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'Accepting where I'm at' – a qualitative study of the mechanisms, benefits, and impact of a behavioral memory intervention for community-dwelling older adults

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ABSTRACT

Objective: Gain novel, in-depth insight into therapeutic mechanisms, benefits, and impact of a multi-modal behavioral memory intervention for older adults with concerns about memory.

Methods: Participants were11 community-dwelling older adults (aged 63–88) who completed the Memory and Aging Program, an evidence-based multi-modal group intervention for normal age-related memory change. Semi-structured interviews were administered post-intervention. Responses were analyzed using qualitative content analysis until meaningful themes were agreed upon.

Results: Analyses revealed a main theme of normalization as the overarching benefit of participation. The mechanism for this comprised both specific intervention content and the process of participating with others. A positive impact of the intervention was demonstrated at emotional (feelings of reassurance, hope, and confidence) and functional (increasing motivation for lifestyle change) levels; for some, there was a direct link between emotion and function.

Conclusion: This study highlighted a single, prominent therapeutic benefit of normalization, illustrated a dual mechanism for achieving this, and characterized a nuanced inter-relationship of the emotional and functional impact of the intervention for participants. Results support the notion that group behavioral interventions can educate, empower, and promote psychological well-being in older adults and may be an effective avenue to reduce risk of disease and promote sustained functional independence.

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Introduction

The older adult population is the fastest-growing worldwide, with the number of individuals over age 60 projected to triple by 2100 (United Nations, 2012). Innovation in health care delivery is needed to meet the needs of this population. Behavioral interventions can educate, empower, and promote healthy lifestyle changes in older adults and may be an underutilized avenue to reduce risk of disease, promote sustained functional independence, and reduce unneeded medical investigations.

One group who may be well-served by such interventions are those who are troubled by the experience of normal age-related memory change. This would include the 'worried well' who present to physicians seeking investigation of perceived memory decline that ultimately proves to be within the limits of normative age-related changes. Such investigations may include consultations with specialists, laboratory tests, neuroimaging, and/or neuropsychological assessment (Galvin & Sadowsky, 2012). Although such patients may be ultimately reassured by the absence of evidence of pathological memory change, the potential burden to the patient and health care system is significant and the opportunity for health promotion may be limited.

There is a growing body of quantitative literature showing positive outcomes of behavioral intervention in this population. Most studied interventions share common features including provision of psychoeducation, training in evidence-based memory strategies, and use of a group format to offer advantages of efficiency, peer feedback, and social support (Agronin, 2009). Although there is insufficient evidence to date to establish a 'gold standard' for this type of intervention, commonly reported outcomes across similar interventions include *knowledge gain*, e.g. better understanding of normal versus abnormal memory change (Troyer, 2001; Turner & Pinkston, 1993; Wiegand, Troyer, Gojmerac & Murphy, 2013) and *improved emotional health*, e.g. reduced worry, increased confidence, and self-efficacy (Hill, Sheikh & Yesavage, 1987; Hoogenhout, de Groot & Jolles, 2010; Hoogenhout, de Groot, van der Elst & Jolles, 2012; Levy-Cushraan & Abeles, 1998; Mohs et al., 1998; Troyer, 2001; West, Bagwell & Dark-Freudeman, 2008; Wiegand et al., 2013).

The degree to which these interventions make a *meaningful functional impact* is less consistent across studies. Although improved self-reported memory is a common finding (Bottiroli, Cavallini & Vecchi, 2008; Hohaus, 2007; Troyer, 2001; Willis et al., 2006), change in objectively measured memory function has been observed less frequently (Craik et al., 2007; Gross et al., 2012; Troyer, 2001, Unverzagt et al., 2007). Although not commonly examined across studies, a significant increase in healthy lifestyle behaviors was found in a recent randomized controlled trial (Wiegand et al., 2013), suggesting that these interventions may hold potential for broader health benefits to participants.

