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NZSIGN Workshops (recent and upcoming)

PROFESSOR BARBARA WILSON

*Evaluating Neuropsychological Interventions
workshop , 25th May 2012.*



Professor Barbara Wilson (OBE) is a world renowned expert in both research and clinical practice in neuropsychology, with work involving memory and other areas of neurorehabilitation. Prof Wilson presented an excellent workshop for NZSIGN on the different ways in which interventions in neuropsychology can be evaluated so we can determine if the treatments clinicians provide are effective. The workshop showed the value of clinicians, in their everyday work, finding opportunities to engage in research that is at a manageable and practical level. By establishing how our clinical work will be evaluated before it is started we can design our interventions in a way that ensures outcomes are measurable, effective, and can evolve into publishable works. Different research designs were re-visited, and in particular the value of single case designs was explored. Workshop attendees indicated how valuable this session was in making research concepts apply more readily to clinicians.

Upcoming Workshop - Dr John Meyers and Kelly Meyers

The next NZSIGN workshop is by Dr John Meyers and Kelly Meyers, the researchers and publishers of the well known Meyers's and Meyers's norms for the Rey Complex Figure (ages 6 to 89 years). This will be in Feb 2013 and the 1 ½ day workshop will include scoring and interpretation, clinical cases (e.g., brain injury, ADHD) for adult and child, symptom validity, and use of the Rey in conjunction with other neuropsychological tests. A flyer will be sent out in the near future. Send us your expressions of interest (so we can get an idea of numbers) and also feel free to send ideas of what you would like to get from the workshop - send to: kay.cunningham@xtra.co.nz



Tell us what you would like.....

Let us know what topics and presenters you would like to see in the future (home grown and international). Send your ideas and thoughts to Dr Nic Ward

Nic@insightteam.co.nz

INTRODUCTION

E nga reo, e nga mana, e
nga karangaranga maha, Nau
Mai, Haere Mai ki te panui hou
o NZSIGN.

NZSIGN was established in early 2011 by Dr Nic Ward as a means of bringing together clinicians working in the field of neuropsychology in New Zealand, to share perspectives, experiences and promote learning in this field. The NZSIGN mandate is outlined on p. 18.

The purpose of the NZSIGN Newsletter is to promote these aims through the sharing of knowledge and providing a focus on neuropsychology specific to our country and our cultural needs. While including reference to international studies, books, and resources it is also aimed at highlighting and celebrating the exceptional research and expertise in clinical practice being undertaken by New Zealand psychologists.



Special topic - Fatigue after Brain Injury

K. Cunningham

Fatigue is a common effect after any form of brain injury and is often reported as one of the main causes of handicap, as well as significantly affecting an individual's quality of life. Fatigue may be constant, occurring in the context of physical and/or mental activities and effort, and can greatly exacerbate underlying cognitive, emotional, and physical difficulties. In an informative article by Levine & Greenwald (2009) the authors note that people with neurologic disorders (ND) describe fatigue differently from the way the general population does. The main distinction is that fatigue in individuals with ND does not respond to sleep or rest nor is it accompanied by the desire to sleep, whereas people in the general population report an amelioration of fatigue symptoms with a nap or a full night's sleep.

PERIPHERAL VERSUS CENTRAL FATIGUE

This important difference in definitions has implications for research, because scales used to quantify fatigue in the general population may not accurately measure fatigue in peripheral and central fatigue. Peripheral fatigue, or physical fatigue, is most commonly expressed as musculoskeletal symptoms that impair mobility and the ability to perform activities of daily living (ADLs). Central fatigue, as described by Levine & Greenwald (2009) is "also known as mental or cognitive fatigue, and results from dysfunction of the supratentorial structure involved in performing cognitive tasks. Central fatigue is a difficulty initiating and sustaining mental and physical tasks in the absence of motor or physical impairments. The inability to maintain focused attention is a key component of central fatigue, since focused attention is necessary to incorporate the mental, physical, and sensory inputs involved in completing

a task. Once focused attention is impaired, integrating the various types of information needed to complete a task becomes more difficult and requires greater effort to complete. In persons with TBI and stroke, central fatigue predominates, whereas in Parkinson's Disease, fatigue complaints are often mixed. In evaluating patients with complaints of fatigue, differentiating between central and peripheral fatigue is an important initial step, as inciting agents and treatments differ between the two".

The authors further provide an overview of the etiology, assessment of fatigue, quality of life (QoL) implications, and treatment of fatigue in adults with neurologic disabilities. Other articles worth review are by Chaudhuri & Behann (2004) and Zwarts and colleagues (2008), both of which offer descriptions of the neurophysiological basis of fatigue in neurological conditions.

APOE GENOTYPE and mTBI

Interesting research is also occurring on whether there is a relationship between APOE genotype and incidence of fatigue after mild traumatic brain injury. For example, in their study Sundstrom and colleagues (2007) found fatigue was particularly common for carriers of the APOE epsilon4 allele. While still an area requiring further examination, underlying additional mechanisms as to why fatigue occurs in some TBI patients may help us understand why some suffer more from chronicity and severity of fatigue than others.

EFFECTS OF FATIGUE ON TESTING

Research by, for example, Fry, Greenop & Schutte (2010) found fatigue had effects on both executive

functioning and global functioning for both subjects with, *and* without, concussion. This highlights the impact that fatigue alone can have on test performance and which can be wrongly attributed to brain damage. In studies of patients with Chronic Fatigue Syndrome (CSF), such as by Majer and colleagues (2008), symptoms of neuropsychological Dysfunction were present with significantly decreased motor speed and alterations in working memory independent of comorbid psychiatric disease and medication useage. Thomas & Smith (2009) found lower scores on vigilance tests, and results also suggested greater distraction by irrelevant stimuli for the CSF group. While post-trauma fatigue may differ in terms of cause and underlying mechanisms, CSF research can help to provide some understanding of the neuro-cognitive effects of fatigue.

