posh overtones], ... Out there, the guy would just be like, 'Oh, hi', and serve you like nothing was wrong. (XP)

A number of participants mentioned factors hindering the community's access to the program including: a lack of support at the outset of the program, especially for participants new to the digital monitoring devices; and general scheduling and communication difficulties. Participants highlighted the need for organised patient management procedures and engaging professionally with participants.

If you're trying to bring in something that's really, for quite a lot of people in [the local area], is kind of 'out there', then all of that stuff's really important ... how the person's first met. I think my experience of it was a bit casual in a way, and I think there's a difference between being friendly and then casual.
(FG)

The low number of participants involved in the program at certain stages, as well as a sense of a small distinct group of program participants, was also perceived by those interviewed to have posed potential barriers to program accessibility, especially for others within the wider community, who may have had less exposure to new or outside concepts.

I would have liked to have brought my [relative] there ... but then she wouldn't have felt comfy maybe, with the other people who were there, because they all were quite knowledgeable [on that topic], she would need other people like her. (XP)

Program cost was considered very affordable by most participants interviewed; however, some felt that others in the wider community would be hesitant to spend money on such a program in an area where most health care is free through the NHS. This aligned with other interview participant comments that there was a perceived reluctance in the community to take responsibility for one's health outside this service, coupled with a significant elderly population for whom the General Practitioner (GP) is the only point of reference for health care in line with their upbringing.

Numerous interviewees recommended incorporating a GP, or referral pathway via the NHS, into the program to bolster participant trust and overall community engagement. Being in a rural community, word-of-mouth marketing was also highlighted as key to engaging a broader portion of the populace.

The success of something is more on the relationships that you form, and the broadness of people ... Up here, the way things work in Scotland, in the communities, if the word of mouth gets around that it's a good thing, then

people come. (XP)

In relation to running the program in other environments, participants expressed the positive potential for the program to be run in aged care facilities, hospitals or schools, as well as noted the positive impact the recommendations of the program could make to teenagers and children. There was a general sense imparted by participants interviewed that the program would do well in the city, and/or within a larger, more diverse population.

4.2.4 Discussion

This study found that program participants perceived improved health outcomes whilst engaging in a CCM program, with several unique facets of the program perceived as being beneficial. Participants reported improvements in energy levels, digestive function, immune response, respiration, weight, joint and muscle pain, as well as in emotional outlook and self-awareness. Such changes align with much of the existing literature on the effects of both acupuncture and qigong^{5,7,9,39} which were components of the program. Furthermore, engaging in daily exercise routines more broadly and maintaining social connection through group exercise, has been shown to increase social function, mental acuity and physical vitality, especially in the middle and older population.⁹⁰⁻⁹⁴ Thus, health changes expressed by interviewed program participants may have been the result of singular CCM-derived components of the program, such as acupuncture treatments, qigong practice, or broader benefits such as social connection, or physical exercise, or health changes may have been a result of the collective sum of the programs' many parts. This latter possibility suggests an avenue for further investigation into comprehensive integrative health care initiatives which support patients concurrently via numerous avenues of support, particularly when working with models of CAM which are typically drawn from a whole system of care approach, such as that of CCM.²²⁶

Participants expressed certain difficulties in incorporating aspects of the CCM program into daily life in rural Scotland, most notably the midday and afternoon practices which coincided with working schedules and personal and/or family commitments, respectively. Participants interviewed who did report successfully adopting practices throughout the day commented on self-discipline, flexibility and involving friends and family members, as being key to this integration. The CCM literature, from which the practice recommendations were conceptually drawn, explores in detail the nature of cyclical changes in the greater environment and the influence which daily and seasonal cycles have upon human health, thus recommending human lifestyle patterns which broadly follow the movements of nature.^{1,227} In light of the emerging research in circadian biology, which correlates society-based schedule-induced timings, to obesity and disease-promoting behaviours²²⁸ and with reference to the tentative correlations between specific time windows and adverse health events,²²⁹ the potential health impact of tightly scheduled modern lifestyles warrants further investigation, especially in comparison to schedules which follow individually responsive timings and the broader outline of a CCM approach. Given that implementing such an approach can be challenging for participants within the social and cultural expectations of Western society, best outcomes may also require a longer period of lifestyle readjustment and associated period of assessment. However, further research is also warranted on how CCM approaches, such as the adoption of a midday rest, may be able to more successfully integrate into contemporary Western settings, such as workplaces or schools, and how modern lifestyles may be adapted to enable schedules more responsive to individual needs.

Our study results suggest that numerous overlaying participant characteristics may influence the overall success of the program in individuals; these being, a pre-existing openness, interest and/or understanding of complementary medicine

concepts; respect for and engagement with those delivering the content; and elements of self-discipline and/or adaptability [Fig.4]. Self-direction and optimism in relation to behaviour change, and related perseverance in adopting new behaviours, are aligned with the concept of self-efficacy and an ability to visualise success, which has in turn been related to the extent in which positive physiological changes occur during times of adopted change.^{6,211,230} In the CCM program assessed, the practitioner's role as primarily a guide and educator and secondarily as a therapist; along with the encouragement of participants to recognise the connection between their state of wellbeing and their daily actions, inclusive of the time and space of such actions, may have assisted in promoting self-efficacy and supporting change. Further exploration is required to more confidently identify the links between such changes and the supportive aspects of CCM. Specifically, more detailed records of engagement with specific practices and to what extent that engagement has occurred could provide more validity in future studies, along with quantitative assessments at baseline and endpoint. Furthermore, a randomised trial approach, with the program initiatives trialled with a general sector of the intended participant demographic, may reveal insight into whether a pre-existing openness to CAM is a pre-cursor to experiencing successful results from the CCM program, as opposed to the results perceived by the self-selecting participant group assessed in our study.

This study has several limitations. Selection bias is a study limitation, as those invited to interview by the project manager made up only half of the total initial program enrolments. Furthermore, those who attended interview may have had a significantly different experience to those who did not respond. The pre-existing relationship between the researcher and two of the interview participants may also have influenced the amount and nature of data gathered from one interview participant to the next. The lack of data on which aspects of the program interview participants specifically engaged with, as well as the lack of data on health status

and/or comorbidities at baseline, are also limitations to the study. The results are likely to be demographically specific and pre-existing impressions of the program practitioners and connected organisations may have also influenced participants' overall perception of the program. Despite these limitations, this study offers important insights into the participant experience of an innovative concept for CCM delivery in preventative health care.

4.2.5 Conclusion

Improved health outcomes noted by participants of the program highlight the need for further investigation into similar health care initiatives, which utilise simple methods to enhance patient's health through social support, the encouragement of self-awareness and lifestyle change. Local engagement with the program, however limited, suggests that there is a sector of community living in rural areas, who are seeking further avenues of support in health care and who are willing to accept aspects of CCM practices into their daily lifestyle. Integration with the existing health care system, a degree of flexibility in program delivery, consistent and personable administrative procedures and further cultural alignment, are key aspects of participant feedback found in this study, which would be recommended for similar programs in the future. It is suggested that such programs, drawing on CCM concepts, may have the potential to support patients living with chronic illness, especially if delivered in adapted, integrated models which lend themselves to cost-effectiveness and scale-ability and warrant further investigation.

4.3 Chapter summary

The results reported in this chapter suggest an association between participants who attended three months or more of the CCM program and improved health outcomes. These outcomes may have been the result of numerous variables inclusive of the participants' respective backgrounds and pre-existing exposure to CAM approaches to health and specifically to the concepts of traditional East Asian medicine. This background may have provided and/or been reflective of, a robust sense of self-

efficacy, within the interviewed participant group, even prior to enrolment on the program, which may also have contributed to long-term engagement on the program and a willingness to attend interview. Despite these variables, the perceived results from adopting the CCM self-care routines and attending the CCM program group sessions, suggest that a multi-faceted CCM approach with a focus on self-care as a lifestyle intervention, may offer support for those living with chronic illness in rural Western settings and thus warrants further investigation.

5. RESULTS – A qualitative study on integrating CCM in community health focusing on a self-care approach: practitioner and staff perspectives

5.1 Chapter introduction

5.1.1. Qualitative data on the practitioner and staff perspective

This chapter details a qualitative evaluation of the CCM program from the perspective of practitioners and staff. Those involved in the program delivery included the program manager, casual and part-time administrative staff and the practitioners directly delivering the program content. One aspect of assessing the potential of a community-based intervention is in evaluating its delivery: inclusive of accessibility, its capacity to be scaled and the elements required for effective and efficient roll-out. In order to further explore these aspects, within the CCM program, one-on-one, face-to-face interviews were undertaken with the staff and practitioners of the program and thematically analysed.

5.1.2 Publication of results

The written content comprising this chapter forms the majority of a paper which has been published as follows:

Harvie A, Steel A, Wardle J. A qualitative study of classical Chinese medicine in community health focusing on self-care: practitioner and staff perspectives. *Integrative medicine research* 2020; **9**(1): 42-7

A copy of the full manuscript can be found in the Appendix (I).

5.2 A qualitative study on integrating classical Chinese medicine in community health: practitioner and staff perspectives

5.2.1 Introduction

In response to the global rise in non-communicable disease (NCD), there has been a call from the World Health Organization (WHO), for, cost-effective and scalable health intervention strategies which promote behavior change.⁹¹ Such change is most effectively adopted and sustained when supported by integrated community-based approaches which incorporate a range of intervention strategies.²³¹ Easily adopted health care practices that can be incorporated into daily routines and largely align with current WHO recommendations⁹¹ are found in many traditional cultures and their traditional medicine systems,¹³ including that of Chinese medicine.¹

A number of foundational texts, largely recorded in the Han dynasty (206BCE – 220CE), have had considerable influence on the transmission of Chinese medicine throughout the past two thousand years and convey principles by which to not only practice medicine but also by which to live.^{1,49,52} These principles, recorded in texts such as the *Dao De Jing* (Path of Virtue) and *Huang Di Nei Jing* (Yellow Emperor's Inner Classic), express an interweaving of Daoist, Buddhist and Confucian schools of thought, reflective of the cultural matrix of the time.⁴⁵ Passages from the *Huang Di Nei Jing* also provide background to specific lifestyle practices, historically common to Asian culture, such as: following patterns of rising with the sun and taking to rest with the sun; undertaking strenuous activity in the earlier part of the day; taking a midday rest; adapting one's diet and patterns of dress according to the seasons and one's constitution; acknowledging one's place within the greater environmental and social context; and maintaining a balanced emotional perspective on life.^{1,2,4,45} Similar lifestyle principles have been reflected in numerous traditional cultures around the world and are suggested by those who follow them, to be associated with health, longevity and sustained vitality.¹³

Within the Chinese context, certain sources are described as 'classical texts' due to their historical dating and the translation of the term *Jing*, in their title, which denote them as being considered foundational content for the field.⁵¹ The principles espoused in these records continue to hold influence on the modernized practice of Traditional Chinese Medicine (TCM),²⁹ however, the detailed and nuanced approach, described in the classics is suggested by some within the field to be incomplete in the TCM construct.^{27,232} It is against this backdrop that the term Classical Chinese Medicine (CCM) has thus been emerging to define a field of Chinese medicine practice which aims to draw more consistently on the principles and specifics detailed in the classical texts.^{19,22,27,30,47}

Within the published literature, lifestyle recommendations, which draw heavily on CCM principles, have primarily been evaluated when delivered alongside a course of acupuncture and have been found to be associated with increased self-efficacy^{11,12} and increased patient empowerment.¹⁰⁰ Furthermore, improvements in self-efficacy and self-care were found to be associated with a longer-term reduction in pain at 12 months post-intervention.^{11,12} A number of studies have evaluated self-care techniques, such as acupressure or moxibustion, for bio-medically defined conditions,⁶ however, there has been little investigation into how the TCM/CCM framework might be applied in the community context in settings outside of Asia or the Asian diaspora.⁶

The success and sustainability of new community-based programs has been found to be influenced by numerous factors including the level of local integration and community engagement achieved²³³ and may also be considered to be influenced, from a creative and inclusivity perspective, by the degree of intuitive leadership, unity and flexibility within the delivery team.^{234,235} Such aspects may hold particular value in respect to programs which adopt elements from outside cultures, such as that of a CCM program, delivered in a regional area of the United Kingdom (UK).^{236,237} Although the co-existence of multiple medical systems exists within the UK context, the dominant healthcare system in the UK, as delivered through the National Health Service (NHS), differs somewhat in its overarching framework to that of the CCM approach.²³⁸ The aim of this study is to examine the experience of staff delivering a community-based program in the north of the UK, in regional Scotland, that focused on promoting health behavior change by sharing knowledge with participants based on self-care principles drawn from CCM. An applied research approach²⁰¹ was implemented to explore the staff experience, inclusive of both administrative and practitioner feedback, in order to: assess the impact, if any, of the program on the health and wellbeing of participants; examine the staff perception as to the practicality and feasibility of the program; and to examine any other themes which might emerge from the interview data.

5.2.2 Methods

5.2.2.1 *The context of the analysis: the CCM program*

A community health care program, based upon CCM concepts, was implemented in a small town in the Highlands region of Scotland. The program ran between November 2015 and September 2016 and was primarily supported by private donor seed-funding. The program focused on initiating and supporting pro-active self-care in participants' daily lives, through the teaching of daily lifestyle practices. Key to the program was a focus on educating participants about the potential influence of each CCM practice on individual health.

The program was delivered through a paid membership approach, allowing open access to any number of different classes being held at the program center throughout the week. Most classes were based on CCM concepts that focus on adjusting periods of rest and activity to align with the natural rhythm of a day and incorporated a routine of simple practices to be adopted at morning, midday, late afternoon and prior to bed. There were also classes on topics of interest such as

dietary therapy from the context applied in TCM, or the practice of drinking tea, such as green, *oolong*, or *pu'erh* tea, which is considered within Chinese culture, to support cleansing, nourishing or digestive health, respectively.^{222,223} Other classes focused on non-CCM exercise, including aerobic and stretching routines. Low-cost acupuncture and/or biofeedback treatments were available with membership, which also included a one-on-one monthly appointment with a practitioner trained in the CCM concepts. In this appointment practitioner and participant would review the participant's health status and co-create a health focus and lifestyle adjustment plan for the coming month.

The organization ran three pilots of the program between November 2015 and September 2016. The initial program had 50 participants enroll, with smaller numbers on the subsequent two programs. Digital monitoring was incorporated into the program as a self-reflective tool for participants and was achieved, in the initial pilot, via a wristband fitness tracker worn by participants for up to 3 months. This was also used as a method to monitor participants' adherence to the lifestyle routine suggested. On the two subsequent pilots digital monitoring was implemented via monthly readings from a biometric machine, based at the program center. The third pilot focused on providing support for those with a biomedical diagnosis of diabetes (type 1 or type 2). Over the ten months of the program, a number of key staff members were involved on a full-time basis, from initial program concept and design, through to delivery. Other staff members were employed after the program had commenced and were primarily involved on a part-time basis in administrative roles.

5.2.2.2 Methodology

Semi-structured individual interviews were conducted with staff involved in administration or delivery of the program by AH (Appendix B). Ethical clearance was granted by the University Technology, Sydney, Human Research Ethics Committee (ETH160459). Formal written informed consent was obtained from all participants.

5.2.2.3 Participant selection

All program staff (n=9) (inclusive of practitioners, management and administrative personnel) were contacted via email and invited to interview, by the researcher ([redacted for blinded review]) in September-October 2016, with the exception of three staff members who were not contacted as their contact information was not provided by the organization. Of those contacted, seven agreed to participate in the study and were interviewed at a time and place preferred by the participant (e.g.,

café, meeting room, participant home). Interviews had no set time limit and lasted for 25 to 70 minutes. All interviews were conducted between 31 October and 5 November, 2016.

5.2.2.4 Researcher background and relationships

Most staff interviewed were introduced to the researcher three months prior to interview, with the exception of two online meetings and brief email communication between the researcher ([redacted for blinded review]) and program manager six to twelve months prior. Additionally, a pre-existing professional relationship as co-workers existed between the researcher and two participants two years before the study.

The primary researcher had a background of 20 years' experience in studying and practicing 'Chinese medicine', as it is currently defined by the national regulatory board in Australia, and is a registered Chinese medicine practitioner and educator in Australia. All staff interviewed were made aware of the researcher's role as an investigator; however, they were only made aware of the researcher's background in classical and/or traditional Chinese medicine if a shared context of understanding became relevant to the discussion.

5.2.2.5 Interview structure and administration

Semi-structured interview questions were used to guide the researcher during interviews (Appendix C). Participants were invited to describe their experience of delivering the program and provided opportunity to introduce new items as they felt appropriate. Interviews were digitally recorded, de-identified and transcribed verbatim by a transcription service, and re-checked and edited by the interviewer to ensure accuracy. Field notes were made during interviews and used to note prompts for further questioning on comments of interest rather than used as additional data.

5.2.2.6 Data analysis

Transcribed interviews were imported into NVivo 11 software for analysis and coding by AH. Themes were derived from the data, using the *Framework Approach*, which involves a process of *data familiarization, framework identification, indexing, charting and mapping*.²⁰¹ This applied research approach draws from the direct experience and observations of those studied whilst also allowing for the objectives to be set out in advance.²⁰¹ Quotes were selected based upon their representativeness of the

theme. Participants were not provided an opportunity to give feedback on the findings.

