



Research paper

Student acupuncturists: Career choice and views on traditional Chinese medicine (TCM)

Asmita Patel^{a,b,*}, YiYu Chen^a^a New Zealand College of Chinese Medicine, Auckland, New Zealand^b Human Potential Centre, Auckland University of Technology, Auckland, New Zealand

ARTICLE INFO

Keywords:

Acupuncture
Traditional Chinese medicine
Student acupuncturists
Career choice
Attitudes
Perceptions

ABSTRACT

Introduction: New Zealand, like many other Western countries, has experienced an increase in the use of complementary and alternative treatment modalities, such as that of traditional Chinese medicine (TCM) based acupuncture. While there has been an increase in the utilization of TCM-based acupuncture, there has also been an increase in the number of individuals graduating with a degree specializing in acupuncture. Limited research exists that has examined why individuals have chosen to study TCM-based acupuncture. Therefore, the primary aim of this study was to identify reasons why students chose to study acupuncture. A secondary aim was to identify and examine students' views on TCM.

Methods: Fifteen TCM students from the Auckland region of New Zealand who were majoring in either acupuncture or Chinese herbal medicine were interviewed at the institution at which they were studying. An inductive thematic approach was used to analyze the data.

Results: Previous experience of acupuncture and its perceived efficacy were identified as a salient reason for studying TCM. TCM was perceived as providing a holistic approach to health and healing, and was perceived to have fewer side effects compared to conventional medicine.

Conclusions: This study identified factors that influenced both Chinese and non-Chinese individuals to study TCM. Student practitioners believed in the effectiveness of acupuncture and other TCM treatment modalities. Acupuncture was perceived to provide a holistic approach to health and healing, taking into account both physical and emotional states.

1. Introduction

New Zealand has experienced an increase in the use of complementary and alternative medicine (CAM) treatment modalities [1–6]. Previous studies have cited that around one quarter of the adult New Zealand population have consulted a CAM practitioner over a 12-month period [1,7,8]. Research indicates that acupuncture is one of the most recognised and utilised CAM treatment modalities [1,6,9–12]. Acupuncture is a treatment modality that falls within traditional Chinese medicine (TCM) [13,14]. TCM comprises of several treatment modalities, such as acupuncture, Chinese herbal medicine, tuina, moxibustion and cupping [12]. TCM has been practiced in China for over 2000 years and is part of the Chinese healthcare system [15,16].

Acupuncture is the most utilized form of TCM treatment in New Zealand for non-Chinese individuals [12]. National data indicate that there has been an increase in the utilisation of TCM-based acupuncture, as well as an increase in the number of individuals graduating with a degree specializing in acupuncture [1,12,17].

There may be several reasons for an increase in the utilization of TCM-based acupuncture. Firstly, research indicates that acupuncture is predominately sought for pain management purposes, and specifically for conditions that are difficult to treat by conventional medicine [1,11]. In line with this, a New Zealand-based study reported that almost one half of new patients who sought acupuncture treatment over a four-month period at a TCM clinic in Auckland, (the country's most populated city) had consulted another healthcare practitioner, namely a general practitioner prior to seeking acupuncture [6]. This study also reported that acupuncture was predominantly sought for pain management purposes compared to any other condition [6].

Also, in New Zealand, the government funds acupuncture treatment for injury-related conditions through the Accident Compensation Corporation (ACC) based on its efficacy in the management of musculoskeletal pain [18]. As noted in a recent publication [12] non-Chinese individuals who have had an initial successful experience of acupuncture are more likely to seek acupuncture for similar conditions in the future. A growing Asian population, which comprises of 12% of the

* Corresponding author at: New Zealand College of Chinese medicine, P.O. Box 17467, Auckland, New Zealand.
E-mail addresses: asmita.patel@aut.ac.nz, miami@xtra.co.nz (A. Patel).

New Zealand population may also account for an increase in the utilization of acupuncture [19].

