

Ageing Mind Initiative

Issue 8, July 2011 Newsletter

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Inside this issue

Music as a connection
through dementia - Page 2

Research updates from
Language studies - Page 3

Cochlear Implant Research
Update - Page 4

Hallucinations in Blindness
and Bereaved Carer
Research - Page 5

Current Ageing Research
- Pages 6-11



The Results Are In!

Here at AMI we have been carefully listening to your feedback and requests to include more updates on past advertised research projects. It is very important that you have the opportunity to hear about the research findings from the studies you have participated in.

As such, this edition of the AMI Newsletter has a heavy focus on research updates as well as the usual showcase of current research projects looking for participants. We have been flooded by enthusiastic researchers eager to share their discoveries with the participants who helped make it all possible! If you've participated in any AMI research, check out the preliminary results inside this month's newsletter.

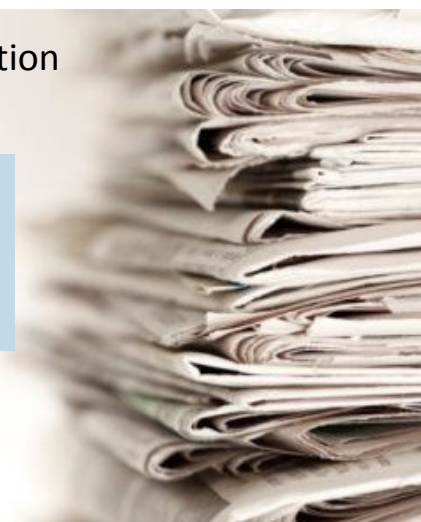
Look inside to read about how music therapy helps carers connect to their spouses with dementia (p2) and how auditory deprivation impacts on the effectiveness of cochlear implants in older adults (p4). We also have updates on two language studies (p3) and hallucinations in blindness and bereaved carer Research (p5).

We hope you enjoy this month's edition
of the AMI Newsletter!

ISSUE QUOTE:

Sometimes age succeeds, sometimes
it fails. It depends on you.

~ Ravensara Noite





Using Music to Connect when Living with Dementia

"As Time Goes By"

For many of us, music is part of our daily lives. We might wake up to it, we have it on in the car, we hear it in the supermarket. We might turn on the radio at home, or hear it as part of the TV shows we watch. We might have CD collections which many of us would say we don't listen to often enough.

Most of us are already aware that music can change our mood, and help us feel better. But did you know that music can be especially beneficial when people are living with dementia? One of the reasons for this may be that emotional intelligence is likely to remain intact in people with dementia, even though their logical thinking processes are in decline. Studies have found no difference between people with Alzheimer's disease and healthy people the same age in their reactions to emotional concepts and information.

Memory for music too is often stored in areas of the brain that are not affected by dementia. Even when some parts of the brain are weakened, the fact that the brain uses many areas to process music means that other parts can compensate for these losses.

Music has been found to be an effective way of engaging people with dementia, overcoming apathy and helping them to interact more than they usually would. Sharing music together with your partner can also prompt either or both of you to remember and talk about meaningful events in your lives.

Illness of any kind, but especially chronic illness, can bring an imbalance in close relationships like marriage. Things like communication and companionship are no longer the way they used to be. The partner doing the caregiving is likely to feel increasingly burdened, which may lead to potentially significant health problems for them. We believe that sharing music together with your partner can help to rectify this imbalance, at least for the duration of each session. It is this idea that was

tested in our recent study, 'As Time Goes By.'

Couples living with dementia in the community were invited to participate, mainly through their contact with Alzheimer's Australia. The caregiving partner in each couple was asked a series of questions about how they felt about their current life situation. Each couple was then randomly assigned to trial one of three 'interventions' for six weeks: active music (including singing, dancing and relaxation); music for relaxation (only); and wait list (care as usual until after six weeks). All couples were visited by a registered music therapist before and after the six weeks, who showed the caregiving partner how to use their own CD collection to engage their partner in either active music, or music for relaxation only. Couples using music were asked to answer 10 questions after each session, as well as complete the initial survey at the end of the trial, and again six weeks later.

"It was lovely to share some 'us' time and forget everything else. It was something we can both do which is easy."

