

A Qualitative Study Examining Older Adult Usage of Complementary and Alternative Medications for Cognitive Health

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Introduction

Mood changes and declines in cognitive functioning tend to occur at a higher frequency among Older Adults; this includes mood disturbances that commonly occur with conditions such as Alzheimer's, Parkinson's, and stroke related depression [1]. Herbal and complementary medication use tends to be high for such cognitive decline however research that guides patients and caregivers to this usage is limited [1]. Studies have shown that reliance on an active lifestyle that includes physical, mental, and social activities improves memory and cognitive function among Older Adults [2]. Additionally, relying on a diet based on fruits and vegetables provides an improvement of health among Older Adults [3].

Many herbal medications are marketed for memory loss, cognitive function improvement, and depression; this makes the use of such products among Older Adults high [4]. Use of natural health products appears to be high among the general population however use is almost doubled among patients of anxiety and depression [5]. It is well known that the use of natural health products along with prescription medication can lead to potential interactions and negative side effects; this becomes even more pronounced among Older Adults where polypharmacy is prevalent [4]. Additionally, many users of natural health products use do not disclose such usage to their primary health care practitioners, which is alarming due to the potential of the occurrence of adverse events; health care practitioners must therefore be aware of usage of such products, especially among Older Adults where medication usage in general tends to be high [4].

References:

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2. Piccirilli, M., et al., Improvement in cognitive performance and mood in healthy older adults: a multimodal approach. *European Journal of Ageing*, 2019.
3. Gehlich, K.H., et al., Consumption of fruits and vegetables: improved physical health, mental health, physical functioning and cognitive health in older adults from 11 European countries. *Aging Ment Health*, 2019: p. 1-8.
4. Dergal, J.M., et al., Potential interactions between herbal medicines and conventional drug therapies used by older adults attending a memory clinic. *Drugs Aging*, 2002. 19(11): p. 879-86.
5. Saeed, S.A., R.M. Bloch, and D.J. Antonacci, Herbal and dietary supplements for treatment of anxiety

Study Objective

The **objective** of this study was to determine the use of complimentary therapies to improve cognitive function by Older Adults, specifically to improve memory and to treat anxiety / depression.

Methods and Analysis

Participants were recruited through membership in the Sheridan Center for Elder Research located in the Trafalgar Campus. An electronic flier was shared with participants outlining the study and requested that participants contact the principal investigator via email to set up a one-on-one interview. Recruitment occurred from December 2019 until January 2020 and all interviews were conducted from January 2020 until April 2020. Some interviews were conducted over the telephone due to ongoing COVID-19 related Public Health Guidelines. The interviewer took extensive notes during the interviews and these notes were used to create a transcript for each participant. Questions included demographics (age, gender, education level, household income, current health, living situation (i.e. retirement home, apartment, household), # of household members) along with the following suggested questions:

1. What do you use now to improve your memory (if anything)? If yes, what is it? If not, would you consider something? Herbal / natural or prescription? Repeat questions for anxiety and depression.
2. What do you know about these herbal products? Which of them do you use? Target: St John's Wort, Fish Oils and OMEGA-3 Fatty Acids, SAME, Folate and B12 supplements.
3. Have you considered CBT? Do you know what CBT is? Do you think it would work?
4. If you use natural / herbal products, how often do you use them? Also, how do you check that they actually worked?
5. Do you think your use of such products changes with the weather?
6. What diet changes and / or nutritional supplements do you use to enhance your memory? To improve anxiety and depression?
7. How often do they get tested for memory? How about anxiety and depression? Do you use any prescription medications for these conditions?

Results were analysed using a grounded theory approach where transcripts were created, saturation was determined, and emerging themes identified.

Results

A total of 10 participants were interviewed, with ages ranging from 63 to 86 years old (mean and median age was 73 years old). 20% of the participants were males and all participants reported their health as "good" however did report hypertension as the most common health condition they suffered from. The mean household income for participants ranged from \$35,000 to \$150,000 / year. All participants were from Ontario (mostly local) and either lived on their own or shared a dwelling with someone else. A total of 6 emerging themes were identified (below).

