A Culturally Appropriate and Linguistically Understandable Translation Approach: For Dementia-related Public Health Information

By:

Zihan He

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Department of Chinese Studies
School of Languages and Cultures
Faculty of Arts and Social Sciences
The University of Sydney

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Statement of Originality

This is to certify that the content of this thesis is my own work. This thesis has not been submitted for any other degree or purpose.

I certify that the intellectual content of this thesis is the product of my own work, and that all assistance received in preparing this thesis and all sources have been acknowledged.

Zihan He

Artificial Intelligence Statement

Artificial intelligence tools were used in a limited and transparent manner during this research. Microsoft Copilot was used to assist with translating some interview transcripts from Chinese into English, ensuring the accuracy and fidelity of bilingual data representation. Grammarly was used to proofread the final drafts of this thesis to correct grammatical errors and improve language clarity. The author conducted all analytical interpretation, data coding, and final writing. The use of these tools did not influence the intellectual content, data interpretation, or academic argumentation in this thesis.

Name: Zihan He

Date: 19 May 2026

Authorship Attribution Statement

I, Zihan He (ZH), conducted the PhD research from 2022 to 2025 at the Department of Chinese Studies, the School of Languages and Cultures, the Faculty of Arts and Social Sciences, the University of Sydney. This research was completed under the supervision of Prof Meng Ji (MJ) and Prof Lee-Fay Low (LL), with the additional contributions from Dr Sally Day (SD), Ms Lucie Downer (LD), Dr Yang Xu (YX), Dr Annica Barcenilla-Wong (AB), Mr Cedric Cheng (CC), A/Prof Lyn Philipson (LP), and A/Prof Mustapha Tabi (MT).

I am the first author of all the chapters in this thesis. Except for Chapters 1 and 6, the remaining chapters were co-authored with other co-authors. I conceptualised all studies in the PhD research. I conducted interviews with participants and led the analysis of the interview data. I led the survey design and the survey data analysis. Specific contributions made by each author are as below:

Chapter 2 *Renaming Dementia in Chinese – A Proposal for a Scientifically Accurate and Culturally Appropriate Chinese Term for Dementia* (ZH, MJ, LD, CC, YX, SD, AB, LW)

ZH conceptualised the chapter. ZH, LL and MJ designed the study. ZH, AB and MJ prepared the ethics application. ZH recruited and interviewed participants, and transcribed and translated interview scripts. ZH and CC coded the interview scripts. ZH drafted the chapter. All co-authors critically reviewed and approved the chapter.

Chapter 3 *A Culturally Appropriate and Linguistically Understandable Translation Protocol: For Dementia-related Public Health Information* (ZH, MJ, LP, MT, CC, SD, LD, LL)

This chapter has been under review for the book – A. D. Moore, E. Stephens & K. Sutton (Eds.), Health and Medical Humanities in Australia, Routledge. ZH conceptualised this chapter. ZH, MJ and LL designed the chapter. ZH drafted the chapter. All co-authors critically reviewed and approved the chapter.

Chapter 4 *Culturally Appropriate and Linguistically Understandable Translation Strategies: For Dementia-related Public Health Information* (ZH, MJ, LL)

ZH conceptualised the chapter. ZH, MJ and LL designed the chapter. ZH drafted the chapter. All co-authors critically reviewed and approved the chapter.

Chapter 5 *Effectiveness and Acceptability of a Culturally and Linguistically Appropriate Translation Protocol: Evidence from Community Testing* (ZH, LD, SD, MJ, AB, LL)

ZH conceptualised the chapter. ZH, LD, SD, AB and LL designed the study. ZH, LD and SD recruited respondents. AB prepared the ethics application. ZH led the analysis of the survey (qualitative analysis and descriptive data analysis). LD was responsible for the inferential analysis of the survey. ZH drafted the chapter. All co-authors critically reviewed and approved the chapter.

Name: Zihan He

Date: 19 May 2026

Abstract

Dementia is the seventh leading cause of death globally, the fifth leading cause of death in Mainland China, and the leading cause of death in Australia. As the number of immigrants from non-English-speaking countries living in Australia has rapidly increased, Australia has become more culturally and linguistically diverse (CALD). Australia needs to confront the growing challenge of an ageing CALD population, which inevitably means an increasing number of CALD people living with dementia. In recent years, several health campaigns have been launched targeting CALD populations, aiming to raise awareness of dementia and encourage early diagnosis of dementia. Many CALD people do not speak English well, making it essential to provide translations into their own languages when delivering educational materials.

However, most of the current translations of dementia-related public health information adopt a literal approach. These literal translations are highly unlikely to be culturally appropriate and linguistically understandable (CALU) for the CALD population. Such translations may not merely fall short of reducing dementia-related stigma among CALD communities. In fact, the translated information exacerbates misconceptions and deepens prejudice against dementia. For example, the mainstream Chinese translation of "dementia" is "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), which is regarded as the root cause of dementia stigma in Chinese culture.

To provide more accessible translations of dementia-related public health information, this thesis proposes the CALU Translation Model, comprising the CALU translation process and strategies. This thesis illustrates this model through the CALU Chinese translations of English dementia-related public health information. Moreover, this thesis empirically demonstrates that target readers prefer CALU translations over standard translations by surveying them.

To avoid using "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) in the CALU Chinese translations of dementia-related public health information, this thesis

proposes a scientifically accurate and culturally appropriate Chinese term for "dementia" – "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) by interviewing twenty-one Chinese-speaking dementia experts from the Asia-Pacific region.

The CALU Translation Model has been applied to health campaigns – Face Dementia and Facing Dementia Together. In Face Dementia, the CALU Translation Model has been adopted to provide the Chinese translations of campaign materials. In Facing Dementia Together, the CALU Translation Model has been adopted to provide the Arabic, Chinese and Vietnamese translations of campaign materials.