5.2.3 Results

5.2.3.1 *Interview participant characteristics*

Of the seven staff interviewed, one was in a managerial role, two were administrators and four were practitioners. Of the practitioners interviewed, three delivered the CCM core program, as well as acupuncture treatments (n=2) and/or Western style fitness (n=1) sessions, while one practitioner delivered bio-resonance treatments only. The practitioners who delivered acupuncture had over 10 years' clinical experience and were registered with the British Acupuncture Council. Similarly, the Western fitness instructor held formal qualifications and background experience. The bio-resonance practitioner was newly qualified and had a background in working in community health programs. Of the three teaching practitioners interviewed, two reported personally engaging with CCM practices on a daily basis for over a year or more and one had only become aware of the practices over the previous few months. Personal engagement with CCM practices varied amongst administrative and managerial personnel. Interview participants were aged between 32 and 50 years. Four were female and three male (Table 4).

Table 4: Staff Interviewee Characteristics

Role	Age Range	Personal engagement with CCM practices	Gender
Managerial - 1	Youngest – 32yrs	Admin – variable	F – 4
Administrative – 2		Practitioner – 2 (of 3)	M – 3
Practitioner - 4	Eldest – 50yrs		

5.2.3.2 Key themes

Themes emerged from the data in three key areas: *Cultural challenges within the local region; Integration with the existing local health care network and Team dynamics, co-creation and communication integrity.*

Cultural challenges within the local region

Delivery of the CCM program was perceived by staff to be challenging within the local region it was based. However, program staff perceived a positive potential in the program, with this view more pronounced amongst those who engaged with CCM practices personally and had experienced positive health outcomes as a result. Some staff noted the routine of practices throughout the day was difficult for them to personally integrate, both logistically and culturally, resulting in their adoption of smaller components of the program or simply taking inspiration from the concepts.

I still do that in my life, [the midday rest], and sort of, being more in touch with biorhythms, ... so I didn't join in the formal sense, but I did totally take inspiration from what was happening. (WG–Practitioner)

A sense of self-awareness, reflected by some staff in relation to the potential impact of the program's cultural differences, seemed to contribute to varying recruitment approaches to attract participants to the program. One member of administration personnel commented that the online information was sparse on details in an attempt to capture a broader cross-section of the community.

The approach that we had on the website, and our materials, was that we

were skirting around the fact that what was being offered was classical Chinese medicine. There was no mention on the website of acupuncture treatments or anything...So, through that, people perhaps saw vagueness to it. (RK–Management/Admin)

Having a pre-existing philosophical understanding or experience of the CCM concepts appeared to predetermine staff having a positive and enthusiastic vision of the program's objectives. Similarly, community participants who remained on the program were noted by staff to be those who already had some positive experience with alternative health practices, or to be those who had prior knowledge of the program teachers.

Practitioners also reported that other participants, for whom the CCM content was more unknown and who had enrolled with initial enthusiasm in response to sponsored places or direct recruitment techniques, did not often remain on the program for long. One practitioner suggested that clear communication at sign-up, in terms of clarity as to the associated time, effort and commitment required from participants, as well as a stronger focus on relationship building between practitioners and participants, after sign-up, may have resulted in more long-term engagement.

They hadn't necessarily thought through on a practical way what it would mean in terms of dedication of time and commitment. I think there was then a gap between an initial excitement and a realization that they would need to take some responsibility themselves, which is the whole idea of the program, over these months, for transforming their lives. (AQ–Practitioner)

Variability in treatment delivery – perhaps attributable to cultural influences – was also seen in delivery of acupuncture treatments between treating practitioners. The treatment styles of the two most regularly scheduled acupuncturists were reported by patients, via administrative staff, to differ considerably. This variability in treatment approach was seen to impact administrative and record-keeping processes as well as alignment of the practitioner team in working together.

[In the design of the intake forms] I was trying to capture enough information to work with, in their consultation, based on three very different styles of treatments, for the three different [acupuncture] practitioners. (YU-

Practitioner)

It's very clear to me that when Chinese [medicine] practitioners talk about what they're doing, and that when a fellow Chinese medicine practitioner may be using the same language, our understandings may be completely different... So, on a basic level, to create a team that can really work together, that takes time. (AQ–Practitioner)

This heterogeneity also extended to the teaching of the CCM lifestyle content. Administrative staff noted that feedback from class participants suggested that practitioners new to the program's interpretation of CCM concepts were less effective in delivering the content.

Ideally [the teaching practitioners] sign up to practice [the exercises] themselves personally every day... That's kind of a two-month, three-month, kind of process ... [It's important] because ... If they haven't done the [practical work], they won't know how to explain it, or to support someone when they're going through those transitions. (YU-Practitioner)

Practitioners who had worked with the CCM practices for years, however, expressed that although experiential engagement with the practices was important, any health care practitioner could become competent in the CCM teachings within a few months of training. Elements which were perceived to lead to effective teaching strategies for those from other health care fields included: using English terms, over CCM terms, for key concepts, for example, using the term *duality* rather than *Yin-Yang*; recognizing and discussing that the practices have a relationship with cycles observed in nature; having a personal resonance with the concepts; and adopting flexibility in delivery.

Integration with the existing local health care network

Although the program obtained some local support, in the form of grants for a small number of sponsored patient places, and business support and training, in relation to integration of personal digital-monitoring devices during the initial pilot, it was felt the program failed to gain adequate traction with the existing local health care system. One practitioner commented that the team would have benefited from having a GP or nurse within the practitioner team, and/or from having a connection via an NHS referral pathway to provide profession-based and recruitment support and to elevate

the profile and credibility of the program. Interview participants noted similar local health and well-being programs being run at the same time and which had NHS funding, were able to invest comparatively more resources into planning and community consultation prior to onset, as well as establish more robust networks, due to having an NHS intermediary; aspects which were recognized as necessary but not as comprehensively integrated in the CCM program design. One practitioner, co-working on the community-based NHS project, summarized the proactive consultation approach adopted in the NHS funded model:

I think what they're learning is, we can have ourselves a really good model and idea, and game plan, an idea that people come into, but life doesn't always work like that. We're going to meet in the middle and go out and really listen: What do you want?; What do you need?; What do you love?; How can we support you?; and these are our tools that we're offering, but, what else would you like? (WG–Practitioner)

Team dynamics, co-creation and communication integrity

A significant challenge faced by the majority of staff during program delivery was the perceived variation in integrity and consistency of internal and external communications. Miscommunications and delays in contact (between investor and management; between management and staff members; and between staff and participants), funding interruptions and changing timelines were reported by many staff to have increased stress levels and to have affected the majority of staff during various stages of program delivery. Additionally, the extent of collaboration and connection within the internal team was felt to vary, with one staff member noting that although an idea of a co-creative environment was espoused, structured hierarchal working relationships appeared to dominate during times of pressure.

I think the co-creative atmosphere is what we wanted, but I don't think there was anyone who had experience of it. There were a lot of different backgrounds there, that were working together, but all of the backgrounds were already based from a structured regimented environment. (PY-Practitioner)

In contrast to stated differences, a strong sense of collaboration and personal investment was noted during the project's initial phase, wherein personal resources (later reimbursed) were invested by three staff members.

I think, in some ways that was part of the strength, because when you're

putting your cash in ... people who are volunteering, or people who have given some personal risk, have a different relationship from people who are being paid and being employed. I noticed that that provided a strong collaborative culture in the initial phases. (AQ–Practitioner)

5.2.4 Discussion

To the authors' knowledge, this is the first study to examine a community health program, incorporating a whole-systems²²⁶ Chinese medicine approach, to be delivered in a Western setting. The emergent themes resulting from our analysis of this project highlight a number of key issues relating to the delivery of such a program outside of Asia or the Asian diaspora.

5.2.4.1 Chinese medicine: influences and variability in modern application

Chinese medicine research, outside of Asia, has to date been heavily focused upon studies of isolated treatment techniques such as acupuncture,³⁹ moxibustion^{149,191}, herbal medicine preparations,²³⁹⁻²⁴⁴ or practices, such as Tai-Chi²⁴⁵⁻²⁴⁷ and Qigong^{5,8,9,248}, which are primarily applied, in isolation, as interventions to patients within bio-medically defined disease categories. This is the case when the intervention is applied to the patient, by the practitioner or research assistant, as well as in studies of Chinese medicine self-care approaches.⁶ The traditional practice of Chinese medicine, however, especially prior to the field being redefined as 'TCM' in the 1950s,¹⁹ has for many centuries drawn on classical concepts that incorporate a whole-systems approach to patient care and illness management.⁴⁵

Of the three Chinese medicine registered and UK trained practitioners delivering aspects of the CCM program evaluated, data from our study indicated a difference in practitioners' interpretation of TCM/CCM concepts and in use of TCM/CCM terminology, as well as in acupuncture treatment styles. Although variance is to be expected within any professional field and has also been the case historically within Chinese medicine²⁴⁹ these divergences in modern application may also be reflective of a disconnect between the modern practice of Chinese medicine and the whole-systems approach which is both a construct in TCM,²⁹ as well as reflected in TCM's classical roots.^{1,45} In order to create coherence and consistency in health programs aiming to incorporate a whole-systems approach, such as that of a multi-faceted CCM program, adequate time should thus be allocated for practitioners to be trained and oriented to relevant concepts and terminology, as defined by the program, as

well as time taken to orient researchers and readers to the paradigm of the intervention.

5.2.4.2 Program viability, integration and sustainability

Diversity in practitioner approach may have also influenced program viability which was additionally perceived to be impacted by: varying community interest and acceptance; un-sustained engagement from some participants following initial sign-up; a lack of ongoing financial support and/or financial sustainability by end-date; and limited integration with the existing health care network. The interactive and individualized approach to self-care incorporated in the program design is reflective of the nature of TCM self-care guidance delivered within TCM acupuncture consults, which has been shown to be associated with positive benefit to patients' long-term self-care and quality of life.¹² Similarly, in a cross-sectional study of over 25,000 primary care patients, it was found that programs which focused on patient activation were most effective when: 1) focusing participants on skill development and reflective questioning and 2) when support staff tailored levels of encouraged change to align with the individual's own perceived ability to adopt change.²¹⁸ Future work in the area of CCM self-care may thus benefit from incorporating active enquiry and feedback systems in the early stages of a program, to ensure that individuals feel supported at a level appropriate to their individual circumstances and to counter participant withdrawal. Recommendations from interview participants for the allocation of further resources to the start-up phase and for incorporating a broader range of health care professionals within the core team, including, where possible, physician involvement, also aligns with data which has shown these to be key factors in the sustainability and success of community health programs.²⁵⁰

5.2.4.3 Classical concepts, community health and connection

Our study found that staff and practitioners were perceived to be most effective in delivering program objectives when they engaged extensively with the practices and felt a personal resonance with the CCM concepts at the heart of the program: namely that the human body can be viewed as a microcosm of the macrocosmic natural world; and that by observing and following natural planetary rhythms we can draw methods of self-care and health maintenance, beneficial both to the individual and to the community.⁴⁵ These concepts – as perceived by staff in our study - align with the stated philosophies of many systems of traditional and Indigenous medicine throughout the world,⁵⁷ which acknowledge the importance of interrelationship with

the natural world and promote activities and an environment in which the health of the community, and those who live within it, are harmoniously supported. Thus, these philosophies align with the objectives of community health.²⁵¹ Furthermore, direction relative to teamwork and ethical and intuitive leadership can also be drawn from concepts inherent to CCM and traditional cultures to enhance project success: aiming for practitioner teams which embody ethics, compassion and empathy⁴⁵ and team environments which create unity by considering the context, perspectives and values of all involved.²³⁴

5.2.4.4 Limitations

Selection bias is a limitation, as only nine, of the twelve staff who had been engaged with the program, were contacted and invited to interview. As such the data gathered may have held bias towards staff members who had a stronger reason to maintain a working relationship with the program and its funding organization. There was also a previous working relationship between the researcher and two of the interview participants, potentially influencing the nature of data gathered from different participants. The relatively short duration of the program and its small number of participants are also limitations, as is the complex nature of the program, which included many aspects of intervention. While these are limitations for examining of the program itself, they are ideal for looking into the issues associated with establishing a new program and this study brings forth some important insights into working with CCM concepts in community health and the challenges of integrating non-conventional medical approaches in community programs.

5.2.5 Conclusion

This study highlights the challenges inherent in delivering a CCM program in a regional Western setting and has implications for future research in that the results obtained may be used to guide future programs in this area. CCM has a philosophical underpinning that is conducive to its integration into community health, but accessibility, integration, networking, ongoing funding and unity must be carefully considered and addressed when integrating CCM community health approaches in Western settings. The diversity of practice which may be found amongst CCM practitioners could also present challenges and highlights the need for adequate planning, appropriate timelines and stable resources, in order to achieve effective program delivery.

5.3 Chapter summary

The results reported in this chapter highlight a number of considerations relative to the delivery of health care programs based upon a whole systems approach, as well as highlight the diversity of practice within the field of Chinese medicine. CCM concepts and techniques, although recognised as providing the foundation to Chinese medicine in its modern iteration,²⁵ were found by our study to be understood and/or interpreted in differing ways by the practitioners delivering the CCM program. Further to this, our study found that practitioners and staff delivering the program perceived a need for a more robust network with the existing dominant health care system in the region, as well as a need for further cultural accessibility and improved communication, within and beyond the local program team, in support of team dynamics and effective program delivery. These latter findings reflect recommendations in the existing literature²⁵⁰ on successful delivery of community health programs.

Of particular interest to future projects focusing on health behaviour change is the alignment of practices drawn from traditional medical systems,¹³ such as that of CCM,¹ with current recommendations for health and wellness, as outlined by the WHO.⁹¹ Reflection upon most appropriate methods for the dissemination of such information, as well as consideration on best methods for bringing those within the existing dominant allopathic medical system into a sphere of shared understanding on the application of such concepts, is an area which requires due consideration from those within the CCM field. Further to this, the evaluation of programs which highlight patient education and the adoption of lifestyle medicine brings some complexity to evaluation methods, in that the intervention cannot be isolated from the greater context of the patients' lives. Thus, qualitative evaluations, at extended time points, prior to, during, at endpoint, and up to 6 and 12 months following endpoint, may be beneficial in providing further data on the benefits and experience of participants of such programs. In addition, qualitative data gathered from those working within the allopathic medical model, prior to and following, interaction with a program such as this, may provide insight into how to best develop networking strategies and a shared focus on participant outcomes for future programs.

6. DISCUSSION

6.1 Chapter introduction

This chapter considers in further detail and in a broader context the findings from this research. A number of themes emerged from the study data, based on the experience of participants, staff and practitioners of the CCM program. These themes included: a reported alignment of the program material with a naturalistic worldview, similar to that of other traditional medicine paradigms; variation in clinical approach and background philosophy between the Chinese medicine practitioners delivering the program; an experience of improved health outcomes by interviewed participants who engaged with the program for over three months; and a perceived need for stronger networks and relationships with the community, within the program itself and with the existing health care system. The nature of the CCM program, which incorporated numerous individualised components, in participation and in delivery, also warrants consideration relative to best practice in assessing complex interventions which utilise a whole system of care.

6.2 Cultural alignment and differences relative to Traditional Medicine and its inclusion in community health:

6.2.1 The shared philosophies of traditional medicine

The study found that practitioners delivering the CCM program perceived including reference to a naturalistic world view, typical of CCM, to be supportive of effective delivery. This theme responds to the research objectives of describing the staff and practitioner experience of delivering the program; identifying factors which staff and practitioners found to be supportive to positive program delivery, and thus, identifying recommendations for program delivery. This naturalist perspective, as described by program facilitators, observes an alignment between the recommended program practices and cycles and patterns occurring in nature. Concurrently, it was noted by practitioners, that using English-language terms, such as 'duality', in place of culturally or paradigm specific terms, such as *Yin-Yang* and adopting flexibility in their teaching approach, supported program delivery and participant engagement. Alignment with the program material and its concepts, was also reported, both by teaching practitioners and by participants (via feedback given to and reported by administrative staff), to be key to engaging participants in classes. Teaching practitioners who had no background in TCM or Chinese medicine previously

reported alignment with the material due to perceiving the concepts to be universal and to hold a resonance to natural laws.

These concepts which program facilitators described as being central to the CCM program also have a resonance with the stated philosophies of many traditional and indigenous health systems throughout the world.^{25,57} Acknowledgement of the interrelationship between humans and the natural world; recognising change as a constant dynamic, both internally in the human body and externally in the greater environment; and acknowledging the interrelationship of body, mind and spirit, are key components of these shared philosophies.^{25,57} In practical application, these shared traditional medicine concepts were linked to components of the CCM program by way of: recommendations to follow resting and active practices throughout the day; the incorporation of tools to increase awareness of one's state of inner health and wellbeing, both physiologically and mentally; aims of creating a community of connection and support through group classes and the buddy system; and individually tailored adjustments to diet and/or lifestyle, drawn from Chinese medicine concepts.

