

**Traditional Chinese Medicine Use amongst
Women with Arthritis: a Health Services Research
Study**

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A Thesis Submitted for the Degree of Doctor of Philosophy

Australian Research Centre in Complementary and Integrative Medicine

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Lu Yang, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Health at the University of Technology Sydney.

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

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except fully acknowledged within the text.

Signature of Student: Production Note:
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Lu Yang

14th August 2018

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STATEMENT OF CONTRIBUTIONS TO JOINTLY AUTHORED WORKS CONTAINED IN THE THESIS

The results presented from this thesis have been submitted for publication in peer-reviewed journals through four articles (one literature review and three discrete original articles), presented in Chapter 2 through Chapter 4. For each of these papers, I have been primarily responsible for designing the research questions, undertaking the research analyses and writing the drafts of the manuscript.

Distinguished Professor Jon Adams, Professor David Sibbritt, and Dr Wenbo Peng have provided support with final stages of drafting manuscripts.

I take full responsibility for the accuracy of the findings presented in these publications and this thesis.

PUBLISHED WORKS BY THE AUTHOR INCORPORATED INTO THE THESIS

Of the four manuscripts included in this thesis, all have been published in the high-quality peer-reviewed journals. Following is the list of manuscripts contained in this thesis:

1. **Yang, L.**, Sibbritt, D. and Adams, J. (2016). A critical review of complementary and alternative medicine use among people with arthritis: a focus upon prevalence, cost, user profiles, motivation, decision-making, perceived benefits and communication. *Rheumatology International*, 37(3), pp. 337-351.
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3. **Yang, L.**, Peng, W., Sibbritt, D. and Adams, J. (2017). Prevalence and characteristics of Australian women aged 45 and older who consult acupuncturists for their osteoarthritis. *The International Journal of Clinical Practice*, 71(12).
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CONFERENCE ORAL PRESENTATION

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ABBREVIATIONS

ABRASCO – Brazilian Collective Health Association

ABS – Australian Bureau of Statistics

AHPRA – Australian Health Practitioners Regulation Agency

AIHW – Australian Institute of Health and Welfare

ALSWH – Australian Longitudinal Study on Women’s Health

APHA– American Public Health Association

APS – American Pain Society

ARCCIM – Australian Research Centre in Complementary and Integrative Medicine

ASGC – Australian Standard Geographical Classification

CAM – Complementary and alternative medicine

CI – Confidence interval

CMBA – Chinese Medicine Board of Australia

DMARDs – Disease-modifying anti-rheumatic drugs

GP – General practitioner

HREC – Human Research Ethics Committee

HSR – Health services research

NCCAM – National Centre for Complementary and Alternative Medicine

NHIS – National Health Interview Survey

NHMRC – Australian National Health and Medical Research Council

NIH – National Institute of Health

NSAIDs – Nonsteroidal anti-inflammatory drugs

OA – Osteoarthritis

OR – Odds ratio

PBRN – Practice-based research network

PHAA – Public Health Association of Australia

PHASA – Public Health Association of South Africa

PRACI – Practitioner Research and Collaboration Initiative

RA – Rheumatoid arthritis

RCT – Randomised controlled trial

TCM – Traditional Chinese medicine

TGA – Therapeutic Goods Administration

US – United States

WHO – World Health Organisation

WOMAC – Western Ontario and McMaster Universities Osteoarthritis Index

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ABSTRACT

Background: The use of traditional Chinese medicine (TCM) has attracted increasing attention for physical and mental health studies over recent years. To date, there have been few nationally representative studies examining TCM treatments as well as consultations with TCM practitioners, for women with arthritis.

Methods: The thesis study outlined here consists of four related but separate sections of research. First, a critical review was conducted focusing on TCM and other complementary and alternative medicine (CAM) use amongst patients with arthritis via a search of the key medicine and health science databases for international peer-reviewed articles published in the previous eight years (2008-2015). The study also conducted secondary and primary analyses of data from large samples (including both patients and practitioners) obtained by drawing upon three distinct large-scale established studies in Australia – the Australian Longitudinal Study on Women’s Health (ALSWH), the Sax Institute’s 45 and Up Study and the Practitioner Research and Collaborate Initiative (PRACI) study. Statistical analyses involved chi-square tests, multiple logistic regression, two proportions Z tests, Student’s t-tests, etc. to examine associations between the use of TCM (i.e. Chinese herbal medicine and acupuncture) and arthritis-related symptoms. Chi-square tests or Fishers Exact tests were employed for categorical variables, and Student’s t-tests were employed for continuous variables, to examine TCM practitioners’ perceptions and the role of TCM practitioners in Australia regarding arthritis care.

Results: Findings from the critical review show a high prevalence of TCM/CAM use amongst people with arthritis in a number of countries and many people with

arthritis use TCM/CAM concurrently with their conventional medicine. The results from ALSWH study identify women with arthritis are more likely to use TCM than women without arthritis, with 6.2-9.5%, and 4.0-5.7% of Australian women reported to be using acupuncture and Chinese herbal medicine, respectively, in the previous 12 months. Moreover, the analyses from the 45 and Up Study sub-study show that acupuncture use is positively associated with women experiencing a longer duration of time since initial diagnosis of osteoarthritis (OR=1.04), undertaking more exercise (OR=5.41), living in a rural area (OR=3.62), having consulted a psychologist (OR=12.21), and having consulted another CAM practitioner (OR=4.18). In addition, it is reported from the PRACI study that the majority of the TCM practitioners (82.2%) noticed that their patients with arthritis used other treatments alongside TCM and a large number of TCM practitioners who participated in the study believe TCM to be effective for treating arthritis.

Conclusions: TCM use is popular amongst women with arthritis and the TCM profession represents a significant part of Australian CAM healthcare sector in treating arthritis. This thesis highlights a need for future research to examine the potential benefits of TCM for arthritis and to help inform the efficient and safe use of this treatment alongside conventional care. Moreover, all health professionals offering care for those with arthritis need to be aware of the concurrent use of both TCM and conventional medications amongst their patients.