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# The use of complementary and alternative medicine in later life

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## Summary

The increasing prevalence of complementary and alternative medicine (CAM) use is a significant health care issue in contemporary societies and researchers have identified CAM as holding potential for treating and coping with chronic illness and other conditions experienced in later life. This paper focuses upon contemporary research literature to provide a critical review of the prevalence, correlates, conditions, perceptions and communication of CAM use in later life. Evidence from recent research illustrates the substantial prevalence and complexity of CAM use amongst older people and such 'community' use requires all providers, regardless of their experience or perception of the worth of CAM, to at least acknowledge and enquire with their older patients about the potential use of these other medicines.

*Keywords:* aged, complementary medicine, alternative medicine, acupuncture, aromatherapy, chiropractic care, reflexology, herbal medicine.

## Introduction

The consumption of complementary and alternative medicine (CAM) – a wide range of practices, treatments and technologies such as acupuncture, aromatherapy, chiropractic, reflexology and herbal medicine that have not been traditionally associated with the public health system or training of conventional medical practitioners – has attracted much attention as an emerging health care issue in recent years.[1]

Survey findings indicate widespread CAM use in Western societies.[2,3] Studies reveal the typical CAM user is more likely to be female, between 35 and 49 years of age, to have a higher income and education, be in full-time employment, and reside in non-urban areas.[4–6] While the evidence base in this area is gradually emerging, a wide range of significant issues require further research attention, and CAM use amongst older people is one case in point. The need for more rigorous research examining CAM use in later life is highlighted by both rapidly ageing populations facing Western healthcare systems[7] and the fact that CAM has been identified as holding potential for treating chronic illness and other conditions experienced in later life.[8] As such, the use of CAM has significant potential to contribute towards helping achieve healthy ageing and maintain independence for older people in contemporary societies.

Recent years have witnessed a boom in trials on the efficacy of CAM with regard to common ageing ailments. The Cochrane CAM Field (http://medschool.umaryland.edu/integrative/cochrane_consumer.asp), which undertakes systematic reviews of randomized clinical trials in complementary medicines, has over three hundred entries examining interventions focused upon illnesses common among older people such as diabetes, hypertension, arthritis, prostate enlargement and osteoporosis. This is a clinical evidence base for CAM that looks set to continue to grow in the near future. However, in contrast, we still know relatively little about the social and cultural dimensions of CAM use among older people. This is especially the case with regards to the ways older people use CAM to cope with health challenges or disabilities and how they make sense of this consumption in daily life.[1,9] A contemporary review of this significant practice issue is of importance to health professionals and policymakers involved in the provision of care for older people.

A previous systematic review of the broad area of CAM consumption amongst older people[9] has been useful in providing focus upon prevalence and reasons for CAM use as well as facilitators or barriers to CAM consumption among older people. However, this earlier review paid relatively

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little attention to examining the broader social and cultural contexts around CAM use in later life. Moreover, given the exponential growth in both CAM use and research over the past few years, there is a need for a contemporary synthesis of literature and research evidence on this topic. In response, this paper presents a critical review of CAM use among older people in light of recent research findings focusing upon the context of social and cultural transformations in late modern societies.

The rest of this paper is organized into distinct but inter-related sections. Firstly, we outline a number of broad social and cultural considerations tied to contemporary CAM consumption among older people, and then provide a critical review of contemporary research and findings on this topic. Drawing upon this review, the paper then focuses on a number of critical issues relating to CAM consumption in the older population, highlights gaps in the evidence base on this topic and provides comment on the type of research topics required for further investigation of CAM use amongst older people.

### *Search methods*

The authors conducted a comprehensive search of literature from 2004 to 2009 in CINAHL, MEDLINE, AMED and CSA Illumina (social sciences section) with the following keywords: 'complementary medicine/therapy', 'alternative medicine/therapy', 'old age', 'ageing', 'elderly', 'gerontology', 'geriatric'. Only peer-reviewed articles published in English are included in this review. The authors also searched the bibliographies of studies identified for inclusion for any other relevant researches.