Although we weren't able to involve as many couples as we originally hoped, for a variety of reasons, the overall response to both music conditions was very positive. For instance, one person expressed: "We never even thought of putting music in our lives and, turning the news off..."; her husband (who has dementia) commented: "It made us think of another dimension really." Another person caring for her husband who has dementia said: "It was lovely to share some 'us' time and forget everything else. It was something we can both do which is easy."

The results of the study showed that intentional music sessions can repeatedly bring moments of enjoyment, connection, and relaxation to both partners in couples living with dementia. It is important to note however that the music interventions were more likely to be beneficial in the earlier stages of dementia. Our thanks go to each person who participated, and to Alzheimer's Australia for promoting the study.

- Research Coordinator Dr Felicity Baker



Language Research Updates

**“Language is the blood of the soul
into which thoughts run and out
of which they grow”**

~Oliver Wendell Holmes



Language Problems in Dementia

Thanks to the generous involvement of readers of the ageing mind initiative, our study has been able to highlight key differences in the language processing of people with dementia when compared with healthy control participants. The most striking observation made is that people with dementia have difficulty processing the features of objects (the component parts of objects e.g., the colour or an apple or the shape of a key) when compared with healthy control participants. This observation is helping us to conduct further investigations into how speech pathology intervention can assist people with dementia.

The project should be completed in the coming months and I look forward to reporting the results to you.

Research Coordinator Kieran Flanigan

Language in Parkinson's disease after surgical treatment

Thanks to the involvement of the volunteers who participated in this research, we have now collected data on the brain activity associated with language processing in healthy adults.

Preliminary analysis of the results has illustrated specific patterns of brain activity associated with different aspects of language processing (e.g., processing the meanings of different types of words).

This data has provided useful information on the neurological mechanisms that underlie language processing, which can now be used as a framework for investigating whether deep brain stimulation in Parkinson's disease influences these aspects of brain activity.

Research Coordinator Anthony Agwin



Research Updates: Cochlear Implant Study

Exploring the differences in the way cochlear implant (CI) recipients and normal hearing individuals attend to sounds and images.

The cochlear implant has enabled people with profound hearing loss to hear sound. Unfortunately, speech perception outcomes for CI users vary from simple sound detection to telephone use. Given that attention plays a vital role in perception, in this preliminary study we investigated the role that attention might play in driving these differences in performance.

Some studies have shown that periods of auditory deprivation enhance the vision of deaf people. For example, deaf compared to hearing individuals are better at detecting objects that occur in the periphery of their visual field. It seems that their attentional focus broadens. Therefore it could be hypothesised that attentional changes during deafness could have a residual affect on the performance of people with a cochlear prosthesis. For instance, increased attention to visual objects might reduce the amount of attention directed to audition. A recent study has corroborated this view, showing that poor performing CI users found it harder to recognise aural words when moving objects were simultaneously presented with them (Champoux, Lepore, Gagné & Théoret, 2009).

We recruited cochlear implant recipients and gender- and age- matched normal hearing individuals. CI recipients were separated into groups according to their length of deafness ('long-term deaf CIs', 'short-term deaf CIs'). Participants were presented with alternating auditory and vis-

ual stimuli and across different blocks they directed their attention to one mode of stimulus. Electrophysiological markers (ERPs) were collected for attended and ignored visual and auditory stimuli.

For each group, the attended visual stimuli evoked a larger neural response than that of the ignored visual stimuli. This showed that attention bolstered the processing of the visual stimuli similarly across the three groups. Interestingly, a difference was identified in the way attention affected the processing of auditory stimuli for long-compared to short-term deaf and normal hearing individuals. Although attention enhanced the neural response to auditory stimuli for the normal hearing and short-term deaf CI groups, it did not affect the signal to auditory stimuli for the long-term deaf group. Therefore it appeared that directing attention toward sound did not have the same facilitatory affect for long-term deaf as other groups. This finding suggests that CI users who have been implanted after extended periods of deafness may have auditory attentional deficits. Further studies are currently underway to investigate this outcome.

-Krystal Baguley, Jill Harris, Marc Kamke



Language Research Updates

Hallucinations in Those with Blindness: The Charles Bonnet Syndrome

Early analysis of our Charles Bonnet Syndrome EEG and vision study has produced a number of interesting findings. Firstly it seems that, when given an attention task, the results of our aged volunteers with normal vision are quite similar to the results of younger volunteers.