These multiple components of the CCM program were perceived by program facilitators as an attempt to provide a structure for an integrated approach to community care. When examined in comparison to other contemporary projects which draw on traditional medicine philosophies,^{14,15} the CCM program, similarly, aimed to maintain an alignment with naturalistic concepts, as well as to hold a focus on inclusion and community. The focus on community engagement, empowerment and connection, which facilitators of the CCM program stated as goals of the project, are also key areas of focus emerging from research into best practice for community health programs in non-traditional medicine settings.²⁵²

6.2.2 Lifecycles, physical health, spiritual wellbeing

CCM draws on a rich historical and philosophical matrix, of which written records date back to Han Dynasty (206BCE-220CE).¹ Exemplified in texts of this era, is an 'open-minded syncretism of Daoism, Buddhism and Confucianism',⁴⁵ reflective of the cultural matrix which influenced medicine in China during the Han era and throughout the centuries which followed. The influence of Daoist philosophy, which places a strong emphasis on physical health and spiritual wellbeing,²⁵³ is similarly seen in components of the CCM program investigated in our study and was referenced by practitioners as key to sharing their understanding of program content and therefore guiding their method of program delivery.

Similar to concepts found in Daoist philosophy many systems of traditional wisdom highlight the importance of lifecycles and acknowledge the ongoing systems of flux within which humans exist.^{13,25} As a Native American Appalachian elder stated, in a study of the views of traditionally living elders: 'Without death there is no birth, without winter there is no springtime'.¹³ This quote echoes the impermanence and duality repeatedly alluded to in the *Dao De Jing*, a text which is considered a foundational work, in both Chinese medicine and classical Chinese culture.⁴⁹ This concept of observing cycles in nature and constructing daily patterns to follow such rhythms was noted by facilitators as being supportive, conceptually, to the successful delivery and teaching of the CCM program.

Observing and working with cosmological and calendrical cycles occurring within the natural world has also been found to be common to elders interviewed from diverse regions of the world: the Mayan mountains region of Belize in Central America, Native Americans in the Appalachian mountains, as well as elders from the Eastern Afromante and Albertine Rift region of Ethiopia, and the Western Ghats region of India.¹³ Despite their geographical distance, these elders shared common philosophies, drawn from observing nature, the cosmos and the human being, which were then translated into daily life through following a set of comprehensive yet simple routines for sustaining health and vitality and promoting longevity.¹³ These patterns hold a similarity to the concepts utilised in the CCM program, as well as reflect the reported sense of resonance and universality of these concepts, as perceived by program facilitators.

6.2.3 A misalignment between traditional lifestyle patterns and contemporary life in Scotland

A key finding from the study was a reported misalignment, by participants of the program, between the recommendations of the midday and afternoon practices and the routine of a typical working day. This finding links with the research aim of examining the program participants' experience of engaging with the program recommendations, as well as their perception of limitations to the program. The recommended CCM program practices included a midday rest 5-10 minutes or longer and an afternoon practice which involved 5-10 minutes of either sitting comfortably or resting supine on a mat with legs elevated. Participant feedback from those interviewed revealed that some program participants felt the recommended times of practice to be unrealistic and were reported, by other interviewed program participants, to have potentially left the program as a result. Other participants who

remained on the program reported that although they had intentions of following the practices at the midday and afternoon times, the reality of their work and family commitments made it difficult to follow the timings. Comparatively, the morning and evening practices were reported by participants to be easily adopted due to the times of day they were scheduled.

Further to a perceived clash of midday and afternoon practice times with a contemporary Western lifestyle, there was also a reported cultural misalignment of some of the practice activities themselves, especially noted by program participants in relation to the idea of taking a rest during daylight hours. Participant data also suggested that although some program participants were themselves comfortable with the idea of taking a midday rest, they felt it was not a culturally acceptable thing to do in Scotland or England. This was contrasted, in participant feedback, by their reported experiences in other countries, such as in Africa, where taking a nap when tired would be a completely natural thing to do whether at work or at home.

In numerous communities and cultures throughout the world daytime napping is prevalent,²⁵⁴⁻²⁵⁸ interwoven with social, cultural and in some cases religious contexts.²⁵⁹ In Asian countries, inclusive of China,²⁵⁶ Taiwan²⁶⁰ and Japan,²⁵⁴ as well as in the Mediterranean region²⁵⁵ and in South America²⁶¹ a culture of taking a daytime nap is well-reported. Further to this, the integration of napping habits, even when at work or in social settings, especially in Asian countries,^{254,262,263} is often commented on and examined as unusual and in contrast to typical sleeping habits within contemporary Western societies.²⁵⁴

Cultural alignments, relative to sleep, can also be observed in examining not only the timings of sleep practices but also the specific nature of sleep practices from various global communities. In Islam, a midday nap is recommended and cited numerous times in the Quran, including recommendations for specific resting positions²⁵⁹ which closely align with recommended positions for daily rest, or 'lying Qigong', as practiced in China¹¹² and very similar to the daytime resting practices recommended in the CCM program in our study. Recommendations or arrangements relative to which direction in which to sleep - for example, lying from east to west - are also common to recommendations drawn from Chinese culture⁴ and to practices in traditional aboriginal communities in Australia.²⁵⁷ It has also been noted that the regimented nature of sleep as it often occurs in modern Western society - taken only at night - is foreign to numerous traditional cultures, where taking sleep as needed

during the day or even being woken as needed during the night is more common to the living and social structures of their communities.^{257,258}

Although daytime napping is rarely followed in England,²⁶¹ the emerging research suggesting an association between daytime napping and increased health and productivity²⁶⁴ is leading to a shift in contemporary Western workplace culture, to reflect an increased support for workplace napping.²⁶⁵ A number of influential global firms, including Google, Continental and British Airways, have already integrated nap-friendly workplace environments.²⁶⁵ If this cultural shift continues, it may be that workplaces which are supportive of daytime napping and which encompass a more comprehensive view of employee health become more commonplace in Western cultural contexts. The shift to these types of daily habits, such as daytime napping, reflect typical habits of traditional cultures including those informing the origins of CCM and may be worthy of further investigation not only in relation to health but also relative to how best such practices can be integrated into contemporary daily life in both home and workplace settings.

6.2.4 Application in daily life: dietary nourishment, foods and herbs

Facilitators of the CCM program drew on CCM philosophy in the design of simple guides and classes for dietary guidance. In response to the research aim of examining the participant experience, these classes were reported by various participants as being both non-culturally relevant in some of the food suggestions within CCM classes, as well as supportive, in the daily diary guide on foods. Concepts of 'hot' and 'cold' plants and foods, which are central to CCM⁴⁴ and as described by facilitators of the program, have been carried through to an understanding of foods and herbs in modern TCM and in traditional East Asian cooking.^{98,266} These concepts relative to the nature and influence of foods, are also common to other traditional cultures, such as that of the Maya, who utilise the 'hot' or 'cold' nature of plants and foods in healing and in encouraging thermal equilibrium within an individual.¹³ Also common to traditional contexts, is the passing on of knowledge of healing plants and remedies within the family or community, with children learning about herbs and their uses, in everyday life, throughout their childhood.^{13,30} This knowledge of simple everyday medicine, being applied through foods and in home cooking, is also seen in families with Asian heritage, even when living outside of Asia.^{131,132}

Of such importance is the use of foods considered in CCM, relative to nurturing life and avoiding illness, that the outline of one of the key foundational CCM texts on

medicinals, dating back to the Eastern Han Dynasty (100-200CE), designates everyday substances and foods, as being of the highest rank.⁴⁵ The *Shen Nong Ben Cao Jing* (translated as the Divine Farmers Classic of Materia Medica), lists first, of three categories of medicinals, herbs, minerals and plants which 'contain no medicinal efficacy', and 'should be taken over a long period of time to lighten the body, boost qi [health and resilience] and prolong life'.⁴⁵ This concept aligns with the repeated adage in Chinese medicine of 'treating disease before it arises' and the teaching that the highest level of practitioner aims to heal disease with the least invasive of methods.⁴⁵ Feedback from participants of the study suggests, however, that further alignment to contemporary culture, in the teaching methods of these concepts, may be necessary for bringing the material to a contemporary Western audience.

6.2.5 Environmental, cultural and social aspects of health

The study found that although the CCM program aimed to be inclusive and accessible to the community and also aimed for a collaborative dynamic amongst the delivery team, these aspects of connection were felt by some interviewees to be unsuccessful. Some program participants reported that there seemed to be a distinct group of core participants, whom may have already held knowledge or had a background in the program concepts and that this may have created a sense of exclusion to potential newcomers. It was also perceived by staff, practitioners and participants, that stronger networks with the existing health care system and further engagement with the broader community would have been beneficial. These points are of interest, due to the fact that CCM embodies a philosophy of connection, both socially and between humans and the natural world,^{1,2,45,49} and that these aspects are also reflected in other traditional medicine frameworks and highlighted as being of importance when successfully engaging community.^{15,252}

In recognition of the significance which the environment surrounding an individual, has upon their health; within the familial unit; within the smaller and wider social context; and in context of the natural environment, CCM principles align with the pillars of other traditional medicine frameworks from around the globe. In traditional medicine of the Maori, in Aotearoa/New Zealand, spiritual (*te taha wairua*), psychic (*te taha hinengaro*), bodily (*te taha tinana*) and family dimensions (*te taha whanau*) are considered to be the four cornerstones of health.²⁶⁷ Similarly, in remote aboriginal Australian communities, community, culture and empowerment, have statistically been shown to have a significant impact on a community member's

sense of wellbeing and happiness.²⁶⁸ Furthermore, this sense of community connectedness, connection to culture and empowerment, has been shown to be a key stepping stone to improved health, education and employment for indigenous community members.²⁶⁸

Not only within indigenous communities but across all social scales personal empowerment has been shown to be key to achieving improved health measures.²⁶⁹ What is referred to, in the current literature, as the social gradient in health is considered to occur in all environments and observes that those placed at the lower end of a social hierarchy, whether it be on a large or small scale, are at increased risk of mortality and morbidity.²⁷⁰ Working to provide further social inclusion, especially for marginalised sectors of community and those at the lower end of the socio-economic spectrum, is thus considered key to improving health outcomes across the globe.²⁷¹

6.2.6 Empowerment, ownership and self-efficacy: listening and responding

The CCM study found that staff, practitioners and participants recommended further community engagement and stronger networks, in order to facilitate further accessibility and social inclusion; recommendations which align with both contemporary research and traditional concepts. As a component of a review into effective health interventions for marginalised and excluded populations, a public engagement panel was held in London, UK, in 2015.²⁵² The panel included 16 individuals with lived experience of social exclusion, along with four academic researchers and two service providers.²⁵² The panel workshop found that the key elements of services, as valued by participants, were that the services: 'provide ample time and patience to really listen; strive to develop trust and acceptance; provide supportive, unbiased, open, honest and transparent services in inclusive spaces and places; encourage clients to accept personal responsibility for health; allow clients to take ownership, have choices and participate in decisions; and above all promote accessibility, fairness and equality'.²⁵² Furthermore, it was noted that for people to regain a sense of control and responsibility around their health, access to support outside mainstream health services, such as in the form of housing, welfare support and legal aid, was also important.²⁵²

In the Uti Kulintkaju Project, a project which has been led by indigenous Anangu women in central Australia, to improve mental health and wellbeing within their community, similar themes of empowerment, ownership and listening, have been highlighted as being key to the success they've achieved.¹⁵ The women who've led

the Uti Kulintkaju project, the Anangu team women, have existing relationships and roles of leadership within community, which has allowed for connection and community acceptance of the project's aims and design.¹⁵ The project furthermore has had continuity, over six years, which has been noted as a key component of its success. This continuity has allowed for the project to be 'emergent and adaptive' in design, responsive to feedback from community and has allowed time for team members to carefully reflect and consider best approach in response to consultation.¹⁵ In contrast to this, the CCM program was reported by staff and practitioners, to have been designed and delivered within very short timeframes, which led to a reported sense of being unable to successfully recruit and engage community.

Also of significance in the Uti Kulintkaju project, is the nature in which the project draws on traditional cultural wisdom and is led from within community, whilst concurrently aiming to build a bi-cultural understanding of mental health and wellbeing.¹⁵ The project team members seek ways in which to bring the best of Anangu and Western knowledge to bear on the mental health challenges their communities are facing and to share a framework for listening and collaboration, both within their communities and in relation to the government-led mental health care practitioners working in their region.¹⁵ The Uti Kulintkaju Project is thus seen as an extension of the Ngangkari (traditional aboriginal healers) program, 'underpinned by an ethos of care and healing' which is drawn from their traditional culture, and aims to 'strengthen partnerships with Western medical practitioners, for the benefit of the health of Anangu people'.¹⁵ Comparatively, staff and practitioners of the CCM program reported networks with the existing health care system being lacking, despite attempts to create referral pathways and collaboration in the lead-up phases. Furthermore, the CCM program staff reported a sense of self-consciousness, relative to the program material and its contrast to common Western health perspectives which they felt influenced and limited their recruitment strategy.

6.2.7 Community connection in the CCM program

The data from our evaluation of the CCM program suggests that it drew on themes common to other traditional medicine projects in many aspects of design and delivery, such as in its aims for social inclusion, in having a focal point for gathering and working in collaboration with the participants.^{15 252} In response to our research aim of identifying elements which were perceived to support positive delivery and engagement with the program, feedback from those interviewed, however, indicates

that they felt the program would have benefited from an extended period of community consultation, a greater sense of accessibility and further integration with the existing health care system. In the London panel workshop, aspects of health programs stated to be valued by those experiencing social exclusion, and therefore, poorer health, included programs which supported them in taking responsibility for their health.²⁵² In similarity, the CCM program, by design, encouraged its participants to take greater responsibility for their health, through active engagement and self-awareness and supported participants to have choice in how they would pro-actively make changes to their lifestyle. During the one-to-one consults, in the CCM program, health care goals for the coming month would be co-created between practitioner and participant, thus supporting patient choice and aiming to build a sense of responsibility and empowerment for participants.

The CCM program also aimed for social inclusion through its low-cost membership approach and design of program delivery through group classes. Data from the CCM program evaluation, however, suggested that the program attracted a distinct group of attendees, many of whom already had an understanding and experience of CAM therapies and practices. Thus, engagement with those demographics who may have most benefited from a low-cost community health care program, that is, those at the lower end of the socio-economic gradient, may have been missed in recruitment and/or retention. This may have been due to the core group of attendees being perceived by potential participants as being unique or already 'quite knowledgeable' as reported by some participants. It may also have been due to a lack of understanding coming across, in recruiting materials or communications, in relation to what the program was about and how it was aiming to be inclusive for all sectors of society.

In distinct difference to the Uti Kulintjaku project,¹⁵ run in central Australia, the CCM program drew on concepts and philosophies foreign to the majority of its intended demographic. Avenues of further inclusion could have possibly been built with the local community, through the CCM program team investigating currents of alignment with local mainstream and/or traditional health care practices of the region. Engaging a steering group from within the local community, beyond those delivering the project, may have also been an avenue to explore, in order to provide connection and a feedback pathway between the CCM program and the community.

6.2.8 Connection with the community and the formal health care system

Interviewed participants, staff and practitioners of the CCM program expressed that further inclusion of National Health Service (NHS) staff, such as nurses, or general practitioners and a referral avenue from the existing government-led health care service would have been beneficial to both program delivery and participant experience. Interestingly, however, one participant on the program, also a local medical practitioner within the NHS, did not echo this perspective but felt rather that it had more to do with trust between a potential participant and the person describing the program to them. Reflecting this sentiment, the Uti Kulintkaju project in central Australia was seen to be successful by those delivering the project, because of the roles and levels of trust which the core team members already held within their respective communities.¹⁵ Due to their positions of standing within community, the Anangu team women were able to connect with those the program was designed to help, and importantly, then created and adapted their project in response to feedback received.¹⁵

The type of participatory research models used in traditional communities, such as with indigenous populations like the Anangu,¹⁵ are just as appropriate to the context of the CCM program.^{272,273} Co-creative and participatory models of health-care research are recommended in community health projects, in aim of ensuring that programs meet the needs of the community.^{272,273} Such models have been found to be successful when incorporating: a systems perspective; a focus on creativity and human experience; and when maintaining an emphasis on process.²⁷³ This includes incorporating aspects of local adaptation and nonlinearity and considering how programs are framed, the nature of relationships within the program team and with community and incorporating structured approaches to governance and conflict-resolution.²⁷³

Engaging communities, groups and individuals to take steps towards improved health and wellbeing is considered to be a complex task, requiring careful program design.^{274,275} Recommendations in the current literature highlight taking into consideration many facets of support: social, familial, financial and emotional, in order to bring individuals to a point of long-term health behaviour change.^{274,275}

Traditional medicine philosophies and cultural practices from around the world share similar perspectives to the CCM recommendations for health and sustaining vitality, recognising the importance of connection for humans with each other and with the natural world.^{13-15,45,95}

Traditional practices and ways of being may be able to contribute to constructing frameworks for community health programs, beyond implementation in primarily traditional or indigenous communities,^{15,276} by drawing upon key principles of collaboration, listening and empowerment, as well as by providing specific guidelines for sustaining vitality and health.¹³ With the health gap in society becoming marked, especially for certain marginalised groups,²⁷⁰ drawing on principles of collaboration, support and connection, from our shared traditional knowledge landscape, could provide an important path forward for improved health globally. Findings from the CCM program analysed suggest that further research is warranted, in the design and delivery of programs based upon traditional medicine concepts, with a focus on networking and connection, especially when delivering such programs in regions where the program concepts may be considered different or alternative to the primary health care system in place.