## Social and cultural conditions of CAM use in later life

CAM use in later life has become an important social and health care issue in the twentieth century as a result of three interacting trends. Firstly, there is the global trend of population or demographic ageing.[7] In many countries, population ageing implies more than just an increase in the life expectancy of individuals – there is also evidence that the onset of morbidities is postponed and compressed into a shorter period of time.[10] Researchers have argued that the emergence of the so-called 'third age' or a generation of older people who are healthier than previous generations has given rise to new social structures and values[11,12] and the move of recent ageing policy discourse away from welfare models and towards social services with a focus on the independence, choice and participation of older people reflects this transformation.[13]

Although the onset of morbidity and disability is pushed or compressed into older ages, the rapid increase of an ageing population has also influenced a change in disease patterns. With an increase in longevity and living standards, degenerative diseases (such as cardiovascular disease, diabetes, cancer, and mental illness) have replaced infectious and parasitic diseases as the major challenge facing health systems in many countries.[7] It is predicted that chronic diseases will become the predominant cause of global death and disability in the near future.[14] On facing this epidemiological transition of disease patterns, the traditional biomedical model of disease management has been identified as poorly equipped to deal with the new contexts of population ageing.[15] In contrast, the diverse therapeutic practices of CAM offer a flexible and prevention-oriented health care model more attune to managing non-life-threatening, long-term chronic conditions.[8] Indeed, having a chronic health condition is one important predictor of CAM consumption among older people.[16–19]

Another social trend that facilitates the use of CAM in older populations is the rise of consumerism in health care.[20] Over the past decades, the spread of neo-liberalism plus an ever-escalating health expenditure have led many countries to deregulate and privatize their health care services[21] and the commodification of health and the emergence of health lifestyle markets have facilitated a change in the nature of medical practice, from that of professional dominance to an emphasis on the patient as an active participant or consumer.[22] This new care practice pays due attention to guiding values such as 'choice', 'personal responsibility', 'shared decision-making', and 'self-care'. The convergence of this new health consciousness with the rise of the third age means that the lives of older people are increasingly marked by diverse social and individual experiences with the meaning of ageing becomes less permanent and stable.[23]

The increasing salience of the anti-ageing movement and discourse may be another factor contributing to the increase in CAM consumption in later life. In recent years, there has been a significant interest in the possibilities and technologies of slowing down or even reversing the biological process of ageing.[24] This discourse on extending the human lifespan or rejuvenating the ageing body has aroused much debate and criticism among commentators.[25,26] Some CAM has long had a close affinity with anti-ageing medicine, with some modalities claiming a capacity to modulate ageing and its consequences.[27,28] Demand for CAM is particularly strong among those of mid- and old-age who are eager to resist the 'mask of ageing'[29] and the growing interest of the public in anti-ageing is one potential factor that may be helping to generate a global demand for CAM products and services.

## Evidence base for CAM use in later life: contemporary developments

### *Prevalence of CAM use*

As Andrews[30] has observed, the conventional wisdom among researchers has long been that older people are not significant users of CAM. However, survey findings from the late 1990s onward have shown a different trend. Contemporary empirical studies (post-2003), many using large representative samples, have provided further evidence that CAM consumption is prevalent in later life. Flaherty and Takahashi[31] provide an overview of the use of CAM therapies by older people in China, Japan, India, Europe, South Africa and the United States, concluding that such use is widespread and on the rise across all these countries. McMahan and Lutz[19] report that 43% of respondents (aged between 65 and 74 years) from the US National Survey of Midlife ($n = 335$) used CAM therapies during the previous twelve months. The study of Ness *et al.*,[32] based on a sub-sample of 1099 people aged 52 or over from the 2000 Wave of the US Health and Retirement Survey, identified 87% of respondents as consuming some form of CAM, with dietary supplements (65%) and chiropractic (46%) the most commonly reported items. This finding is consistent with a separate analysis on another sub-sample (848 people aged 50 and over) of the same data set, which revealed that approximately 72% of the respondents had used at least one of the following CAM modalities: acupuncture, chiropractic, massage therapy, breathing exercise, use of herbs, and meditation.[33] Another US study, using data from the 2002 National Health Interview Survey ($n = 5827$) comparing CAM consumption among older Americans with and without self-reported anxiety or depression, discovered that 82% of the former and 65% of the latter had used CAM (20 modalities in four categories) in the past twelve months.[34]

Meanwhile, the American Association of Retired Persons (AARP) conducted a telephone survey of 1559 seniors in 2007 and found that almost two-thirds (63%) had used one or more CAM therapies.[35] Another survey of community-dwelling adults aged 65 and over in Minnesota revealed that 63% ($n = 445$) reported use of some form of CAM.[36] Similarly, a computer-assisted telephone interview study in Australia, employing random-digit telephone dialling, found that 58% of respondents aged 65 years or older consumed CAM, with around 60% of these old CAM users consulting an alternative practitioner.[37] Although survey findings have in general shown a high prevalence of CAM use among older people, it is also important to remain mindful of the wide variation in both definition of CAM and exclusion/inclusion criteria adopted by different cohort studies. The existence of this diversity, a limit noted for CAM consumption research more generally,[38] adds to the challenges of comparing findings and drawing general conclusions from across different studies.