The proposed term, "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome), has been endorsed by Dementia Australia, the peak organisation of dementia in Australia. Dementia Australia has utilised this term in its Chinese resources. This term's update has been widely reported by SBS Australia and the University of Sydney to inform the public.

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Time has flown by so quickly. From March 2022 to October 2025, this journey has been filled with challenges and pressures, yet it has profoundly transformed my life. Beyond earning a degree, it has reshaped the way I think, perceive, and engage with the world. This PhD journey has been a transformative experience that would not have been possible without the guidance, support, and kindness of many people.

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understanding of the norms and significance of social science research. My sincere appreciation also goes to Annica, Cristian, Cedric, Nora, Cynthia, Aisha, Van, Danika and Lyn, whose kindness and encouragement made me feel genuinely supported and connected within the team.

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List of Abbreviations

Abbreviation	Full Form
ABS	Australian Bureau of Statistics
ACSQHC	Australian Commission on Safety and Quality in Health Care
AD	Alzheimer's Disease
AIHW	Australian Institute of Health and Welfare
APA	American Psychiatric Association
BT	Back translation
CA	Cultural appropriateness
CALD	Culturally and linguistically diverse
CALU	Culturally appropriate and linguistically understandable
CLAT	Culturally and linguistically adapted translation
CNCTST	China National Committee for Terminology in Science and Technology
COT	Community-optimised translation

DSM	Diagnostic and Statistical Manual of Mental Disorders
ICD-11	International Classification of Diseases, 11th Revision
JCCPA	Jockey Club Centre for Positive Ageing
LT	Literal translation
LU	Linguistic understandability
MT	Machine translation
NAATI	National Accreditation Authority for Translators and Interpreters
NGO	Non-governmental organisation
SA	Scientific accuracy
ST	Source text
TADA	Taiwan Alzheimer's Disease Association
TCM	Traditional Chinese medicine
THP	Thinking Healthy Program
TT	Target text
WHO	World Health Organization

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Chapter 1 Introduction

1.1 Research Background

According to the World Health Organization (WHO, 2025), there are over 57 million people living with dementia in the world. This figure is estimated to reach 75 million in 2030 (WHO, 2017). Dementia is also the 7th leading cause of death worldwide (WHO, 2025). For some countries, dementia is playing a more significant role in terms of mortality. Dementia is the leading cause of death in Australia (Australian Institute of Health and Welfare [AIHW], 2025), and Alzheimer's disease (AD), a type of dementia, has been the 5th leading cause of death in China (Ren et al., 2022) and the 6th leading cause of death in the U.S (Alzheimer's Association, 2025). Despite this, the public still has limited knowledge about dementia (Zhao et al., 2020). According to WHO (2025), dementia is a broad term used to describe the decline of memory, language, problem-solving skills, and other cognitive capacities to the extent that they significantly disrupt everyday functioning. The most commonly seen case of dementia is AD which comprises around 60% to 70% of total dementia cases. Other forms of dementia include Vascular Dementia (second most common form), Lewy Body Dementia (or Dementia with Lewy Bodies), and Frontotemporal Dementia (WHO, 2025). However, people tend to think that dementia and AD are interchangeable (U.S. National Institute on Aging, 2024). In addition to this myth, many myths about dementia are also widespread, for example: (1) dementia is a natural part of aging; (2) if a person's parent develops dementia, the person will get dementia; (3) only elderly people can develop dementia; (4) people can do nothing once they get dementia (U.S. National Institute on Aging, 2024). Therefore, it is vital to educate the public about dementia so the public can recognise the early signs of dementia, seek medical attention, and find a timely and scientific solution for their health situations.

Compared with many other health issues, the stigma of dementia is a salient problem that has troubled public health practitioners for a long time. The stigma of dementia can be reflected in manifolds such as the negative perception of people with dementia, public fear, and even discrimination in healthcare services (Nguyen & Li, 2020; Phillipson et al., 2015). Stigma, in essence, creates obstacles for individuals with dementia and their families to obtain essential treatment and assistance, ultimately affecting their overall well-being and quality of life (Phillipson et al., 2014; Kim et al., 2022). In Australia, higher levels of negative cognitive attributions connected to dementia were seen in three specific groups: (1) older age cohorts; (2) persons who have personal connections with someone affected by dementia; and (3) those who use a language other than English as their primary language at home (Kim et al., 2022). In addition, the stigma associated with dementia is a widespread barrier in culturally and linguistically diverse (CALD) communities in Australia (Low & Purwaningrum, 2020; Brijnath et al., 2022). The stigma of dementia is intricate and differs among CALD communities. This variation is influenced by sociocultural factors, such as beliefs about the causes of dementia, negative stereotypes associated with people living with dementia, and the negative meanings attached to the terms used to describe it (Siette et al., 2023; Wernar & Kim, 2021). In Australia, 27.6% of the total population was born outside Australia, and 5.5% of Australians share Chinese ancestry constituting the 5th largest population group following English, Australian, Irish, and Scottish (Australian Bureau of Statistics [ABS], 2022). In addition to English, 2 of the top 5 languages used at home are Chinese languages – Mandarin and Cantonese (ABS, 2022). This demonstrates that the Chinese community in Australia is an integral part of Australian society, and their views on dementia will influence Australian society's views on the condition. Yet, Chinese culture is featured with shyness, passivity, and "loss of face" (Mason, 2023). Consequently, these features and the stigma embedded into Chinese culture result in Chinese people being reluctant to discuss dementia with others. The dementia-related stigma often hinders Chinese people from seeking timely diagnosis, scientific treatments, and necessary supports for their dementia-like symptoms, which gives the opportunity for early-stage dementia to develop into middle-stage and late-stage dementia sooner (Low et al., 2019; Woo, 2013; Woo & Mehta, 2017). The stigma surrounding dementia in Chinese culture can be instantly seen from its Chinese name – "痴呆症 *chī dāi zhèng*", whose literal translation is "Stupidity and Idiocy Syndrome". Furthermore, Chinese people have some common misunderstandings about dementia. They believe, for example, that communicating with people who have dementia can be challenging. Companies are likely to terminate the employment of a 65-year-old employee who is affected by dementia. People with dementia may have difficulty comprehending the concern or fear expressed by others (Woo & Chung, 2013).