To date, limited research exists that has examined why individuals have chosen to study TCM. With an increase in the use of TCM-based acupuncture in New Zealand, and an increase in the number of individuals graduating with a formal degree in acupuncture and Chinese herbal medicine, more information is required that examines why individuals have chosen to study TCM. Therefore, the present study had two main aims: firstly, to identify why students choose to study TCM, and secondly, to identify and examine students' views on TCM.

2. Methods

2.1. Participants

Participants were enrolled in the Bachelor of Health Science degree (BHSc) majoring in either acupuncture (a 3-year degree) or Chinese herbal medicine and acupuncture combined (a 4-year degree) at New Zealand College of Chinese Medicine based in Auckland, New Zealand.

2.2. Outcome measure

An interview schedule was developed for the present study by members of the research team. The interview schedule comprised of four main parts. The first section comprised questions that were designed to ascertain why students had chosen to study TCM. The second section contained questions that were designed to examine students' views on TCM. Also examined were students' own use of TCM treatment modalities. Demographic information was also collected, including information about previous employment.

2.3. Procedure

Participants were recruited through the use of the College's student management system, which contains student records. Purposive sampling was used to recruit participants, with recruitment of participants being based on stage of degree progression. The majority of invitations were sent to senior students (i.e., students who were either in the second year of their three-year degree, or those who were in the final year of their degree). It was deemed that senior students would have more knowledge and practical experience of TCM, as senior students treat patients under supervision in the College's Student Acupuncture Clinic (lining up with the secondary aim of the study).

Also, in the context of New Zealand, in comparison to other Western countries, we have a relatively small population of just under 4.8 million people. At present, there are only two tertiary providers (i.e., private teaching establishments) that teach traditional Chinese medicine. Both institutions have a relatively small number of students enrolled in their TCM programmes. At the time of data collection, 126 students were enrolled at our college. The majority of students (98%) were of Asian descent. Hence, purposive sampling was also used to try and recruit non-Asian students.

To obtain 15 positive responders, a total of 65 email invitations, including a copy of the participant information sheet were emailed to potential participants. Recipients had two weeks to respond. If a reply had not been obtained within this two-week period, one follow up email invitation was resent. Students interested in participating replied via email. Two first year students, five second year students, seven third year students and one fourth year student took part in the present study. Each participant was individually interviewed in a private room at the College by the first author. Each interview varied in length, taking between 15 and 40 min to complete. All interviews were audio-taped for later transcription. Informed written consent was obtained from each participant prior to the commencement of each interview. At the time the interviews were conducted the first author was employed as the College's Research Officer, and had no direct contact with

students (i.e., no teaching or a clinical supervisory role). The second author was employed as a Lecturer and Clinical Supervisor. Ethical approval for this study was obtained from the New Zealand College of Chinese Medicine Ethics committee (Reference number 2014/002).

2.4. Data analysis

All 15 audio-taped interviews were transcribed verbatim by the first author. Transcripts were analyzed using an inductive thematic approach based on Auerbach and Silverstein's [20] approach to thematic analysis. Four main steps were involved in the analysis process. The first step involved reading and re-reading each transcript several times for each question within each of the topic areas. The second step involved identifying repeating ideas between transcripts. This involved identifying text where participants used the same or similar words to convey the same idea. The third step involved coding repeating ideas to create themes and sub-themes. A theme is an organization of repeating ideas that is given a name that communicates what participants are trying to convey [20]. The final step in the analysis process was concerned with verifying the trustworthiness of the findings to reduce individual researcher bias. This step involved members of the research team individually reading the transcripts to verify or disqualify themes [20]. The first author initially analyzed the data and identified themes. The second author individually read the transcripts to ensure that participant quotes matched the categories of themes identified. This involved either verifying or disputing themes. Both authors hold a doctorate. The first author has extensive experience in carrying out qualitative research in the health sciences field.

3. Results

Fifteen students (9 female and 6 male) took part in the present study. Participants were aged between 31 and 50 years of age (40.0 ± 2.0 years). Five participants were born in China and identified as being Chinese. Three participants were born in Taiwan and identified as being Taiwanese. Two participants were born in Korea and identified as being Korean. One participant was born in Vietnam and identified as being Vietnamese. One participant was born in Indonesia and identified as being Indonesian. Three participants were born in New Zealand. Two of these participants identified as being New Zealand European and one identified as being Maori. The twelve students who were born overseas had been residing in New Zealand between 2 and 19 years (11.5 ± 1.5 years).