NEW ZEALAND RESEARCH

a). Post-stroke fatigue

Despite the significant impact on function, quality of life, and mortality in patients post-stroke researchers such as Barker-Collo, Feigin & Dudley (2007)(University of Auckland) have identified there is a relative scarcity of fatigue research in this area. Additionally, while there have been studies on the efficacy of fatigue education programmes in other neurological conditions, such as cancer, multiple sclerosis, and TBI, little has been done in the way of intervention trials post-stroke.

Recently Clarke and Barker-Collo (2012, Topics in Stroke Rehabilitation) piloted a group psycho-education intervention targeting fatigue post-stroke. In this pilot trial both those who received general stroke education and those provided with specific fatigue education improved over 3 months on measures of fatigue, anxiety, mood and quality of life. Those who received fatigue-specific

education improved to a greater degree, but this did not reach statistical significance.

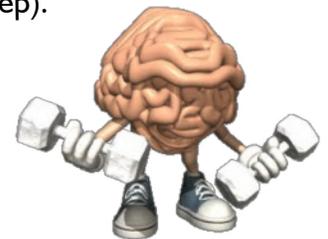
b). Fatigue Management programmes for mild to moderate TBI

As described by Principal Researcher, Dr Alice Theadom, a feasibility study has very recently been completed which explored two types of fatigue management interventions for people who have experienced a mild or moderate TBI. One intervention was based on the CBT approach and the other looked at the use of activity coaching with the aim of reducing fatigue through increasing physical activity.

Qualitative feedback revealed that both interventions were acceptable and useful for participants, results which were mirrored in the pre and post intervention scores on assessments of fatigue, mood and memory (Theadom, Bhattacharjee, Kayes, Mudge, McPherson, Barker-Collo, Kersten, Feigin, in prep).

Related international research

A study of endurance training and cardiorespiratory conditioning after TBI was undertaken by Mossberg and colleagues (2010). They proposed that TBI patients may have a reduction of 25-30% in peak aerobic capacity when compared to healthy sedentary persons, and this can be a contributing factor to subjective experiences of fatigue post-injury. Patients with mild TBI are often not referred to physical therapy because they are identified as having only subtle physical impairments. However they may have persisting fatigue that does not improve over time. The positive effect of exercise post-TBI is also proposed by Archer (2012) with positive effects on brain plasticity and neurocognitive performance. In New Zealand, specific Fatigue Management programmes have been developed with a multidisciplinary approach (i.e. ProActive Rehab Ltd).



c). Fibromyalgia and Fatigue

Dr Theadom has also recently completed a study with colleagues in the UK looking at the use and impact of daytime napping in fibromyalgia syndrome. The study included a sample of over 1000 participants diagnosed with fibromyalgia syndrome aged over 18 years. A high proportion of participants reported napping on a daily basis and links with outcomes including sleep, fatigue, pain, mood and everyday memory were explored. The results of this study have recently been submitted for publication (Theadom, Cropley & Kantermann, submitted) and have potential implications for understanding the effects of napping for other subject groups.

d). Assessment of sleep, fatigue and neuropsychological assessment in TBI

The BIONIC prospective study of follow-up after TBI (see p. 12) outcome measures include sleep, fatigue and a comprehensive computerised neuropsychological assessment. This study was recently completed and data analysis is now underway (Feigin, Theadom, Barker-Collo, Starkey, McPherson, Kahan, Dowell, Brow, on behalf of the BIONIC Study Group).

e). mTBI and Fatigue

In a New Zealand prospective longitudinal study of 263 post-mild traumatic brain injury (mTBI) patients with fatigue by Norrie and colleagues (2010) subjects post-mTBI fatigue was exacerbated by depression but not anxiety. For most fatigue diminished in the first 3 months, then became relatively stable, suggesting the optimum intervention for fatigue was at 3 months or more post-injury.

Psychological conditions, such as depression, in themselves cause fatigue and sleep disturbance

thereby making differentiation of cause a challenge (see Fava, 2003). Earlier intervention may therefore prevent or reduce the development of psychological issues which may be causative in ongoing fatigue.

SLEEP DISTURBANCE AND FATIGUE

Sleep disturbance is common after brain trauma and non-traumatic neurological conditions, and may be causative or contributory to fatigue issues. However while there can be significant overlap they can also occur independently. A review of sleep disorders in TBI was undertaken by Castriotta & Marthy (2011) and over half of all TBI patients had insomnia complaints, most often those with less severe injury. One of the causes of post-TBI sleep disruption can be hypothalamic injury disrupting endocrine production.

For some, sleep apnoea can develop with related risk factors, including a possible correlation between sleep apnoea, TBI, and APOE epsilon 4 (see O'Hara et al., 2009). Sleep apnoea alone can cause cognitive compromise (e.g. Durmer et al. 2005; Verma et al. 2007). Post injury changes in sleep-wake relevant neurotransmitters have been found to be disturbed (Baumann et al. 2007). In the study by Ouellet and others (2006) approximately 50% of TBI patients had insomnia symptoms, and 29% met the criteria for an insomnia syndrome which was severe, chronic and disabling. Risk factors associated with insomnia were milder TBIs, and higher levels of fatigue, depression, and pain.

Given these findings treatment of sleep disturbance may need to be a primary intervention for fatigue management. Administration of a client rated sleep questionnaire during initial clinical interviewing can therefore help determine the level of disturbance and effects in any presenting condition whereby fatigue or cognitive complaints are evident.

