



Patients with Alzheimer disease may exhibit neuropsychiatric symptoms due to their language backgrounds in early life

Marcellino Coppola[†]

Received date: 02-Feb-2022, Manuscript No. NPY-22-57981; **Editor assigned date:** 04-Feb-2022, PreQC No. NPY-22-57981(PQ); **Reviewed date:** 15-Feb-2022, QC No NPY-22-57981; **Revised date:** 25-Feb-2022, Manuscript No. NPY-22-57981(R); **Published date:** 04-Mar-2022, DOI: 10.37532/1758-2008.2022.12(2).629

Introduction

The core symptoms of Alzheimer's disease are Neuropsychiatric Symptoms (NPSs), which can be psychotic (delusions and hallucinations), affective (apathy, depressed mood, irritability, and anxiety), or behavioural (euphoria, disinhibition, agitation, aberrant motor activities, sleep disturbance, and eating disorder). NPSs were originally assumed to appear in persons who were at the end of their lives. However, it is now known to present in prodromal and all stages of Alzheimer's disease. NPSs are also linked to early institutionalisation, caregiver anxiety, and rapid cognitive deterioration. In a recent study, the prevalence of NPSs in patients with Alzheimer's disease was estimated to be at 30%-40%, with an annual incidence of 20%-30%. If untreated Alzheimer's patients are included, the prevalence of NPSs could be as high as 77.8%.

Many biological characteristics, such as age, sex, race, disease severity, and general medical state, have been proposed as risk factors for NPSs. In most research, the severity of dementia has been consistently linked to NPSs. However, the results of studies on these biological risk variables have been equivocal, if not downright conflicting at times. Studies have focused on environmental or psychosocial effects on individuals in addition to biological risk factors. Biological and environmental consequences have been identified in certain studies.

Depression was substantially more common in cognitively impaired Chinese Americans than in cognitively impaired Caucasians, according to a study that included 137 elderly Chinese Americans and 140 Caucasians with and without cognitive impairment from a referral memory clinic.

Furthermore, Chinese Americans were less likely than Caucasians to be receiving depression treatment. In that instance, depression is linked to both biological and environmental factors, such as ethnicity and education and culture. Few research, however, have looked into the relationship between early language experience and NPSs in dementia. Aside from NPSs, Alzheimer's disease affects patients' cognitive function in a variety of ways. One of the earliest and most prevalent signs is a loss of language. It frequently causes communication issues and puts a strain on caretakers. According to studies, persons with Alzheimer's disease may seek to employ childhood languages or even neologisms as a result of their linguistic difficulties.

Many Taiwanese people received official Japanese education as children prior to World War II (WW II). As a result, unlike their Taiwanese contemporaries who earned their education after the war or on the mainland, these Taiwanese people can communicate in Japanese. Japanese was also their first symbolic language. Taiwan's official language was converted to Mandarin Chinese after the war. As a result, Taiwanese people who received formal Japanese education maintained a low degree of fluency.

Department of Psychology, Educational Science and Human Movement, University of Palermo, Palermo, Italy
[†]Author for Correspondence: Marcellino Coppola, Developmental Neurology Unit, IRCCS Foundation Carlo Besta Neurological Institute, Celoria 11, Milan, Italy email: marcellinocoppola@gmail.com.

cy in Japanese. Most members of this group still speak Taiwanese or Mandarin Chinese in everyday life.

We recruited 21 individuals with Alzheimer's disease from a memory clinic in a previous pilot trial. We discovered that multilingual Alzheimer's patients had higher delusions. Furthermore, delusions are thought to be caused by "linguistic mixing" and "wrong emotional response." This study investigated this notion further by employing a more complete design and a large sample size cohort.

Discussion

According to the findings of this study, Taiwanese patients with Alzheimer's disease who got Japanese education as a child may have higher NPSs than those who did not. The link was stronger among patients with Alzheimer's disease who had a poor educational level. The differences in NPSs between these two groups were limited to hallucination, depression, and anxiety. Simultaneously, we discovered that individuals with Alzheimer's disease who had had Japanese schooling had lower language-related MMSE sub-item scores than their non-Japanese peers.

The effects of "linguistic mixing," which we demonstrated in a prior pilot study, can be related to the findings of our investigation. In their childhood, our participants had received official Japanese education for about 6 years. Despite the fact that Japanese was their first symbolic language, they spent the majority of their time speaking Taiwanese or Mandarin Chinese. To put it another way, they were mostly unbalanced multilingual. When they got dementia, each language may not have devolved at the same time, and they tended to converse with others using a mixture of lan-

guages. More misunderstanding and improper emotional responses may have resulted as a result. In a prior study, we used various real-life examples to highlight this tendency. In the current study, we discovered that communication challenges may have caused increased delusion, depression, and anxiety in our Alzheimer's patients. Delusions have been linked to early life experience, and the combination of these behavioural symptoms has been documented in dementia patients with decreased language function.

Chronic stress in this group of persons with distinct life circumstances could perhaps be a factor in our findings. Taiwan's official language was converted from Japanese to Mandarin Chinese after WWII. As a result, persons who had received a Japanese education were largely isolated and had fewer career and educational prospects. Chronic stress has been identified as a risk factor for Alzheimer's disease, with the potential to increase the incidence or speed up the onset of the disease. In a population-based sample followed for 35 years, patients with more self-reported psychological stress in midlife acquired AD in late age, according to a longitudinal study.

Inflammation and glucose metabolism were employed to elucidate the underlying process in animal research. More NPSs, according to our findings, should be viewed as an early and critical indicator of potential rapid cognitive impairment. The GDS (self-reported) did not reveal that the patients were more depressed than another group of people in this study; nevertheless, the sub-item analysis of the NPI-Q (completed by their family or carers) indicated that the patients were more depressed. There was a disparity between the two scores. This gap could be due to a disconnect between their perception of themselves and their perception of their family or carer.