

WTC exposure was associated with poorer cognitive function, but this association was attenuated upon adjustment for PTSD. Analyses revealed that having current PTSD was associated with slower reaction time and processing speed as well as poorer working memory and cognitive throughput. In subdomain analyses, associations were concentrated amongst those who reported re-experiencing symptoms in the years immediately following the WTC disaster (in all cases, standardized effect sizes ranged from 0.85–1.20 SDs and $p < 1.2E-04$). Traumatized individuals are increasingly believed to be at higher risk of cognitive impairment and incident dementia. Results from this study support existing studies, showing that intrusive stress influences a broad range of cognitive functions absent traumatic head injuries. Future studies should utilize brain imaging to examine the extent to which neurodegeneration may explain these associations.

TRAINING NEEDS AND EDUCATION FOR DEMENTIA CARE IN CHINA: THE PERSPECTIVES OF MENTAL HEALTH PROVIDERS

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Purpose: The purpose of this paper is to identify needs of training and public education for dementia care including who should be the trainees, what would be the contents of training and how to deliver the training in China.

Methods: Using a purposive sampling method, data were gathered via four focus group discussions with 40 mental health providers in Beijing, China in 2011. Data were transcribed by two independent investigators, and then translated into English. Content analysis was employed to separately identify themes/codes among three researchers. Discrepancies were fully discussed until final agreement achieved.

Results: All participants agreed there is a huge need for training and public education on dementia care. Both formal (physicians, nurses, hospital administrators, community workers) and informal caregivers (family/non-kin hired caregivers) were identified as two groups for receiving the training. For formal caregivers, training topics for enhancing clinical knowledge of dementia (i.e., pathogenesis, clinical symptoms, approaches for dementia prevention) and clinical practice skills (i.e., diagnostic, caregiving, counseling, communicating skills) were identified. For informal caregivers, basic dementia knowledge and home-based caregiving skills such as safety, rehabilitation, and stress management strategies were identified as key training contents. Multilevel support from the government as well as community centers are considered as crucial in delivering the training and public education.

Conclusions: Culturally sensitive education and training specific for formal and informal dementia caregivers are urgently needed. Policy and program implications were discussed.

PREDICTION OF CAREGIVER BURDEN IN THE CONTEXT OF DEMENTIA-SPECIFIC DAY CARE

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Caregiving for a loved one with Alzheimer's disease and related disorder (ADRD) can lead to adverse caregiver outcomes. Among the interventions for those with ADRDs are day care programs. The purposes of the present study were to: (1) assess the caregiver burden among caregivers whose relative attended a dementia-specific day center; and (2) examine gender and racial/ethnic differences in caregiver burden. Data were collected by family nurse consultants in 10 day centers in Southeastern Florida, between February 2015 and January 2016. The centers are run as part of an Alzheimer's Community Care (ACC) intervention that operates under a comprehensive, community-based model of care. Caregiver burden was measured with the Zarit Burden Scale, which measures the caregiver's self-perceptions of the burden providing care. Among 306 day center participants, 60% were aged 80 or older, 67% female, 51% non-Hispanic White, 27% African American/Black, and 22% Hispanic/Latino. Over 75% of enrollees scored in the severely cognitively impaired category on the Brief Interview for Mental Status. About 10% of caregivers reported severe burden followed by 29% moderate to severe, 42% mild to moderate and 19% little to no burden. Caregiver burden was not differentially associated with gender of the care recipient. In racial/ethnic differences, African American caregivers were the least burdened. Interactions indicated that caregivers to Hispanic women were more burdened whereas caregivers to White women were less burdened. Considering that caregivers of Hispanic/Latina women are at greater risk of burden, more research is needed to understand gender and racial/ethnic differences in caregiver burden.

DEVELOPMENT OF AN INTERVENTION TO IMPROVE COMMUNICATION WITH PEOPLE WITH DEMENTIA IN NURSING HOMES

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Nurses often report communication difficulties in caring for people with dementia (PWD). Evidence-based interventions to enhance communication are scarce. Therefore, we developed a theory-informed intervention using the Behavior Change Wheel with the aim to improve communication between nurses and PWD. First, ideal communication was defined (*targeted behavior*) based on the scientific literature, policy reports and consultations of experts (n=7). Second, a focus group meeting with relevant stakeholders (n=7) was organized and observations of nurses (n=9) and PWD (n=9) during daily nursing care were conducted to understand their *current behavior* and to identify *facilitators* and *barriers* for the targeted behavior. Reviewing the literature and consulting experts have shown that ideal communication has to be person-centered and therefore should be tailored to the needs and capacities of PWD. Furthermore, next to verbal communication, attention should be paid to non-verbal communication, including the use of pictograms, objects, and touch. Additionally, the environment has to be recognizable and comprehensible for PWD. However, the focus group meeting and observations have shown that current behavior of nurses

is often characterized by a task-oriented instead of person-centered approach. Furthermore, non-verbal communication (e.g., eye contact) is insufficiently used. Identified facilitators and barriers for the ideal communication relate to nurses' characteristics (e.g., knowledge, awareness, and skills), social influences, and other environmental factors (e.g., resources). These insights were used to develop a theory-informed intervention in close collaboration with relevant stakeholders (e.g., nurses, speech therapists, and policy makers). The systematic development of the intervention and its final version will be presented.