6.3 Heterogeneity within Chinese Medicine and the re-emergence of CCM

6.3.1 Variation in clinical approach and profession-based concepts

The CCM program study found a perceived variation in clinical approach, during the individualised support and acupuncture sessions, as well as variation in professional philosophy and delivery of program content, amongst the three primary Chinese medicine practitioners engaged with the program. This finding responds to the research objective of examining perceived limitations to the program, by those engaged with and delivering it, as well to examining the participants' overall program experience. This variation in teaching philosophy was noted by participants and by administrative staff, as well as by the practitioners themselves and appears to reflect the wider context of a vast range of interpretations of Chinese medicine in practice.²⁷⁷ Consideration of the extent of these differences within the field may be relevant to researchers designing studies based in Chinese medicine frameworks, as well to the interpretation of research data drawn from such studies.

Studies based in Chinese medicine frameworks include those which incorporate traditional approaches to acupuncture, as well as those investigating Chinese herbal medicine and traditional Chinese medical approaches to exercise and lifestyle care, all of which are practiced, and researched, with wide variation in philosophy, diagnostic parameters and treatment approach.^{44,47,278,279} Clarity as to what specifically constitutes, 'Chinese medicine', 'Chinese herbal medicine', 'acupuncture', 'traditional Chinese medicine', 'classical Chinese medicine' or even

'Tai-chi' and 'Qigong' is difficult to qualify in study design, despite attempts by research groups to provide further guidelines.^{278,280} This difficulty in identification is partially due to the shifting nature of language, which necessarily fluctuates and adapts through history, according to the parameters of differing cultural and political, and in this case, health care and medical environments, as well as affected by international translations of both terminology and practice.²⁸¹ However, this broad and at times ambiguous interpretation of Chinese medicine may also simply be reflective of the vastness of the field and the numerous schools of thought, within and beyond China, within each of these sub-categories of therapeutic application.²⁷⁸ Of relevance to current research in the field of Chinese medicine is the possibility that practitioners working within the field and on Chinese medicine clinical studies, may be working from distinctly different perspectives and interpretations of the medical paradigm of Chinese medicine.

6.3.2 Variation in techniques of Chinese medicine: the example of acupuncture

6.3.2.1 Variation in acupuncture approach in the UK

Examination of the data available relative to variation in contemporary Chinese medicine practice suggests, that there is broad variation within the field,^{277,279} in similarity to the data which emerged from the CCM program evaluated. Practitioners in the UK practicing acupuncture, a key therapy commonly associated with Chinese medicine, were surveyed in 2011, with clinical practice questionnaires being sent to random samples of 100 practitioners drawn from three professional societies: the Acupuncture Association of Chartered Physiotherapists, (AACP), the British Acupuncture Council (BACc) and the British Medical Acupuncture Society (BMAS).^{277,282} From the 129 respondents the majority were also registered practitioners of other disciplines, with 91% of AACP members and 52% of BMAS members having less than 12 months training in acupuncture.²⁷⁷ All BACc members had more than 12 months initial acupuncture training.²⁷⁷ With the study focusing on how practitioners treat the presentation of low back pain, the results found that respondents needed between 2 and 30 acupuncture points in an average treatment (median=8) and left needles in situ for between 0 and 40 minutes, with a range of 121 points being listed, in total, as points used by practitioners in treatment.²⁷⁷ Respondents also reported that the strongest influence on their point selection was experience, followed by choosing local painful points and then by selecting distal

points on channels traversing the area of pain.²⁷⁷ Co-interventions most commonly used included exercise and massage, as well as moxibustion, which was used by 36% of respondents.²⁷⁷ The nature of exercise or massage was not specified, so it cannot be assumed that this was or wasn't prescribed from within a Chinese medicine framework, however, moxibustion is commonly associated with and used in conjunction with a Chinese medicine framework.¹¹¹

The results of the 2011 UK survey are likely to have been heavily influenced by the approaches and training of medical doctors practicing acupuncture and physiotherapists practicing acupuncture, being that the combined BMAS (37%) and AACP (35%) practitioners, respectively, comprised over two thirds of the respondents, compared to those registered with BAoC (28%).²⁷⁷ However, the data still brings into focus the large variation in the practice of acupuncture, a key therapy associated with Chinese medicine, as it's currently practiced in the UK. The UK study findings align with findings from a survey of licensed acupuncturists in Washington State, in the US, in 2001, which also showed a wide variation in styles of acupuncture treatment, applied for the presentation of low back pain, from amongst the 56 respondents.²⁷⁹ These findings also reflect similarity to the variation in clinical approach reported amongst the Chinese medicine practitioners working on the CCM program.

6.3.2.2 Variation in acupuncture approach in Washington State in the US

Styles of acupuncture practiced amongst those surveyed in Washington State included TCM acupuncture (89%), Japanese eclectic styles (including Manaka, Nagano) (50%), Trigger point Western styles (41%), Japanese meridian therapy (32%), French energetic acupuncture (9%) Korean constitutional acupuncture (7%), Worsley 5 element (9%) as well as other styles (12%).²⁷⁹ All practitioners reported using one or more adjunctive therapies, from a range which included moxibustion, massage, cupping and herbs.²⁷⁹ Seventy percent of respondents reported sometimes using electrostimulation.²⁷⁹ Interestingly, the survey was stated to be focused on the practice of Traditional Chinese Medicine (TCM) acupuncture, with the majority of analyses 'confined to the 50 practitioners who used TCM to treat chronic low back pain', however, what specifically constitutes TCM acupuncture was not clearly defined by the paper.²⁷⁹

6.3.3 The shifting meaning of terminology and the influence of 'TCM'

In consideration of why there may be significant variation being reported relative to the philosophical background and treating styles of practitioners within Chinese medicine, both in the CCM program evaluated and in the broader field, several points can be reviewed.^{277,279} Being that the term TCM is currently used extensively to define the field of traditional practice drawn from Chinese medicine; it seems pertinent to identify the emergence of this term and its intended meaning. If taken literally, traditional Chinese medicine, (TCM), implies that a version of medicine practiced under this title, will be both 'traditional' and 'Chinese', two terms which pose difficulties in determining clarity of meaning, being that tradition can and does shift, according to cultural and geographic context and considering that China, as a geographic, political and/or cultural entity, also shifts according to historical context.²⁸¹ Considering the term 'Chinese Medicine', we can determine from the literature, that by the late 19th century in China, there arose the need for a distinction between the medicine which had been practiced within China up to that point, which had previously been simply referred to as 'medicine' and which now became 'Chinese medicine' (*zhongyi*), in contrast to 'Western medicine' which was rapidly being adopted in China at the time.²⁸¹ Interestingly, the literature on the exchange of ideas, theories and philosophy, between East and West, at this point in history, suggests that many concepts exported to the West as 'Eastern' and 'traditional' may have been specifically repackaged by those in the East, to capture imaginations relative to Western preconceptions around what this might entail.²⁸¹ Fluidity and exchange, between what constitutes traditional and modern, 'Chinese' and 'Western' medicine, appeared to be common during the early to mid-twentieth century.²⁸¹

Of further interest and particular importance to the current use of the term Traditional Chinese Medicine, or TCM, is acknowledgement that the version of TCM, endorsed and disseminated from within China, since the late 1950s, was primarily constructed by Western-trained (Chinese) physicians, who adopted small sections of traditional knowledge and incorporated it into their understanding of modern medicine in order to create the parameters of the new 'TCM'.¹⁹ Commentators suggest that this was a direct reflection of the swinging political discourse in China at the time, which had included a direct denouncement of China's traditional physicians in the years immediately preceding the formal establishment of TCM and a desire by the government of the day to embrace Western medicine.¹⁹ It's further suggested that the nature of the political and educational environment, relative to medicine at the time, resulted in TCM being formed as a diminished and misunderstood version of China's previous medical traditions; a version which has also been suggested to be

far less effective in clinical practice and often difficult to navigate theoretically due to inconsistencies with clinical observation.^{19,21,47}

Despite this, TCM texts continue to be the mainstay of traditional Chinese medicine and acupuncture programs internationally.²⁷⁹ This successful dissemination of TCM, to many Western countries, may potentially be due to the success of therapies such as acupuncture, for which there is an emerging body of supportive research,³⁹ and which can, theoretically, be understood and applied based upon modern biomedical understandings: for example, via a theory of fascial channel pathways,²⁸³ a modern understanding of neurology,²⁸⁴ or from a physiological perspective.⁴⁶ However, the ongoing support of a potentially limited TCM curriculum, internationally, could also be the result of influence from mainland China and its move to form political, cultural and educational ties with many international institutions.²⁸⁵⁻²⁸⁷

Understanding this background and the factors which have historically, and are currently, influencing the field of Chinese medicine, provides insight into how practitioners within the field may be initially trained, and then are engaging with the profession in private practice. In the study evaluated in this thesis, all practitioners delivering the acupuncture sessions had been university or college trained, in three-four-year degrees, however, all had uniquely different approaches to CCM/TCM concepts and to delivering acupuncture. In the research field, studies which claim to be aligned with Chinese medicine concepts, either within TCM or CCM constructs, would benefit from increased clarity as to where, specifically, their concepts and approaches are drawn. Further details as such would provide greater understanding for those interpreting such studies, as well as create the opportunity for increased consistency for research studies within the field.

6.3.4 Influences on best practice: educational, research, and funding influences

In addition to the recent historical and political influences shaping contemporary Chinese medicine, there may also be reluctance from higher education institutions to adopt aspects of traditional medicine which by their nature can only be investigated and applied pragmatically, with a high level of individualisation, thus failing to match the standardised constraints of a randomised clinical trial (RCT).²⁸⁵ Considering that formal teaching institutions typically attract funding through research²⁸⁸ and that RCTs are considered to be of a higher standard than pragmatic studies for medical research in Western medicine,²⁸⁹ this creates an obvious conflict for teaching institutions in relation to backing either a clinically relevant or research-relevant

curricula, especially amidst the shifting landscape of global tertiary education.²⁹⁰ What is typically seen in the emerging research for Chinese medicine is the use of standardised formulae, in response to western medicine disease categories, both in acupuncture³⁹ and in Chinese herbal medicine,^{243,291-293} and even in the adoption of self-care techniques drawn from Chinese medicine.⁶ These approaches have become common to the modernised version of TCM but are not typically considered best practice relative to the concept of individualised treatment, nor in classical Chinese medicine schools of thought.^{19,47} This myriad of influences may be being reflected in clinical practice and in the philosophical perspectives and understandings being held by university or college-trained contemporary Chinese medicine practitioners,²⁵ including the practitioners engaged with the CCM program evaluated. These influences may also be affecting the approaches being adopted and defined as Chinese medicine in clinical research,^{39,285} as well as defining the practice of Chinese medicine clinicians in private practice settings.

6.3.5 The emergence of CCM in an international present-day context

In conjunction with the steady stream of TCM courses, being taught formally in institutions in many Western countries,²⁹⁴⁻²⁹⁹ there is also an emerging field of practitioners and scholars, practicing, studying and teaching, specifically classical Chinese medicine, both within China and internationally.^{22,47,300} The identifying term of 'classical Chinese medicine', which has likely emerged as a way of differentiating the field from TCM, identifies itself with a flexible, cohesive and potentially more clinically adept version of China's traditional medicine, based upon classical texts,^{27,32,33} that is, texts which scholars have considered classics, by title and by status, throughout the last two thousand years of medicine in China, with the term 'classics' referencing their value and clinical importance, rather than simply denoting the time in which they were written.² However, even within this field, there are numerous lineages and interpretations. Currently, within China, it is considered that there are over 42 schools of thought interpreting the key classical herbal text, the *Shang Han Za Bing Lun*, (usually translated as the Canon on Cold Damage and Miscellaneous Disorders), in relation to its application in clinical practice.⁴⁷ These variations of interpretation within the field of CCM, which is emerging as a self-identified stream within the broader profession of Chinese medicine, provides some background to the reported variations noted in philosophical interpretations of CCM concepts, by the practitioners working on the CCM program studied. Thus, this discussion point responds to the research aim of examining the experience of

practitioners delivering the CCM program and the research objective of exploring factors which influenced their successful delivery of the program.

6.3.6 Professional terminology: the shifting landscape of language

Variances in the interpretation and application of professional terms, within the field of Chinese medicine, were also noted amongst the Chinese medicine practitioners in our study, with a reported perception that this affected consistency in both delivery and communication, amongst practitioners themselves, and between practitioners and program participants. The same terms, were noted by different practitioners, to have a different meaning and clinical relevance, according to the practitioner's experience, training and clinical background. The shifting discourse in relation to professional terminology is not only reflective of recent years, however, and has been documented as occurring within the profession for centuries.

Two defining tenants of Chinese medicine are considered to be its holistic approach, both theoretically and clinically and its system of pattern based differentiation, or *zheng*.²⁴⁹ However, the term *zheng* has shifted in meaning throughout the centuries, sometimes referring to a very rigid set of symptoms, to be matched with a disease diagnosis, for example, as outlined by the Imperial Pharmacy in the Song era (960-1279) and somewhat similar to the approach of modern Western medicine, or potentially similar to the approach of modern TCM. At other times, comparatively, the term *zheng* has referred to a practitioner oriented interpretation of signs and symptoms and has incorporated a treatment approach which acknowledges the importance of practitioner insight, from within a responsive and flexible, yet well studied, theoretical paradigm.²⁴⁹ This latter approach tends to more closely reflect the classical schools of thought within Chinese medicine and also aligns with the approach within the CCM program design evaluated in our study.

6.3.7 CCM in lifestyle practices: significance and subtlety

Aspects of CCM, incorporated into the CCM program, although more subtle and simplified than that of classical herbal medicine and/or classical acupuncture approaches are similarly less commonly practiced, within the Chinese medicine or TCM profession and are often subject to varied interpretations. Aspects of Chinese medicine self-care discussed in classical texts, such as the *Huang Di Nei Jing*,^{1,2} and/or as reinterpreted for a general lay audience,⁴ often include very specific guidelines for health and well-being. Although such aspects are given some reference in TCM texts and training modules, it is uncommon for such classical

protocols to be discussed or investigated as a specific aspect of TCM lifestyle medicine in the published literature.⁶ This background may have influenced the differing approaches and interpretations of the CCM program content between the CCM practitioners engaged on the program.

6.3.8 Encompassing CCM in research

The current surge of interest in studying CCM, from acupuncture and Chinese herbal medicine practitioners internationally, suggests that many practitioners are either interested in, or are already applying aspects of classical Chinese medicine in practice.^{21,22,30,47} As the literature within the field continues to grow, studies in Chinese medicine which adopt a pragmatic approach, in line with whole-systems research,³⁰¹ may have the potential to more accurately reflect these aspects of classical practice within the field. Considerations for researchers and publishers in support of this, may thus include an increased word count, for published pragmatic studies, in order that they may adequately describe the theoretical paradigm and treatment approach adopted within complex interventions. Furthermore, a detailed description of not only the background of practitioners and their treatment approach, within Chinese medicine, but potentially, also the training and orientation requirements, if any, advertised by the study, prior to recruiting practitioners, could be disclosed. With increased understanding of the background from which traditional self-care techniques have emerged, the professional and lay audience may gain greater clarity on how best to utilise the strengths of traditional medicine, either for individuals and/or within community.

6.4 An experience of improved health outcomes for participants with multi-faceted, individualised support

6.4.1 Experience of improved health outcomes

Our study found that participants, who attended the CCM program for 3 months or more, reported improvements on a wide range of symptoms, including musculoskeletal, digestive, immune, energy and psycho-emotional presentations. These reports of positive health outcomes, as perceived by participants of the program, suggest that elements of the CCM program, either in isolation, or in combination, may hold a potential benefit for individuals seeking to improve their health. Improvements seen in these health areas align with the emerging research on the effects of both acupuncture and qigong,^{5,7,9,39} therapies which were not central to the program but which were incorporated. This finding responds to our study's

research objective of identifying any perceived health outcomes, noted by participants, through engaging with the program.

In considering the reported health improvements stated by participants, the potential contributing factors for such changes, in light of the multi-component nature of the program, must be discussed. A comparative literature review, which assessed a total of 136 systematic reviews on the effects of acupuncture for specific biomedical conditions, found evidence of positive effect for joint pain, specifically low back pain and knee osteoarthritis, as well as for allergic rhinitis and post-operative pain.³⁹ In the same review, moderate evidence was shown for conditions including metabolic disorders such as menopausal hot flashes, cancer-related fatigue and emotional conditions including anxiety and post-traumatic stress disorder.³⁹ Systematic reviews on qigong studies are less conclusive, however, suggest that qigong practice reduces stress and anxiety in healthy adults,⁹ is beneficial in treating some chronic pain conditions⁵ and there is evidence to suggest that meditative movement therapies generally may improve health-related quality of life (HRQOL).⁷ Furthermore, engaging in daily exercise routines and maintaining social connection are noted to improve health.⁹⁰⁻⁹⁴ The perceived results, seen by program participants, may have thus been due to any individual component of the CCM program but could also have been a sum of its many parts, with specific aspects of the program supporting relevant aspects of health and wellbeing for each individual participant.

6.4.2 Multi-faceted support and health behaviour change

The CCM program investigated by our study was multi-faceted, incorporating social support, self-reflection tools, digital feedback devices, exercise and stretching classes, contextual teaching of CCM concepts, therapeutic treatments and individualised recommendations. Aspects drawn from a CCM philosophy, which made up the core of the program, were delivered with a focus on sharing understanding with participants and of tailoring CCM based self-care recommendations to their individualised needs, in line with their self-reported readiness to adopt change. Aspects of this approach draws similarities to the *Trans-theoretical Model* of health behaviour change, which guides the practitioner to identify the patient's, or participant's, state of readiness to change, before providing advice and resources.³⁰² This aspect of the program was primarily seen in the one-to-one monthly consult, in which the participant and practitioner would collaboratively set a health care goal for the coming month.