Data were examined under the two main sections described in the Measures section. A number of themes were identified within these topic areas. The themes for each topic area are provided below with direct quotes to help illustrate participant views.

3.1. Topic: decision to study acupuncture

Six main themes emerged for this topic area that identified and examined why individuals had chosen to study TCM-based acupuncture.

3.2. Theme: own injury or illness

A number of students discussed how their personal experience of acupuncture and other TCM treatment modalities for an injury or illness influenced their decision to study TCM. For example, student 3's first experience of acupuncture was through a back injury. This student was also interested in the medical field (as conveyed in a later theme). Hence, her interest in medicine coupled with her positive experience of acupuncture was an influencing factor in her decision to study TCM. Both student 11 and 15 had an ongoing chronic health condition and decided to have TCM treatment because of limitations they experienced with their conventional Western medicine treatments. As a result of

their TCM treatment, they both became interested in learning more about TCM. Participant 15 also discussed how he wanted a slower pace of life, and that becoming a TCM practitioner would help him achieve this in comparison to his former career in business. The following quotes illustrate this:

“When I injured my back, I had acupuncture treatment. It’s not really common here unless you are injured or referred by a GP. That is how I first became interested in acupuncture.” (Student 3)

“It started when I had tennis elbow. The steroid treatment that my GP gave didn’t work. The physiotherapy didn’t work either. My GP suggested that I see a Chinese medicine doctor. A colleague loaned me a book about Chinese medicine. I found it fascinating. I wanted to learn more.” (Student 11)

“I have a thyroid problem. I decided to slow down a little bit, as I was the owner of my own company. In the beginning, I used Western medicine, and it worked fast on my symptoms. But if you stop taking the medication, the problem comes back. So, I decided to use acupuncture and herbal medicine to help myself as well. Western medicine controls the surface of the symptoms. But I cannot get my vital energy back. With herbal medicine, there’s more balance. I can tonify genuine chi and give more nourishment. I wanted to learn a little bit more to understand my own body.” (Student 15)

3.3. Theme: family or friends with an injury or illness

The following quotes indicate that students’ decision to study TCM was also influenced by family or friends who had illnesses or injuries, as there was a strong belief in acupuncture being a helping and healing form of treatment. Student 5 gave an account from his childhood regarding how he remembered the positive effect that acupuncture had on his mother who had cancer and how this influenced him two decades later to study TCM and become an acupuncturist himself:

“I had too many friends and family who were unwell. They had backaches, neck aches, arthritis and a couple had cancer. I just really wanted to heal my friends and family.” (Student 12)

“I want to treat my family. My mum has arthritis and my father has diabetes. I think acupuncture can help people to maintain a healthy body.” (Student 10)

“My first experience of acupuncture was of my mother having it when I was around eight. My mother who had cancer underwent acupuncture treatment to some success. So, I was aware from even an early age of the effect of acupuncture. I will always remember that it helped my dying mother.” (Student 5)

3.4. Theme: interest in a healthcare field or in health maintenance

The following quotes indicate that some students were already interested in the healthcare field or in aspects of health maintenance; this coupled with other factors, such as having acupuncture treatment themselves, and/or an ongoing interest in Chinese medicine and its philosophical underpinnings, also appeared to influence their decision to study TCM:

“I was already interested in the medical field.” (Student 3)

“After I retired, I was interested in how I could maintain my health. I found Chinese medicine interesting.” (Student 2)

“It started when I picked up a book called Barefoot Doctor a handbook for the urban warrior. There were many references to a substance called qi. From there on I became aware in the periphery of my consciousness things like acupuncture, tai chi and qi gong.” (Student 5)

3.5. Theme: desire to help

This theme involved a number of students discussing how they perceived acupuncture to be a helping form of treatment. A number of students conveyed that they wanted to use acupuncture to treat (i.e., help) themselves, their family, friends and the general public, especially those in one’s own community and also, for people who lived in non-urban areas and did not have easy access to healthcare practitioners:

“I want to treat myself first and then my family.” (Student 1)

“I want to help my family and friends. I want to give them some advice.” (Student 11)

“I want to help my people; Maori people.” (Student 12)

“I want to help people in my community. I want to treat them. I want to make them happier.” (Student 10)

“I want to be able to provide acupuncture to people in rural areas. Acupuncture for people who can’t actually get to a practice or practitioner.” (Student 12)

“I want to help people. My goal is that prevention is better than cure.” (Student 7)

3.6. Theme: personality

In the following quotes, two students discussed how they had a personality that suited them to be acupuncturists. The helping and healing nature of acupuncture was perceived to suit the personality of some students, as it was conveyed by students that they wanted to work with people in a helping, caring and healing capacity and that the practice of acupuncture allowed them to do this:

“I wanted to work with people in a healing capacity. That was what I had in my heart to achieve. I think acupuncture has helped me to get on the path to really acknowledging that focus and especially that aspect of my nature. I want to do more than just help people overcome their illnesses. There is a saying, ‘the good healer, heals the mind, not just the body.’ Healing hearts and minds, as well as bodies. Acupuncture puts you in a strong position to do all three of those things, because it is a profound healing modality in itself.” (Student 5)

“I think it suits my personality. I love to look after people. I care about people. I like helping people. I can use acupuncture to look after people.” (Student 10)

3.7. Theme: cultural factors

This theme involved students discussing how TCM (or traditional medicine systems) were part of their culture, as traditional medicine treatment modalities are widely known and utilised in the Asian countries that these students were from. While TCM originated in China, adaptations of TCM treatment modalities are used in surrounding Asian countries, such as Taiwan and Korea. The following quotes illustrate this:

“Since I was young, my family used Chinese medicine. We went to the Chinese medicine doctor in Taiwan.” (Student 13)

“Since I was a child, my family in Taiwan knew how to apply the TCM method. Sometimes my parents used herbs and tuina massage. So that’s one of the things of my childhood that I thought was amazing.” (Student 7)

“Both my grandfather and great grandfather were Chinese medicine doctors in Korea. So, I am familiar with TCM, and this has affected my decision to study TCM.” (Student 14)

3.8. Topic: views on TCM

Two main themes emerged for this topic area that identified students' views on TCM.

3.9. Theme: fewer side effects compared to conventional medicine treatments

This theme involved students discussing how they perceived TCM to have fewer and less adverse side effects compared to conventional pharmaceutical treatments. Also, discussed were cases where an individual may have to start taking additional medication (i.e., pharmaceutical treatment) to counteract the side effects of the original medication. The following quotes demonstrate this:

“Western [conventional] medicine has side effects. TCM has fewer side effects, and fewer negative side effects.” (Student 3)

“For chronic diseases and conditions like diabetes, high cholesterol, hypertension and depression, Western medicine will treat these conditions with medication. The medication has side effects. Chinese medicine can treat some chronic diseases with fewer or no side effects.” (Student 13)

“Sometimes you have to take more medication to counteract the side effects of the original medication.” Student 6

3.10. Theme: TCM provides a holistic approach

Students gave accounts of how they perceive TCM to provide a holistic approach to treatment, as the individual is viewed as a whole person (i.e., physical and emotional states are taken into consideration in diagnosis and treatment), which in turn, can provide information regarding the root cause of the condition. In comparison, Western medicine (i.e., biomedicine) focuses on treating the symptoms. The following quotes illustrate this:

“TCM sees the person as a whole. If you have a headache, it's not just about your head. TCM treats the person as a whole system. So, fix the problem from the root.” (Student 8)

“Western medicine treats the problem directly, but in Chinese medicine we look at your internal state and provide a holistic view. Chinese medicine also looks at your emotional state.” (Student 14)

“Western medicine will treat your tendon muscle first. The Chinese medicine view is that it is all connected to the internal organs, like spleen and kidney. Chinese medicine approach would think that your internal organs are not strong enough and should be nourished first.” (Student 14)