Compared with the young and mid-age population, older people have been found to consume less CAM. A national report released by the US Department of Health and Human Services[39] suggested that the percentage of CAM use among the age groups 30–39, 40–49 and 50–59 years were 40, 40 and 44%, respectively. In contrast, the percentages of consumption among older groups were 32% (60–69 years) and 24% (70–79 years) (see also Zhang *et al.* 2007[37]). At present, there is no clear agreement on why the consumption of CAM may decline with age – suggestions and interpretations include 'age effect' (a characteristic common to people who reach a particular age) or 'cohort effect' (a characteristic based on shared temporal or life experience) or a combination of the two. It is very difficult for researchers to differentiate the two effects based

on analysis of cross-sectional survey data and there is a need for further longitudinal research to be undertaken.[38] Existing evidence does suggest that when the baby boomer generation enters old age, the number of people using CAM will gradually increase – a Harvard study that compared two national surveys of CAM use by US adults discovered that being aged 40–64 years is a factor associated with the highest use of CAM among respondents.[40]

### *Correlates of CAM use*

The predictors of CAM use by older people identified in contemporary literature appear to be similar to those identified for the general population[3,40] and consistent with previous research findings on older users.[9] Overall, older women have been identified as more likely to use CAM than older men.[19,32,37,41–43] CAM use also appears more common among those seniors who are younger (age 50–64 years),[18,35,41] who have higher income and education,[18,19,32,37,44,45] or who have poorer health status.[18,36,41,43,44]

As mentioned above, at present there is no conclusive explanation as to why CAM consumption declines with the advance of age in later life. The association between CAM use and age becomes more complicated when the catch-all category of complementary and alternative medicine is itself further scrutinized. For instance, in the study of Ness *et al.* based on the US Health and Retirement Survey,[32] it was discovered that age correlated positively with utilization of dietary supplements but inversely with alternative practitioner use. The fact that fewer reports of use of practitioner-based CAM were recorded among the oldest old group in this study may reflect the decline of mobility of this group of people. Working on a different sub-sample of the same data set, Grzywacz *et al.*[46] proposed that an explanation for the diversity of CAM use patterns among different age groups may lie with patients' different interpretations and beliefs about appropriate strategies for responding to disease or disability. Votova and Wister,[47] on the other hand, highlight an inverse association with age for the use of chiropractic and massage therapy but not for acupuncture, homeopathy or naturopathy in their analysis of 4401 older adults drawn from the Canadian National Population Health Survey. Overall, the existing evidence and discussions point to the need for longitudinal studies, and for researchers to consider separately the consumption pattern of different kinds of CAM products or practices with regard to age.

CAM is a common health maintenance strategy used by older adults living in non-urban or rural areas. Existing evidence suggested that the use of CAM is part of a comprehensive approach employed by older people living in these areas to meet their health care needs.[18,41,44,48–50] Latest findings also confirm that CAM use is prevalent and diverse among older people from ethnic minority groups.[33,42,43,51–53] In addition, many of these minority ethnic older people continue to use traditional or indigenous healing practices, often in combination with conventional medicine or other types of CAM.[54–56] Adherence to traditional cultural beliefs and lack of access to health care services of these older people, especially in rural regions, are factors that appear to account for their continuous consumption of alternative or traditional healing practices.[57]

### *Conditions of CAM use*

There are two core research questions that dominate empirical investigation around conditions of CAM use in later life: what are the specific modalities used by older people, and what are the health conditions for which they employ these specific modalities? Examining these two questions separately helps clarify further the magnitude of CAM use in later life (as well as addressing the limitation of using a blanket CAM term).

Regarding the first question, researchers have identified substantial variations among CAM modalities used by older people. This finding is not unexpected as CAM is an umbrella term that covers a heterogeneous group of therapeutic practices. The AARP survey ($n = 1559$) found that the most commonly used CAM amongst older people were bodywork (such as massage and chiropractic) (45%), herbals or dietary supplements (42%), and mind/body practices (15%).[35] McMahan and Lutz's study ($n = 335$) of the US young-old (age 65–74 years) discovered that spiritual practices (22%), exercise/movement therapists (20%), and special diets (10%) were the most frequently used CAM modalities.[19] Ness *et al.*,[32] on the other hand, found that dietary supplements (65%)

and chiropractic (46%) were modalities ranked at the top for respondents in the US Health and Retirement Survey ($n = 1099$). The computer-assisted telephone interviews in Australia[37] reported that clinical nutrition (35%), chiropractic (16%), and massage therapy/meditation (14%) were the most common forms of CAM used by older people aged 65 or over ($n = 178$).