Current literature on health behaviour change also indicates that daily exercise combined with social connection^{90,93} and a greater degree of self-efficacy²¹¹ can positively impact mental clarity and physical vitality. Studies which have examined the impact of regular group exercise, particularly in older adults, have shown that participants experience improvements in their functional health, as well as in their social capacity and enjoyment of life.^{90,93} Other studies which have examined self-efficacy and a person's health locus of control, that is, their self-perceived ability to adopt behaviour change, have also found these factors to be predictive of health behaviour change.^{211,303} An online study, of diabetic participants (n= 3,926), accessing an online program which encourages increased physical activity,²¹¹ and a German study (n=2,486) of participants attending a 14-day, on-site, integrative medicine program,³⁰³ found participant's self-perception of illness, as well as perception of their social network; and self-efficacy, stage of change and health locus of control; respectively, to be predictive of changes in health behaviour. Social connection was also found in the CCM program study, as being of highlighted value to participants, in relation to program adherence and overall program enjoyment.

6.4.3 Support via a shared context of understanding and individualised guidance

The study found that participants perceived the delivery of recommendations within the program to be supportive in encouraging them to adopt health behaviour change. Explanations for lifestyle change which were inclusive of CCM context and which were found to be relatable to an individual's everyday circumstances were reported, by participants, to create understanding and an impetus for shifts in behaviour. Thus, responding to the research objective of identifying factors which supported the participants' positive experience of program engagement and adoption of recommended practices. Providing context for recommended lifestyle change holds similarity to self-care advice given within traditional acupuncture consults, in current western private-practice settings, which has been shown to improve self-efficacy in acupuncture patients and been associated with reductions in pain and disability, up to one year after a course of treatment.^{11,34}

This approach of individualised recommendations drawn from a whole system of care such as CCM, may also allow for flexibility: in delivery of approach to lifestyle change, for practitioners; and in the chosen extent of adoption of lifestyle change, for patients and/or health care program participants. The scope of Chinese medicine lifestyle recommendations varies from simple generalised recommendations, such

as adopting regular sleeping patterns and regular meal times⁷ to more in-depth approaches such as following specific dietary recommendations or structured exercise routines, such as Tai-Chi sequences or Qigong practices.^{245,304} Thus, participants of the CCM program may have felt able to adopt lifestyle change, from within this range, at a level which felt possible and attainable to them, with guidance from a practitioner and based upon an overarching framework delivered in the core content of the program.

6.4.4 Health behaviour change and improved health outcomes via the CCM framework

In primary care settings improved outcomes are seen, relative to health behaviour change, when lifestyle recommendations are matched to a patient's level of activation.²¹⁸ In a US study, conducted in 2010 (n=25,047), this was found to be further supported by the incorporation of a practitioner who assists the patient to monitor their condition and to pro-actively set goals.²¹⁸ Self-care advice as reported by acupuncture practitioners practicing from within a traditional or whole system of care context, in the UK, reflects some similarity to these approaches.³⁵ Practitioners report self-care advice, within consults, to be aimed at: sharing understanding and engaging patients' to reflect on possible causes, (contemplation and/or activation); building self-awareness, (monitoring); and empowering the patient to pro-actively put in place behaviour change plans in view of longer-term health outcomes (goal setting).³⁵ As one-on-one consults were incorporated into the CCM program studied, which aimed to engage participants in a process of goal setting relative to their lifestyle behaviours, this may have assisted participants to set and achieve attainable changes, which may have contributed to their perceived improved health outcomes.

6.5 Chinese medicine as a complex intervention

6.5.1 Chinese medicine: When is it a complex intervention?

The CCM program investigated incorporated an individualised approach to patient self-care plans as well as to one-on-one treatments. In this way, the program incorporated flexibility and tailoring, as well as included a number of lifestyle recommendations, that is, behaviours, for participants to follow. There were also a number of components to be considered for those delivering the intervention, relative to teaching, assessing, advising and treating participants and the ways in which these components were delivered, were found by the study, to vary between practitioners. Although these components of variation add complexity for researchers

in assessing the impact of an intervention, these elements reflect the variation which might exist between acupuncturists and Chinese medicine practitioners in real-world, or private clinical practice settings.^{277,279} The following discussion point responds to the research objective of identifying recommendations for program improvement, based upon the findings of variation between use of CCM terminology and material delivery, as well as in the delivery of therapeutic treatments, amongst the practitioners delivering the program. It furthermore examines methods of evaluation for complex interventions, such as those based upon a CCM medicinal philosophy, as is the case with our study.

Complex interventions are defined by the Medical Research Council (MRC) (UK) as 'interventions that contain several interacting components' and may be further influenced by the 'number and difficulty of behaviours required by those delivering or receiving the intervention, . . . [the] number and variability of outcomes . . . [and the] degree of flexibility or tailoring of the interventions permitted'.¹¹⁷ The nature of Chinese medicine, when practiced in line with an individualised pattern diagnosis approach, also referred to in some literature as a traditional acupuncture approach³⁴ and considered common to TCM^{29,40} and to CCM,^{32,33} focuses on a high degree of tailoring according to the patient and takes into consideration the stage of illness, or health, each patient may be experiencing at the time of consult.²⁹ The CCM program evaluated aligns with these aspects of Chinese medicine and/or traditional acupuncture practice and presents as a complex intervention.¹¹⁷

6.5.2 Evaluating and delivering complex interventions

MRC guidance on evaluating complex interventions recommends careful planning relative to study design and evaluation, tailored to the nature of the intervention, along with acknowledgement that the phases of development, implementation, evaluation and reporting may be occurring in parallel, in stages, or cyclically, rather than only linearly (Fig. 5).³⁰⁵

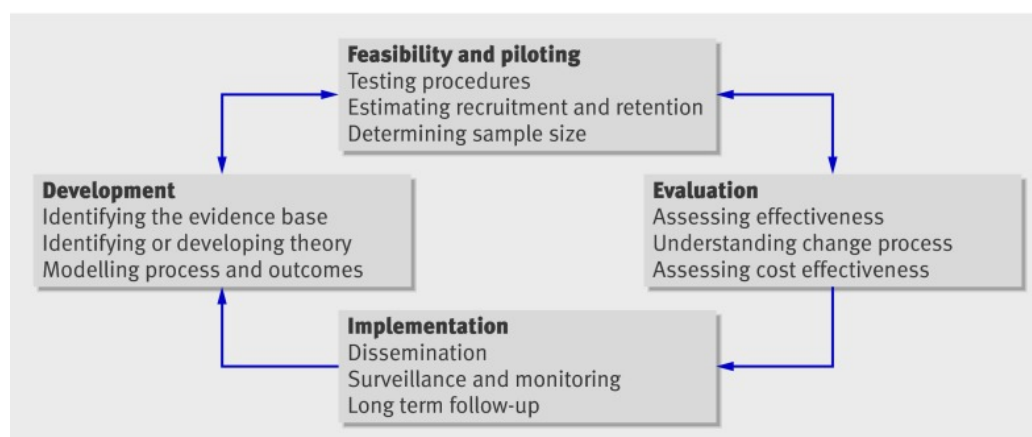


Figure 5. Key elements of the development and evaluation process

Feasibility or pilot studies can also play a key role in the development of complex interventions, by aiming to address the main uncertainties within the trial design and by providing a means to evaluate acceptability, compliance, recruitment and retention rates.³⁰⁵ The CCM intervention, which our research evaluated, was itself a series of pilot studies, designed to evaluate many of the aforementioned factors, as well to consider the program’s potential for ongoing sustainability, either through external funding or through a user-pay model. One of the weaknesses of the program design, from an exploratory research perspective, however, may have been the high number of variables incorporated into the pilot phases, both in relation to participant activities and in the variability of delivery.

6.5.3 Co-creation: an action-research approach

Data from the staff and practitioners in our study revealed that the delivery team felt that timelines and resources constrained their ability to effectively engage with the community for consultation and feedback prior to program commencement. This data responds to our research objective of examining staff and practitioner limitations to program recruitment and delivery. Engagement with community, prior to program roll-out, has been highlighted as a key element of enhancing success in community intervention strategies.²⁵⁰ An expanded version of this approach is often utilised in community programs based upon an action research model, wherein a repeated cycle of community consultation, program design, implementation and obtaining further feedback is followed.³⁰⁶ The effective delivery of the CCM program was also shown, through the staff and practitioner data, to have been constrained by the shifting objectives of the private funders, where additional phases of the project were requested or approved by the funding stakeholder, however, with very little

preparation or lead-in time for those running the project to engage in recruitment strategies and/or community consultation. Future programs, especially those incorporating traditional or CCM approaches in rural Western settings, should thus incorporate into timelines and budgets, adequate resources for community consultation, networking and relationship building with the primary health care infrastructure, prior to program onset.

6.6 Building connection and communication through a research agenda: CCM, multi-faceted interventions and whole-systems research

6.6.1 Whole-systems research

Whole-systems research (WSR) emerged in 2002 as a term for investigative research methods which might encompass the full facet of holistic systems of intervention, such as that of traditional and/or classical Chinese medicine.²²⁶ These holistic systems, in real-world settings, are typically inclusive of the patient-practitioner interaction and the facilitation of aspects of health behaviour change.²²⁶ This area of research has emerged not only in recognition of the holistic aspects of CAM care, but also in response to a considered misalignment with CAM, of typical interpretations of outcome measures, such as those held in pharmaceutical research, which tend to aim for a single endpoint, or result, in time, in order to assess the linear cause and effect of a clinical drug.³⁰⁷ Further assumptions, in mainstream clinical research, relative to the concept of study outcomes include: 'that an intervention is directed at preventing, moderating or curing one disease process; that the change in disease process will be predictable and similar in its form for every patient; [and that] the therapeutic relationship, . . . [including] changes in health beliefs and behaviours, are separate from the effect of the intervention under study.'³⁰⁷ In light of the future evaluation of multi-faceted CCM programs, which may be similar in design to the program assessed in our study, the following section provides a brief outline on WSR, relevant to such programs.

6.6.2 Whole-systems approach of this CCM program

The effectiveness of the kind of intervention evaluated in this thesis, compared with other more commonly employed interventions, cannot be determined without using an RCT design. However, the study evaluated in this thesis answers different questions. In contrast to this clinical trial perspective of outcomes, our study examined an intervention which specifically aimed to improve health outcomes through the identification and highlighting of individual variation, rather than seeing

all participants as similar, or rather than aiming for a specifically balanced demographic. Furthermore, the CCM program design and intervention was based on the hypothesis that health behaviours may change based upon the individual beliefs and levels of understanding held by participants. The qualitative study data, based upon participants' experience of the program, revealed that participants did change their behaviour based upon new perspectives imparted via the program content and that participants also placed a high degree of value on the therapeutic relationship and the facilitator's connection with the delivered material. The incorporation of a qualitative participant-based outcome measure, via participant interviews, thus, not only provided feedback on participants' perceived degree of physiological change, but also allowed for insight into the reasons for behaviour change occurring. This participant-based aspect of feedback was also able to provide insight on points of value for program adherence.

Incorporating multiple levels of measurement, inclusive of participants' physiological, psychological and experiential aspects, as well as incorporating the participant's perspective, not only in relation to their experience of an intervention, but also in the decision-making process on what the health-based outcomes ought to be, are all components which have been flagged in the discussion on best practice into whole-systems research.²²⁶ Patient-oriented outcome measures (PROMs), such as visual analogue scales, when used in process-based educational interventions, such as rehabilitation, have been found to be more likely to reflect aspects of functional improvement as opposed to conventional measures.³⁰⁸ Conventional physician-oriented measures, such as levels of impairment and disability, also typically fail to measure benefits which may be of value to participants, such as coping strategies and self-efficacy.³⁰⁸

6.6.3 The value of PROMs relative to Chinese medicine

In the CCM program, explored by our study, individualised feedback and advice were given to a heterogeneous group of participants, in conjunction with recommendations for health behaviour change, with individualised one-to-one acupuncture and/or bio-resonance treatments also accessed by some participants. For interventions such as this, participant-oriented assessment tools may hold particular relevance, as they have the potential to be used by practitioners working with a range of diagnostic frameworks, applying individualised approaches. In the field of Chinese medicine, differential diagnosis reveals a wide range of patterns and treatment approaches; that is, Chinese medicine often observes a heterogeneous

mix of patients, from a diagnostic and treatment perspective, for what would otherwise be considered one homogenous group of patients if identified by biomedical disease name only.²⁹ The use of participant or patient-oriented outcome measures, in feedback and evaluation, has the potential to accommodate this complexity by simplifying outcomes to a patient's key symptoms or primary area of concern.

One UK study, in 1996, trialled a patient-centred assessment instrument with 265 patients, in a multi-disciplinary practice, comprising patients from both primary (n=281) and complementary care (n=47).³⁰⁹ The practitioners on the study comprised four general practitioners, two osteopaths, an acupuncturist and homeopath. Their outcome instrument was called the Measure Yourself Medical Outcome Profile (MYMOP) and requested patients to identify what they themselves felt to be their two most important symptoms and to rate them on a visual scale. The MYMOP also tracked an activity of daily living and asked patients to rate their general feeling of wellbeing.

Results of the study showed that responsiveness or sensitivity to change, that is, scales relating to minimal clinically important change, were greater using MYMOP than conventional measures and that patients identified symptoms, or chief areas of concern, on the MYMOP, that their practitioner may have missed.³⁰⁹ In similarity with the results of our study, which found participants enjoyed tracking their progress via a simple daily diary, the MYMOP was popular with patients.³⁰⁹ This data may also suggest that patients are interested, generally, in playing a co-creative role in tracking their symptoms and in managing their health.

6.6.4 Increased utilisation of PROMs in pragmatic research trials

In recent years, there's been further development in patient-centred assessment tools, with a search on the PROQOLID™³¹⁰ research instruments database, in 2019, eliciting 242 results for patient-reported instruments.³¹⁰ The PROQOLID research instruments database was created in 2002, with the aim of facilitating greater worldwide access to tools which promote patient-centred outcomes in research. Specifically, the database has a focus on clinical outcomes assessments which 'measure a patient's symptoms, overall mental state, or the effects of a disease or condition on how the patient functions'.³¹¹ To be included, assessment tools must have a publication which describes their development; a clearly identified copyright holder; and a master version of the questionnaire in English has to have been submitted.³¹¹

In reflection upon the increased use of patient-reported outcomes (PROs), a review of trials on the Australian New Zealand Clinical Trials Registry (ANZCTR), from inception (2006) to March 2017, reveals that 45% of registered trials included a patient-reported outcome (PRO).³¹² There was also found to be an increase in the proportion of studies including a PRO between 2006 and 2016, with the most common categories for PROs being mental health (99.8% included PROs), rehabilitation (65.6%), musculoskeletal conditions (63.5%), public health studies (63.1%) and cancer trials (54.2%).³¹²

Being that interventions drawn from Chinese medicine, when practiced in line with an individualised pattern differentiation approach, incorporate complexity in diagnosis and in treatment, PRO measures provide an important tool for assessing changes in patient's health and quality of life. In contrast to the clinical study assumption that an intervention outcome is directed at moderating 'one disease process' and that the disease process will be 'predictable and similar' for every patient,³⁰⁷ the differentiated approach of classical and/or traditional systems of Chinese medicine incorporate the perspective at outset, that the process of change will differ for each patient and that one must necessarily aim to moderate and improve all aspects of disease process concurrently.²⁹

6.7 Limitations

This thesis presents the findings from a qualitative evaluation of a CCM program, which aimed to improve health outcomes for participants, through a focus on self-care. There are certain limitations, however, inherent in the approach taken in this study, which it's important to acknowledge.

6.7.1 Selection bias

Elements of selection bias were a limitation for both the participant and staff interviews. The researcher was provided with a list of program participants who had agreed to attend interview, as arranged by the project manager, however, those invited to interview made up only half of the total initial program enrolments. Those who were not contacted for interview and those who did not respond, may have had an entirely different experience from those who were contacted and who did respond. For the staff interviews the researcher was similarly referred to staff by the program manager and other staff members, however, post-interview phase, it became apparent that three staff members had been missed. These staff had only worked with the program briefly and had left the organisation prior to researcher

involvement. Similarly to the program participant respondents, those staff who had not been contacted and those who did not respond to an invitation to attend interview, may have had a different experience to those staff interviewed.

6.7.2 Pre-existing networks

Pre-existing relationships were also a limitation in this study. Due to having previously worked, for 10 months, in the organisation which conceived the design of the CCM program, the researcher had a prior professional relationship with two of the program staff interviewed and two of the program participants interviewed. Thus, the data from these persons may have differed to the nature and context of data gathered from other respondents.

6.7.3 Project and region specificity

The results are likely to be specific to the project, its team of practitioners and administrators, the participants involved and the demographic of its local population. As such, the results cannot be generalised to other populations. Relationships, prior perceptions within community of those initiating the project, political or funding agenda of other organisations, may have all influenced the nature in which the program was perceived and responded to. Recall bias of those interviewed, must also be considered, as there was significant variation in time elapsed since engaging with the program, (from 6 weeks up to 6 months), amongst interviewees. At two separate interviews, there was a child present, which also may have influenced the detail and nature of responses. Quantitative measures would have provided further support and rigor to the data gathered on health outcomes of participants; however, this level of investigation was outside the scope of this project.