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This study was conceived to address this lack of clarity as to the nature and extent of meaningful functional impact of memory intervention programs for healthy older adults. We also probed participants' views as to what are the active ingredients and most salient therapeutic benefits of these multi-modal interventions; prior quantitative studies have been largely silent on these issues. As Sofaer (1999) described, 'qualitative methods can result in a far more complete, and often far more compelling articulation of the intervention' (p. 1107). Individual interviews with graduating participants of a 10-hour evidence-based memory skills and lifestyle intervention program for older adults experiencing normal age-related memory changes (Troyer, 2001; Wiegand et al., 2013) were completed in order to understand 'why a given intervention has a specific impact [and] how the impact occurs' (Curry, Nembhard, & Bradley, 2009, p. 1443). A qualitative approach was, therefore, chosen to maximize depth of understanding and opportunity to capture the voices of participants post-intervention, including ideas for further exploration and study.

Methods

Intervention

The Memory and Aging Program® (Troyer, 2001; Wiegand et al., 2013) is a psychoeducation and memory intervention service offered quarterly at a geriatric care center to self- and physician-referred, community-dwelling older adults with concerns about normal age-related memory changes. The program is delivered by a licensed psychologist with one or more trainees in five weekly 2-hour sessions with groups of 10−20 participants. An overview of the program's weekly agenda is presented in Table 1. This is a well-established clinical program that has been offered to over 1000 older adults at our center in the past 15 years and is also available to clients in other centers with the recent creation and distribution of facilitator training materials. Detailed information about the program is available at www.baycrest.org/memory.

Participants

Data were collected as part of a quality assurance initiative aimed at understanding the day-to-day functional impact of program participation. All clients in three serial intervention groups in 2013 were asked by the psychologist facilitating the group to consider volunteering for a one-time, individual interview. Of the 53 clients asked, 11 (3 men and 8 women) participated in the initiative (age range 63−88 years, mean = 75; education range 12−20 years, mean = 16). Participants were similar in age and gender balance to those who declined to participate (age range 57−96, mean = 78, 63% female). The project was approved by the institutional research ethics board.

Table 1. Schedule of intervention weekly content.

Week	Content
1	Orientation and goal setting Normal age-related memory changes
2	Factors that affect memory (e.g. medical conditions/medications, diet, exercise, cognitive engagement, attitude, stress/relaxation) Relaxation training: diaphragmatic breathing and visualization Homework: track own cognitive and physical activities
3	Overview of memory strategies (e.g. implementation intentions, spaced retrieval, semantic elaboration, habits, and external memory aids) Teaching and practice with spaced retrieval memory strategy Homework: relaxation practice
4	Teaching and practice with semantic elaboration memory strategy Teaching and discussion of external memory strategies (e.g. written and electronic aids) Homework: memory strategy practice
5	Application of memory strategies in everyday scenarios Review and evaluation of goal attainment Goal setting for future memory strategy use and lifestyle practices

Procedure and data analysis

Interviews were conducted in person using a semi-structured script that probed participants' understanding of their experience of memory change, use of memory strategies, lifestyle behaviors, and perceived impact of the program on daily functioning. Discussion topics and questions are detailed in Table 2. These topic areas were chosen to mirror the major content areas of the intervention (e.g. memory education, strategy training, and lifestyle coaching). Interview questions were written to probe the mechanism of any described effects (e.g. *how* did the program…). Phrases were chosen to pull for both emotional (e.g. '…change the way you *feel*…') and cognitive (e.g. 'how do you *think*…') impact. Functional impact was probed by repeatedly soliciting specific examples of behavior change throughout the interview. This was done in two ways. First, multiple probes were used within each discussion topic to elicit detailed disclosure, including any examples of functional change (e.g. tell me more about that, give me an example of what you mean). Second, the functional impact of the program was queried directly on two occasions throughout the interview, initially in reference to the memory education and strategy training, and later in reference to the lifestyle coaching. Interviews lasted between 30 and 90 minutes, and were conducted within two weeks of the final program session in private interview rooms. Interviews were audiorecorded and transcribed verbatim; transcripts were not returned to participants for comment.