PAEDIATRIC POPULATIONS

Assessing fatigue and sleep issues is also relevant in paediatric populations. An interesting New Zealand study by Gregory and colleagues (2009) examined the association between parent-rated sleep problems during childhood and neuropsychological functioning during adolescence in 1038 children. Their findings have added to the growing body of literature that sleep problems may be a risk indicator for later cognitive/learning difficulties.

Central fatigue can be a disabling factor for children who have suffered brain trauma, and can severely impact upon their academic, social, and emotional development. Sleep problems have been identified in this group, for example in a dissertation by Wells (2005) dyssomnia was found to differentiate TBI subjects from controls. Studies of parent reported sleep disturbance in children after mild TBI has also been identified (e.g. Milroy et al., 2007) and the authors highlight some of the difficulties involved with gaining objective data through subjective means.

Nevertheless, use of parent and child rating scales can provide meaningful information. A number of rating scales are available in respect to children suffering from conditions such as cancer and multiple sclerosis, and it would be worthwhile to examine these to determine their usefulness for traumatically related conditions.

Given the research in this area, a fuller assessment of sleep disturbance for those paediatric clients presenting with neurological problems and/or learning difficulties would seem of relevance.

PHARMACOLOGICAL TREATMENTS

Kaiser and colleagues (2010) undertook a prospective, double-blind, randomized, placebo-controlled pilot study of the benefits of Modafinil (used for narcolepsy)

NEXT NEWSLETTER TOPIC - Cultural context and issues in Neuropsychology in New Zealand.

for management of excessive daytime sleepiness (EDS) after traumatic brain injury. Their results showed EDS was significantly improved in TBI patients taking 100-200 mg of Modafinil (compared with the placebo group) but the medication did not have a significant effect on post-traumatic fatigue. No clinically relevant side effects were noted in this study, however concerns were raised in 2010 by the European Medicines Agency due to reports from other sources of psychiatric adverse reactions, and cardiovascular adverse reactions.

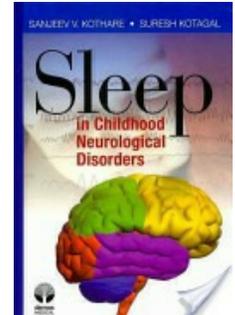
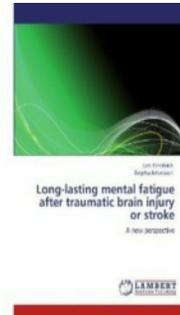
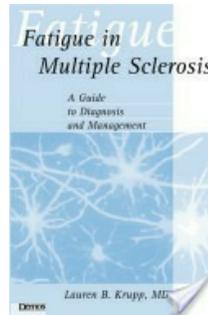
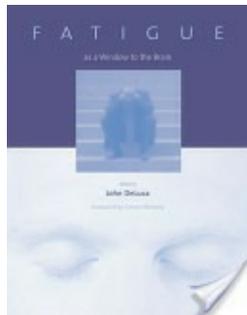
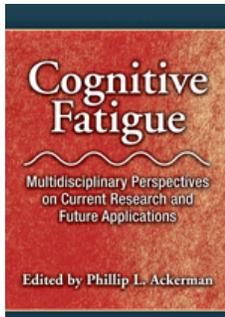
Treatment of associated disorders by medication may have benefits, and Arciniegas and others (2005) provide a review of possible pharmacological treatments for some of the cognitive, emotional, behavioural, and physical impairments experienced by people suffering mTBI effects. Some studies suggest there is a higher incidence of hormone deficiencies in a significant number of TBI patients with severe fatigue. In particular, Vitamin D may be deficient and treatment can lead to improved energy levels, along with appropriate treatment of the other two identified primary factors - poor sleep and anxiety (Schnieders et al., 2011). Ponsford and colleagues (2012) also identified individuals with TBI showed lower levels of evening melatonin production which was associated with less rapid-eye movement sleep.

PROGNOSIS FOR RECOVERY

While many individuals recover from post-brain injury fatigue for some it can be a persistent symptom, with multi-dimensional causes, including psychological factors such as chronic stress, and also illness beliefs. Bay & de-Leon (2011) suggest Quality of Life measures are utilised to determine the impact on an individual's life with symptom management strategies to include general stress management to reduce fatigue burden and improve quality of life.

(See pages 20 & 21 for reference list)

Books on Fatigue/Sleep



These are some books that you may find of interest

Ackerman, P.L. (Ed.)(2011). *Cognitive Fatigue: Multi-disciplinary Perspectives on Current Research and Future Applications*. Published by American Psychological Association.

DeLuca, J. (Ed.)(2007). *Fatigue as a Window to the Brain*. Published by MIT Press.

Kothare, S. (2011). *Sleep in Childhood Neurological Disorders*. Published by Demos Medical.

Krupp, L. (2004). *Fatigue in Multiple Sclerosis*. Published by Demos Medical.

Ronback, L. (2012). *Long-lasting mental fatigue after traumatic brain injury or stroke: a new perspective*. Published by Lap Lambert Academic Publishing.

Rating scales

FATIGUE SEVERITY RATING SCALES



Following are various psychometric measures that can be used to assess fatigue:

- Measures of fatigue overview in *Arthritis & Rheumatism (Arthritis Care & Research)* Vol. 49, No. 5S, October 15, 2003, p. S175–S183
- Dittner, A.J., Wessely, S.C. & Brown, R.G. (2004). The assessment of fatigue: a practical guide for clinicians and researchers. *Jnr of Psychosomatic Research*. Vol: 56, p. 157-170.
- Huguet, A. & Miro, J. (2007). *Jnr of Pediatric Psychology*, Vol 33: 1, pp. 63-79.
- Jin-Mann, S.L., Brimmer, D.J., Maloney, E.M., Nyarko, E., Belue, R. & Reeves, W. (2009). Further validation of the Multidimensional Fatigue Inventory in a US adult population sample. *Population Health Metrics*. Vol: 7: 18, p. 1-12.