4. Discussion

One major finding that was identified in influencing the decision to study TCM was the presence of an injury or an illness either in students themselves, their family or friends and the perceived efficacy of TCM, namely that of acupuncture in the treatment of the condition or injury. Several respondents in a U.S. based study [21] that examined why individuals decided to become TCM practitioners, also found that previous experience of TCM, including perceived efficacy for the treatment of an injury or illness influenced the decision to study TCM. Perceived efficacy of acupuncture treatment was described as contributing to ‘literally turning one’s life around’ and ‘feeling healed for the first time in one’s life’ [21]. Another U.S. based study [22] reported an account of a patient stating that acupuncture profoundly changed their life to the extent that they decided to study acupuncture and make it their life’s work.

A desire to help others was also a motivating factor in choosing to study TCM. A strong discourse throughout the interviews was the

perception of TCM being a helping and healing form of treatment. Several students discussed how they not only wanted to treat (i.e., help) the general public, but that they also wanted to treat themselves, their family and their friends with TCM treatment modalities. Similar findings were also cited in a recent study that was designed to identify motivating factors that influenced health professionals (i.e., physicians, nurses and physiotherapists) to study and practice acupuncture in Spain [23]. Some of the physicians who took part in the Garcia-Escamilla et al. study [23] discussed how acupuncture could be used as a valid therapeutic treatment to help their patients in comparison to their usual activity of only prescribing drug treatments. In relation to different healthcare practitioner groups; wanting to help people was also identified as a salient motivating factor that influenced individuals to study Western medicine (i.e., biomedicine) [24–27].

An interesting comparative finding between the present study and previous research that has examined why individuals chose to study Western medicine, is that medical students emphasised how the scientific application of Western medicine as a treatment modality was a motivating factor in influencing them to study Western medicine [24–27], while the TCM students in the present study emphasised the holistic approach of TCM (i.e., taking into account both physical and emotional/psychological states as affecting the health and illness of individuals) as a factor that influenced their decision to study TCM. The holistic approach of acupuncture as a treatment modality was also identified as a motivating factor that influenced health practitioners to study and practise acupuncture in the Garcia-Escamilla et al. study [23].

An interest in health maintenance, including an ongoing interest in aspects of TCM and Chinese philosophy were also identified as influencing the decision to study TCM. In line with these findings, Barnes [21] also cited examples where her respondents who were predominantly American, provided accounts regarding how an exposure to knowledge about TCM and Chinese culture in general influenced their decision to study TCM. Likewise, Spanish healthcare practitioners who went on to practise acupuncture also discussed how they resonated with the underlying philosophy of TCM as it relates to health and illness [23].

In the present study, personality appeared to be an additional factor in influencing the decision of some students to study TCM. These students discussed how they had a personality and outlook that suited them to work with people in a capacity where they could provide help, empathy and healing. In TCM, wanting to help people in a healing capacity can be related to the concept of *xin*, which is often referred to as the heart-mind connection. This is related to the quality of an individual's heart (i.e., their inner essence), as well as their ethical and social reasoning processes, which in turn, are reflected in how they interact with other people [21,28].

Cultural factors were identified as being another factor that influenced some individuals in choosing to study TCM. A number of Asian-born students discussed how TCM was part of their cultural background in their respective countries of birth. This was especially the case for the Chinese and Taiwanese students. These students had grown up seeing family members use TCM treatment, and had also been treated themselves with TCM.

It must be noted that each Asian country has its own form of traditional medicine [29]. In their review on the history of TCM, Yu et al. [30] highlight that East Asian medicine originated in China 3000 years ago and adaptations of TCM treatment modalities, such as acupuncture, herbal medicine, cupping, moxibustion and massage therapies were adopted in surrounding East Asian countries, such as Taiwan, Korea, and Japan. Geographical proximity of these four countries and pre-Western influences resulted in these countries having very similar and overlapping forms of traditional medicine systems. However, each of these countries has its own name for its traditional medicine system. Also, national policies have also effected the regulation and utilisation of these traditional medicine systems within these four countries [29].