This contradicts an earlier finding that older subjects showed decreased ability to perform certain

attention tasks. In contrast, those with visual loss associated with macular degeneration showed an EEG response which was the reverse of those with normal vision, which suggests that their brains may be "adapting" to blindness by changing how they direct their attention. Finally the subjects with Charles Bonnet Syndrome (hallucinations in the context of blindness) appear to be showing a generalised increase in activity of the visual parts of the brain, and this is not changed by whether the person is directing attention to anything in particular.

Perhaps this overactivity is the result of less information coming from the eyes. It is not yet clear why some people with macular degeneration develop hallucinations and others do not, but it may be that in the process of responding to blindness, rather than adapting the "usual" way, their brains become uncontrollably overactive.

Thank you to all the members of the 50+ Registry who participated in this study.

Research Coordinator Michael Dwyer

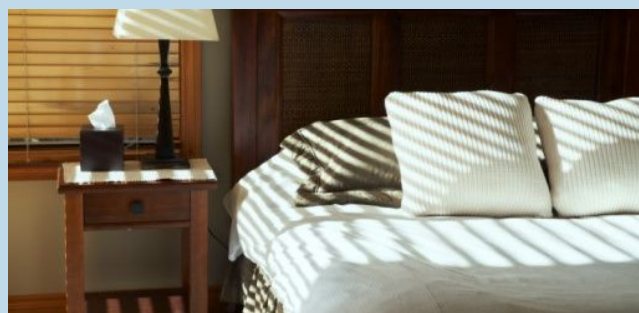
Bereaved carer satisfaction for someone dying in residential aged care

This study reports on a bereaved carer survey conducted in a Australian residential aged care facilities. Family members of residents who died in 60 Queensland residential aged care facility between July 2009 and December 2009 were invited to participate in the survey. A total of 582 invitations were sent to the carers and a total of 108 surveys were returned a response rate of 18.6%.

The survey included demographic data on the residents and carers and 36 questions about the quality of care received in the last month of life. Most residents died in the residential aged care facility with the remaining dying in hospital and one in a palliative care unit. The majority of residents had been living in the facility for more than 12 months (46.7%), although a proportion had been in the facility for less than 3 months (13.3%).

Overall carers were satisfied with the care provided and slightly higher satisfaction was found for residents who died in the residential aged care facility compared to those who died elsewhere.

Research Coordinator Deborah Parker





Current Ageing Research

The following projects are looking for participants. Make a difference in Ageing Research today. Sign up now!

Did a close family member develop cardiovascular disease before they were 60? If so, are you aware of your own risk status?

The Cardiovascular Imaging Research Centre of the University of Queensland is currently running a trial for healthy 40-65 year olds who have a family history of premature cardiovascular disease. That is, you have a mother, father, brother or sister who has been diagnosed with premature (before age 60) cardiovascular disease – such as heart attack, acute angina, stroke caused by a blood clot (not a brain bleed) and/or poor blood supply to the hands, feet or lower legs.

The aim of the study is to see if a nurse-led risk management program will be effective in reducing the incidence of cardiovascular disease in this group of patients. All participants will have their arterial plaque levels (cholesterol build up in the arteries) measured by undergoing a carotid artery ultrasound, as part of their risk assessment. Eligible participants will be randomised to either their usual medical care or the nurse-led disease management program. Participation involves 4 to 6 visits over 3 years.

There are considerable benefits for healthy patients enrolling in this trial, one of them being a carotid artery scan to assess plaque buildup in the arteries and a full risk assessment. The aim of the trial is to detect cardiovascular disease in healthy individuals with a family history and instigate a nurse managed lifestyle management program with a view to avoiding the disease.

For further information please contact:
j.holliday@uq.edu.au OR **l.rigby@uq.edu.au**

Seeking healthy older adults for participation in research on financial capacity.

Managing your finances is important throughout life, but particularly in later life when you may be retired or no longer working full time. However, some disorders associated with older age (such as dementia) can impact on our ability to make sound financial decisions. Research investigating financial capacity is currently being conducted at The University of Queensland.

Participation involves one assessment session where brief interviews and questionnaires are completed, as well as a practical financial task. We will also ask a family member or friend of your choice to participate in an interview. The session takes about 90 minutes to complete and is conducted conveniently in your own home.