WHO (2017) appeals to build a dementia-inclusive society, which is also an approach to protect human rights. A dementia-inclusive society allows people living with dementia, as well as their carers enjoy fulfilling lives and get the necessary care and support to reach their full potential with dignity, respect, independence, and fairness (WHO, 2021). Although Australia has been promoting a dementia-inclusive society for years, dementia is still widely not treated as a disability, and people with dementia can still live in social isolation (Dementia Australia, 2021). A recognised effective way to reduce dementia-related stigma is to educate the public (Alzheimer's Disease International, 2019; Cheng et al., 2011; Kim et al., 2021). Compared with English-speaking populations in Australia, CALD people encounter an extra barrier when they try accessing education and literature, which is the language barrier (Boughtwood et al., 2012; Patel et al., 2022). In fact, the language barrier does not only negatively affect CALD people to access dementia-related education and literature, but also impedes CALD people from approaching dementia supports and services provided by communities (Boughtwood, 2012; Shanley et al., 2012). Thus, the provision of translation and interpreting services to break down the language barrier should not be ignored if a multicultural society wants to build a dementia-inclusive society.

1.2 Dementia in Australia and among CALD Populations

1.2.1 Dementia in Australia

Dementia is a term used to describe a set of symptoms that are caused by illnesses that damage the brain, which refers to a collection of disorders that include a steady decline in brain function, leading to potential effects on memory, speech, cognition (thinking), personality, behaviours, and mobility (AIHW, 2025). In 2024, there were approximately 425,000 Australians living with dementia (AIHW, 2025). Even though the Australian government and relevant health authorities have realised the increasing trend and invested funds to publicise the information about risk factors for dementia, the sharp increase in the number of people with dementia has not levelled off. There are around 16 individuals with dementia for every 1,000 Australians. However, this number climbs to 84 individuals with dementia for every 1,000 Australians who are 65 years old or older. Notably, dementia has been the leading cause of death for Australians (AIHW, 2025). Hence, dementia is a prevalent and escalating health and aged care concern in Australia, which greatly affects the well-being and quality of life of those with the disorder, as well as their loved ones.

In addition to the serious harm to the health of the Australian society, dementia also contributes the significant economic loss to Australia. The cost of dementia can be categorised into direct costs and indirect costs. Direct costs refer to the expenses spent on people with dementia, which include aged care and health related costs and non-medical expenditures specifically for out-of-pocket costs incurred by people with dementia, family members and carers (Brown et al., 2017). In 2020-21, around AU$3.7 billion was spent on direct health and aged care systems specifically for dementia (AIHW, 2025). It is estimated that the total direct cost of dementia will reach approximately AU$24 billion in 2056 (Brown et al., 2017). Indirect costs are caused by the reduced productivity of people with dementia and their carers. For example, a person with younger-onset dementia retires early, and the lost income due to the early retirement should be counted as an indirect cost (Brown et al., 2017). As for indirect costs of dementia, the total value which includes the financial impact of reduced productivity among people with dementia and their caretakers, were projected to be AU$5.5 billion in 2016 and AU$5.6 billion in 2017. It is estimated that the overall indirect expenses associated with dementia would rise to AU$9.1 billion by 2036 and surpass AU$12.8 billion by 2056, representing a more than twofold increase (Brown et al., 2017).

1.2.2 Dementia among Australian CALD Populations

The concept of “cultural and linguistic diversity” was first introduced by the ABS (1999) to highlight the diversity of cultures and languages shared by people living in Australia (Pham et al., 2021). The concept of CALD can vary in different settings, but it at least refers to 4 core indicators: “Country of Birth of Person”, “Main Language Other Than English Spoken at Home”, “Proficiency in Spoken English”, and “Indigenous Status” (ABS, 1999). In addition, some more variables are also considered if necessary, including “Ancestry”, “Country of Birth of Father”, “Country of Birth of Mother”, “First Language Spoken”, “Languages Spoken at Home”, “Main Language Spoken at Home”, “Religious Affiliation”, and “Year of Arrival in Australia” (ABS, 1999). However, after a systematic review by Pham et al. (2021), they reviewed 108 epidemiological studies and found that no researchers strictly followed the 4 core indicators. Among the researchers, 30.6% solely define the CALD people based on the country of birth, and 19.4% merely distinguish the CALD population with reference to the language spoken at home (Pham et al., 2021). Thus, although there is an “official definition” of “CALD”, researchers have their own focuses while defining the CALD population. For the general purpose of advertising information about the CALD, the CALD population used by AIHW (2018) often refers to people who were born outside Australia, speak languages in addition to English, or have a parent not born in Australia.

According to AIHW (2025), approximately 25% of Australians living with dementia were not born in an English-speaking country. In Australia, 26% of people aged 30-64 were born in a non-English-speaking country. Yet, only 18% of Australians with dementia aged 30-64 were born in a non-English-speaking country. The relatively low diagnosis rate can be caused by higher levels of dementia stigma in their born countries (AIHW, 2024a). Based on the data provided by AIHW (2025), around 2.9% of Australians with dementia are Chinese. Although Chinese people constitute 5.5% of the total population in Australia (ABS, 2022), their representation in the overall dementia population remains disproportionately low.