SLEEP

a). **Adult** - Sleep scales include the Epworth Sleepiness Scale and Pittsburgh Sleep Quality Index.

Another scale, the Medical Outcomes Study (MOS) Sleep Scale, is becoming widely used and consists of 12 items to measure 6 sleep dimensions: initiation (time to fall asleep), quantity hours of sleep each night), maintenance, respiratory problems, perceived adequacy, and somnolence. For psychometric information of this scale (and other sleep scales) go to:

<http://onlinelibrary.wiley.com/doi/10.1002/art.11409/full>



b). **Child/Adolescent** measures– for example:

School Sleep Habits Questionnaire (Adolescents) and Child Sleep Habits Questionnaire (Children)

http://www.rush.edu/Rush_Document/CSPedsSleep_CSHQ.pdf

Sleep Disturbance Scale for Children - Bruni et al.(1996). Construction and validation of an instrument to evaluate sleep disturbances in childhood and adolescence. *Jnr Sleep Research*, 5: 4, p 251- 261.

QUALITY OF LIFE

Quality of Life after Brain Injury Scale (QOLIBRI) - for scale go to www.qolibrinet.com

Self-rating measures of quality of life can provide useful information as a supplement to clinical and functional outcome measures. When used in conjunction with other rating scales they provide greater clarity on whether symptoms result in functionally disabling effects (including fatigue). As stated by Truelle and colleagues (2010), “*It allows the identification of personal needs, the prioritisation of therapeutic goals and the evaluation of individual progress. It may also be useful in clinical trials and in longitudinal studies of TBI recovery*”.

Truelle et al. (2010) Quality of life after traumatic brain injury: the clinical use of the QOLIBRI, a novel disease-specific instrument. *Brain Injury*, 24: 11, p 1272-91.

Von Steinbuechel et. al (2010). Quality of life after brain injury (QOLIBRI): scale development and metric properties. *Journal of Neurotrauma*, Vol: 27, p 1167-1185.

Von Steinbuechel et al. (2012). QOLIBRI Overall Scale: a brief index of health-related quality of life after traumatic brain injury. *Jnr of Neurology, Neurosurgery and Psychiatry* (Epub ahead of print).



Neuro-QOL - is a multi-site that aims to develop a clinically relevant and psychometrically robust health-related quality of life (HRQL) assessment tool for adults and children with chronic neurological conditions. Free scales and resources are available on: <http://www.neuroqol.org/default.aspx> Well worth looking at.

Child/adolescent - see Anderson, V., Brown, S., Newitt, H. & Hoile, H. (2011). Long-term outcome from childhood traumatic brain injury: Intellectual ability, personality, and quality of life. *Neuropsychology*, Vol 25: 2, p. 176-184

McCarthy, M.L. and colleagues (2005). The Pediatric Quality of Life Inventory: an evaluation of its reliability and validity for children with traumatic brain injury. *Archives of Physical Medicine & Rehabilitation*, Vol. 86: 10, p. 1901-9.

For publication list for Pediatric Quality of Life Inventory go to: www.pedsqol.org

General articles/book chapters of interest (reviewed by K Cunningham)

Symptom validity

Binder, L.M., Spector, J., & Youngjohn, J.R. (2012) *Psychogenic Stuttering and Other Acquired Nonorganic Speech and Language Abnormalities*. Archives of Clinical Neuropsychology, Vol. 27, pp. 557-568.

Three case studies of peculiar speech and language abnormalities are evaluated in the context of co workers compensation claims of brain dysfunction after mild traumatic brain injury. As well as performance on measures of effort and motivation, the authors describe these cases, and provide a formulation as to why severe dysfluency or language abnormalities persisting after a mild and uncomplicated head injury fit with psychogenic cause. A good article when assessing clients with atypical speech abnormalities.

WISC-IV short form

Ponder, J., Elzinga, B., Kuipers, D., Helder, E. & Crawford, J.R. (2012) *Development of an eight-subtest short form of the WISC -IV and evaluation of its clinical utility in children with traumatic brain injury*. Child Neuropsychology, in press.

This is a very useful article for clinicians who have time constraints, wish to use a shortened version of the WISC-IV while ensuring reliability is retained. In a related link there is a free download of the relevant computer scoring programme available. Go to :

http://homepages.abdn.ac.uk/j.crawford/pages/dept/sf8_wisc4.htm

ToM in children with TBI

Dennis, M., Simic, N., Gerry-Taylor, H, Rubin, K., Vannatta, K., Gerhardt, CA, Stancin, T., Roncadin, C, & Yeates, K.O. (2012). *Theory of mind in children with traumatic brain injury*. Jnr of International of Neuropsychological Society, Vol. 18: 5, pp. 908-91.

The authors used a new three-frame Jack and Jill cartoon task for evaluation of ToM, and their results suggested a specific deficit in ToM in children with severe TBI. While it was possible to only review the abstract, given the researchers backgrounds (e.g. Dr Keith Yeates) this is an article worth checking out if you have an interest in this area.

Memory rating scale

Crawford et al. (2003) *The Prospective and Retrospective Memory Questionnaire (PRMQ): Normative data and latent structure in a large non-clinical sample*. Memory, 11 (3), pp. 261-275

The PRMQ is a self-report measure consisting of sixteen items, with half about prospective memory failures and the other half for retrospective failures. The authors provide an analysis of the questionnaire, with reliability and normative data and free download of a software programme that takes an individual's raw scores and provides T scores, estimated true scores and 95% confidence limits for the three scales. It also tests whether the discrepancy between the Prospective and Retrospective scales is reliably different as well as population norm discrepancies.