If you are over 55, do not have memory problems and are interested in participating, please contact Bronwyn Massavelli, telephone **(07) 3365 5050**, or email **b.massavelli@uq.edu.au**



Would you like a free assessment of your nervous system?



Q: Who are we seeking?

A: People without low back pain

Q: What does the study involve?

A: Controlled application of cold over the surface of your feet, hands & lower back. **A:** Controlled application of pressure over the surface of your upper arms, lower back/pelvis

Q: What are the risks?

A: These tests have no risks or side effects

Q: What are the benefits?

A: The purpose of this study is to improve the quality of medical care. You will have the opportunity to receive detailed information about your nervous system sensitivity

Q: How long will it take?

A: 1 session, ~ 15 minutes total

Q: Where is the study conducted?

A: UQ-St. Lucia, Therapies building 84, Rm. 511. Brisbane AUSTRALIA

Contact: **Nick Karayannis**, PhD Candidate

Email: n.karayannis@uq.edu.au Phone: 07 3346 7468

Why do Patients with Parkinson's Disease Experience Speech Deficits?

The aim of our study is to investigate why patients with Parkinson's disease suffer from speech deficits. We want to determine how brain activity differs between healthy adults and Parkinson's patients during a basic speech task.

We are seeking healthy participants between 55-75 years of age who are right handed, have English as a primary language, no history of neurological disease, mental illness, head trauma and have no metals present in the body which are not safe in an MRI scanner.

Participation in the research involves a one-off brain scan (MRI) while participants complete a basic speech task. It is expected that participation in the research will take less than an hour. The scan will be conducted at the Centre of Advanced Imaging at the Wesley Hospital. Participants will be reimbursed \$30 for their time and effort.

If you would be interested to find out more about the study (or know of anyone who may) please contact **Peter Bell** on 0418840398 or 33466110 or peter.bell@uqconnect.edu.au.

Your interest in this research is much appreciated!

Mapping the Brain Mechanisms of Naming Treatment Post-Stroke

The aim of this research is to find out what areas of the brain are used when people who have had a stroke process language, and what areas of the brain are influenced by different types of naming therapy. Patterns of brain activity in healthy adults will be compared to that in people who have had a stroke.

We are seeking males and females between 50-65 years of age who are right handed, have English as a primary language, no history of neurological disease, mental illness, head trauma, alcoholism, cerebral tumour or abscess, and have no metals present in the body which are not safe in an MRI scanner.

Participation in the research will involve one brainwave recording (EEG), as well as one brain scan (MRI) while you do some language tasks such as name objects or pressing a button in response to words. You will receive \$30 as a reimbursement for your time and travel. Participation in this project is expected to take between 4-6hrs over 3-4 weeks.

Contact Sophia van Hees, to find out more details about the study on **(07)3346 6110** or **0422 135518** or s.vanhees@uq.edu.au

Brisbane participants only please.

A Parenting Program for Grandparents

UQ researchers are on the lookout for grandparents who need assistance or would like to fine tune their parenting skills to take part in a new program.

Grandparent Triple P is a nine-week group program that runs at the University of Queensland's St Lucia campus. Early sessions will focus on refreshing parenting strategies with the emphasis placed on working with parents to form a positive parenting team. The latter part of the program will be conducted by telephone to help grandparents develop these techniques further.

To participate in Grandparent Triple P you need to provide at least 10 hours of care per week to a grandchild who is aged between two to nine years. There is no cost to take part. More information is available at <https://exp.psy.uq.edu.au/grandparents/>.

For more information contact
Project Coordinator
James Kirby on
(07) 3365 6207 or
j.kirby@psy.uq.edu.au



Ageing, health and emotion



Recent research has found that emotions can impact on our physical well-being, and that older adults experience emotion differently to younger adults. We are extending this research by investigating how the different ways that older adults experience emotion could impact on their ability to fight off infectious disease. We hope our research findings will inform patient treatment in both medicine and psychology.

We are seeking adults 65 years and older. Participation involves answering some questions about your mood and your physical health, as well as recounting some memories and viewing some pictures. Participation takes approximately 45 minutes, and participants are reimbursed \$15 for their time.

If you live in Brisbane, researchers can come to your house to interview you, or you can come to UQ campus. If you live Interstate, please contact the researcher for an online version of this study.