1.3 Dementia-related Stigma in Chinese Culture

Stigma is the term used to describe the negative preconceptions that various groups face due to the beliefs held by the community. These views may lead to biased and discriminatory actions against marginalised populations (Cheng et al., 2011). Dementia-related changes in the aspects of cognition (e.g., greater forgetfulness), behavioural symptoms (e.g., sadness or hallucinations), and the manifestation, experience, and response to impairment itself in certain sociocultural circumstances may generate dementia-related stigma (Liu et al., 2008). Dementia-related stigma has been widely recognised as the main reason why people delay and even refuse to seek medical attention for dementia (Gao et al., 2020; Herrmann et al., 2018; Woo & Mehta, 2017). The commonly used Chinese expressions to represent dementia and AD are "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) and "老年痴呆症 *lǎo nián chī dāi zhèng*" (Elderly Stupidity and Idiocy Syndrome), respectively. The two terms have been extremely aggressive towards people with dementia. In Chinese culture, neither term is specifically used for people with dementia. For instance, Chinese people can use "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) to depict people related to "wrongdoing", "craziness" and "worrying too much" (Sun et al., 2012).

In America, a higher proportion of Asian Americans (53%) compared to Anglos (16%) agreed with the statement that "Alzheimer's is a type of insanity" (Ayalon & Arean, 2004). Chinese Americans are found to be more vulnerable to the stigma of dementia, which increases the suffering of people with dementia and delays people's willingness to seek help for dementia (Liu et al., 2008). It has been found that Chinese communities in America may think that developing dementia can make their families and themselves "lose face", which means "humiliated" or "lose fame" (Woo, 2017). Besides, stigmatising thoughts (e.g., "it is difficult to talk to people with dementia", "people with dementia are unpredictable and violent", etc) are widely held by Chinese Americans (Woo, 2017), which can explain why Chinese Americans underuse the treatment services compared with Caucasian Americans (Diamond & Woo, 2014). It is worth noting that dementia-related stigma is not only experienced by people with dementia but also by their families (Liu et al., 2008). For instance, Chinese families in America have an inclination to isolate the people with dementia from society, which prevents other people from knowing there is a “mentally ill patient” inside their families, because they think the person with dementia can affect the whole family’s reputation (Liu et al., 2008).

In Hong Kong, Su (2016) revealed the existence of negative attitudes, avoidance of social interactions, and isolation of people with dementia in Hong Kong society. While interviewing Hong Kong people about attitudes towards dementia, Lam and Sun (2014) realised some Hong Kong people believe people with dementia can be violent and demented. Despite the fact that most Hong Kong people have accepted the benefits brought by an early diagnosis of dementia, some older Hong Kong people also express concerns that an early diagnosis of dementia can cause stigmatisation, anxiety, and even legal issues about their capacity to manage their own properties (Leung et al., 2018).

In Mainland China, Gao et al. (2020) conducted a survey to examine the Chinese people’s perceived stigma towards AD in Wuhan. In this study, 33.9% of participants expressed a preference for keeping the “secret” (if they got dementia) undisclosed. 33.8% of participants thought their self-esteem would be lost if they were diagnosed with dementia. In Shanghai, a study to test dementia-related stigma among elderly people was performed by Yang et al (2021). For the older individuals who have lower literacy skills, they exhibited significantly stronger concerns than the older individuals who have higher literacy skills, in the following aspects: “If I had dementia, my doctor would not provide best care for my medical problems”, “If I had dementia, my doctor and other health professionals would not listen to me”, “If I had dementia, I would be concerned that my health insurance company would find out”, and “If I had dementia, I would be concerned my employer would find out”. Dementia-related stigma is not only found among the general public in Mainland China, but also exhibited from healthcare providers and professionals. According to Wu et al. (2016), in rural areas of Mainland China, some doctors think dementia is incurable, so it is a waste of money if people seek medical help for dementia. The health practitioners at the community level in Mainland China hold a greater tendency to have unfavourable opinions about the involvement of primary care teams in dementia care, which reflects that they do not think people with dementia should be cared for by them (Wang et al., 2018).

In Australia, there are a few studies about dementia-related stigma among the Chinese cohort (e.g., Low et al., 2010; Zhao et al., 2022). Low et al. (2010) compared the perception and attitudes related to dementia among Italian Australians, Greek Australians, Chinese Australians, and third-generation Australians. Her team found that Chinese Australians have higher tendency to believe that people with dementia could never have quality life anymore compared to third-generation Australians. Chinese Australians were also more likely to hold the view that people with dementia should be taken care of in a manner similar to children in contrast to other ethnic groups and third-generation Australians. Research done by Zhao et al. (2022) was designed to understand how Chinese people aged over 50 think about dementia. The authors selected 25 participants from Beijing, China and 21 participants from Melbourne, Australia to compare their thoughts towards dementia. Based on the interviews with participants in Melbourne, Zhao et al. (2022) found the following thoughts about dementia: “they are scared about dementia, because dementia means foolishness and people with dementia will lose independence, self-control and dignity”, “people with dementia can be a tragedy for their whole family, and will bring their families heavy care burden from the mental, physical and financial aspects”, “they will be self-stigmatised and ashamed if diagnosed with dementia”, and “they will avoid the discussion of dementia in their daily conversations”.

In short, Chinese people in different regions commonly share some stigmatised beliefs. For instance, Chinese people always refer to dementia as some characteristics such as dumbness, violence, childish behaviours, and loss of fame. Chinese people are reluctant to seek a diagnosis of dementia, because they fear that a diagnosis will make them discriminated against by others.

