The Influence of Cognitive Capacity on the Efficacy of Early Intervention and Prevention Strategies Among Older Homeless

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In the design and evaluation of intervention strategies applied to an aged homeless population several obstacles are encountered that may not equally apply to a younger cohort. Key areas of disparity are linked to the longer duration of homelessness resulting in deep-seated behaviours of social disconnectedness, distrust, premature aging and long-term dissociation from a safe, protected environment. Another, often underestimated factor involves the high prevalence of cognitive deficit within this population that exceed the effect of age-related dementia evident in people of equivalent age.

A comprehensive systematic review of published research completed in 2004, highlighted the association between homelessness and generalized cognitive impairment among adults.[1] The question as to whether such cognitive impairment is in any way specific to homelessness or whether it is similarly prevalent among other at-risk groups (e.g. people living in poverty) remains unclear. Indeed, while homeless people are likely to experience adverse circumstances, there is not necessarily any a priori reason why they should exhibit a pattern of cognitive deficit distinct from the poor or otherwise disadvantaged.

Cognitive impairments among the homeless population arise from a number of sources including schizophrenia, substance abuse, traumatic, or acquired brain injury, progressive neurological disorders, and developmental disabilities — all of which have been shown to be more prevalent among the homeless population, particularly with increasing age. Impairments may originate from more than one source, and the pattern of cognitive problems may shift over time.

The majority of the studies that have examined the incidence of cognitive deficit among the homeless population used the Mini Mental State Examination (MMSE) screening tool. The MMSE provides a brief easy-to-administer test with high inter-rater reliability, however; it is an insensitive indicator of cognitive impairment which has a low sensitivity for the detection of focal deficits and frontal lobe disorders.[2] The proportion of adults living in the community exhibiting deficits on the MMSE has been estimated at 2–3%, whereas most studies of homeless populations showed rates as high as 30 to 40%.[3, 4, 5] The prevalence of cognitive impairment among homeless men and women within Sydney's emergency shelters has been shown to increase significantly with age.[5] This finding corroborates the findings of an earlier research project conducted in Los Angeles which also found an increased prevalence of cognitive impairment with increasing age among a cohort of homeless people.[6]

Cognitive impairments have been shown to significantly affect an individual's ability to obtain and maintain stable housing, and to benefit from supportive services.[7] The type of housing placement has also been shown to bear a direct relationship with level of cognitive functioning; notably, socially isolating housing is associated with higher levels of cognitive deficit particularly in the domains of impaired planning and organisational skills, abstract reasoning and impulse control (i.e., executive functioning). Homeless persons with serious mental illness who lived in independent apartments demonstrated significantly lower levels of executive functioning, verbal memory and sustained attention when compared with those living in a communal group environment.[8] It is however it is unclear from this research as to the sequence of occurrence i.e. does a person with a cognitive deficit live in an independent environment because their impairment challenges their ability to live in a cooperative communal environment or does a person's level of social isolation affect their cognitive functioning?

It has also been shown that the level of cognitive impairment is influenced by the duration of homelessness. In studies of homeless men living in a hostel in Sydney, those with significant levels of cognitive impairment had been homeless for an average 25 months, compared with 12 months for those without impairment.[3] Bremner and associates (1996) reported similar findings among homeless men in London; they found that duration of homelessness was positively related to level of cognitive deficit.[9]

In view of the fact that the MMSE is not the best way to assess executive function and may accrue type II errors (false negatives).[12] There is a need for studies that utilize more specific test of executive function such as the Trails B, Stroop and Rey Complex Figure Test. With the application of such tests evidence suggests that a significantly larger proportion (up to 80%) of homeless adults demonstrate some degree of executive impairment,[11, 12] however the number of studies that utilise such tests within the homeless population is limited.

Although costly and lengthy, neuropsychological assessment provides the most valuable tool in tailoring the most effective intervention for homeless individuals. Neuropsychologists use scientifically validated objective tests to comprehensively evaluate cognition, mood, personality, and behaviour. An important outcome of this testing is the interpretation of the results which are used not only as the basis of the treatment or intervention planning but provides valuable insight into the capacity or potential of the individual to change or modify their behaviours.

Successful interventions and outcomes are still possible, even for homeless individuals with significant levels of impairment. Flexible service systems, integrated health and psychosocial services provided by a multidisciplinary team, and client-centred care are all contributing factors to the success of such programs. Engagement in a therapeutic relationship based on trust and the development of a care plan influenced, where possible, by the client's own perception of what constitutes wellbeing and quality of life, are essential to this process.

Standardised tests that assess wellbeing and life role participation may assist service providers in identifying and monitoring changes in these values. Currently in Melbourne a research trial is underway investigating the success of an intensive supported residential model in improving the life quality of older homeless men with significant levels of acquired brain injury.[12] Based on a comprehensive neuropsychological assessment, individual behaviour management and care plans have been implemented. This action research is exploratory in nature incorporating both qualitative and quantitative outcome measures. Depression and aggression scales, life satisfaction and quality of life assessment tools have all been employed to determine the effect of interventions.

The project fully titled, 'Older People with Acquired Brain Injury and Associated Complex Behaviours: A Psychosocial Model of Care That Supports Long-term Residential Care Needs: (The Wicking Project)' commenced in October 2006. Substantially funded by a Major Strategic Initiative Grant from The JO and JR Wicking Trust which is managed by ANZ Trustees the project is based in Wintringham, Flemington. Wintringham is a not-for-profit welfare company that provides high quality aged care services specifically targeted at elderly homeless men and women (50 years and older). As a result of their homeless background, the proportion of Wintringham clients with non-age-related cognitive impairment is uncharacteristically high compared with mainstream aged care services.

Strategies for supporting homeless people with cognitive impairment are not well-integrated into standard practice principally because they come from varied settings and disciplines. In many instances time, budget and space limitation make detailed examination and assessment difficult; however, there are analysed research- and practice-based strategies for modifying assessment, treatment, or shelter/supported housing services to reflect the special needs of people with significant cognitive impairment.[11]

These include such strategies as:

- Use service modalities that are not cognitively demanding;
- Set well-defined client-centred goals;
- Provide concrete explanations of actions to be taken;
- Offer continual and consistent behavioural reinforcement;
- Use memory enhancement approaches;
- Provide staff with education and training on the client's individual support requirements;
- Use very clear, concise, and specific language, avoiding abstractions and unnecessary detail;
- Information should be provided slowly, with opportunity for questions; and
- Goals should be broken down to one-at-a-time achievements, instead of presenting the person with a set of goals they may find overwhelming.

The importance of ascertaining a homeless person's cognitive ability relates directly to the effectiveness of early intervention and prevention strategies. Deficits in a person's memory, perception, judgment, planning, and speech can result in poor problem-solving and social skills, and in his/her inability to make sound decisions. Executive impairments also commonly result in difficulties with behaviour regulation, which can include difficulties with initiation (i.e. adynamia) and impulse control. If a person is to change their life circumstances, learn new skills and break destructive patterns of behaviour, ability to learn, problem-solve, self-monitor and regulate behaviour (executive functioning) is required. The questions pertinent to the homeless in a rehabilitative or preventative program are: to what extent is their cognitive impairment present and how will persistent deficits impact upon social functioning and reintegration?

Researchers and service providers who endeavour to develop and implement intervention and prevention programs for older homeless people, should therefore consider the capacity of their target population to achieve behavioural change, target interventions taking into account client's cognitive strengths and weaknesses, and carefully consider the appropriateness of the outcome measures to be employed in view of the increased likelihood of cognitive dysfunction. ■

Footnotes

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