Studies show that CAM is used by older people to treat a wide range of health conditions, especially chronic or long-term ailments. For instance, the cross-sectional survey by Cheung *et al.* of 1200 older Americans[36] found that arthritis (44%), chronic pain (24%) and cold/flu (21%) were the most common conditions for which their respondents used CAM ($n = 445$). CAM was also widely reported to be used for the treatment of common late-life conditions like diabetes,[44,49] hypertension,[58] depression, anxiety, and sleep disturbance.[34,59,60] However, it is important to point out that in addition to specific conditions, CAM is often used by older people for the general purpose of health maintenance – the AARP survey[35] found that 65% of the respondents used CAM for the purpose of improving overall well-ness, and this was especially the case for the group aged 65 years and over. In contrast, respondents in the younger age group (age 50–64 years) were more likely to report using CAM for specific purposes. The study of Bell *et al.* based on 5821 participants (aged 65 or over) from the 2002 National Health Interview Survey[58] discovered that although 70% of older Americans diagnosed with hypertension used CAM, only 7.8% of them reported using CAM for the treatment of this particular condition. Conducting analysis on the same national data set, Grzywacz *et al.*[34] demonstrated that although 82% of older Americans ($n = 5827$) with self-reported anxiety or depression used CAM, fewer than 20% of these users employed CAM modalities for their mental health. In short, existing evidence suggests that CAM use is an important tool utilized by older people to maintain their quality of life and well-being.

Recent findings also indicate that ethnicity is related to the use of specific CAM modalities in later life. For instance, the secondary analysis by Ness *et al.* on the US Health and Retirement Survey[32] found that Blacks and Hispanics use fewer dietary supplements and less chiropractic, but report more personal practices (like breathing exercises and meditation) than Whites. Working on a different subsample of the same data set, Montalto *et al.*[33] report that black Americans are more likely to use self-administered preventive/curative modalities whereas their white peers are more likely to consume practitioner-based formal CAM services. Another survey on a convenience sample of 338 multi-ethnic older Americans shows that Hispanics report the highest use of herbal medication for colds and insomnia, while Blacks have the highest reported use for low-back pain.[42] The latter also had higher use of CAM prescriptions than Whites for treatment of colds.

### *Perceptions and communication of CAM use*

In line with previous findings,[61,62] recent surveys have recorded a high satisfaction level with CAM use among older adults and suggest that both physical and psychological health benefits may be gained from the consumption of alternative treatments (at least as self-reported by respondents).[36,50,52] Older people have also been found to report an experience of empowerment associated with CAM use (through the ability to exercise choice or negotiate treatment options in CAM consultation).[16] This emphasis on gaining control (when accompanied by the fact that CAM use may be for the purpose of general wellness) highlights the role of CAM as a coping strategy for older people, helping maintain a sense of independence and well-being in everyday functioning. Interpreted in this way, CAM may be seen as one potential tool for promoting both primary and secondary disease prevention as well as in achieving the goals of healthy and active ageing.

Research has also identified a relationship between CAM use and the endorsement of a self-management or self-regulatory model of illness in later life.[42,44,46,48,49] Votova and Wister[47] examined several dimensions of self-care deemed to be associated with CAM in Canada and they found that self-care beliefs and spirituality (i.e. a feeling of enlightenment, faith and divinity) were the most important predictors of practitioner-based CAM use among older adults ($n = 4401$). Study findings examining older people's perceptions of CAM also highlight the trend and desire of older people to assume a more proactive role in health consumption, to monitor their health, and to make decisions on how to respond to physical ailments or disability.[22,61,63]

The increasing prevalence of CAM use among older people raises a significant practice issue: communication and information-sharing about CAM between older people and their care providers. Previous studies indicate that older people often fail to disclose CAM use to their conventional health providers and that medical practitioners can find it difficult to communicate with their elderly patients about alternative therapies.[64,65] Recent research findings provide further support and insight on these issues. The AARP study of older Americans found that 69% of respondents had not discussed CAM consumption with their physicians because the latter never asked (42%) or the respondents did not know they should make such use known (30%). Another 19% of the respondents suggested that there was not enough time to talk about CAM during medical consultation. The perception that physicians are unwilling to discuss or will react negatively to the patients' use of CAM was also a commonly held belief.[35]