Qualitative content analysis was the method of inquiry in this descriptive study. Information collected during the interviews was analyzed inductively. Inductive analysis involves searching for categories of meaning in the data rather than imposing a previously defined coding system (Berg, 2009). The process involved unitizing, categorizing, and forming themes based on the information gathered from each of the participants, as described by Corbin and Strauss (2015). Seven interviews were initially conducted by co-authors directly involved in program delivery (JS, SV). These were then coded independently by three co-authors (SD, SF, SV). Coding and data analyses were conducted manually. As the data were analyzed, the researchers began to become familiar with the world of participants through their stories. Line-by-line analysis revealed emerging patterns and themes which were discussed at team meetings. Disagreements between coders were resolved by consensus.

Using the method of constant comparison (DePoy & Gitlin, 2011), data were simultaneously coded and analyzed, compared with earlier findings and each team meeting helped to refine emerging themes as data were revisited. As supported by Sandelowski (2000), the use of constant comparison, often associated with grounded theory, was employed for the purpose of comparing emerging ideas and themes in the data rather than for the purposes of generating theory. Four interviews were then conducted by a co-author not directly involved in program delivery (AA) and coded independently by two co-authors (SD, SV). Further coding and analysis provided additional support for previous findings. Since new information was not being

Table 2. Interview topics, sample questions, comparison to quantitative approaches.

Topic	Sample introductory question[a]	Comparison to how typically measured in prior quantitative studies
(1) Memory education	How has the Memory and Aging Program changed the way you feel about your memory?	Content quizzes on knowledge gains[b, c, j], self-report inventories on confidence, worry, etc.[b–i]
(2) Strategy training	Tell me about any memory strategies you learned in the program…how have you used them?	Content quiz[b, c]
(3) Functional impact (memory)	How do you think your day-to-day memory performance has changed as a result of what you learned about the science of memory and memory strategies?	Self-report questionnaires regarding perceived memory change[b–f, h–k], performance on laboratory memory tests (e.g. word list recall)[b, c, e, g, i–o]
(4) Lifestyle change	Tell me about any changes you have made to your lifestyle since the program began.	Self-report written lists[c]
(5) Functional impact (lifestyle)	How have these changes made a difference in your daily life?	Not previously studied

[a]Each question was followed by follow-up probes to elicit detailed disclosure. For example, question 1 was followed by: '*Solicit and query for details on specific examples, use multiple prompts if needed. E.g. Give any examples of what you mean? Can you tell me more about…? How specifically have you changed…? Can you provide another example of…?*' [b](Troyer, 2001), [c](Wiegand et al., 2013), [d](Turner & Pinkston, 1993), [e](Mohs et al., 1998), [f](Hoogenhout et al., 2012), [g](Westet al., 2008), [h](Hill et al., 1987), [i](Hoogenhout et al., 2010), [j](Levy-Cushraan & Abeles, 1998), [k](Hohaus, 2007), [l](Willis et al., 2006), [m](Gross et al., 2012), [n](Unverzagt et al., 2007), [o](Craik et al., 2007).

obtained, it was determined that informational redundancy had been reached (Lincoln & Guba, 1985; Sandelowski, 1995). Themes were then refined and reviewed in order to ensure adequate data from participants to sufficiently support each theme, confirm that the theme was complementary to the data set as a whole and ensure that themes credibly supported the purpose of the study (Braun & Clarke, 2006).

Results

Participants in the intervention program consistently described a positive effect from their participation in this group. All respondents shared concerns about memory decline as they aged. However, both through the information presented during specific content teaching as well as through involvement with other group members, respondents came away with a new understanding of what they were experiencing. This generated an overall theme of *Normalizing my Experience*. Contributing to this theme, there were sub-themes related to the benefits of the group, both through group content and with respect to the involvement of other group members. As well, *normalization* had an emotional impact for all respondents, and a functional impact for many. Figure 1 illustrates these interconnections.

Theme: normalizing my experience – 'Accepting where I'm at'

Many respondents shared concerns about their experiences with memory and expressed frustration with changes in things like communication and everyday tasks. 'I can't find words. It's very frustrating to me because words were my stock in trade for 45 years' (ppt#10).