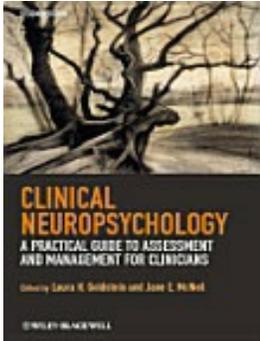
psyc.abdn.ac.uk/homedir/jcrawford/prmq.htm

Hearing impairment and neuropsychological testing

Neuropsychological assessment of persons with physical disability (congenital or acquired) can be challenging due to tests either not being appropriate because they are not relevantly normed, or have no suitable intergrated alternative. This is particularly difficult in assessments of intellectual disability. Some articles that readers may find of value in regards to hearing impaired are:

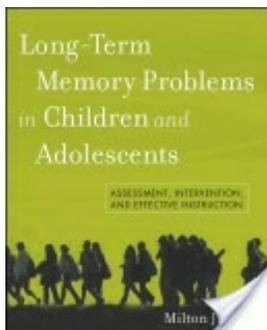
- Hill-Briggs et al. (2007). *Neuropsychological assessment of persons with physical disability, visual impairment or blindness, and hearing impairment or deafness*. Archives of Clinical Neuropsychology, Vol. 22, p. 389-404.
- Baker & Baker (2011). *The Assessment of Intellectual Disability with Deaf Adults*. International Jnr on Mental Health and Deafness, Vol 1: 1, p. 23-36.
- Remine et al. (2008). *Language ability and verbal and nonverbal executive functioning in deaf students communicating in spoken English*. Jnr of Deaf Studies and Deaf Education, Vol. 13: 4.
- Hauser, P.C., Cohen, J., Dye, M.W.G., Bavelier, D. (2006). *Visual Constructive and Visual - Motor Skills in Deaf Native Signers*. Journal of Deaf Studies and Deaf Education, Vol. 12 (2), pp. 148- 157.
- Kutz, W., Wright, C, Krull, K.R. & Manolidis, S. (2003). *Neuropsychological testing in the screening for cochlear implant candidacy*. Laryngoscope, 113: 1, p. 57-62.

Book reviews (recent, relevant, or soon to be released) Reviewer: K Cunningham



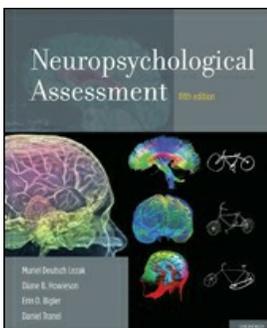
Goldstein, L.H. & McNeil, J.E. (Ed.) (2nd Edition) (2012) *Clinical Neuropsychology: Practical guide to assessment and management for clinicians* Published by Wiley-Blackwell (available on Kindle)

There is an exceptional range of experts and researchers contributing in this book. While some of the beginning sections cover areas also present in other Neuropsychology texts (such as neuroanatomy and neuropathology) up-to-date research is provided. A number of chapters cover specific disorders by domain and function (e.g. Visuo-spatial and Attentional Disorders) as well as by neuropathology (e.g. Frontal Temporal Dementias), across all age ranges, and including rehabilitation and research design. Other chapters include The Effects of Prescribed and Recreational Drug Use on Cognitive Functioning (Chapter 5), Legal Issues and Mental Capacity (Chapters 17 & 18), Driving (Chapter 24) and Quantitative Aspects of Neuropsychological Assessment (Chapter 6) by Professor John Crawford. Professor Crawford's Chapter provides an excellent, easy to read description of quantitative measurement and it is worth noting he is presenting at the ASSBI 36th Brain Impairment Conference in May 2013 (Hobart). This alone would be worth the Trans-Tasman trip!



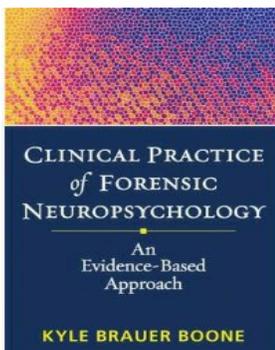
Dehn, J.M. (2010). *Long Term Memory Problems in Children and Adolescents*. Published by John Wiley & Sons - available also on Kindle

In the initial chapters a comprehensive overview of the neuroanatomy of memory systems in children and adolescents is provided, (within a developmental framework) risk factors for memory impairment, followed by assessment measures, suggestions for intervention and case studies. Summaries of key points are provided within each chapter, thereby providing a ready reference. The beauty of this book for clinicians working with children/adolescents is not only as a comprehensive text on child memory but also for the descriptions of different disorders (due to various causes such as neurological, genetic and prenatal factors, mental illness, substance abuse) and how memory can be impaired. An excellent text.



Lezak, M., Howieson, D.B., Bigler, E.D. & Tranel, D. (2012) (5th Edition) *Neuropsychological Assessment*. Published by Oxford Uni Press.

Little introduction is needed for this iconic book, now in its 5th Edition. This new edition provides an update of previous research and test materials, and includes information on the advancement of neuroimaging techniques. To many neuropsychologists, these editions are the "bible" of neuropsychological assessment, and this new edition does not disappoint.