1.4 The Necessity of Education

1.4.1 Dementia Literacy

Dementia literacy is a branch of a more general notion – health literacy. Health literacy was first introduced to describe the individuals’ capacity to comprehend medical information, but this capacity is also affected by how health care practitioners provide information (AIHW, 2024b). Hence, there are two components contained in the domain of health literacy – individual health literacy and the health literacy environment. Individual health literacy refers to the ability to search for (e.g., find relevant information about a certain health condition), comprehend (e.g., understand the key information delivered by the health material), and make use of health information (e.g., know how to use healthcare facilities).

Health literacy environment is more about the health system in a country, including the country's health policies, health materials, and system processes, which may impact how people are involved with the health system (Australian Commission on Safety and Quality in Health Care [ACSQHC], 2014). Low health literacy can contribute to lower overall health conditions (Berkman et al., 2011) and poor health behaviours, which can be reflected by reduced capacity for self-care management (Geboers et al, 2016), higher hospitalisation rates (Mitchell et al, 2012), lower comprehension of medication instructions (e.g., wrong usage of medications, non-adherence, etc.; Miller, 2016), and decreased use of preventative health services, including types of cancer screening (Kobayashi et al., 2014). On the other hand, high health literacy can benefit the public in various ways. For example, high health literacy can lead to a healthier lifestyle and better health protection, which ensures a healthier body to work and reduces the cost of healthcare, ultimately lowering the risk of poverty caused by giant out-of-pocket medical expenses. Parents with good health literacy can prepare more balanced diet for children, which assists to combat overnutrition and malnutrition, facilitating a better health condition for the next generation (WHO, n.d.). Therefore, a good health literacy does not only promote people's health themselves, but also improve people's health intergenerationally. Furthermore, high health literacy can also contribute to a more equal world. People with higher sexual health literacy show less discrimination against LGBT people, and they are more likely to treat these sexualities as natural (Miller et al., 2023). Thus, to improve the equality of sexual orientation and the rights of sexual minorities, sexual health literacy is key.

Dementia literacy is generally defined by Low and Anstey (2009) as "knowledge and beliefs regarding dementia that aid recognition, management, or prevention". More specifically, Lincoln et al. (2019) referred to dementia literacy as the ability to detect dementia-related symptoms and make informed choices. Dementia literacy is facilitated by people's knowledge and comprehension of the cause, evolution, implications, symptomatology, and treatment of dementia. Nguyen et al. (2021) proposed that the definition of dementia literacy should include both descriptive aspects (such as causes, risk factors, symptoms, or consequences) and procedural aspects (such as prevention, detection, or treatment). Therefore, dementia literacy involves the ability for people to convert information into attitudes, making decisions, and actions regarding the assessment, diagnosis, and utilisation of healthcare resources and the provision of care and support for individuals with dementia. Individuals with low dementia literacy are equipped with little knowledge to recognise symptoms associated with dementia, and they may be unclear about many treatment alternatives that are available during the course of dementia (Leung et al., 2018). Low dementia literacy may limit older people's capacity to make decisions about their health issues caused by dementia (Dixon et al., 2018). Low dementia literacy is also associated with dementia-related stigma, which means people with low dementia literacy are likely to show higher dementia-related stigma (Harper et al., 2019; Yang et al., 2021). Additionally, people with dementia can be more dependent on their family carers as the condition progresses. Family carers with high dementia literacy are found to be more capable of providing suitable home care to individuals with dementia (Van Patten & Tremont, 2020). Individuals without sufficient dementia literacy may experience social discomfort when confronted with dementia and may not be willing to provide assistance to those living with dementia (Leung et al., 2018). Owing to this social discomfort, family members may feel a mental burden while providing care for loved ones with dementia (Leung et al., 2018). Accordingly, lifting people's dementia literacy can reduce dementia-related stigma, promote timely dementia diagnosis, and help people with dementia get better care and support, which contributes to a dementia-inclusive society and a healthier society in terms of dementia.

1.4.2 Dementia Education and Translation

Dementia education has been empirically proven to be effective in improving people's dementia knowledge (Eccleston et al., 2019) and reducing the stigma surrounding dementia (Matsumoto et al., 2023). Dementia education can be delivered by various means, such as offline training sessions (Surr & Gates, 2017), audio narration (Hobday et al., 2017), textual information (Pleasant et al., 2017), and public health campaigns (Van Asbroeck et al., 2021). In spite of the various delivery modes, the materials are prepared in texts. When it comes to multicultural dementia education, translation is inevitably required when approaching different target cultural groups (Kiadarbandsari et al., 2024).

In Australia, there is an urgent need to educate the CALD communities about dementia knowledge to improve their dementia literacy (Caballero et al., 2025; Shatnawi et al., 2023). In the context of multicultural dementia education, translations should be culturally adapted before adoption (Kiadarbandsari et al., 2024). Culturally appropriate translations help to reduce cultural and social isolation for CALD people by engaging them in dementia friendly communities and campaigns (Shatnawi et al., 2023). Accordingly, one of the specific issues about dementia-related health information translation is cultural appropriateness. Culturally inappropriate translated resources will further expand the health disparities between the mainstream cultural population and the CALD population (Caballero et al., 2025).

1.5 Research Rationale, Aims and Questions

Dementia has been the leading cause of death in Australia (AIHW, 2025). To reduce the future financial and social costs of dementia, it is urgent to improve Australian people’s dementia literacy and reduce dementia stigma, particularly for the CALD population. Moreover, existing research has highlighted the importance of providing culturally appropriate translation of dementia-related public health information when approaching CALD communities. However, gaps still exist in how to structurally provide culturally appropriate and linguistically understandable (CALU) translations of dementia-related health information from the perspective of translators.

