Predictors of Complementary and Alternative Medicine (CAM) Use in People with Type 2 Diabetes Living in Taiwan

A thesis submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

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Statement of Originality

The work in this thesis has been completed by the candidate and has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

_____________________
Hsiao-yun, Annie Chang
Abstract

Increasing interest in and use of complementary and alternative medicine (CAM) is evident across the world among both the general population and patients with chronic illness. CAM refer to practices, approaches, knowledge, and beliefs outside conventional medicine, such as biologically based practices, mind-body therapies, and manipulative and body-based practices. The presence of chronic, devastating or painful illness has consistently been reported to be a common reason for CAM use. Diabetes is a prevalent, chronic and incurable disease associated with a range of complications which can be life-threatening. Little is known about the prevalence of CAM use, which types are being used and the characteristics of CAM users among people with Type 2 diabetes living in Taiwan.

This mixed methods study was designed to explore the patterns of CAM use, the factors predicting CAM use and the decision-making processes used by CAM users. Within the framework of the health belief model, a cross-sectional survey was undertaken using structured personal interviews (n = 326) in outpatient clinics in different regions of Taiwan. The survey explored CAM use among people with Type 2 diabetes. In addition, in-depth qualitative interviews were carried out with some survey participants (n = 16). These qualitative interviews were used to detail how CAM users made decisions regarding CAM use in the management of their illness in a Taiwanese context.

The results of this study have provided the first comprehensive exploration of CAM use among people with Type 2 diabetes living Taiwan. More than half the participants (56.1%) who visited diabetic clinics reported using at least one CAM therapy in the previous 12 months but only one in three of CAM users obtained CAM
therapies through CAM practitioners. Nutritional supplements, traditional Chinese medicines, manipulative based therapies, diet modifications and supernatural healing therapies were the most commonly used CAM therapies. The demographic profile of CAM users with Type 2 diabetes who were of older age, living in the city, practising religion, either being married or widowed, and suffering from more complications and diabetes-related symptom distress. The major finding of this study was that the predictors of CAM use were a positive perception of CAM, personal surroundings and illness-related suffering.

Results from the qualitative findings revealed that there are five major stages in the CAM decision-making process reported by CAM users with Type 2 diabetes living in Taiwan: recognizing the need for using CAM; assessing potential CAM before use; matching CAM use to personal philosophy; on-going evaluation of CAM; and using CAM to manage health and illness. However, patients are likely to use both conventional medicine and CAM in managing their illness and health without disclosing (75.3% non-disclosure rate) their CAM use to their conventional healthcare professionals. The lack of communication may increase the possibility of CAM-drug interactions and lead to the potential for impairment of disease management provided by conventional healthcare professionals. The results of this study can be used to improve clinical assessment, professional and patient education and clinical research. Improving health professional education about CAM and developing an open and honest communication channel between patients and conventional healthcare professionals is imperative if patient safety is to be maintained which chronic disease self-management is being pursued.
Acknowledgements

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For

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My father 父親  -  張篤之

My mother 母親  -  李秀子

My brothers and sisters in law,

whose love, perseverance, and

encouraged me and made the quest for

this degree possible
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADA</td>
<td>American Diabetes Association</td>
</tr>
<tr>
<td>CAM</td>
<td>Complementary and Alternative Medicine</td>
</tr>
<tr>
<td>DM</td>
<td>Diabetes Mellitus</td>
</tr>
<tr>
<td>ESRD</td>
<td>End-Stage Renal Disease</td>
</tr>
<tr>
<td>HBM</td>
<td>Health Belief Model</td>
</tr>
<tr>
<td>NAATI</td>
<td>National Accreditation Authority for Translators &amp; Interpreters in Australia</td>
</tr>
<tr>
<td>NCCAM</td>
<td>National Centre for Complementary and Alternative Medicine</td>
</tr>
<tr>
<td>NHI</td>
<td>Taiwan National Health Insurance</td>
</tr>
<tr>
<td>NT</td>
<td>New Taiwan Dollar</td>
</tr>
<tr>
<td>RA</td>
<td>Research Assistance</td>
</tr>
<tr>
<td>TCM</td>
<td>Traditional Chinese Medicine</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of American</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
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Glossary of Terms

Terms associated with complementary and alternative medicine (CAM) and Diabetes mellitus (DM) are briefly described here to clarify the nomenclature and definitions encountered in this field, and the ways this terminology is used within this dissertation (Terms related to individual CAM therapies are presented in Appendix A).

- **Conventional medicine** refers to a medicine system practised by holders of MD (qualifications medical doctor) and other conventional healthcare professionals (such as nurses, pharmacists and therapists) who treat symptoms and diseases using drugs, radiation or surgery. Conventional medicine is called Western medicine, mainstream medicine, orthodox medicine, biomedicine and allopathic medicine (NCCAM, 2005a).

- **Complementary and Alternative Medicine (CAM)** refers to the various forms of therapy that are viewed as being complementary or alternative to conventional medicine (NCCAM, 2007).

- **Diabetes mellitus (DM)** is the term used to describe a disease associated with a disorder of carbohydrate metabolism in which sugars in the body are not oxidised to produce energy (Dunning, 2003b). There are two forms of this disease: Types 1 and Type 2. Diabetes is shortened term used to represent Diabetes mellitus in this thesis document.

- **Modality** refers to healthcare practices outside conventional treatments that relieve pain, cure disease, or correct a disorder (Soanes & Stevenson, 2006).

- **Remedy** is a term used to describe any therapy in natural medicine or product (Soanes & Stevenson, 2006).

- **Therapy** is a term including any form of treatment for a disorder (Soanes & Stevenson, 2006).
Dissemination of Study Results


Alternative medicines need to be considered in diabetes management (2007). *National Diabetes Week*, July: 8-14 (Interview)


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