A number of students discussed how they perceived TCM as providing a holistic approach to treatment, as TCM takes into account both physical and emotional states. Similar views were expressed in the Barnes study [21] whereby, one respondent who is a combined acupuncturist and psychotherapist discussed how TCM was beneficial for his work because TCM does not divide physical and emotional categories. The holistic nature of TCM-based acupuncture was also discussed in a recent study that examined Spanish healthcare practitioners' motivations for studying and practising acupuncture [23]. A number of physician and nurse participants who took part in the Garcia-Escamilla study [23] discussed how TCM-based acupuncture as a treatment modality views patients as whole human beings, in comparison to the biomedical approach which focuses on the disease, hence, fragmenting the individual. It has been argued [21,23,31] that Western medicine trained practitioners who also practice acupuncture view TCM-based acupuncture as being a humane medicine, as the physical, psychological, emotional and social aspects of the individual patient are taken into account in the health/illness/treatment approach.

A number of studies [32–35] have reported that patients perceive certain CAM treatments, such as TCM-based acupuncture as providing a holistic form of treatment that views them as a whole person. TCM takes into account how the interrelationship between the physical body, the mind/emotion, the spirit, and social relationships can influence an individual's health [36]. Research indicates that some individuals who seek CAM treatment resonate with the view that health and illness are created by both physical and nonphysical (i.e., mind/spirit) factors [32].

Some students conveyed that they perceived TCM treatment to have fewer side effects compared to conventional pharmaceutical treatments, a finding also substantiated in previous research carried out with healthcare practitioners (i.e., physicians and nurses) who also practise acupuncture [23,32]. The non-harmful nature of acupuncture as a treatment modality was found to be a motivation for studying and practising acupuncture by a number of Spanish healthcare practitioners [23]. While CAM treatments, such as TCM can have fewer side effects in comparison to certain conventional medicine treatment options, TCM treatment modalities are not completely risk-free [16]. A large scale prospective observational study involving 229,230 patients designed to evaluate the safety of acupuncture, reported that the most common adverse side effects of acupuncture treatment were bleeding and pain. Vegetative symptoms, such as nausea and sweating were also reported as occurring after acupuncture treatment [37]. Fainting and nausea have also been reported in previous research as being a side effect of acupuncture [38]. The consumption of Chinese herbal medicine has resulted in allergic reactions for some individuals [38].

A qualitative methodology strengthened the present study, as it allowed participants to discuss in detail the factors that influenced their decision to study TCM. This type of methodology also allowed participants to discuss in detail their views on TCM. However, generalizing these findings to other populations of TCM students should be done with caution as only a small proportion of TCM students were interviewed. Within a qualitative framework that employs an inductive thematic approach, a sample of 15 participants is adequate, as the focus is on the richness of participant responses. Also, it must be noted that the majority of participants were of Asian descent, which did skew the citing of cultural factors as having influenced one's decision to study TCM. However, we did employ purposive sampling to try and recruit an equal proportion of non-Asian students. The majority of students interviewed were senior students or students who were half way through their degree, hence, degree progression/stage of training may have influenced how they answered the primary question regarding why they choose to study TCM. However, the interview question was specifically worded in relation to ascertaining their initial, original decision to study TCM. Interviewing students who were mid-way or toward the end of their degree, facilitated discussion regarding the secondary aim of the study, which was to ascertain students' views on TCM. It

must be noted that we did not pilot our questionnaire. If this study was replicated, a more representative sample in terms of ethnicity would be warranted (i.e., interviewing students from a number of different ethnic groups).

5. Conclusions

The decision to study TCM was strongly influenced by previous experience of TCM treatment, namely that of acupuncture and its perceived efficacy. Compared to other forms of treatment (i.e., conventional medicine), TCM was perceived as providing a holistic approach to health and healing, as both physical and emotional states are viewed as affecting an individual's health. TCM treatment modalities were perceived as having fewer side effects compared to certain conventional medical treatments. Future research in this area will qualitatively examine patients' reasons for choosing to seek acupuncture treatment at a TCM-based clinic.