Additionally, the traditional Chinese translation of “dementia” is pejorative. Although some efforts have been made to introduce more culturally appropriate Chinese terms for “dementia” in some Chinese-speaking regions, Chinese people still lack a consistent, scientifically accurate and culturally appropriate Chinese term for “dementia”.

Therefore, this research aimed to establish a translation approach that provides culturally appropriate and linguistically understandable translations of dementia-related health information, and to propose a scientifically accurate and culturally appropriate Chinese term for “dementia”.

To achieve the research aims, the following research questions need to be answered:

Q1: What Chinese term for “dementia” should be adopted to reduce dementia stigma in Chinese culture?

Q2: What translation process can produce CALU translations of dementia-related public health information?

Q3: What translation strategies can produce CALU translations of dementia-related public health information?

Q4: Are CALU translations more acceptable than normal translations from the perspective of target readers?

1.6 Thesis Structure

This thesis contains six chapters as below:

Chapter 1 is the introduction chapter of the thesis. This chapter introduces the research background and presents an overview of dementia in Australia, dementia among the CALD population, dementia stigma in Chinese culture, dementia literacy, and dementia education and translation. This chapter also presents the research rationale, aims, and questions.

Chapter 2 addresses the first research question. This chapter introduces the existing Chinese terms for "dementia", stigma related to "痴呆症 *chī dài zhèng*" (Stupidity and Idiocy Syndrome), the history of dementia from a Western perspective, the history of dementia from the perspective of traditional Chinese medicine, renaming mental disorders in English, and renaming mental disorders in Chinese. This chapter presents a study that uses semi-structured interviews with Chinese-speaking dementia experts to explore their attitudes towards each Chinese term for "dementia", focusing on scientific accuracy and cultural appropriateness. This chapter proposes "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) as the most scientifically accurate and culturally appropriate term. This proposal has been recognised and adopted by Dementia Australia.

Chapter 3 answers the second research question. This chapter proposes the CALU translation protocol which includes the CALU translation process and the key translation recommendations involved in the CALU translation. This chapter analyses the pros and cons of the traditional forward and backward translation process in public health information translation. This chapter also introduces the WHODAS 2.0 translation guidelines and analyses why the they are not suitable for general health translation practitioners. Finally, this chapter proposes a 7-step translation process and three translation recommendations, which is illustrated by real translation examples and experiences. This translation protocol has been adopted in public health campaigns, “Face Dementia” to produce Chinese translations and “Facing Dementia Together” to produce Arabic, Chinese and Vietnamese translations.

Chapter 4 addresses the third research question. This chapter introduces a set of CALU translation strategies. This chapter offers an overview of public health information translation, the role of human translators, linguistic and cultural competence in public health information, dementia stigma, and translation. This chapter also systematically explains formal and dynamic equivalence, functional equivalence, and pragmatic equivalence. Moreover, this chapter draws key principles from English dementia-inclusive language guidelines. Then, it combines translation theories with dementia-inclusive language guidelines to propose CALU translation strategies. These translation strategies are explained by translation case studies which are extracted from the materials of “Face Dementia” and “Facing Dementia Together”. The set of CALU translation strategies has been adopted in “Face Dementia” to produce Chinese translations and “Facing Dementia Together” to produce Arabic, Chinese and Vietnamese translations.

Chapter 5 addresses research question 4. This chapter is underpinned by reader response theory in translation studies. This chapter adopted a survey-based approach to compare a standard translation provided by a professional translator and a CALU translation. Through quantitative and qualitative analysis, this chapter concludes that the CALU translation is more readable, comprehensible and positive than the standard translation. This chapter empirically evidences the effectiveness and acceptability of translations produced through the CALU translation protocol.

Chapter 6 is the conclusion chapter, which summarises the key findings of the PhD research, the implications for translation studies and public health researchers, the limitations of the PhD research, and future research directions.

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Chapter 2 Renaming Dementia in Chinese – A Proposal for a Scientifically Accurate and Culturally Appropriate Chinese Term for Dementia

Abstract

Chinese people hold stigmatised thoughts and attitudes towards dementia. One of the reasons behind the stigma is the mainstream Chinese translation of “dementia” – “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). Some Chinese-speaking regions have renamed dementia in Chinese, trying to destigmatise the health condition by providing a more culturally appropriate term. Despite this, different regions adopt different Chinese terms for dementia, such as “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome), “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome), “认知症 *rèn zhī zhèng* ” (Cognition Syndrome) and “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome). The inconsistent use of Chinese terms for dementia causes a barrier for the Chinese public to understand and destigmatise dementia. Therefore, this study aims to propose a scientifically accurate and culturally appropriate term for Chinese people to use in the future. We interviewed 21 Chinese-speaking dementia experts from the Asia-Pacific region to seek their opinions on the scientific accuracy and cultural appropriateness of each term. We adopted thematic analysis to analyse the interview content. Eventually, “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) was the

most favoured one among other terms by these experts. We proposed the term to Dementia Australia which has endorsed the Chinese term and updated this term in its Chinese resources.

Keywords

Dementia, Renaming, Stigma, Chinese, Mental Disorder, Destigmatisation

2.1 Introduction

2.1.1 Dementia in Mainland China

Dementia is an increasingly important public health and social issue, especially for regions with ageing populations (Xing et al., 2024). It is estimated that over 57 million people are living with dementia globally (World Health Organization [WHO], 2025).

Mainland China has one of the fastest ageing populations in the world (Peng, 2023). About 15.4% of Mainland China’s total population is aged above 65, reaching approximately 217.76 million (National Bureau of Statistics of China, 2024). The number of people aged over 65 in Mainland China is expected to peak at 436 million in 2057 (Peng, 2023). As the older population rises in Mainland China, so will the number of people with dementia. According to *China Alzheimer Report 2024* (Wang et al., 2024), there were around 17 million people living with dementia in Mainland China by 2021. By 2050, it is projected there will be 66.3 million people living with dementia in Mainland China (Liu et al., 2024).