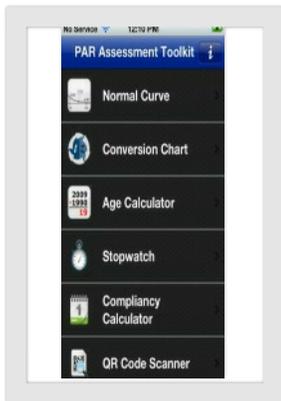
Boone, K.B. (Ed.) (2012) *Clinical Practice of Forensic Neuropsychology* Not yet released therefore can't be reviewed (due in October 2012)

Amazon description indicates "*evidence-based guide describes how to conduct a comprehensive forensic neuropsychological evaluation and provide expert testimony. All steps are covered--from selecting, scoring, and interpreting tests to writing reports and responding to cross-examination--with special attention to assessing noncredible performance. The book identifies seven common flaws of forensic neuropsychological reports and shows how to avoid them. Excerpts from testimony transcripts illustrate ways neuropsychologists can protect their reports from attack. Also featured are case illustrations and a sample report*".

TECHNO AIDS - Some useful Apps for mobile/ipads

Breathe2Relax (free app via iTunes)

Breathe2Relax is a portable stress management tool which provides detailed information on the effects of stress on the body and instructions and practice exercises to help users learn the stress management skill of diaphragmatic breathing. Relaxing music has been added as an option to listen to during the breathing exercise.



PARS TOOLKIT (free app)

via iTunes or: <http://toolkit.parinc.com/>

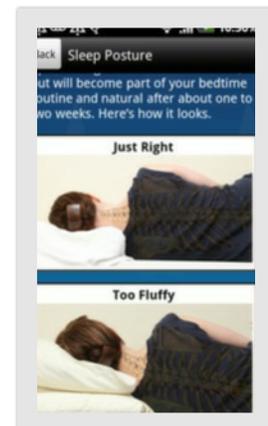
The PAR Toolkit includes scoring modules that allow for conversion from raw scores to T scores, Age calculator, Stopwatch, Compliancy Calculator. Very handy app to have and provided free for download.

mTBI Pocket Guide Mobile App

(free app via iTunes or: <http://t2health.org/apps/mtbi>)

(As described on website) the mTBI Pocket Guide mobile app offers clinicians a wide range of diagnostic, treatment and information resources. Includes:

1. Definitions, causes and severity ratings for mTBI
2. Summary of cognitive rehabilitation clinical recommendations for mTBI
3. Examples of clinical tools and resources, and how to obtain them
4. Examples of patient education materials, and where to obtain them



Test alert! Did you know that if you teach at University you can get 40% off PARS published tests and books?



Research in Aotearoa

The following is a profile of just some of the research centres and projects currently in place. (Abstracts are provided in websites or in communication with Primary Researchers.)

University of Auckland PANNNZ

<http://www.psych.auckland.ac.nz/uoa/suzanne-barker-collo/>

The purpose of this website is to provide New Zealand clinicians and researchers with a single source from which to access data on how New Zealander's from the general population perform across tests of cognition and other areas of functioning. If you are aware of any New Zealand normative data not currently available on the website, please contact the authors of PANNNZ in order for them to obtain permissions to include the research findings on the website.



Research Centre for Cognitive Neuroscience – University of Auckland

<http://www.fmhs.auckland.ac.nz/faculty/cbr/>

Research activities range from cognitive and clinical neuropsychology to fMRI and EEG measurement of brain activity. The work of the Centre covers both basic and applied research, and includes studies with both normal and brain-injured people, and aims to encourage collaborative research, thereby increasing the likelihood of receiving substantial research funding. Research topics include Aging and Neurodegenerative Disorders (Alzheimer's Disease, MCI, Amyotrophic Lateral Sclerosis, Huntington's Disease, Multiple Sclerosis, Parkinson's Disease), Neurodevelopmental disorders (such as ADHD, Asperger's, Auditory processing and reading disorders, Dyslexia), Neuropsychiatric Disorders (Schizophrenia), Neurological Disorders (Headache disorders, Focal Dystonia, Temporal Lobe Epilepsy, Traumatic Brain Injury, Stroke, Cardiac surgery. Primary researchers include Dr Lynette Tippert .

NISAN – National Institute for Stroke and Applied Neurosciences

Auckland University of Technology www.nisan.aut.ac.nz/

The primary and unique aim of NISAN is to conduct high quality epidemiological studies and clinical trials to improve the health and outcomes in people with major neurological disorders – the current emphasis being on stroke and traumatic brain injury. Research at NISAN focuses on the assessment and amelioration of specific cognitive, behavioural and social consequences of injury and illness as well as determining incidence rates of specific conditions in NZ. Interventions are geared towards improving outcomes for survivors of brain injury, their families /whanau with the aim of being easily adopted by clinicians and translated into practice. The institute is led by Professor Valery Feigin, and has three highly active research programmes; TBI and spinal cord injury (led by Dr Alice Theadom), Neuropsychology (led by Dr Kelly Jones) and Cerebrovascular disease (led by Rita Krishnamurthi) with involvement from key associate researchers including Associate Professor Suzanne Barker-Collo (see website for list of related research publications).

BIONIC Brain Injury Outcomes New Zealand in the Community (AUT, Waikato and Otago Universities).

This is a study that is being led by AUT in collaboration with Waikato, Otago and Auckland Universities. It is a prospective population-based study that registered all cases (including all ages and severities) of traumatic brain injury that occurred in the Hamilton and Waikato districts (a general population representative of New Zealand) between the 1st March 2010 and 28th Feb 2011. As part of the study all incident cases were invited to take part in follow up assessments at baseline, 1, 6 and 12 months after their injury to explore their recovery. Outcome assessments include sleep, fatigue and a comprehensive computerised neuropsychological assessment. This study was recently completed and data analysis is now underway (Feigin, Theadom, Barker-Collo, Starkey, McPherson, Kahan, Dowell, Brown, Parag, Kydd, Jones, Jones, Ameratunga, on behalf of the BIONIC Study Group).