6.7.4 Complex nature of intervention

The program incorporated numerous components of intervention, some of which were outside of a uniquely CCM approach, such as the inclusion of Western fitness classes, the general approach of group interaction, and on the latter pilot, self-tracking via the daily diary and added peer-support through the buddy system. As such, it cannot be determined whether reported benefits by participants were seen from engaging with the unique aspects of the CCM approach, or from the more general aspects of peer support, social connection and fitness. As such, this study is subject to the constraints associated with the pragmatic assessment of an existing complex intervention in a real-world setting.

6.7.5 Subjectivity bias

As with all qualitative research, there is the possibility that subjectivity bias, on the part of the researcher, may have influenced results. However, the methodology followed, using a *Framework Approach*,²⁰¹ was both systematic and rigorous and therefore aimed to counter bias as much as possible. Data was gathered from multiple sources: staff, inclusive of both practitioners and administrative staff; as well as from participants, in aim of acquiring numerous perspectives on the program. Themes were developed only where a clear pattern of occurrence or perspective was identified. Verbatim quotes were included in the results chapters to highlight common themes and provide connection with the original data. Further to this, the data has been reported, as closely as possible, in line with the current standards for reporting qualitative research, as outlined in the Consolidated Criteria for Reporting Qualitative Research (COREQ).¹³⁸

Despite these limitations, the data presented provides a unique contribution to the current literature. The nature of the CCM program is such that it holds similarity to other CAM approaches and thus, the results provide further perspective on the challenges and potential associated with delivering a CAM program, in a Western rural setting. The classical philosophy, upon which the CCM program draws, also shares similarity with many cultural and health perspectives from traditional medicine paradigms around the world and therefore provides insight into how these concepts might be delivered and received by demographics in a Western setting.

6.8 Future directions in research

This project highlights several areas for which there are gaps in the published literature, and which would benefit from further investigation.

6.8.1 Further investigation into health-related outcomes from Chinese medicine lifestyle interventions

The CCM program evaluated in our study, incorporated numerous aspects of self-care, including a routine of active and resting practices, followed throughout the day, individualised dietary and lifestyle recommendations, according to a CCM framework, aerobic exercise offered in group sessions and social support. The key components of this program were based on concepts drawn from CCM,¹ concepts which also hold resonance with many traditional medicine philosophies.¹³ Qualitative data from the study suggested a positive health association for those who attended the program for 3 months or more. This data would be supported by further

investigation of a more rigorous nature and replication of the study with a larger sample group, with both quantitative and qualitative data gathered from all participants who commence the program. The research would also benefit from having data collection: prior to program commencement, at program end date and at follow-up, for example: 6-12 months post end date, to investigate quantitatively, changes, if any, in health parameters, as well as to assess, qualitatively, pre-existing values and perceptions as well as long-term health behaviour change. Future studies would also benefit from examination of the non-CCM components of the intervention, such as the peer-support and self-tracking components, and the potential impact of such factors on outcome, specifically in relation to health behaviour change.

The data also indicated that staff and participants of the program felt that the program had potential for being delivered in other similar Western cultural settings. Participants indicated that they felt the program has potential for delivery in existing socially interconnected environments such as schools, or aged care settings, as well as in larger urban environments with a greater degree of cultural diversity. Whilst there is evidence of Chinese medicine interventions being delivered in such populations,³¹³⁻³¹⁵ a whole-systems intervention, such as the CCM program evaluated in our study, is yet to be assessed in such environments. Further research replicating a similar study, within such populations, would provide insight into variances of the program across such settings.

The positive findings associated with TCM self-care approaches, as indicated in the systematic literature review, suggests that self-care approaches, inclusive of self-acupressure, self-acupuncture, self-moxibustion and adoption of individualised lifestyle, diet and exercise advice, based upon a TCM diagnosis, may lead to improved health outcomes.⁶ The positive results obtained from these studies, suggest a need for further research into these self-care techniques.⁶ Due to the heterogeneous nature of the studies published in this area to date, however, it's difficult to draw firm conclusions from the data.⁶ In these studies, self-care approaches were adopted both with and without participants being exposed to a framework of understanding relative to the recommended practices, be that either traditional or biomedical.⁶ Data was also only available on self-care techniques being utilised in relation to a relatively small number of conditions.⁶ Moxibustion, for example, a considerable field of therapeutic intervention utilised in East Asian medicine, for a wide range of conditions,¹³⁴ was associated with only one published English-language self-care study, relative to only one biomedical disease diagnosis.¹⁴⁹ Further investigation into these aspects of self-care is warranted,

especially in the context of cost-effective health care interventions for improved health outcomes in those with chronic and lifestyle disorders.

6.8.2 Defined terminology and parameters of practice

As the field of Chinese medicine adapts to find its place within the global context,³¹⁶ it's becoming apparent that clearly defined parameters of practice are necessary, for both researchers and practitioners working in the field. The design and conceptual framework being utilised for therapeutic interventions, such as 'acupuncture', need to be clarified, especially in the context of evaluation of health related outcomes.³¹⁷ In acknowledgement of this the Standards for Reporting Interventions in Clinical Trials of Acupuncture (STRICTA) were published in 2001, which set out reporting guidelines for 'the acupuncture rationale, the details of needling, the treatment regimen, other components of treatment, the practitioner background, and the control or comparator interventions'.²⁷⁸

6.8.3 Parameters of practice: the example of acupuncture

Even when studies report and define their acupuncture intervention, however, in line with the STRICTA guidelines, challenges yet remain. Scholars and practitioners within the field highlight that the responsive nature of acupuncture, as classically described, cannot be directed or defined by a set of acupuncture points, details of needling, or practitioner style, as it is suggested that only when these variables are aligned to match the unique presentation of the patient, in the moment of treatment, that the desired result will be achieved.³¹⁸ That is, it is inferred, for best outcome, that these variables can and should vary from treatment to treatment.³¹⁸ Furthermore, some interpretations of the classical literature suggest that should an incorrect method of needling take place, that the patient's condition may worsen.³¹⁸ The subtleties of effect, responsive to needling application, is a difficult topic to grasp and examine, especially within the context of the wider academic and research audience, and thus remains largely undiscussed in the majority of published studies of acupuncture.^{317,319} Further to this is the questionable reliability, between practitioners, of diagnoses based upon traditional and/or classical frameworks, which guide traditional acupuncture treatment.³²⁰

6.8.4 Parameters of practice: other therapeutic techniques of Chinese medicine

In the profession of classical Chinese herbal medicine, similar issues arise, wherein best practice dictates that the patient is regularly re-assessed and modifications made, where necessary, to prescribed medicinal formula based upon the patient's shifting symptoms, rather than according to a biomedically defined disease category.^{27,33} In addition, other Chinese medicine therapeutic techniques, beyond that of acupuncture and the field of CCM herbalism, similarly have nuanced aspects of application: moxibustion,¹³⁴ cupping,¹⁰⁹ dietary and lifestyle modifications,⁴⁵ qigong,³²¹ all have detailed guidelines for application, recommended to be adapted according to an individualised diagnosis and/or to the presentation of the patient or participant at the time of intervention.

6.8.5 Model validity: the need for alignment between intervention framework and trial design

These aspects of nuanced and individualised practice within the field, predispose CCM interventions to being best evaluated in pragmatic trials, in which real-world effectiveness is assessed in accordance with the model validity principle.¹²⁰ This principle is defined in whole-systems research, as the ' . . . 'fit' between a study's design and the conceptual and clinical features of the studied intervention's underlying or originating paradigm'.¹²⁰ In similarity to other CAM interventions, holistic Chinese medicine therapeutic approaches are often multi-target or multi-morbid in their aims and consider subjective patient feedback as a component of tracking progress, both within treatment and relative to long-term objectives.¹²⁰ Behavioural, psychological and physiological aspects of ill-health may all be considered and treated in CCM and/or TCM interventions, in that the entire wellbeing of the patient is aimed to be addressed.³²² In Chinese medicine terms, the goal of treatment is to 'try to restore that idealised state of qi in the patient' addressing both the patient's overall state of health and concurrently, addressing the patient's specific symptoms.³²²

6.8.6 Ethics of practice and future research considerations

In the history of modern medicine³²³ and in the history of medicine in Asia,³²⁴ there are clearly recorded guidelines for physicians to act with empathy and integrity and to place at the centre of their focus the needs of the patient. At a time when we are seeing a global increase in chronic and lifestyle illness, patient needs ought to be centred in the public health and research agenda, now as much as ever. Pragmatic research trials, incorporating multi-component interventions, inclusive of patient-

reported outcome measures and based upon traditional medicine concepts including that of CCM warrant further investigation and could contribute significantly to current global health needs moving forward.

7. CONCLUSION

This thesis examined the experience of participants, staff and practitioners of a community-based CCM program delivered in rural Scotland. The CCM program utilised a whole systems approach in line with CCM philosophy and maintained a focus on participant education and the learning of self-care techniques for health behaviour change. The study used a *Framework Approach*²⁰¹ and identified a number of key findings.

Emergent themes from the participant data included self-reported improvements in health and self-awareness, by program participants who had spent three months or more on the program, as well as identified themes amongst these same participants of self-direction, adaptability and prior exposure to complementary medicine and/or specifically to traditional East Asian medicine. Themes on perceived points of value, from program participants, included personalised and social support, which was integrated into the program design and a perceived value in the incorporation of self-reflective tools. Points of perceived challenge, as expressed by program participants, included cultural barriers, barriers to program accessibility and an identified need for stronger networks both within the program and externally. Analysis of the staff and practitioner interview data revealed themes of cultural challenges in integrating the program in the local region, including with the existing local health care network, as well as themes relative to team dynamics and communication integrity within the local program team, as well as between the program team and external stakeholders.

These findings provide insight into challenges and key considerations for those designing CCM programs in the future, as well as provide information for future programs adopting a whole systems approach to promoting health. Future similar programs can thus draw on these findings, in addition to the existing literature, to inform study design, recruitment pathways, program evaluation tools, networking methods and funding approaches, in order to facilitate best practice and enhanced success in program delivery and program participant outcomes relative to health behaviour change.

8. APPENDICES

Appendix A: Literature review: Published manuscript associated with Chapter 2:
JACM

Appendix B: Interview Guide: Participants

Appendix C: Interview Guide: Staff

Appendix D: Ethical clearance UTS HREC

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Appendix F: Program participant interview consent form

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Appendix H: Qualitative study: published manuscript assoc. with Ch. 4: EurJIM

Appendix I: Qualitative study: published manuscript assoc. with Ch. 5: IntegrMedRes

Appendix J: TIDieR checklist: CCM Program

Appendix A: Literature review: published manuscript associated with Chapter 2: JACM

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JACM

Traditional Chinese Medicine Self-Care and Lifestyle Medicine Outside of Asia: A Systematic Literature Review

Alaia Harvie, MAppSc (CHM), BHSc (TCM-Acu), GradCert Tert Teach,¹
Amie Steel, PhD, MPH, Grad Cert Ed (Higher Ed), BHSc (Nat),^{1,2}
and Jon Wardle, PhD, MPH, MHLth and Med Law, BHSc (Nat)^{1,2}

Abstract

Background: Chinese medicine, when applied as a whole system of care, traditionally incorporates self-care techniques and patient understanding as key aspects of patient recovery and health maintenance.

Objectives: This review aims to explore the literature to date on Traditional Chinese Medicine (TCM) self-care in settings outside of Asia, beyond the sole application of *t'ai chi* or *qigong*, to consider simple self-care techniques as health care interventions that may be generalized to a wider population.

Design: AMED, CINAHL, EMBASE, PubMed, and MEDLINE databases were searched for articles from inception to July 2018. Studies were included, which were undertaken in settings outside of Asia and/or Asian communities, and were excluded if they solely examined *t'ai chi* or *qigong*.

Results: Findings of the included studies ($n = 37$) were categorized into four key areas in relation to the TCM self-care component evaluated: self-acupressure, self-acupuncture, self-moxibustion, and the adoption of prescribed lifestyle, diet, and exercise advice based on a TCM diagnosis. The studies included randomized clinical trials, case studies, hospital audits, and qualitative evaluations. The studies assessed TCM self-care in relation to a wide range of health conditions, with the majority of studies concluding positive findings.

Conclusion: This review draws attention to the potential role of TCM self-care techniques, in settings outside of Asia, beyond the sole practices of *t'ai chi* and *qigong*, as an adjunct to health maintenance and recovery. Only tentative conclusions can be drawn from the existing research, however, due to variability across studies in reporting transparency and the overall low number of studies retrieved. Further research is warranted.

Keywords: systematic review, Traditional Chinese Medicine, self-care, acupressure, acupuncture, lifestyle advice

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¹Faculty of Health, University of Technology Sydney, Sydney, Australia.

²Australian Research Centre in Complementary and Integrative Medicine, Faculty of Health, University of Technology Sydney, Sydney, Australia.

Appendix B: Interview guide: participants

AllsWell PARTICIPANT Interview Questions - November 2016

Research Question What impact does a community health program, teaching basic health and lifestyle techniques, based upon the concepts of classical Chinese Medicine, have on the health and well-being of participants?

Sub-Questions (adapted for relevance to staff interview) What is the participant experience of the program? // Is the program a socially and culturally appropriate design for application in a rural Scottish location? // Is the program easy to promote and integrate in a rural setting (in a western country)? // Is the program adaptable? // How can the program design be enhanced or improved?

CONTACT with PROGRAM

- How did you hear about AllsWell ?
- Were you a participant on Love2, or on the Pilot Program?
- What prompted you to join, or to look into the program?
- Which aspects of the program did you attend-formally- eg in classes, or consults?
 - Pilot Program: (eg: Acupuncture/PhysicalHealth Classes/Bio-Resonance)
 - Love2: (eg: Rest4Health/Stretch4Health/MOT)
 - How often?

OVERALL EXPERIENCE

- How would you describe your experience overall?
- What did you enjoy most about the program?
- What did you dislike the most about the program?
- Which area of the program would you feel is most in need of improvement or adaptation?

IMPLEMENTING THE PROGRAM

- What was your experience of implementing the program into your daily routine?
- Whilst on the program, how often did you apply the techniques and lifestyle suggestions into your daily life?
 - Which aspects of the program were these?
 - Do you continue to apply these in your daily life currently?

STAYING WITH THE PROGRAM

- Did you attend a complete course of the AllsWell program?
- Can you describe what motivated you to continue, &/or not continue?
- Did you feel supported/encouraged?

VALUE of PROGRAM

- Do you have any feedback on the cost of the program?

AllsWell PARTICIPANT Interview Questions - November 2016

HEALTH RELATED EXPERIENCE

- Are there ways in which you feel that the program made an impact on your physical health?
- Are there ways in which you feel the program made an impact on your emotional and mental health?

IMPRESSION OF ORGANISATION

- What did you perceive to be the main aim of AllsWell?

DIARY & BIOMETRICS

- What was your experience of the diary? (helpful/not helpful?)
- Monthly appointment?
- Biometrics?

PROMOTION OF PROGRAM

- Do you think the program can be recommended to everyone?
- Would you recommend personal friends/family to the program?

STAFF

- What was your impression of the course teachers and practitioners at AllsWell?
- What was your impression of the admin staff and management?
- What was your impression of the recruitment process?

HEALTH IN RURAL AREAS / PROGRAM ADAPTABILITY

- Do you feel the program was relevant to the local area?
- Do you think the program is adaptable to other cultural environments? (eg. City areas, Other countries).

SUMMARY AND CLOSING

- If this program, or something similar, were to run again, What specific recommendations would you make, to improve or enhance the program being run by AllsWell?
- Do you have any other insights, recommendations, feedback which you would like to share?

Appendix C: Interview guide: staff

AllsWell STAFF Interview Questions - November 2016

Research Question

Does a community health program, teaching basic health and lifestyle techniques, based upon the concepts of classical Chinese Medicine, have a positive impact on the health and well-being of participants?

Sub-Questions (adapted for relevance to staff interview)

What is the experience of staff members, in relation to their experience in delivering and/or participating in the program? //Is the program a socially and culturally appropriate design for application in a rural Scottish location?//Is the program easy to promote and integrate in a rural setting (in a western country)? //Is the program adaptable? //How can the program design be enhanced or improved?

Interview Questions – Semi-Structured Interview Format

ROLE & TIMEFRAME

- What is your current or previous role with AllsWell ?
 - How long were you in that position for and during what time period (approx.)?
 - How did you come to the job?
 - What was the structure of your role? Eg. Were you a paid employee/volunteer/other arrangement?
 - Were you engaged in the pilot phase, or the Love2 program, or both?

OVERALL EXPERIENCE

- How would you describe your experience overall?
- Are there any key areas in which you felt you learnt from your experience in working with AllsWell?

ENGAGEMENT WITH THE PROGRAM

- Did you attend any of the AllsWell classes yourself & if so what was your impression?
- If you have learnt the techniques/recommendations of the program:
 - Do you apply them in your daily life? Which techniques, how often?
 - What is your experience with them?
- Do you feel that the program can be recommend to everyone (eg. Would you recommend personal friends/family to the program?)

IMPRESSION OF PARTICIPANTS

- How would you describe the types of participants enrolling on the program?
- What do you feel attracted them, &/or what do you feel they were hoping to get from the program?
- Do you feel there were any consistent or recurring reasons as to why people dropped off the program?