Mainland China is facing rapidly increasing economic and health pressure due to dementia (Xing et al., 2024). However, health professionals and the lay public in Mainland China are not sufficiently prepared in terms of awareness and knowledge. There is a lack of dementia awareness among Mainland China's general public (Lian et al., 2017; Zheng et al., 2020). Mainland China's healthcare professionals were reported to have limited knowledge of dementia (Fu, 2019; Ma & Guo, 2015; Wang et al., 2018). The lay public in Mainland China exhibits stigma surrounding dementia and holds incorrect beliefs (Chen et al., 2023; Gao et al., 2022; Li et al., 2011; Yang et al., 2021; Zhao et al., 2022).

The low awareness of dementia and the stigma surrounding dementia may lead to delayed diagnosis of dementia (Gove et al., 2015; Lian et al., 2017). Mainland Chinese with dementia and their family members delay help-seeking for the diagnosis of dementia by around two years, because Mainland Chinese generally hold a negative attitude towards dementia, and they tend to regard symptoms of dementia as signs of normal ageing (Zhao et al., 2015).

2.1.2 Dementia-related Stigma in Chinese Cultures

Chinese people have been reported to hold dementia-related stigma (Chang & Hsu, 2020; Zhai et al., 2022; Zhang, 2025; Zheng et al., 2016). Stigma is an attribute that discredits a person "from a whole and usual person to a tainted, discounted one" (Goffman, 1986, p. 10). Dementia-related stigma negatively affects people's willingness to seek a diagnosis of dementia, seek support after diagnosis, and participate in dementia research (Swaffer, 2014). In addition, people with dementia may be discriminated against in terms of resource allocation in the health, welfare, and legal systems due to dementia-stigma (Werner & Kim, 2021).

The traditional term "痴呆症 *chī dài zhèng*" (Stupidity and Idiocy Syndrome) or its derivative "痴呆 *chī dài*" (Stupidity and Idiocy) can be one source of dementia-related stigma rooted in Chinese cultures (Chiu et al., 2014; Dai et al., 2015; Zhang, 2025). Diseases are not intrinsically stigmatising, but society's stereotypes of them can produce stigma (Akbari et al., 2023). The stigmatisation process begins with stereotyping, labelling differences, grouping people into specific categories, and discriminating against this group (Fischer et al., 2019; Hatzenbuehler et al., 2013). The Chinese term – "痴呆症 *chī dài zhèng*" (Stupidity and Idiocy Syndrome) can stigmatise this health condition merely through its name, which describes people with dementia as "stupid and idiotic".

When public health practitioners try to destigmatise dementia among Chinese people through education, using the "痴呆症 *chī dài zhèng*" (Stupidity and Idiocy Syndrome) term might have the opposite effect to the aim of destigmatisation.

2.1.3 Chinese Terms for Dementia

Education is a common method that has been shown to improve awareness and knowledge of dementia (Baker et al., 2019; Huggins et al., 2022; Van Asbroeck et al., 2021; Phillipson et al., 2019). "Dementia" is the core concept which needs to be explained in dementia educational material and public health promotion.

There are six Chinese terms commonly used for “dementia” education materials – “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome), “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome), “认知症 *rèn zhī zhèng* ” (Cognition Syndrome) and “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome). Some derivatives without “症 *zhèng*” (“disease” or “syndrome”) exist, such as “痴呆 *chī dāi*” (Stupidity and Idiocy) and “失智 s*hī zhì*” (Loss of Intelligence). Among these derivatives, such as “痴呆 *chī dài*” (Stupidity and Idiocy) and “痴呆症 *chī dài zhèng*” (Stupidity and Idiocy Syndrome), or “失智 *shī zhì*” (Loss of Intelligence) and “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome), they are essentially the same expression. However, other terms differ significantly in meaning, such as the meaning difference between “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) and “痴呆症 *chī dài zhèng*” (Stupidity and Idiocy Syndrome).

Different Chinese terms and derivatives are used across regions (e.g., Mainland China, Hong Kong, Taiwan, Macau, and Singapore). “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) is widely used in Mainland China (Chiu et al., 2014). “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is used by some health organisations from Hong Kong (Jockey Club Centre for Positive Ageing [JCCPA], n.d.), Australia (Dementia Australia, 2022), and Canada (Alzheimer Society, 2021). “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) is officially used in Hong Kong (The Government of the Hong Kong

Special Administrative Region, 2024). “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is officially used in Taiwan (Taiwan Alzheimer’s Disease Association [TADA], 2024), Macau (Macau Alzheimer’s Disease Association, n.d.), and Singapore (Dementia Hub SG, n.d.). “认知症 *rèn zhī zhèng* ” (Cognition Syndrome) is officially adopted in Japan (Ishihara et al., 2024). “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is used in UK (Dementia UK, 2018).