If you would like to participate in this study, or you would like further information, please contact Elise Kalokerinos at e.kalokerinos@uq.edu.au or 0466 800 641 or 07 3346 7281

Attitudes towards Ageing among Older Adults

You are invited to take part in a research project being conducted by Edward Helmes from the Ageing Mind Initiative at James Cook University and the University of Queensland.

The study explores the attitudes of older adults towards other older adults and their own ageing. If you agree to be involved in the study, you will be invited to complete four short questionnaires that should only take approximately one half hour of your time. These questions cover different features of older adults, the changes that occur with increasing age, and how people feel about being older and other older people.

The study is being conducted via mail, so the questionnaires can be completed at your convenience. Reply paid envelopes are provided with the surveys for their return. There is no attendance required at any university or institution.

If you would like to participate or have any questions in regards to this study, please feel free to contact us via email at:

Attitudes.to.ageing@gmail.com



How language recovery occurs in the brain after stroke?

We are seeking healthy participants over 65 years of age who are right handed, have English as a primary language, no history of neurological disease, mental illness, or head trauma and have no metals present in the body which are not safe in an MRI scanner.

The aim of this study is to investigate how acute stroke patients with communication impairment recover language function following a stroke. We want to determine how brain

activity differs between healthy adults and stroke patients during a basic language task.

Participation in the research will involve two brain scanning (MRI) sessions, carried out six months apart at the Royal Brisbane and Women's Hospital, Herston. An additional assessment session will be carried out at the University of Queensland Centre for Clinical Research, Herston. Participants will be reimbursed \$30 for their time and effort.

If you live in Brisbane and would be interested in finding out more about the study (or know of anyone who may) please contact:

Tracy Roxbury on **33466110** or **0409652447** or t.roxbury@uq.edu.au

Do You Have Ongoing Hip Pain?

Do you have or think you have HIP JOINT OSTEOARTHRITIS? Would you like a FREE scan for your hip Bone Mineral Density?

Researchers at the School of Physiotherapy and Exercise Science at Griffith University, Gold Coast campus are conducting a research study investigating the effects of hip joint osteoarthritis on muscle function and walking and related progression of the condition. This project has ethical clearance from the Griffith University Human Research Ethics Committee (PES/23/08/HREC)

Persons over the age of 45 years with ongoing hip pain (greater than 3 months) and/or suspected or known diagnosis of Hip Joint Osteoarthritis (and no previous lower limb joint surgery) are required for this research study. Testing will take place at the Griffith University Biomechanics Laboratory, Gold Coast campus. Free Xrays will be taken at a local radiology clinic in Brisbane or the Gold Coast.

Participants will be tested twice, approximately 12 months apart and will:

- have a free X-ray and Bone Mineral Density scan of their hips
- wear a 'pedometer' for 1 week
- complete questionnaires on overall health, pain, mobility and quality-of-life
- have their lower body strength tested
- have their walking pattern analysed

To volunteer or receive more information, please contact:

Maria Constantinou Mobile: 0412392062 Phone: (07) 5552 7716

Email: m.constantinou@griffith.edu.au



Do you have osteoarthritis in your knee?

The Division of Physiotherapy at the University of Queensland is looking for people aged over 50 years with osteoarthritis (OA) of the knee who have had knee pain on most days for the past month to participate in a clinical trial. We are comparing the effectiveness of three treatments for knee OA delivered by physiotherapists: Treatment involving a combination of exercise and pain coping skills training and Treatment involving exercise alone Treatment involving pain coping skills alone

All eligible volunteers will be randomly allocated to receive one of the three treatments under investigation from a trial physiotherapist located in your region. You will receive 10 physiotherapy sessions over 12 weeks at no personal cost.

Participants must be willing to:

- Have a **free** knee xray to ensure that you are eligible to participate
- Attend the Division of Physiotherapy at the University of Queensland for baseline and follow up testing (3 times over a 12 month period)
- Undertake a home based program for your knee OA
- Keep a diary of activities and answer questionnaires at 3 time points



To obtain details and learn more about the trial please contact:
Paul Connellan, Ph: (07) 3365 4691

For additional information or to be added to the AMI mailing list and Listserve, please contact us via email at ami@uq.edu.au.

**Alternatively you may contact Dr Nancy Pachana at
School of Psychology, The University of Queensland
ST LUCIA QLD 4072 or Tel. 07-3365-6832**



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