Conflict of interest

None.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

Author contribution

All research done by authors.

Acknowledgements

We would like to thank the students who took part in this study, the majority of whom are now acupuncturists.

References

- [1] M.J. Pledger, J. Cumming, M. Burnette, Health service use amongst users of complementary and alternative medicine, *N. Z. Med. J.* 123 (2010) 1312.
- [2] T. Nicholson, Complementary and alternative medicines (including traditional Maori treatments) used by presenters to an emergency department in New Zealand: a survey of prevalence and toxicity, *N. Z. Med. J.* 119 (2006) 1233.
- [3] M. Taylor, Patients' and general practitioners' attitudes towards complementary medicine in Wanganui New Zealand, *NZFP* 30 (2003) 102–107.
- [4] K. Wilson, C. Dowson, D. Mangin, Prevalence of complementary and alternative medicine use in Christchurch, New Zealand: children attending general practice versus pediatric outpatients, *N. Z. Med. J.* 120 (2007) 1251.
- [5] A. Evans, B. Duncan, P. McHugh, et al., Inpatients' use, understanding and attitudes towards traditional, complementary and alternative therapies at a provincial New Zealand hospital, *N. Z. Med. J.* 121 (2008) 1278.
- [6] A. Patel, C. Standen, An Auckland-based student acupuncture clinic patient profile and utilisation study, *N. Z. Med. J.* 127 (1398) (2014) 134–137.
- [7] D. Jakes, R. Kirk, How and why patients use acupuncture: an interpretive phenomenological study, *J. Prim. Health Care* 7 (2) (2015) 124–129.
- [8] P. Cottingham, J. Adams, R. Vempati, J. Dunn, D. Sibbritt, The characteristics, experiences and perceptions of naturopathic and herbal medicine practitioners: results from a national survey in New Zealand, *BMC Complement. Altern. Med.* 15 (2015) 114.
- [9] Y. Zhang, L. Lao, H. Chen, R. Ceballos, Acupuncture use among American adults: what acupuncture practitioners can learn from the National Health Survey 2007? *Evid. Based Complement. Altern. Med.* (2012), <http://dx.doi.org/10.1155/2012/710750>.
- [10] D. Sibbritt, J. Adams, A. Moxey, Mid-age women's consultations with acupuncturists: a longitudinal analysis of 11,200 women, 2001–2007, *J. Altern. Complement. Med.* 17 (8) (2011) 735–740.
- [11] C. Zollman, A. Vickers, ABC of complementary medicine. Users and practitioners of complementary medicine, *BMJ* 319 (1999) 836–838.
- [12] A. Patel, V. Toossi, Traditional Chinese medicine practitioners in New Zealand: differences associated with being a practitioner in New Zealand compared to China, *N. Z. Med. J.* 129 (1444) (2016) 35–42.
- [13] K. Dew, Deviant insiders: medical acupuncturists in New Zealand, *Soc. Sci. Med.* 50 (2000) 1785–1795.
- [14] C.C.L. Xue, A.L. Zhang, K.M. Greenwood, V. Lin, D.F. Story, Traditional Chinese