Participants described feelings of 'anxiety' or 'panic' and almost all expressed 'worry' about what was happening. There was a real fear of increasing memory loss associated with aging. Participation in the intervention changed that for respondents:

> I never really figured I was that smart, but I knew I had a really good memory, so once I started losing it, my memory, I panicked because again, I've never really considered myself particularly smart. So if I lose my memory, what am I going to do? So it's nice to know I'm not alone, for the most part, and uh, it's normal…. Sometimes I was driving myself crazy. It's like you're an old coot. You're supposed to remember those things! And I couldn't. So at least now I don't beat myself up as much about them. (ppt#9)

> 'It made me feel that some things I was concerned about are relatively normal, but it also made me think there was a fair bit I can do, more in terms of maintaining good memory and cognitive stuff' (ppt#8).

> Number one, not to worry about it. This is normal! (ppt#6)
> It's just a normal process, normal journey. (ppt#1)

As participant #4 reflected: 'I think it's interesting because I sort of see where we are going and there are certain things that I will do differently, but not many, and it's more ***accepting where I'm at*** than panicking.'

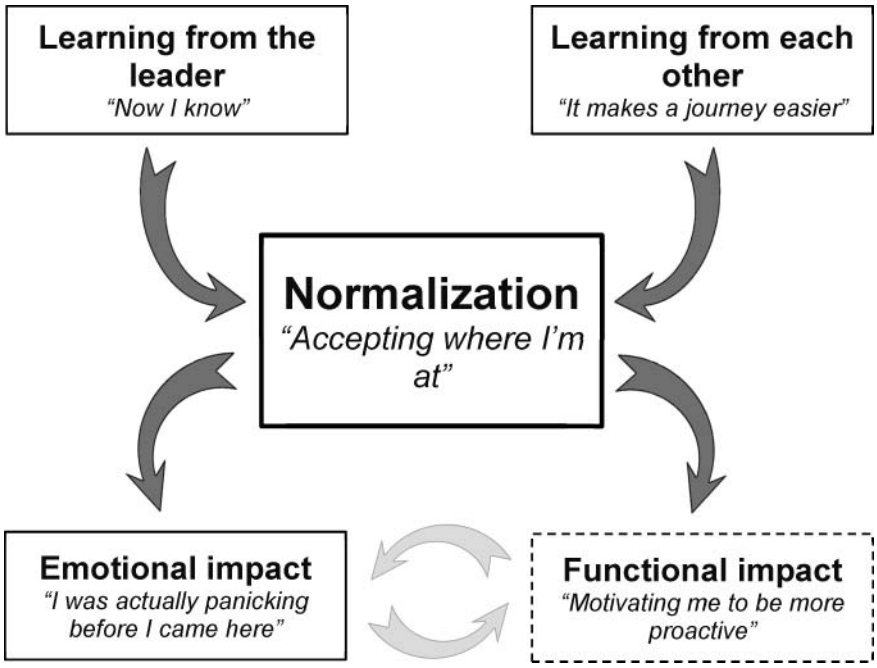

Figure 1. Summary of themes and interconnections.

Respondents described two ways that participation in the intervention helped to normalize their experience. These have been subcategorized as *Learning from the Leader* and *Learning from Each Other*.

Sub-theme: learning from the leader – 'Now I know'

Respondents noted that the didactic portion of the group was an important part of normalizing their experience, saying things such as 'when your brain is healthy, you have a better memory' (ppt#1). As participant #4 said:

> I'm not worried about certain things because you've done the historical or the research of what's going on, and that I found very, very helpful and not only that the possibility of carrying on after I leave, because I have already ordered one of the books that you suggested, and I see it as something not to panic about.