Appendix D: Ethical clearance: UTS HREC

UTS HREC Approval - ETH16-0866

Research.Ethics@uts.edu.au

The 06/10/2016 13:28

To: Charity Carleton <Charity.Carleton@student.uts.edu.au>; Anie Steel <Anie.Steel@uts.edu.au>; Research Ethics <research.ethics@uts.edu.au>; Joe Wardle <jos.Wardle@uts.edu.au>

Dear Applicant

UTS HREC REF NO. ETH16-0866

The UTS Human Research Ethics Expedited Review Committee reviewed your amendment application for your project titled, "Qigong as a Basic Lifestyle Intervention", and agreed that the amendments meet the requirements of the NHMRC National Statement on Ethical Conduct In Human Research (2007). I am pleased to inform you that the Committee has approved your request to amend the following:

1. To include an invitation to participate in interview or focus group, to the previous cohort of participants on the same program; and
2. To extend an invitation to participate in semi-structured interviews, or moderated focus groups, to the staff and key stakeholders delivering the program.

You should consider this your official letter of approval. If you require a hardcopy please contact the Research Ethics Officer (Research.Ethics@uts.edu.au).

To access this application, please follow the URLs below:

* If accessing within the UTS network: <https://rm.uts.edu.au>

* If accessing outside of UTS network: <https://remote.uts.edu.au> , and click on "RMS - ResearchMaster Enterprise" after logging in.

We value your feedback on the online ethics process. If you would like to provide feedback please go to: <http://surveys.uts.edu.au/surveys/onlineethics/index.cfm>

If you wish to make any further changes to your research, please contact the Research Ethics Officer in the Research and Innovation Office, Ms Valeria Passo on 02 9514 2478.

In the meantime I take this opportunity to wish you well with the remainder of your research.

Yours sincerely,

Professor Marion Haas

Chairperson

UTS Human Research Ethics Committee

C/- Research & Innovation Office

University of Technology, Sydney

E: Research.Ethics@uts.edu.au

** please note that researcher(AH) changed name during course of the project, with name upon Ethics approval being Charity Carleton.*

Appendix E: Interview participant information sheet



[retracted name of organisation] PROGRAM – INTERVIEW – PARTICIPANTS INFORMATION SHEET

Qigong as a Basic Lifestyle Intervention (ETH16-0572)

WHO IS DOING THE RESEARCH?

My name is Charity Carleton and I am a research student at UTS conducting research in conjunction with [retracted organisation name] Community Health. My supervisors are Dr Amie Steel and Dr Jon Wardle.

WHAT IS THIS RESEARCH ABOUT?

This research aims to evaluate [retracted organisation name] community health programs, their impact upon participant's quality of life, and participants' overall experience of the programs.

IF I SAY YES, WHAT WILL IT INVOLVE?

You will be invited to participate in a one-to-one interview with myself, Charity Carleton, for a duration of between 30 minutes and one hour. The interview will be audio recorded and I may take some hand written notes throughout. I will follow a general outline of questions, relevant to your experience with [retracted organisation name] however, you will also be free to share any information about the program which you feel is relevant.

After the interview, I will transcribe, (type out), the audio-recording, and, in conjunction with examining the transcripts from other participants, I will analyse the data for themes or common patterns in the feedback. Following this, some basic results or conclusions will be written up.

You will not be identified in any steps from the point of the initial transcription.

With your consent, I may also get in touch with you following my initial analysis, to confirm pieces of information or overall conclusions.

ARE THERE ANY RISKS/INCONVENIENCE?

There is inconvenience in that I am requesting that you give up up to an hour of your time, along with any travel time, in order to meet with me. You will not be paid or reimbursed for your time.

WHY HAVE I BEEN ASKED?

As a participant on one of *[retracted organisation name]* community health programs, you are in a unique position of being able to give feedback on this health care initiative. I am interested in all feedback, positive or otherwise, in order to evaluate the program.

DO I HAVE TO SAY YES?

You don't have to say yes.

WHAT WILL HAPPEN IF I SAY NO?

Nothing. I will thank you for your time so far and won't contact you about this research again.

IF I SAY YES, CAN I CHANGE MY MIND LATER?

You can change your mind at any point up until the interview and you don't have to say why. I will thank you for your time so far and won't contact you about this research again.

You are also free to change your mind, even after the interview, however, please bear in mind that once the interview transcript has been analysed, and some months have passed, anonymous information gathered from your interview may already be included in written papers, which cannot be withdrawn once published.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?

If you have concerns about the research that myself, a member of the *[retracted organisation name]* team, or my supervisor can help you with, please feel free to contact *[retracted organisation name]* on *[retracted phone number]* or myself, Charity Carleton, on *[retracted phone number]*.

If you would like to talk to someone who is not connected with the research, you may contact the Research Ethics Officer via Research.Ethics@uts.edu.au, and quote this number (ETH16-0572).

** please note that researcher(AH) changed name during course of the project, with name at time of interviews being Charity Carleton.*

NOTE:

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 9772 Research.Ethics@uts.edu.au) and quote the UTS HREC reference number (ETH18-0459). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

** please note that researcher (AH) changed name during course of the project, with name at time of interviews being Charity Carleton.*

Appendix G: Program staff interview consent form



STAFF INTERVIEW CONSENT FORM

I _____ agree to participate in the research project **Qigong as a Basic Lifestyle** (HREC REF NO. ETH18-0572) being conducted by *[retracted organisation name]* Community Health in conjunction with research student, Charity Carleton, Contact telephone number: *[retracted]* Email address: *[retracted]* of the University of Technology, Sydney, Australia, for her degree, Master of Health Services (Research). Some funding for this research has been provided by *[retracted organisation name]*, and Endeavour College of Natural Health, Brisbane, Australia.

I understand that the purpose of this study is to assess the impact of a simple exercise and lifestyle program upon quality of life. Furthermore, this study aims to assess the overall relevance of the program and the experience of participants.

I understand that I have been asked to participate in this research because I have been engaged as a staff member of *[retracted organisation name]* programs and that my participation in this research will involve attending a one-off interview of up to one hours duration. I understand that the interview will be audio-recorded and that from the point of initial transcription,(typing out the interview for coding, which will be undertaken by Charity Carleton), my feedback will be de-identified.

I am aware that I can contact the *[retracted organisation name]*, Charity Carleton or her supervisors, Dr Jon Wardle or Dr Amie Steel, if I have any concerns about the research.

I also understand that I am free to withdraw my participation, at any point up to publication, without consequences, and without giving a reason.

I agree that *[retracted organisation name]*, and/or Charity Carleton, have answered all my questions fully and clearly.

I agree that the research data gathered from this project may be published in a form that does not identify me in any way.

Signature (participant)

____/____/____

Signature (researcher or delegate)

____/____/____

NOTE:

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 9772 Research.Ethics@uts.edu.au) and quote the UTS HREC reference number (ETH16-0459). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

** please note that researcher (AH) changed name during course of the project, with name at time of interviews being Charity Carleton.*

Appendix H: Qualitative study: published manuscript associated with Chapter 4: EurJIM

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Research paper

Classical Chinese medicine self-care: Participants' perspectives on a pilot program for community health



Alaia Harvie^{a,*}, Amie Steel^b, Jon Wardle^b

^a Faculty of Health, University Technology, Sydney, Level 7, Bldg 10, 235 Jones St, Ultimo, NSW, 2007, Australia

^b University of Technology Sydney, Faculty of Health, Australian Research Centre in Complementary and Integrative Medicine, 15 Broadway, Ultimo, NSW, 2007, Australia

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ABSTRACT

Introduction: Classical Chinese medicine (CCM) includes numerous simple lifestyle recommendations which can be adopted into daily life in support of short and long-term health outcomes. The rise of chronic illness and non-communicable disease globally, in recent decades, has created a call for acceptable, cost-effective and scalable health care programs. This analysis explores the experience of participants in a CCM community healthcare program delivered in rural Scotland.

Method: Semi-structured interviews were employed in which a sample of program participants (n = 11) were interviewed about their overall experience in participating in the CCM program, inclusive of their experience adopting the recommended practices, program challenges and/or perceived barriers and any self-reported changes in health and well-being. The data were analysed and themes developed using the Framework Approach.

Results: Themes emerged in four key areas: *Improvements in health and self-awareness; Self-direction, adaptability and prior exposure; Personalised support, self-reflective tools, sustaining engagement; and Cultural barriers, accessibility and strengthening networks.* Interviewees were from a diverse range of occupational backgrounds with the majority aged over 50 years.

Conclusion: This study suggests individuals engaged in a CCM community healthcare program may experience improved physical and emotional health outcomes and may feel motivated to adopt CCM self-care practices through program elements which enhance self-efficacy. The clinical benefit of these self-care practices and the feasibility of CCM community healthcare programs on other settings warrant closer researcher attention.

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* Corresponding author at: University of Technology Sydney, Faculty of Health, Level 7, Building 10, 235 Jones St, Ultimo, NSW, 2007, Australia.
E-mail addresses: aharvie@protonmail.com (A. Harvie), Amie.Steel@uts.edu.au (A. Steel), Jon.Wardle@uts.edu.au (J. Wardle).

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Original Article

A qualitative study of classical Chinese medicine in community health focusing on self-care: practitioner and staff perspectives



Alaia Harvie^{a,*,} Amie Steel^{b,} Jon Wardle^b

^a Faculty of Health, University of Technology Sydney, Australia

^b Australian Research Centre in Complementary and Integrative Medicine, Faculty of Health, University of Technology Sydney, Australia

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ABSTRACT

Introduction: Classical Chinese medicine (CCM) encompasses many simple lifestyle recommendations which can be adopted into daily routines in support of short and long-term health outcomes. The rise in non-communicable diseases (NCDs) globally in recent decades has led to a need for cost-effective and scalable health care interventions to address lifestyle risk for NCDs in the community. This analysis explores the experience of staff and practitioners delivering a CCM community health care program designed to improve health behaviors in the community in rural Scotland.

Methods: A qualitative study employed semi-structured interviews with a sample of program practitioners and staff (n = 7). Informants were asked to share their experience in delivering the CCM program. Emergent themes were identified via analysis using the Framework Approach.

Results: Themes emerged from the data in three key areas: Cultural challenges within the local region; Integration with the existing local health care network; and Team dynamics, co-creation and communication integrity.

Conclusion: This study highlights the importance of accessibility, integration, networking, secure funding and team unity in the context of community health program delivery, as well as noting a diversity of practice among Chinese medicine practitioners. CCM concepts may hold potential for integration into community health, however, further research is warranted.

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1. Introduction

In response to the global rise in non-communicable disease (NCD), there has been a call from the World Health Organization (WHO), for, cost-effective and scalable health intervention strategies which promote behavior change.¹ Such change is most effectively adopted and sustained when supported by integrated community-based approaches which incorporate a range of intervention strategies.² Easily adopted health care practices that can be incorporated into daily routines and largely align with current WHO recommendations¹ are found in many traditional cultures and their traditional medicine systems, including that of Chinese medicine.^{3,4}

A number of foundational texts, largely recorded in the Han dynasty (206BCE–220CE), have had considerable influence on the transmission of Chinese medicine throughout the past two thou-

sand years and convey principles by which to not only practice medicine but also by which to live.^{4–6} These principles, recorded in texts such as the *Dao De Jing* (Path of Virtue) and *Huang Di Nei Jing* (Yellow Emperor's Inner Classic), express an interweaving of Daoist, Buddhist and Confucian schools of thought, reflective of the cultural matrix of the time.⁷ Passages from the *Huang Di Nei Jing* also provide background to specific lifestyle practices, historically common to Asian culture, such as: following patterns of rising with the sun and taking to rest with the sun; undertaking strenuous activity in the earlier part of the day; taking a midday rest; adapting one's diet and patterns of dress according to the seasons and one's constitution; acknowledging one's place within the greater environmental and social context; and maintaining a balanced emotional perspective on life.^{4,7–9} Similar lifestyle principles have been reflected in numerous traditional cultures around the world and are suggested by those who follow them, to be associated with health, longevity and sustained vitality.³

Within the Chinese context, certain sources are described as 'classical texts' due to their historical dating and the translation of the term *Jing*, in their title, which denote them as being considered foundational content for the field.¹⁰ The principles espoused

* Corresponding author at: University of Technology Sydney, Faculty of Health, Level 7, Building 10, 235 Jones St, Ultimo, NSW, 2007, Australia.
E-mail address: aharvie@protonmail.com (A. Harvie).

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in these records continue to hold influence on the modernized practice of Traditional Chinese Medicine (TCM),¹¹ however, the detailed and nuanced approach, described in the classics is suggested by some within the field to be incomplete in the TCM construct.^{12,13} It is against this backdrop that the term Classical Chinese Medicine (CCM) has thus been emerging to define a field of Chinese medicine practice which aims to draw more consistently on the principles and specifics detailed in the classical texts.^{13–17}

Within the published literature, lifestyle recommendations, which draw heavily on CCM principles, have primarily been evaluated when delivered alongside a course of acupuncture and have been found to be associated with increased self-efficacy^{18,19} and increased patient empowerment.²⁰ Furthermore, improvements in self-efficacy and self-care were found to be associated with a longer-term reduction in pain at 12 months post-intervention.^{18,19} A number of studies have evaluated self-care techniques, such as acupressure or moxibustion, for bio-medically defined conditions,²¹ however, there has been little investigation into how the TCM/CCM framework might be applied in the community context in settings outside of Asia or the Asian diaspora.²¹

The success and sustainability of new community-based programs has been found to be influenced by numerous factors including the level of local integration and community engagement achieved²² and may also be considered to be influenced, from a creative and inclusivity perspective, by the degree of intuitive leadership, unity and flexibility within the delivery team.^{23,24} Such aspects may hold particular value in respect to programs which adopt elements from outside cultures, such as that of a CCM program, delivered in a regional area of the United Kingdom (UK).^{25,26} Although the co-existence of multiple medical systems exists within the UK context, the dominant healthcare system in the UK, as delivered through the National Health Service (NHS), differs somewhat in its overarching framework to that of the CCM approach.²⁷ The aim of this study is to examine the experience of staff delivering a community-based program in the north of the UK, in regional Scotland, that focused on promoting health behavior change by sharing knowledge with participants based on self-care principles drawn from CCM. An applied research approach²⁸ was implemented to explore the staff experience, inclusive of both administrative and practitioner feedback, in order to: assess the impact, if any, of the program on the health and wellbeing of participants; examine the staff perception as to the practicality and feasibility of the program; and to examine any other themes which might emerge from the interview data.

2. Methods

2.1. The context of the analysis: the CCM program

A community health care program, based upon CCM concepts, was implemented in a small town in the Highlands region of Scotland. The program ran between November 2015 and September 2016 and was primarily supported by private donor seed-funding. The program focused on initiating and supporting pro-active self-care in participants' daily lives, through the teaching of daily lifestyle practices. Key to the program was a focus on educating participants about the potential influence of each CCM practice on individual health.

The program was delivered through a paid membership approach, allowing open access to any number of different classes being held at the program center throughout the week. Most classes were based on CCM concepts that focus on adjusting periods of rest and activity to align with the natural rhythm of a day and incorporated a routine of simple practices to be adopted at morning, midday, late afternoon and prior to bed. There were also classes on

topics of interest such as dietary therapy from the context applied in TCM, or the practice of drinking tea, such as green, oolong, or pu'erh tea, which is considered within Chinese culture, to support cleansing, nourishing or digestive health, respectively.^{29,30} Other classes focused on non-CCM exercise, including aerobic and stretching routines. Low-cost acupuncture and/or biofeedback treatments were available with membership, which also included a one-on-one monthly appointment with a practitioner trained in the CCM concepts. In this appointment practitioner and participant would review the participant's health status and co-create a health focus and lifestyle adjustment plan for the coming month.

The organization ran three pilots of the program between November 2015 and September 2016. The initial program had 50 participants enroll, with smaller numbers on the subsequent two programs. Digital monitoring was incorporated into the program as a self-reflective tool for participants and was achieved, in the initial pilot, via a wristband fitness tracker worn by participants for up to 3 months. This was also used as a method to monitor participants' adherence to the lifestyle routine suggested. On the two subsequent pilots digital monitoring was implemented via monthly readings from a biometric machine, based at the program center. The third pilot focused on providing support for those with a biomedical diagnosis of diabetes (type 1 or type 2). Over the ten months of the program, a number of key staff members were involved on a full-time basis, from initial program concept and design, through to delivery. Other staff members were employed after the program had commenced and were primarily involved on a part-time basis in administrative roles.

2.2. Methodology

Semi-structured individual interviews were conducted, by AH, with staff involved in administration or delivery of the program. [Supplement A]. Ethical clearance was granted by the University of Technology, Sydney, Human Research Ethics Committee (registration number ETH160459). Formal written informed consent was obtained from all participants.

2.3. Participant selection

All program staff (n = 9) (inclusive of practitioners, management and administrative personnel) were contacted via email and invited to interview, by the researcher (AH) in September–October 2016, with the exception of three staff members who were not contacted as their contact information was not provided by the organization. Of those contacted, seven agreed to participate in the study and were interviewed at a time and place preferred by the participant (e.g. cafe, meeting room, participant home). Interviews had no set time limit and lasted for 25–70 min. All interviews were conducted between 31 October and 5 November 2016.