Emerging Themes

Emerging Theme: Fear of Cognitive Health Decline		Emerging Theme: Mitigating Perceived / Self-Diagnosed Cognitive Health Decline	
Participants had a fear of cognitive decline	60%	Participants felt that moving and exercise (e.g. hiking, taking a walk, fitness classes, using treadmill, and dancing) helped them feel better and improved cognitive health.	50%
All participants had experienced some form of Brain Fog	100%	Some participants did mental activities (e.g. puzzles, crosswords, games, reading, attending classes, and playing jeopardy) to "stimulate their brain"	50%
Participants had experienced depression (whether clinical, diagnosed, or seasonal) or anxiety	60%	For most participants, family and friend support was important for them in their health and as a support mechanism when "feeling down" (even for those participants living alone)	70%
Participants had a spouse or parent who either suffers from or has passed away from dementia	50%		
Participants felt that memory loss comes with being older (i.e. as they age)	20%		
Emerging Theme: Supporting Older Adult CAM Use		Emerging Theme: Healthcare Ownership and "Self-Care"	
Participants wanted the government to cover the cost of the CAMs and wanted the government to encourage the use of CAM instead of prescription medications	60%	Participants wanted to be treated as equals by their primary health care practitioner	40%
Participants wanted the results of this study shared with CARP (Canadian Association of Retired Persons)	60%	Participants will choose a family doctor who will approve of visiting a naturopath (or approve of their use of herbal / CAM products)	
One participant suggested that the Sheridan Center for Elder Research (CER) set up a "Memory Health Group" or "Memory Support Group"	10%	One participant called their healing as "self-care" or "self-reflection"	
		Participants mentioned that doctors and HCPs need to be "open-minded" about CAM use among Older Adults	
Emerging Theme: CAM Loyalty		Emerging Theme: Dietary Influences on Cognitive Health	
Most participants were not interested in traditional prescription medications and preferred different CAM therapies	90%	Most participants followed a healthy diet (raw fruits, veggies, gluten-free)	100%
One participant saw no benefit from herbal products but used diet (veganism) for memory loss	10%	Most participants appreciated impacts of diet on cognitive health (the gut the second brain)	
Some participants utilized counselling / therapy / CBT (cognitive behavioural therapy)	50%	Most participants said that food impacted their mood	
Some participants were so invested in CAM that they actually got training / education in it	50%	Some examples of diet changes that participants had followed included: keto diets, eating home-cooked meals only, gluten-free diets, eating raw fruits and veggies only, and utilizing specialized recipes made with spices known to be anti-inflammatory or anti-cancer	

Discussion and Future Work

- Participants had a fear of cognitive decline; this fear was intense to the point that one participant had requested their life to be terminated if diagnosed with AD or PD. All participants had experienced some form of "brain fog" that has recently started to occur or has been an ongoing issue.
- Participants felt that dealing with cognitive decline empowered them; all participants included mental and physical exercises as methods to cope with this cognitive decline. Also, participants relied on their family and friends as a support mechanism when "feeling down".
- Almost all participants believed that diet played a substantial role on their mood: many called the gut the second brain and mentioned the importance of the gut microbiome on the nervous system. To that extent, most participants either already followed a healthy diet (consumption of raw fruits, veggies, gluten-free) or had started to follow a healthy diet. Many utilized special recipes using ingredients known to enhance mood, cognitive health, and overall health.
- When it came to their health, participants indicated that they wanted to be treated as equals by their primary HCP and that unequal treatment (feeling they were "snubbed" by HCP or experiencing a "power struggle") made them consider a naturopath or TCM practitioner; many participants in fact selected a family physician who will let them visit a naturopath (or approved of their use of herbal / CAM products). Participants mentioned that doctors and HCPs needed to be "open-minded" and that "many Older Adults are using CAMS and the HCP needs to be aware of that". As one participant put it: "not a lot of doctors will offer alternative options; the doctor needs to listen to the patient".
- Most participants were not interested in prescription and traditional medications (even though they took them) and preferred different CAM therapies (whether herbal, device, spiritual, psychological, etc). One participant also used prescription cannabis. Half of the participants utilized counselling / therapy / CBT and those who didn't use it still recommended it to their friends and family; cost of therapy was identified as a deterrent to using this method. Half of the participants were so invested in CAM that they actually received training in it: one got training through a TCM, another got reiki training (and shamanic / Tibetan Buddhism training), another got a masters in healing art training, one was self-taught on brain function, and another took courses in the library on brain function.
- More than half of the participants wanted the government to cover the cost of the CAMs for them (as they all said these CAM therapies are not cheap). Participants who asked for government subsidization tended to have household incomes of less than \$50,000 a year; those with high incomes did not mention cost. Most participants wanted the government to encourage the use of CAM instead of Rx medications. One participant phrased it as follows: "it is a shame that the government pays for chemicals such as drugs and medications but not for natural products. (they) should reimburse Older Adults for expensive NHPs and that way they will have less people in LTC homes and at doctor offices" ; another participant mentioned that it is time for "pharmacare to become prevent-a-care".

Future Work: Results of this study will be shared with the Sheridan Center for Elder Research either as a workshop or seminar and with CARP (Canadian Association of Retired Persons) as per participants requests. It would also be valuable to confirm the results of this study using a quantitative survey and to further understand Older Adult usage of NHPs and CAMs.