Another community survey on older people in Minnesota ($n = 1200$) discovered that only 53% of the respondents disclosed CAM use to their primary care providers.[36] In the case of Australia, older CAM users were more likely than younger users to discuss CAM with their doctors. Nevertheless, it still remains that 40% of them failed to do so. Similar to findings in America, the reasons for non-disclosure as identified in Australian research were: that the older patient was not asked by their doctor regarding CAM use (24%) or the patients believed their doctor would disapprove of their use of CAM (16%).[37]

The lack of communication around CAM use is more alarming when one takes into consideration the potential risk of drug interaction[28,66] and the finding that older people often combine CAM with prescription medications.[67] For instance, the AARP survey discovered that 45% of the respondents used CAM to supplement conventional medicine. This is especially the case in the 50–54 year age group.[35] The study of Zhang *et al.* in Australia[37] also revealed that a higher proportion of older people (38%) used both CAM and conventional medical treatments when compared with the young and middle age groups in the study.

Given the high prevalence of CAM use among older people there is an urgent need to facilitate better understanding and communication on CAM use between health care providers and their older clients.

## Discussion

This paper examines the interface of CAM and ageing and investigates the issue of CAM use among older people in light of contemporary research findings. As a result of the profound transformation in the socio-cultural landscape and health care policies over the past decades, CAM has become increasingly prevalent in many countries. Such developments are somewhat paradoxical, with the use of 'non-orthodox' practice now a mainstream activity (at least in terms of the care choices and self-care practices of general populations) – CAM use has become an ingredient of the 'common experience' of many living in contemporary societies ([68]: p. 193).

Evidence indicates that the consumption of CAM is very common in older age groups. The use of CAM appears to play a role in achieving a good quality of life and in encouraging participation of older people in health care decisions. Specifically, CAM stands for a new model of disease management that enables older people to cope with chronic health conditions and those 'unreported' health problems that are often overlooked by primary care providers.[69,70] In addition, to reduce frailty or pain, the use of CAM may also help create a sense of empowerment, agency and independence among older people. This sense of empowerment and autonomy is an important factor in achieving the goals of healthy and active ageing.[13] In line with the trends in ageing policy that emphasize inclusion and participation in health care decisions and which look to replace institutional care with ageing in place,[71] CAM offers a wide range of supportive health care services that older people appear to be accessing as self-care at home and/or in consultancy with practitioners in their community. This is particularly the case in rural or deprived areas where the supply of conventional health resources may be a challenge.

Given the prevalence of CAM and the potential of alternative modalities to enhance successful ageing, the issues around CAM use among older people remain under-researched. The existing body of work consists largely of information gathered from descriptive and cross-sectional surveys, most of which have been conducted in North America. Future research on CAM use in later life should pay attention to four important aspects. Firstly, there is a need for qualitative and in-depth studies that situate CAM consumption in an analysis

of the life course and the social world of older people.[72,73] In particular, research conducted with a longitudinal design provides crucial information for researchers to determine whether older people are growing old 'with CAM' (i.e. a cohort effect) or growing old 'into CAM' (an age effect) ([9]: p. 87).

Secondly, future studies need to examine CAM modalities separately rather than collapse them all into one single category. This practice will provide a more accurate picture of the consumption of different CAM among older people and help further decipher their attitudes and behaviours on use of alternative treatments. Thirdly, future research should address issues of ethnic and geographical diversity related to CAM use in later life. Researchers need to pay attention to differences in experience and practice of CAM across cultures or in various spatial settings.[30,74] As the existing evidence base is focused on the experience of North America, there is an urgent need for researchers to also explore experiences and behaviours in other parts of the world. Finally, at present, there is a great variation in the integration of CAM into the health care system and in insurance coverage for CAM across countries. Many older people have to pay for CAM therapies out of their own pocket and given the trend towards the progressive recommodification of health care, there is a demand for further research to explore the inequality in access and consumption of CAM in later life.[75]

It is imperative that we know more about older people's use of CAM – an issue only made more acutely significant by the ageing population and the rise of chronic illness in later life – if those financing, managing and practising health care and services for older people are to be able to make informed decisions in the interests of the community and individual patients. The evidence of contemporary research illustrates the prevalence and complexity of CAM use amongst older people and such 'community' use requires all providers, regardless of their experience or perception of the worth of CAM, to at least acknowledge and enquire with their older patients about the potential use of these other medicines.

## Conflicts of interest

The authors have no conflicts of interest to declare.

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