And in the words of another respondent:

> ***Now I know*** there are factors involved in the process of aging, not just age that caused the memory problems…. I didn't take into account the fact that illnesses and drugs etcetera, will impact it. I didn't know that would impact…. I knew that drugs would impact physically but I didn't know mentally… and also, lifestyle changes, and that living a healthier lifestyle will also impact the brain, which makes sense, but I didn't think of it before. (ppt#9)

Sub-theme: learning from each other – 'It makes a journey easier'

Interaction with other participants in the intervention was a strong contributor to the experience of normalization. The group provided an opportunity for social comparison and the contextualization of normal changes associated with aging. Respondents described other group members and they spoke positively about what others had to say about their own individual experiences:

> …it was really interesting to see what everybody does do. (ppt#3)
> …hearing feedback from others that do the same things that I have been really concerned about is very…has been very comforting. (ppt#6)

> I'm thinking of signing up for some of the courses that were mentioned in the program by some of the other, uh, clients. (ppt#8)

> I really like the way the course was run, with the interaction from the participants, and the sense that I came away with was, hey, these are pretty sharp people and you know, they're doing some stuff that's pretty interesting, so you know, for me, I guess I've been kind of hard on myself, you're getting old girl, blah blah blah…well I came here, these people don't act old and they don't look old and they're doing stuff for themselves so it was the example… (ppt#5)

> I think one of the benefits I have got from this program, apart from your lectures, you know, and it's also sharing from the people, you know, they told me and how they struggle and I told how I struggle and how do we overcome, you know, sharing it, and it feels that ***it makes a journey easier***. (ppt#1)

Of particular interest are respondents' thoughts regarding the impact of normalizing their experience. All respondents shared their thoughts about an emotional impact of this normalization; several described a functional impact as well.

Sub-theme: the emotional impact of normalization – 'I was actually panicking before I came here'

All respondents described positive emotions that they associated with the normalization of their experiences. They spoke of the reassurance they felt, 'the biggest thing for me with the class was the reassurance that I'm not going crazy and that I'm not senile' (ppt#9), or of feeling relaxed 'I just feel a little more relaxed about it' (ppt#2 in discussion re: memory changes).

Some described a feeling of 'hope': '…it makes me feel both appreciative of what I have and can do and hopeful about keeping as much as I can and maybe recapturing a little something' (ppt#5), 'I think it's made me more accepting of some of those problems… .I think it's also made me hopeful that I can maybe deal with it' (ppt#11), '***I was actually panicking before I came here'*** (ppt#9)

Many respondents spoke of how their confidence had improved: 'I seem to have more confidence in myself' (ppt#1), 'I feel way more confident now' (ppt#3), '…it was also the confidence it gave me.' (ppt#5).

Sub-theme: the functional impact of normalization – 'Motivating me to be more proactive'

Several respondents shared specific examples of how normalizing their experience was having an impact on their function:

> We were all talking about it, it made so much sense, I have always been athletic and whatnot, but I was sort of just coasting I think, I don't know why, I can't tell you why, but I have made it…like it's on my little sheet there, right, to keep walking, like I love walking, but I think that I don't think I ever really walked with any intent of helping my brain, and so knowing that this might help my brain I am more than pleased to walk faster, swim longer… (ppt#3)

> 'It's put me on a pattern where I am going to do more reading and there's a sort of comfort zone knowing it's not untoward and that retrieval can be slow' (ppt#4).

> You know, basically I want to be a reasonably intelligent senior and reasonably active senior. Can't do anything about the arthritis and stuff but everything else you can, and so it's really ***motivating me to be more proactive*** in some of those areas. (ppt#8)

Of particular note is the reflection from some respondents, as they seemed to describe an inter-relationship between the change in their mood and their function, illustrating the direct link between emotional and functional impact as seen in Figure 1. Participant #11 recalled a situation from the past where word finding difficulties created a stressful situation at an important time and how the program has helped:

> I realize now that much of the time, I wasn't relaxed…. So the program has made me aware that such situations demand a different approach, that I have to prepare in a different way for the fact that I might forget things, so I have to try to relax beforehand and maybe go into it in a less anxious way.

And from participant #3 as she reflected on her memory:

> I feel way more confident now, and I haven't had one negative thought about it since I started….you know I am coming up to be 80 this year and it was exciting for me to, to not have… to think that I could put that worry away. I mean, I don't know whether I will have dementia or whatever, but I can't, I have some ways now, I have taken hold of it, I have been able to do something about it, instead of just sitting worrying or having it passing through my, you know, junk stuff that's in your mind, and I don't have that anymore, it's gone. It's quite exciting for me to get rid of that, not to get rid of it but to say 'it's okay' to myself, I will just go along and do what I can do with myself for the rest of my life.