2.4. Researcher background and relationships

Most staff interviewed were introduced to the researcher three months prior to interview, with the exception of two online meetings and brief email communication between the researcher (AH) and program manager six to twelve months prior. Additionally, a pre-existing professional relationship as co-workers existed between the researcher and two participants two years before the study.

The primary researcher had a background of 20 years' experience in studying and practicing 'Chinese medicine', as it is currently defined by the national regulatory board in Australia, and is a registered Chinese medicine practitioner and educator in Australia. All staff interviewed were made aware of the researcher's role as an investigator; however, they were only made aware of the

Table 1
Staff interviewee characteristics.

Roles	Age Range	Personal engagement with CCM practices	Gender
Managerial - 1	Youngest – 32 yrs	Managerial/Admin – 2 engaged casually for up to 1 year, 1 didn't engage	F – 4
Administrative - 2	Eldrest – 50 yrs	Practitioners – 2 engaged regularly, over years; 1 engaged regularly over months; 1 engaged casually, over months	M – 3
Practitioner - 4			

researcher's background in classical and/or traditional Chinese medicine if a shared context of understanding became relevant to the discussion.

2.5. Interview structure and administration

Semi-structured interview questions were used to guide the researcher during interviews. Participants were invited to describe their experience of delivering the program and provided opportunity to introduce new items as they felt appropriate. Interviews were digitally recorded, de-identified and transcribed verbatim by a transcription service, and re-checked and edited by the interviewer to ensure accuracy. Field notes were made during interviews and used to note prompts for further questioning on comments of interest rather than used as additional data.

2.6. Data analysis

Transcribed interviews were imported into NVivo 11 software for analysis and coding by AH and AS. Themes were derived from the data, using the *Framework Approach*, which involves a process of *data familiarization, framework identification, indexing, charting and mapping*.²⁸ This applied research approach draws from the direct experience and observations of those studied whilst also allowing for the objectives to be set out in advance.²⁸ Quotes were selected based upon their representativeness of the theme. Participants were not provided an opportunity to give feedback on the findings.

3. Results

3.1. Interview participant characteristics

Of the seven staff interviewed, one was in a managerial role, two were administrators and four were practitioners. Of the practitioners interviewed, three delivered the CCM core program, as well as acupuncture treatments (n = 2) and/or Western style fitness (n = 1) sessions, while one practitioner delivered bio-resonance treatments only. The practitioners who delivered acupuncture had over 10 years' clinical experience and were registered with the British Acupuncture Council. Similarly, the Western fitness instructor held formal qualifications and background experience. The bio-resonance practitioner was newly qualified and had a background in working in community health programs. Of the three teaching practitioners interviewed, two reported personally engaging with CCM practices on a daily basis, for over a year or more, and one had only become aware of the practices over the previous few months. Personal engagement with CCM practices varied amongst administrative and managerial personnel. Interview participants were aged between 32 and 50 years. Four were female and three male (Table 1).

3.2. Key themes

Themes emerged from the data in three key areas: *Cultural challenges within the local region; Integration with the existing local health care network and Team dynamics, co-creation and communication integrity.*

3.2.1. Cultural challenges within the local region

Delivery of the CCM program was perceived by staff to be challenging within the local region it was based. However, program staff perceived a positive potential in the program, with this view more pronounced amongst those who engaged with CCM practices personally and had experienced positive health outcomes as a result. Some staff noted the routine of practices throughout the day was difficult for them to personally integrate, both logistically and culturally, resulting in their adoption of smaller components of the program or simply taking inspiration from the concepts.

I still do that in my life, [the midday rest], and sort of, being more in touch with biorhythms, so I didn't join in the formal sense, but I did totally take inspiration from what was happening. (WG-Practitioner)

A sense of self-awareness, reflected by some staff in relation to the potential impact of the program's cultural differences, seemed to contribute to varying recruitment approaches to attract participants to the program. One member of administration personnel commented that the online information was sparse on details in an attempt to capture a broader cross-section of the community.

The approach that we had on the website, and our materials, was that we were skirting around the fact that what was being offered was classical Chinese medicine. There was no mention on the website of acupuncture treatments or anything. So, through that, people perhaps saw a vagueness to it. (RK-Management/Admin)

Having a pre-existing philosophical understanding or experience of the CCM concepts appeared to predetermine staff having a positive and enthusiastic vision of the program's objectives. Similarly, community participants who remained on the program were noted by staff to be those who already had some positive experience with alternative health practices, or to be those who had prior knowledge of the program teachers.

Practitioners also reported that other participants, for whom the CCM content was more unknown and who had enrolled with initial enthusiasm in response to sponsored places or direct recruitment techniques, did not often remain on the program for long. One practitioner suggested that clear communication at sign-up, in terms of clarity as to the associated time, effort and commitment required from participants, as well as a stronger focus on relationship building between practitioners and participants, after sign-up, may have resulted in more long-term engagement.

They hadn't necessarily thought through in a practical way what it would mean in terms of dedication of time and commitment. I think there was then a gap between an initial excitement and a realization that they would need to take some responsibility themselves, which is the whole idea of the program, over these months, for transforming their lives. (AQ-Practitioner)

Variability in treatment delivery – perhaps attributable to cultural influences – was also seen in delivery of acupuncture treatments between treating practitioners. The treatment styles of the two most regularly scheduled acupuncturists were reported by patients, via administrative staff, to differ considerably. This variability in treatment approach was seen to impact administrative

and record-keeping processes as well as alignment of the practitioner team in working together.

[In the design of the intake forms] I was trying to capture enough information to work with, in their consultation, based on three very different styles of treatments, for the three different [acupuncture] practitioners. (YU-Practitioner)
It's very clear to me that when Chinese [medicine] practitioners talk about what they're doing, and that when a fellow Chinese medicine practitioner may be using the same language, our understandings may be completely different. . . . So, on a basic level, to create a team that can really work together, that takes time. (AQ-Practitioner)

This heterogeneity also extended to the teaching of the CCM lifestyle content. Administrative staff noted that feedback from class participants suggested that practitioners new to the program's interpretation of CCM concepts were less effective in delivering the content.

Ideally [the teaching practitioners] sign up to practice [the exercises] themselves personally every day. . . . That's kind of a two month, three month, kind of process. . . . [It's important] because . . . If they haven't done the [practical work], they won't know how to explain it, or to support someone when they're going through those transitions. (YU-Practitioner)

Practitioners who had worked with the CCM practices for years, however, expressed that although experiential engagement with the practices was important, any health care practitioner could become competent in the CCM teachings within a few months of training. Elements which were perceived to lead to effective teaching strategies for those from other health care fields included: preferring English terms, over CCM terms, for key concepts, for example, using the term *duality* rather than *Yin-Yang*; recognizing and discussing that the practices have a relationship with cycles observed in nature; having a personal resonance with the concepts; and adopting flexibility in delivery.

3.2.2. Integration with the existing local health care network

Although the program obtained some local support, in the form of grants for a small number of sponsored patient places, and business support and training, in relation to integration of personal digital-monitoring devices during the initial pilot, it was felt the program failed to gain adequate traction with the existing local health care system. One practitioner commented that the team would have benefited from having a general practitioner or nurse within the practitioner team, and/or from having a connection via an NHS referral pathway to provide profession-based and recruitment support and to elevate the profile and credibility of the program. Interview participants noted similar local health and well-being programs being run at the same time and which had NHS funding, were able to invest comparatively more resources into planning and community consultation prior to onset, as well as establish more robust networks, due to having an NHS intermediary; aspects which were recognized as necessary but not as comprehensively integrated in the CCM program design. One practitioner, co-working on the community based NHS project, summarized the proactive consultation approach adopted in the NHS funded model:

I think what they're learning is, we can have ourselves a really good model and idea, and game plan, an idea that people come into, but life doesn't always work like that. We're going to meet in the middle and go out and really listen: What do you want?; What do you need?; What do you love?; How can we support you?; and these are our tools that we're offering, but, what else would you like? (WG-Practitioner)

3.2.3. Team dynamics, co-creation and communication integrity

A significant challenge faced by the majority of staff during program delivery was the perceived variation in integrity and consistency of internal and external communications. Miscommunications and delays in contact (between investor and management; between management and staff members; and between staff and participants), funding interruptions and changing timelines were reported by many staff to have increased stress levels and to have affected the majority of staff during various stages of program delivery. Additionally, the extent of collaboration and connection within the internal team was felt to vary, with one staff member noting that although an idea of a co-creative environment was espoused, structured hierarchical working relationships appeared to dominate during times of pressure.

I think the co-creative atmosphere is what we wanted, but I don't think there was anyone who had experience of it. There were a lot of different backgrounds there, that were working together, but all of the backgrounds were already based from a structured regimented environment. (PY-Practitioner)

In contrast to stated differences, a strong sense of collaboration and personal investment was noted during the project's initial phase, wherein personal resources (later reimbursed) were invested by three staff members.

I think, in some ways that was part of the strength, because when you're putting your cash in . . . people who are volunteering, or people who have given some personal risk, have a different relationship from people who are being paid and being employed. I noticed that that provided a strong collaborative culture in the initial phases. (AQ-Practitioner)

4. Discussion

To the authors' knowledge, this is the first study to examine a community health program, incorporating a whole-systems³¹ Chinese medicine approach, to be delivered in a Western setting. The emergent themes resulting from our analysis of this project highlight a number of key issues relating to the delivery of such a program outside of Asia or the Asian diaspora.

4.1. Chinese medicine: influences and variability in modern application

Chinese medicine research, outside of Asia, has to date been heavily focused upon studies of isolated treatment techniques such as acupuncture,³² moxibustion,^{33,34} herbal medicine preparations,^{35,46} or practices, such as Tai-Chi^{41–43} and Qigong,^{44–47} which are primarily applied, in isolation, as interventions to patients within bio-medically defined disease categories. This is the case when the intervention is applied to the patient, by the practitioner or research assistant, as well as in studies of Chinese medicine self-care approaches.²¹ The traditional practice of Chinese medicine, however, especially prior to the field being redefined as 'TCM' in the 1950s,¹⁵ has for many centuries drawn on classical concepts that incorporate a whole-systems approach to patient care and illness management.⁷

Of the three Chinese medicine registered and UK trained practitioners delivering aspects of the CCM program evaluated, data from our study indicated a difference in practitioners' interpretation of TCM/CCM concepts and in use of TCM/CCM terminology, as well as in acupuncture treatment styles. Although variance is to be expected within any professional field and has also been the case historically within Chinese medicine⁴⁸ these divergences in modern application may also be reflective of a disconnect between the modern practice of Chinese medicine and the whole-systems

approach which is both a construct in TCM,¹¹ as well as reflected in TCM's classical roots.^{4,7} In order to create coherence and consistency in health programs aiming to incorporate a whole-systems approach, such as that of a multi-faceted CCM program, adequate time should thus be allocated for practitioners to be trained and oriented to relevant concepts and terminology, as defined by the program, as well as time taken to orient researchers and readers to the paradigm of the intervention.

4.2. Program viability, integration & sustainability

Diversity in practitioner approach may have also influenced program viability which was additionally perceived to be impacted by: varying community interest and acceptance; un-sustained engagement from some participants following initial sign-up; a lack of ongoing financial support and/or financial sustainability by end-date; and limited integration with the existing health care network. The interactive and individualized approach to self-care incorporated in the program design is reflective of the nature of TCM self-care guidance delivered within TCM acupuncture consults, which has been shown to be associated with positive benefit to patients' long-term self-care and quality of life.¹⁸ Similarly, in a cross-sectional study of over 25,000 primary care patients in the United States, it was found that programs which focused on patient activation were most effective when: 1) focusing participants on skill development and reflective questioning and 2) when support staff tailored levels of encouraged change to align with the individual's own perceived ability to adopt change.⁴⁰ Future work in the area of CCM self-care may thus benefit from incorporating active enquiry and feedback systems in the early stages of a program, to ensure that individuals feel supported at a level appropriate to their individual circumstances and to counter participant withdrawal. Recommendations from interview participants for the allocation of further resources to the start-up phase and for incorporating a broader range of health care professionals within the core team, including, where possible, physician involvement, also aligns with data which has shown these to be key factors in the sustainability and success of community health programs.⁵⁰

4.3. Classical concepts, community health and connection

Our study found that staff and practitioners were perceived to be most effective in delivering program objectives when they engaged extensively with the practices and felt a personal resonance with the CCM concepts at the heart of the program; namely that the human body can be viewed as a microcosm of the macrocosmic natural world; and that by observing and following natural planetary rhythms we can draw methods of self-care and health maintenance, beneficial both to the individual and to the community.⁷ These concepts – as perceived by staff in our study – align with the stated philosophies of many systems of traditional and indigenous medicine throughout the world,⁵¹ which acknowledge the importance of interrelationship with the natural world and promote activities, and an environment, in which the health of the community, and those who live within it, are harmoniously supported. Thus, these philosophies align with the objectives of community health.⁵² Furthermore, direction relative to teamwork and ethical and intuitive leadership can also be drawn from concepts inherent to CCM, and traditional cultures, to enhance project success: aiming for practitioner teams which embody ethics, compassion and empathy⁷ and team environments which create unity by considering the context, perspectives and values of all involved.²³

4.4. Limitations

Selection bias is a limitation, as only nine, of the twelve staff who had been engaged with the program, were contacted and invited to interview. As such the data gathered may have held bias towards staff members who had a stronger reason to maintain a working relationship with the program and its funding organization. There was also a previous working relationship between the researcher and two of the interview participants, potentially influencing the nature of data gathered from different participants. The relatively short duration of the program and its small number of participants are also limitations, as is the complex nature of the program, which included many aspects of intervention. While these are limitations for examining of the program itself, they are ideal for looking into the issues associated with establishing a new program and this study brings forth some important insights into working with CCM concepts in community health and the challenges of integrating non-conventional medical approaches in community programs.

4.5. Conclusion

This study highlights the challenges inherent in delivering a CCM program in a regional Western setting and has implications for future research in that the results obtained may be used to guide future programs in this area. CCM has a philosophical underpinning that is conducive to its integration into community health, but accessibility, integration, networking, ongoing funding and unity must be carefully considered and addressed when integrating CCM community health approaches in Western settings. The diversity of practice which may be found amongst CCM practitioners could also present challenges and highlights the need for adequate planning, appropriate timelines and stable resources, in order to achieve effective program delivery.

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Data availability

AH conceived the study, AS, JW and AH designed the study protocol, AH conducted the research and drafted the manuscript. All authors contributed to revising the manuscript and have read and approved the final manuscript.

Authors declare no conflict of interest.

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Appendix J: TIDierR Checklist – CCM Program

TIDierR (Template for Intervention Description and Replication) Checklist				
Item #	Item	Item Details	Where located	
			Primary paper (page or appendix number)	Other (if not in primary paper)
1	Brief name	CCM program (actual name of program has been withheld for study participant confidentiality)	91	
2	WHY	CCM program staff described the goal of the intervention as improving the health within the local community through sharing principles and concepts drawn from CCM.	93	
3	WHAT Materials:	On the third pilot program, small, printed booklets were provided to participants, designed by the program staff, which provided an overview of the basic concepts and included a daily diary for self-tracking. A whiteboard and shared open space with chair and floor seating, as required, was used for face-to-face classes.	95	
4	Procedures:	Participants had to attend at least one introductory class, based on the CCM concepts, in order to be on the program. Regular attendance thereafter was encouraged, but up to participants to attend. Regular classes were also offered in Western (non-CCM) fitness and stretching. Less regular classes (1 per month, for example) were also offered on topics of interest, such as CCM dietary guidance.	94	
5	WHO PROVIDED	Those providing the CCM classes included 3 British Acupuncture Council (BAC) registered and TCM-trained acupuncturists, as well as by a practitioner who came from a health and fitness background, but who had been trained by the CCM team, in the concepts and delivery of the program. These 4 practitioners also guided the monthly 1-1 goal-setting and review sessions with participants. All acupuncture sessions were delivered by registered BAC acupuncturists. The bio-resonance practitioner was newly trained in bio-resonance therapy and had a background of working in community health projects. The	94	

		fitness and stretching classes were delivered by a practitioner qualified and trained in fitness (from a Western perspective).		
6	HOW	All classes and appointments were delivered face-to-face	94	
7	WHERE	The classes and 1-1 appointments were delivered from a professional suite of rooms, situation within the buildings of a small university campus. The location had on-site parking, elevator access, bathroom facilities and an on-site university canteen.	93	
8	WHEN and HOW MUCH	Due to the nature of the program design, it was up to participants to elect how much to attend classes. The data on how much each participant attended was not made available to the researcher.	94	
9	TAILORING	The intervention was tailored to each participant in the 1-1 monthly appointments. At this appointment, the practitioner would help the participant to set goals for the coming month, in line with what the participant felt was attainable and would be most beneficial to them, from the CCM program recommendations.	94	
10	MODIFICATIONS	The pilot program was adapted to focus on those living with a diagnosis of diabetes after the initial pilot. This program incorporated a 'buddy system' and a daily diary. This shift in focus, from general recruitment, to those living with diabetes, was described by CCM staff as a recommendation from their funding body.	95	
11	HOW WELL Planned:	Intervention adherence was assessed, to some extent, in the initial pilot, by digital tracking devices, which monitored periods of rest and activity. Class attendance was monitored to some extent; however, this data was not available to the researcher.	95	
12	Actual:	Participants described unexpected difficulties in working with the digital tracking devices which made data collection, across the participant cohort difficult. This data was not available to the researcher.	110	

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