Brain Health Research Centre – Otago University <http://www.otago.ac.nz/bhrc/>



UNIVERSITY
of
OTAGO
Te Whare Wānanga o Ōtago
NEW ZEALAND

The BHRC is one of the leading research centres at the University of Otago. It includes 40 research and clinical teams at the University of Otago that are investigating the prevention, cure and treatment of neurological disorders as well improving understanding of what makes a healthy brain. Among the many ongoing projects are studies that are providing insight into the development of Autism disorders, restoration of brain function following stroke, mechanisms and treatments for Parkinson's disease, mechanisms and treatment for aging related cognitive decline, and identification of biomarkers in blood that may lead to an early diagnosis of Alzheimer's disease. The Centre is highly collaborative, covering researchers and students in many basic science as well as clinical departments within the University, plus collaborations with scientists in Australasia, the USA and Europe. The BHRC also has a focus on communicating with the public, and members give many public lectures and presentations to societal groups.

Massey University

<http://www.massey.ac.nz/massey/home.cfm>



MASSEY UNIVERSITY
TE KUNENGA KI PUREHUROA
UNIVERSITY OF NEW ZEALAND

Professor Janet Leathem, Dr Duncan Babbage, and

Associate Professor Podd are three primary

researchers undertaking a wide range of research projects, and supporting students in the study of neuropsychological issues. Professor Leathem has been involved in protocol and policy development in assessment and treatment of brain injury over a number of years and has special interests in ageing and the cross cultural aspects of clinical and neuropsychology. Current research projects being undertaken by Massey include assessment and intervention for older adults with memory difficulties and memory difficulties associated with ECT. Dr Babbage has a particular interest in areas such as affect regulation after brain injury, and mobile computing as a neurorehabilitation aid. He is currently involved in an international clinical trial examining treatments for emotion recognition difficulties after TBI and is chairperson of the working group on cyber community for the Neuropsychological Rehabilitation Special Interest Group of WFNR. He publishes regular updates on research from across the field of neurorehabilitation at www.synapseproject.org. Associate Professor Podd undertakes studies in brain processes and behaviour, psychophysics, facial recognition, aging and memory.

The Dunedin Multi-disciplinary Health & Development Study

<http://dunedinstudy.otago.ac.nz/>



This is a study of 1037 babies born in Dunedin, NZ between 1st April 1972 and 31st March 1973. Of the original cohort there are 1014 still alive. Serial assessments were undertaken throughout infancy through adolescence and adulthood and are continuing with subjects now at age 38 years. Over 1100 publications, including journal articles, book chapters, monographs and other reports have been generated over the years from this study. Findings have (and will continue) to influence family, child and public health policies overseas and in New Zealand.

Victoria University of Wellington

<http://www.victoria.ac.nz/psyc/>



Victoria University hosts a number of research groups with interests in neuropsychology, some of whom work closely with staff in the department of Neurosurgery at Wellington Hospital. Currently, Victoria has a strong programme of research into aphasia and other language disorders. They are running an ongoing research programme examining various aspects of word and sentence production in nonfluent aphasia, and exploring some new behavioural interventions. The researchers, headed by Dr. Carolyn Wilshire, are keen to hear from anyone who has recently suffered a stroke or other brain illness that has affected their language, regardless of what sort of problem they suffer from (our study compares and contrasts people with a range of different problems). Some speech therapists have suggested this as an option for their clients after the completion of speech therapy, as some clients find the practice helpful. For more information, contact Dr. Wilshire at Carolyn.Wilshire@vuw.ac.nz.

Another ongoing project at Victoria examines the role of language assessment in the pre and postoperative care of patients undergoing tumour surgery. Victoria researchers Josh Faulkner and Dr Carolyn Wilshire are working in collaboration with Kay Cunningham and with Wellington Neurosurgeons Mr Ales Aliaskevitch and Mr Andrew Parker. The project involves evaluating a short language assessment battery that is particularly sensitive at detecting language difficulties. Dr Wilshire is also gathering norms on the test battery from healthy participants of various age groups, and would be keen to hear from anyone who would like to take part. Contact Dr Wilshire at Carolyn.Wilshire@vuw.ac.nz



New Zealand Institute of Language, Brain and Behaviour – University of Canterbury

<http://www.nzibb.canterbury.ac.nz>



The NZ Institute of Language, Brain and Behaviour

collects audio, visual, articulatory, neural and behavioural data on how individuals speak, listen, interact, and otherwise use language in their day-to-day lives. With this data, they study the foundations of language as an integrated, multimodal, statistical system operating in a social, physical and physiological context, and the relationship between language and other modes of cognition and behaviour, including memory, gesture, facial expression and gait. There is a focus on language development throughout the lifespan, and on how non-language information (social, physical, contextual, visual) affects individuals' speaking and listening behaviours.

The language and ageing theme is particularly relevant to neuropsychologists, and examines the effect of age upon language processes and communication, both in normal ageing and disorders of ageing. Changes in communication with age and in speech and language difficulties associated with Parkinson's disease, Alzheimer's disease, and stroke are identified. The Language Acquisition theme focuses on language and literacy development in children with and without developmental difficulties (e.g. autistic spectrum, TBI, literacy difficulties, childhood apraxia of speech, and multi-system developmental disorders). The aim of this research group is described as advancing basic knowledge and improving clinical and educational practice.



The NZ Brain Institute is based in Christchurch and consists of a multi-disciplinary team of researchers/clinicians (e.g. Neurologist, Biomechanical Engineer, Neuroscientists, Experimental Psychologists) undertaking research on conditions such as Parkinson's and Dementia, and involving studies using MRI and SPECT scans. Publication list is provided on the website and shows an excellent range of very interesting research topics <http://www.nzbri.org/>

Let us know of any interesting University or other (including individual) research projects or studies that have been, or are in the process of being, published. Send to kay.cunningham@xtra.co.nz for the next Newsletter.

