**DEMENTIA HRQL INSTRUMENTS NOT OPTIMIZED**

Although a number of HRQL instruments for dementia are available, their use to date may not be optimized, researchers have concluded. They note that, “Many studies do not specifically set out to measure dementia-specific HRQL but do include related items.” The analysis is based on a review of 15 dementia-specific HRQL instruments.

The analyzed instruments were identified through an electronic search of PsycINFO and PubMed from inception to December 2011 using a combination of key words that included quality of life and dementia. Researchers found that instruments varied depending on their country of development/validation, dementia severity, data collection method, operationalization of HRQL in dementia, psychometric properties, and the scoring. The most common domains assessed include mood, self-esteem, social interaction, and enjoyment of activities.

— *Int Psychogeriatr. 2013 Jan 25:1-16*

**RECOGNITION OF FACIAL EMOTION IN DEMENTIA**

Although current literature suggests that theory of mind (ToM) and recognition of facial emotion are impaired in behavioral variant frontotemporal dementia (bvFTD) and ToM is spared in Alzheimer’s disease (AD), there is controversy whether recognition of emotion in faces is impaired in AD. New research shows significant ToM deficits in bvFTD and AD compared with controls.

Researchers studied ToM, recognition of facial emotion, and identification of emotions associated with video vignettes in bvFTD, AD, and normal controls. ToM was assessed using false-belief and visual perspective-taking tasks. Identification of facial emotion was tested using Ekman and Friesen’s pictures of facial affect. After adjusting for relevant covariates, there were significant ToM deficits in bvFTD and AD compared with controls, whereas neither group was impaired in the identification of emotions associated with video vignettes. There was borderline impairment in recognizing angry faces in bvFTD. Patients with AD showed significant deficits on false belief and visual perspective taking, and bvFTD patients were impaired on second-order false belief.

— *Alzheimer Dis Assoc Disord. 2013 Jan;27(1):56-61*

connections in Monkey Brain: Simple Grid

Detail from DSI scan shows fabric-like 3D grid structure of connections in monkey brain. Source: Van Wedeen, M.D., Martinos Center and Dept. of Radiology, Massachusetts General Hospital and Harvard University Medical School via NIH.gov
CARERS NEED GUIDANCE ADDRESSING BEHAVIORAL, PSYCHOLOGICAL SYMPTOMS OF DEMENTIA

Behavioral and psychological symptoms of dementia (BPSD), which are shown to be more responsive to treatment than are cognitive and functional decline, have been associated with increased carer burden and early institutionalization. Yet carers’ approaches to them are not well studied.

Researchers interviewed 25 carers of patients with BPSD using a semi-structured interview with the Neuropsychiatric Inventory (NPI). Participants reported high levels of BPSD with a mean score of 8.2 for symptoms and a mean NPI score of 51.4. Distress scores were also high with a mean of 18.5. Carers described on average, fewer than four strategies for managing BPSD. The most commonly used strategies were encouraging activity, utilizing psychotropic medications, identifying triggers, restraining or treating in a paternalistic manner, and meeting physiological needs.

Researchers concluded that while family carers are often at the forefront of identifying triggers and addressing unmet needs, some carers have a limited repertoire of strategies despite experiencing a large number of symptoms.

— Int Psychogeriatr. 2013 Feb 21:1-11

NEUROPSYCHIATRIC SYMPTOMS IN AD AND FUNCTIONAL CONNECTIVITY ALTERATIONS

A correlation between increased connectivity in anterior cingulate cortex and right insula areas of the SN and hyperactivity syndrome (agitation, irritability, aberrant motor behavior, euphoria, and disinhibition) has been found, demonstrating an association between specific network changes in AD and particular neuropsychiatric symptom types.

Findings are based on resting-state functional connectivity analysis with 20 patients with mild to moderate AD, which were correlated with their scores on neuropsychiatric inventory syndromes (apathy, hyperactivity, affective syndrome, and psychosis) with maps of connectivity in the default mode network and SN. Researchers also compared network connectivity in these patients with that in 17 healthy elderly control subjects. All analyses were controlled for gray matter density and other potential confounds. Patients with Alzheimer’s showed increased functional connectivity within the SN compared with controls (right anterior cingulate cortex and left medial frontal gyrus), along with reduced functional connectivity in the default-mode network (bilateral precuneus).

— Hum Brain Mapp. 2013 Feb 18

BROODING MINDS EXPLORED WITH FMRI

Brooding minds need to recruit more posterior dorsal anterior cingulate cortex (pdACC) activation when inhibiting a dominant response toward negative information (in favor of a response towards positive, research shows.) To investigate whether inter-individual differences in depressive brooding are related to neural differences underlying the inhibition of a dominant response towards negative information in favor of the concurrent (positive) response, researchers evaluated 30 never-depressed healthy individuals.

They used the Cued Emotional Control Task (CECT) to index the ability to enhance cognitive control when encountering a negative stimulus associated with an incompatible stimulus-response mapping. Individual brooding scores were not related to behavioral performances on the CECT, however, whole brain analyses demonstrated that trait depressive brooding scores were positively associated with activation in the posterior parts of the dorsal anterior cingulate cortex (pdACC) while successfully inhibiting a response to negative relative to positive information.

— Brain Cogn. 2013 Apr;81(3):352-9

MEG DELTA MAPPING ALONG THE HEALTHY AGING-AD CONTINUUM

Neurophysiological markers are usually not considered as in vivo biomarkers for AD. In order to assess the value of neurophysiology as an AD biomarker, whole-head magnetoencephalographic (MEG) resting state recordings were obtained from 35 AD patients, 23 mild cognitive impairment (MCI) patients, and 24 healthy controls. The AD group was further split into two groups differing in severity according to the GDS/FAST criteria.

Researchers found that eight regions of interest (ROIs) discriminated between AD patients and controls. All ROIs significantly negatively correlated with cognitive status (p < 0.001). DCD values in posterior parietal, occipital, prerolandic, and precuneus cortices distinguished reliably between MCI patients, AD patients with different severity scores, and controls.

Researchers showed that an increase of DCD in right parietal cortex and precuneus indexed the transition from MCI to mild dementia and from mild to more severe dementia. They suggest that MEG delta mapping might be a serious candidate for a “neural degeneration” marker of AD reflecting dysfunctional synaptic transmission. MEG delta mapping is a totally non-invasive technique that directly measures neural activity.

— J Alzheimers Dis. 2013 Mar 11