- medicine: an update on clinical evidence, *J. Altern. Complement. Med.* 16 (3) (2010) 301–312.
- [15] V.C.H.M.P.M. Chung, Law, S.Y.S. Wong, S.W. Mercer, S.M. Griffiths, Postgraduate education for Chinese medicine practitioners: a Hong Kong perspective, *BMC Med. Educ.* 9 (2009) 10.
- [16] T.P. Lam, Strengths and weaknesses of traditional Chinese medicine and Western medicine in the eyes of some Hong Kong Chinese, *J. Epidemiol. Community Health.* 55 (2001) 762–765.
- [17] A. Gilbey, Ninety years' growth of New Zealand complementary and alternative medicine, *N. Z. Med. J.* 122 (2009) 1291.
- [18] Accident Compensation Corporation, Pragmatic Evidence Based Review. The Efficacy of Acupuncture in the Management of Musculoskeletal Pain, Accident Compensation Corporation, New Zealand, 2011.
- [19] Statistics New Zealand, Census – Major Ethnic Groups in New Zealand Statistics New Zealand, Statistics New Zealand, Wellington, New Zealand, 2014.
- [20] C. Auerbach, L. Silverstein, Qualitative Data. An Introduction to Coding and Analysis, New York University Press, New York, 2003.
- [21] L.L. Barnes, Practitioner decisions to engage in Chinese medicine: cultural messages under the skin, *Med. Anthropol.* 28 (2) (2009) 141–165.
- [22] C.M. Cassidy, Chinese medicine users in the United States Part 11: Preferred aspects of care, *J. Altern. Complement. Med.* 4 (2) (1998) 189–202.
- [23] E. Garcia-Escamilla, B. Rodriguez-Martin, V. Martinez-Vizcaino, What led health professionals to study and practise acupuncture in Spain? *Health (N. Y.)* 21 (1) (2017) 93–115.
- [24] P. Vaglum, F. Wiers-Fenssen, O. Ekeberg, Motivation for medical school: the relationship to gender and specialty preferences in a nationwide sample, *Med. Educ.* 4 (1999) 236–242.
- [25] R. Molnar, T. Nyari, P. Molnar, Remaining in or leaving the profession: the view of medical students, *Med. Teach.* 5 (2006) 475–477.
- [26] M.L. Crossley, A. Mubarik, A comparative investigation of dental and medical student's motivation towards career choice, *Education* 193 (8) (2002) 471–473.
- [27] E. Girasek, R. Molnar, E. Eke, M. Szocska, The medical career choice motivations – results from a Hungarian study, *Cent. Eur. J. Med.* 6 (4) (2011) 502–509.
- [28] M. Tung, Symbolic meanings of the body in Chinese culture and 'somatization', *Cult. Med. Psychiatry* 18 (1994) 483–492.
- [29] H.L. Park, H.S. Lee, B.C. Shin, J.P. Liu, Q. Shang, H. Yamashita, B. Lim, Traditional medicine in China, Korea, and Japan: a brief introduction and comparison, *Evid. Based Complement. Altern. Med.* 429103 (October) (2012).
- [30] F. Yu, T. Takahashi, J. Moriya, K. Kawaura, J. Yamakawa, K. Kusaka, S. Morimoto, T. Kanda, Traditional Chinese medicine and Kampo: a review from the distant past for the future, *J. Int. Med. Res.* 34 (3) (2006) 231–239.
- [31] E. Garcia-Escamilla, B. Rodriguez-Martin, V. Martinez-Vizcaino, Integration of acupuncture into conventional medicine from health professionals' perspective: a thematic synthesis of qualitative studies, *Health (N. Y.)* 20 (2) (2016) 176–200.
- [32] J.A. Astin, Why patients use alternative medicine. Results of a national study, *JAMA* 279 (19) (1998) 1548–1553.
- [33] D. Jakes, R. Kirk, L. Muir, A qualitative systematic review of patients' experiences of acupuncture, *J. Altern. Complement. Med.* 20 (9) (2014) 663–671.
- [34] C. Paterson, N. Britten, The patient's experience of holistic care: insights from acupuncture research, *Chronic Illn.* 4 (2008) 264–277.
- [35] C. Vincent, A. Furnham, Why do patients turn to complementary medicine? An empirical study, *Br. J. Clin. Psychol.* 35 (1996) 37–48.
- [36] A. White, Western medical acupuncture: a definition, *Acupunct. Med.* 27 (1) (2009) 33–35.
- [37] C.M. Witt, D. Pach, B. Brinkhaus, K. Wruck, B. Tag, S. Mank, S.N. Willich, Safety of acupuncture: results of a prospective observational study with 229,230 patients and introduction of a medical information consent form, *Forsch. Komplementmed.* 16 (2009) 91–97.
- [38] A. Bensoussan, S.P. Myers, A.L. Carlton, Risks associated with the practice of traditional Chinese medicine. An Australian study, *Arch. Fam. Med.* 9 (2000) 1071–1078.