Some of the upcoming International and NZ Conferences for 2012 and 2013

Oct 2012	8 - 10 th Oct	15 th International Aphasia Rehabilitation Conference	Melbourne
	10 - 13 th Oct	8 th World Stroke Congress, (Adult and child focus)	Brazil
	24 - 25 th Oct	Brain Matters 3: Crossroads of Neurology, Psychiatry & Psychology.	Cleveland, Ohio
Nov 2012	7 - 10 th Nov	National Academy of Neuropsychology 32 nd Conference, International Conference on Neurorehabilitation	Nashville, USA.
	14 - 16 th Nov		Toledo, Spain
	22 - 25 th Nov	18 th APS College of Clinical Neuropsychologists Conference	Launceston, Tasmania
Dec 2012	2 - 3 rd Dec	Neuroscience & Cognition: Consciousness & Cognitive Control	Belgium
Jan 2013	26 - 31 st Jan	46 th Winter Conference on Brain Research	Beaver, Colorado
	30 - 31 st Jan	ICCN: International Conference on Cognitive Neurosciences	Dubai
Feb 2013	6 - 9 th Feb	41 st INS Annual Meeting: Brain Health through Lifespan	Waikloa, Hawaii.
	15 - 16 th Feb	NZSIGN Workshop on Rey Complex Figure test - by Dr John & Kelly Meyers	Wellington, NZ
	27 Feb - 1 st March	ADHD Worldwide - 1 st Joint Meeting	Tel-Aviv, Israel.
	27 Feb - 2 nd March	The 5th International Conference on Fetal Alcohol Spectrum Disorder Research: Results and Relevance Integrating Research, Policy, and Promising Practice Around the World	Vancouver, Canada
	28 th Feb - 1 st March	New Zealand POPS 12 th National Conference Psychology of Older Adults - (contact: john.glass@tdhb.org.nz)	Wellington, NZ.
March 2013	7 - 8 th March	International Conference on Recent Advances in Neurorehabilitation	Spain
	8 - 10 th March	New Zealand Rehabilitation Conference	Nelson, NZ.
	10 - 12 th March	Jerusalem International Conference on Neuroplasticity and Cognitive Modifiability	Jerusalem, Israel



April 2013	10 th April	NZCCP Pre-conferenceworkshop - Comprehensive case formulation assessment/treatment of complex cases	Dunedin, NZ.
	11 - 12 th April	New Zealand Psychological Society & New Zealand College of Clinical Psychologists (NZCCP) Conference	Dunedin, NZ.
	18 - 21 st April	9 th International Congress on Mental Disorders & other Non-Motor Features in Parkinson's Disease and Related Disorders	Seoul, South Korea
May 2013	6 - 4 th May	36 th ASSBI Brain Impairment Conference: "Assessing Clinical Change"	Hobart, Tasmania
	16 - 19 th May	19 th Annual International "Stress and Behaviour" Neuroscience & Bio-psychiatry Conference	Petersburg, Russia
June 2013	20 - 22 nd June	11 th Annual American Academy of Clinical Neuropsychology,	Chicago
	25 - 30 th June	International Behavioural Neuroscience Society 22 nd Annual Meeting	County Dublin, Ireland
July 2013	8 - 9 th July	10 th Conference of the Neuropsychological Rehabilitation Special Interest Group of the WFNR	Maastricht, Netherlands
	10 - 13 th July	INS Conference Mid-Year meeting	Amsterdam, Netherlands
Sept 2013	6 - 9 th Sept	45 th European Brain and Behaviour Society Meeting,	Munich Germany
	6 - 9 th Sept	New Zealand Psychological Society Annual Conference "Building Bridges: Dialogues across Psychology"	Auckland, NZ
Oct 2013	17 - 20 th Oct	8 th International Congress on Vascular Dementia & the First Cognitive Impairment European Meeting	Athens, Greece

Let us know of any other conferences or workshops you are aware of



Future Newsletter

If you have a great *article, book, test, or case study* you can give us a brief review on, that would be great.

Also any *conferences/workshops, research projects* you are doing or know of, *contribution* to the Special topic (and add to your CCP as good works done!) plus any *additional resources or comments* on past topics would be fantastic!

Let us know what you would like in the *Newsletter* so we can keep improving it over time. Send any of above to:

kay.cunningham@xtra.co.nz

Newsletter Editor: Kay Cunningham

Editing Support: Polly Schaverien

Thank you to Dr Margaret Dudley for Maori greeting, and to Associate Prof Barker-Collo and Dr Theadom for their background information and references for Special Topic on Fatigue.

NZSIGN Mandate

To provide the following opportunities for group members to:

- **Meet** others with an interest /expertise in neuropsychology and to increase knowledge and support via discussion of cases, topic areas, and issues relevant to the practice of neuropsychology in Aotearoa/New Zealand;
- **Share** ideas and information via an online forum on the NZCCP website;
- **Share** information regarding upcoming training events relevant to neuropsychology;
- **Provide** workshops and other events related to neuropsychology to contribute to the continuing professional development of group members;
- **Align** with international standard of practice as a long term aim through continuous improvement of the practice of neuropsychology in New Zealand.

NEXT NEWSLETTER TOPIC - Cultural context and issues in Neuropsychology in New Zealand. Let us know if you can contribute in any way - email to kay.cunningham@xtra.co.nz

Next Newsletter - March 2013

If you want to know more about NZSIGN, email:

Nic@insightteam.co.nz

NZSIGN has an email list for announcements and discussion. To subscribe, send an email with brief information on your background in neuropsychology to: nzsign-subscribe@synapseproject.org



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