Emerging theme: concept of aging

One theme that seemed to be of importance to some, yet not fully explored in this study, was the concept of aging; the

view of aging from the perspective of the respondents. As one participant (#7) stated, when speaking about noticeable changes in her memory 'it's a common thing with people my age' or participant #8 shared 'I'm struggling with this getting old stuff.' Some respondents talked about how they identified with other members of the group. For some, there was difficulty: 'I suspect I'm older than the others' (ppt#11). For others, the situation was summed up by saying things such as 'you know what? I'm beginning to like old people!' (ppt#8) or, as participant #3 reflected 'I was very touched by some of the people in that room…it was wonderful and had all of us old people there, and this laughing, everybody just seemed to be at home with each other.'

Discussion

This study examined the mechanisms, benefits, and impact of a well-established behavioral memory intervention for older adults with concerns about memory. Although there is a considerable body of quantitative research on such interventions, this study yielded three main novel findings that have not been previously documented. The first novel finding was to elucidate, from participants' perspectives, a dual mechanism for the intervention (i.e. learning from the leader and learning from each other). The second novel finding was to demonstrate as a clear and consistent main therapeutic benefit of the intervention (i.e. normalizing one's experience). The third and final novel contribution was to clarify and contextualize the functional significance of the intervention impact (i.e. emotional and clinical impact). Results extend and clarify prior quantitative studies of similar interventions that have generally demonstrated positive educational and emotional outcomes of such interventions, but have been silent on specific mechanisms and participant-valued benefits, and mixed with respect to functional impact.

The main benefit of the intervention described by participants was a sense of normalization of their experience of age-related cognitive change. Participants all reported that, prior to the intervention, they had significant concern about age-related memory decline, using words like 'frustrating,' 'worry,' and even 'panic.' This is consistent with other qualitative research findings about the impact of normal memory changes on the lives of older adults (Parikh, Troyer, Maione, & Murphy, 2015). These concerns were substantially tempered by the intervention, as participants attained a new understanding of their experiences as normal, as well as information and strategies to optimize their functioning. There was a clear evidence of acceptance, but not resignation. Many contextualized this benefit within their own developmental trajectory or 'journey,' expressing optimism for the future associated with their new perspective and feelings of confidence. These findings support the validity of the program as an intervention for the 'worried well' and others concerned about normal age-related cognitive changes. These findings also suggest that researchers examining quantitative outcomes may be missing the most highly prized target of their participants by focusing on outcomes deemed critical to the researcher, such as objective memory change.

Novel evidence of a dual mechanism for the intervention is important for clinicians and researchers to consider in developing and revising interventions of this nature, especially as the quantitative literature to date is largely silent on mechanisms. Both the program content and the experience of participating in the intervention with others were key contributors to the therapeutic benefit of normalization. The importance of the group is particularly intriguing. Although general benefits of group interventions are well known (Agronin, 2009), results suggest that this format may be especially critical with this population, where the experience of memory change is largely internal, and difficult to self-assess in comparison to others. Indeed, this challenge is made explicit within the intervention where participants are asked to contrast visible age-related changes (e.g. hair may turn gray, may need glasses), with the less visible experience of memory change. Future exploration of a related, emerging theme within the present results related to shifts in participants' sense of themselves as 'old,' may help to elucidate both how we learn from others, and whether how we identify with ourselves, and with others, might influence that learning. This could be explored through qualitative and quantitative (e.g. subjective age ratings, likert ratings of self-identification as 'old') approaches.

