Cognitive Dysfunction – Do We Acknowledge the Difficulties?

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Having worked for 25 years in the health system, I have noticed that the system in its structure and capacity sometimes neglects to properly observe and understand the patient. Rather than analyzing the patient's individual attributes and addressing them, the system fits the patient into its present institutional organization with its current theoretical approach and treatment paradigm. In order to see our patients clearly, we have to be aware of the way our institutions ignore inconvenient information. If we hold to a specific theoretical approach, we risk overlooking the information that is inconsistent with the theory. If, for instance, we don´t have the necessary housing facility for a person with specific important needs, there is a risk that the needs are not addressed. When our actions do not work out as planned, we have to consider if there are aspects that we overlooked.

One of the difficulties that is easily overlooked or confused with other difficulties is cognitive dysfunction. In Denmark, scientific evaluation will often describe the problems of a person who is homeless in terms of drug or alcohol abuse, psychiatric and physical illness, poverty, social strain and exposure to violence. Looking at the trajectory of homelessness you can observe three different categories: transient, chaotic and long-lasting homelessness[1]. However, the profiles of the people (in terms of their problems) in these three trajectories do not greatly differ. This suggests that there are some aspects related to the problems of the homeless person, that are not being considered. One factor which may impact trajectories in homelessness is cognitive dysfunction. Cognitive dysfunction can appear as a lack of motivation, aggression, dishonesty or a personality disorder. Furthermore, the health and social systems caring for homeless people are not sufficiently informed, or even equipped, to recognize cognitive dysfunction. If we mistake cognitive dysfunction for something else, the help we supply may not be relevant or efficient, it may even be harmful and worsen the cognitive dysfunction. If we interpret cognitive dysfunction as lack of motivation, we might even cease to offer help. Likewise, if we recognize the cognitive dysfunction but do not understand or feel comfortable in dealing with it, we may, as professionals, feel powerless.

Scientific evidence shows that homeless people are more likely to experience cognitive dysfunction. There are signs of cognitive dysfunction both among older and younger homeless people. The extent is however debated. There are plenty of obvious reasons to assume that cognitive dysfunction is widespread. Among homeless people there are higher rates of alcohol and drug abuse, mental illness, violence and adverse social experiences. Each of these conditions are associated with brain damage to a varying extent. Overdoses, toxic effects of drugs, head injuries, depression, schizophrenia and dementia, are just some of the possible mechanisms.

One central subset of cognitive function is the executive function. The executive function comprises different aspects such as working memory, planning and problem-solving ability, selective attention and inhibition, impulsivity and risky decision making, verbal fluency. All functions are important for adapting to changes in daily living, learning, working, and cooperating with others. Executive dysfunction is shown to be associated with both early life family trauma or maltreatment and poverty, both of which have commonly been experienced by homeless people.

Executive function is primarily located in different areas of prefrontal cortex and in the neural pathways that are connected to the prefrontal areas. Prefrontal damage is of great importance because deterioration in prefrontal function and thereby executive function can cause both subtle and severe changes in what we understand as personality. There can be changes in mentalizing, self-awareness and the ability to adjust behavior. When you consider the implications of dysfunction on these personality traits it becomes

1 Benjaminsen L., Enemark, MH, Veje ind og ud af hjemløshed. En undersøgelse af hjemløshedens forløb og dynamik. VIVE 2017

obvious that dysfunction can cause difficulties in relating to other people, including professionals. Thus it is easy for conflicts to arise from the inability of the patient to understand the motives of the professional. They might also arise from difficulties understanding one´s own part in communication, or a lack of confidence. Therefore difficulties in holding on to agreements are possible and not uncommon ways of losing access to professional help.

Research shows attachment styles and executive functioning are linked. Among people experiencing homelessness, there appears to be a connection between insecure attachment style and lower level of executive functioning.

Memory deficits can also be related to damage to the hippocampus. A recent study has correlated the size of certain areas of the hippocampus with difficulties in immediate and delayed verbal recall. These difficulties were found in up to 75% of the examined population of 227 people experiencing homelessness.

Executive dysfunction may be more subtle and difficult to detect than more global difficulties but will become apparent in, for instance, a housing process. It has been shown, among young homeless people, that working memory is of particular significance in attaining more independent housing in a short-term housing process[2]. Apart from the long-term impairment of brain damage, working memory can also be temporarily impaired by adverse life events and psychosocial stress via the negative effect of stress hormones in the hippocampus and prefrontal cortex. Homeless people are more likely to have experienced adverse life events. Living in the street, even very temporarily, will increase psychosocial stress.

When testing for cognitive dysfunction we should remain conscious that testing facilities are not equivalent to real-life function. Testing can only give us an indication of difficulties, it can't give the complete picture of a person. Test results should always be considered together with other observations. We tend perhaps to think of cognitive dysfunction as something stable. This is however not always so. The cessation of drug and alcohol misuse, reduction of stress, treatment of mental or physical suffering or training of executive functions will often to some extent improve daily function.

There is a risk that both minor and severe cognitive difficulties will increase the risk of chronicity or long-term homelessness. The housing process emphasizes the need to adjust the process of helping and accommodating homeless people to adapt to these difficulties. When we consider the association between psychosocial stress, adverse life events, attachment style and cognitive dysfunction, the need for calm and safe hostels with professional knowledge of coping with executive function becomes clear. It can be facilitating for professionals to view these difficulties as signs of minimal brain-damage instead of personality traits and on that account try to fight the unproductive distinction between worthy and needy in the assistance of homeless people.

2 Fry, Charlotte E, Langley, Kate, Shelton, Katherine H. (2019). Executive function in homeless young people: Working memory impacts om short-term housing outcomes. Child Neuropsychol. 2019 Jun 24:1-27