PAIRED INTEGRATIVE EXERCISE FOR PEOPLE WITH DEMENTIA AND CAREGIVERS (PAIRED PLIÉ STUDY)

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We have recently developed a novel, multi-modal, group movement program for people with mild to moderate dementia and their primary caregivers called the Paired PLIÉ (Preventing Loss of Independence through Exercise) Program. The program is offered in community classes taught by trained exercise instructors to dyads of affected individuals with their caregivers. Paired PLIÉ is grounded in neuroscience and focuses on abilities that are relatively well-maintained in people with dementia (procedural 'muscle' memory, mindful body awareness, social connection). We have performed two pilot studies of 4 dyads each. The first pilot study met two days/week for 12 weeks followed by 3 monthly refresher classes. Study participants indicated that they preferred ongoing classes; therefore, the second pilot study met two days/week for 8 weeks followed by weekly classes for another 8 weeks. Qualitative results suggest noticeable improvements in physical function (ability to sit and stand), cognitive function (ability to express thoughts and feelings) and social function (ability to connect with others in a group setting) in affected individuals and greater acceptance and engagement in caregivers. Data analyses are ongoing. At the end of the second pilot study, all participants requested to continue the classes on a weekly basis. A larger randomized, controlled trial of the Paired PLIÉ program will begin in August, 2016.

BEING USEFUL IN RARE AND TYPICAL DEMENTIAS

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Being useful, or doing something that serves a purpose, has implications for wellbeing and underpins Erikson's psychosocial developmental stage of generativity. However little attention has been given to the concept of usefulness in dementia research, with the literature extending to understanding activities which are meaningful for individuals, but not to those which explicitly benefit others or a cause. This work explores usefulness for individuals and families living with typical Alzheimer's Disease (tAD) and Posterior Cortical Atrophy (PCA), a rare dementia usually early in onset and characterised by dominant impairments in visual

processing. In-depth individual and dyadic interviews with 37 couples (17 with tAD; 20 with PCA) were conducted and analysed using grounded theory.

A sense of usefulness was challenged both practically, due to the specific impairments characterising each diagnosis (i.e. dominant perceptual versus memory difficulties), and existentially. Individuals and their family members attempted to manage practical challenges by renegotiating roles and responsibilities over time, with motivation to do so varying according to levels of insight and memory function.

A diagnosis of dementia and its impact on subjective feelings of usefulness may be best understood as a biographical disruption. Further, notions of usefulness in dementia may be most effectively explored through an interactionist lens within the context of the family system and extended social system. This work raises important questions about how being useful is conceptualised, accessed and assessed, and by whom, and has broader implications for wellbeing and the provision of support in these and other degenerative diseases.

MIDLIFE SHIFT WORK AND RISK OF INCIDENT DEMENTIA

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Research examining the long-term effects of midlife shift work in relation to dementia risk is limited. The aim is to investigate the association between shift work and incident dementia in a population-based study.

Participants were 12,028 individuals from the Swedish Twin Registry (STR) born 1926–1943 i.e. at least 30 years of age upon receiving a mailed questionnaire in 1973 that included information on shift work history. A sub-sample of STR twins (n=8,953) who participated in a telephone interview in 1998–2002 also had data on duration of night work employment. Dementia diagnoses were obtained from Swedish national patient registers. Cox regression estimating hazard ratios (HR) was used for statistical analysis. Confounding factors such as age, sex, education, cardiovascular disease and type 2 diabetes were included in adjusted models. In a subsample of participants with genetic data (n=2,998), a genetic risk score (GRS) for morningness to assess circadian rhythm differences and APOE E4 status were considered in the models.

A total of 1,047 dementia cases (8.7%) were identified after a median of 41.3 years follow-up. History of any-type shift work (HR=1.22, 95% CI=1.07–1.40) and night work (HR=1.24, 95% CI=1.05–1.46) were associated with higher risk of dementia in multivariable-adjusted models. Dose-response relationships between dementia with any-type shift work duration and with night work duration were observed (p=0.002 and p=0.001 for linear trend, respectively). Adjusting for APOE E4 and GRS did not attenuate the associations.

In summary, findings indicate mid-life shift work history was significantly associated with increased dementia risk in later life.