The clinical significance of findings was evident in participants' descriptions of the positive emotional and functional impact of the intervention. All respondents described entering the intervention with concerns about memory decline and all described positive emotions (i.e. reassurance, confidence) associated with normalization of their experiences. Functional impact was nuanced, with some reports indicating that the intervention empowered participants to make positive lifestyle changes, and some reports showing a paradoxical effect wherein normalization yielded acceptance, rather than action. This nuanced message illustrated a close link between emotional and functional impact that would be difficult to detect using quantitative methods alone, and may account for some of the inconsistency in prior outcome studies. This link was evident even within the narratives of individual participants. Again, the idea of a developmental trajectory was evident in participants' description of the personal significance of the intervention:

> This is the way I felt. First of all, it was good in terms of giving me some sense of where the research is. Secondly, some sense of security, all right, that's normal. And thirdly, some skills to do things that I'm not doing. (ppt#4)

Although this study is the first, to the authors' knowledge, to use qualitative methods to evaluate a group memory intervention in a healthy older adult population, evidence for the validity of present findings can be gleaned from comparison to studies of related interventions in participants with neurologic conditions. Das Nair and colleagues (das Nair, Martin, & Sinclair, 2015) recently published a meta-synthesis of such studies, identifying five published qualitative manuscripts from the UK and Sweden. Comparison of their findings with this study provides evidence for convergent validity, with the five major themes emerging from their synthesis (i.e. insight and acceptance, therapeutic effects of a group, memory improvement, affective changes, and impact on daily life) directly paralleling the five theme/sub-themes described within this study.

Within each theme, there was also evidence for divergent validity seen in nuanced differences between the perspectives of participants with neurologic disease compared with the healthy older adults in this study. For example, in the neurologic populations, the 'therapeutic effects of the group' theme included a similar social support/normalization aspect

as was described in the present findings, but included the group as a source of meaningful leisure activity for those experiencing isolation as a result of their neurologic condition. Similarly, the 'memory improvement' theme included knowledge gain similar to our 'learning from the leader' subtheme, but also included more examples of specific skills and strategies learned to compensate for daily memory problems, training that would likely be a more central feature in groups of individuals with more prominent memory impairment.

An important avenue for future study is a need to evaluate the sustainability of the benefits and impact reported by respondents, particularly in the functional domain. Behavioral and lifestyle changes are challenging to implement and difficult to sustain. If, as some respondents indicated, the normalization of some of their fears could lead to a change in how they go about their daily lives, it might be expected that lifestyle modifications and re-engagement will be sustained over the long term. Indeed, behavior change may even increase over time, consistent with prior findings showing a trajectory of increasing self-reported healthy lifestyle changes as evaluated immediately and four weeks following intervention (Wiegand et al., 2013). Another area for future investigation would be to examine the impact of short-term behavioral interventions on the long-term cognitive, emotional and physical health of participants.

There are some limitations to this study. The use of a volunteer sample likely yielded a healthier, more educated sample than would be expected within the general population (Ganguli, Lytle, Reynolds & Dodge, 1998; Hultsch, MacDonald, Hunter, Maitland, & Dixon, 2002), although participant demographics closely mirror those of our clinical service (Troyer, 2001). The use of program facilitators as interviewers in some cases may have pulled for more positive narratives; however, there was a high degree of overlap between the narratives of those interviewed by program facilitators compared to those interviewed by independent study staff. Use of an exclusively qualitative design, rather than a mixed methods approach, does not allow direct comparison of present results with related quantitative metrics. Similarly, there is limited opportunity to compare present results with prior quantitative findings from the current intervention as the scope of the present project did not emphasize previously replicated findings such as large gains in knowledge and application of memory strategies (Troyer, 2001; Wiegand et al., 2013).

In summary, this study used qualitative methods to provide in-depth insight into the mechanisms, benefit, and impact of a multi-modal behavioral memory intervention for older adults with concerns about memory. Results identified a single, most prominent therapeutic benefit (i.e. normalization), illustrated a dual mechanism for achieving this (i.e. learning from the leader and learning from the group), and captured an inter-related emotional and functional impact of program participation. These findings extend and clarify prior quantitative studies that document positive educational and emotional outcomes of such interventions, but are inconsistent with respect to functional impact. Future research is needed to further explore these findings and to understand the long-term implications for program participants.

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Disclosure statement

Drs. Troyer and Vandermorris have co-authored a leader's manual and participant workbook for the Memory and Aging Program and have presented Train-the-Trainer workshops for health care professionals interested in training to deliver the Memory and Aging Program. Under Baycrest's Intellectual Property Policy, they are eligible to receive a percentage of the royalties collected on the net profit generated from these ventures.

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