Inconsistencies in the Chinese term for dementia is not just between different regions but within regions. For example, in Mainland China, the National Health Commission of the People’s Republic of China (2024) mainly uses “痴呆 *chī dāi*” (stupidity and idiocy) to represent “dementia”. Mainland China’s civil affairs departments, such as Beijing Municipal Civil Affairs Bureau (2023) and Chongqing Municipal Civil Affairs Bureau (2023), prefer to use “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). It is worth noting there is a specialised committee – China National Committee for Terminology in Science and Technology (CNCTST) to name medical terms in Mainland China. “Dementia” is officially translated as “痴呆 *chī dāi*” (stupidity and idiocy) by the committee (CNCTST, 2022). Despite that, there is no consistent Chinese term for “dementia” in Mainland China’s academia. For instance, “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is frequently adopted as the Chinese counterpart of “dementia” in nursing research articles (e.g., Deng et al., 2024; Song et al., 2024; Xu et al., 2024; Zhu et al., 2024). Many medical and clinical research articles tend to use “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome; e.g., Chang et al., 2024; Gao et al., 2025; Liu et al., 2020; Wan et al., 2025) or “痴呆

chī dāi" (Stupidity and Idiocy; e.g., Chen & Dong, 2025; Ma, 2024; Zheng et al., 2025) to express "dementia". Even in the same academic journal, different articles may use different terms for "dementia" in the same year. For example, in *Chinese Nursing Research*, it can be found that articles published in 2024 used "痴呆 *chī dāi*" (Stupidity and Idiocy; e.g., Liu et al., 2024), "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome; e.g., Wan et al., 2024), and "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome; e.g., Zhang et al., 2024).

In addition to the inconsistent use of Chinese terms for "dementia" by Mainland China's authorities and academia, in Mainland China, the Chinese terms for "dementia" used in mass media are often inconsistent and confusing. Mass media is an effective tool for promoting changes in public health behaviour, as it can rapidly disseminate information on a large scale and raise public awareness of health issues (Saei et al., 2021; Wakefield et al., 2010). Thus, compared with the inconsistent expression of "dementia" used by Mainland China's Authorities and academia, this inconsistency among mass media is more likely to impact the public perception of dementia. It is not uncommon for the same media outlet to employ different Chinese terms for dementia in Mainland China. For example, *The Paper* (澎湃新闻 *péng pài xīn wén*) is a Mainland China's state-owned media outlet (Li, 2021). In the screenshots of *The Paper* (Figure 1, Figure 2 and Figure 3), all these news articles report on dementia, trying to educate the public about dementia. However, the article (Yin, 2023) in Figure 1 used "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome) as the Chinese term for "dementia". The article (Yu, 2025) in Figure 2 employed "痴

呆 *chī dāi*” (Stupidity and Idiocy) to represent “dementia”. The article (Fay, 2024) in Figure 3 utilised “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) to be the Chinese counterpart of “dementia”.

我们目前最恐惧的一种疾病，失智症

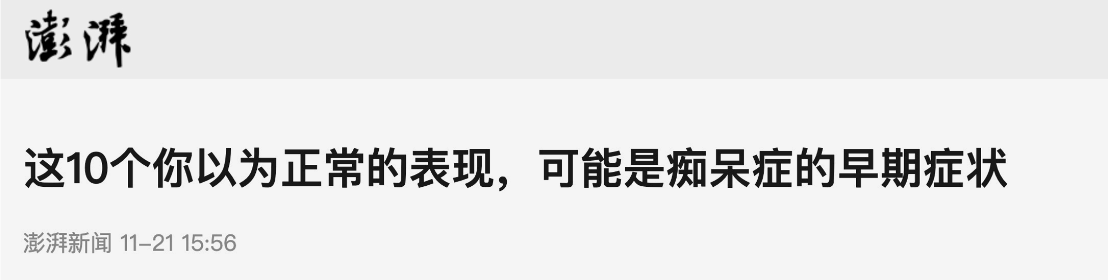
澎湃新闻 10-23 18:49

Figure 1 The Screenshot of The Paper 1 (Yin, 2023)

常见老年综合征——痴呆

澎湃新闻 01-02 16:05

Figure 2 The Screenshot of The Paper 2 (Yu, 2025)



这10个你以为正常的表现，可能是痴呆症的早期症状

澎湃新闻 11-21 15:56

Figure 3 The Screenshot of The Paper 3 (Fay, 2024)

The credibility of Mainland China's state-owned media is high (Zhang et al., 2019). The people in Mainland China trust their state-owned media, especially on health-related topics (Xu, 2013). Mainland Chinese people who are middle-aged and above tend to believe in mass media more than young people (Tang et al., 2024; Yuan et al., 2023). Therefore, the inconsistent use of Chinese terms for "dementia" by state-owned media may confuse readers.

The lack of a consistent Chinese term for dementia can be a barrier to communicating dementia-related information among Chinese, given that information is easily shared online. Moreover, these terms themselves carry different Chinese connotations to the Chinese population.

2.1.4 A Brief History of Dementia from a Western Perspective

The English term "dementia" was coined sometime between 1670 and 1726 (Berrios, 1998). The Latin roots "de" (meaning "out of" or "away from") and "mens" (meaning "mind") are the etymological origin of dementia, which means "absence of mind" in English (Kurz & Lautenschlager, 2010). Solon (c. 630–c. 560 BC), an archaic Athenian philosopher and statesman, thought that people's judgement could be impaired by old age (Boller & Forbes, 1998). Plato (c. 428-c. 347 BC), an ancient Greek philosopher, held that older people with mental impairments could not only not make a will, but they were also ineligible for public civilian jobs and protected from criminal prosecution (Kurz & Lautenschlager, 2010). During the Roman Empire, “dementia” was a concept for people in the Roman era who could not manage their own affairs, sign contracts, serve in public office, or be held criminally liable (George et al., 2011).

Philippe Pinel (1745-1826), a French Psychiatrist, is believed to be one of the first to define dementia in a medical context. His definition of “démence” refers to the struggle to connect concepts, which can manifest in a variety of ways: acts without purpose, acting irrationally, displaying surface emotions, experiencing memory problems, having trouble perceiving objects, having poor judgement, and having trouble finding the right words (Kurz & Lautenschlager, 2010). Jean Etienne Esquirol (1772-1840) was a French Psychiatrist who provided a list of causes of dementia, including head injuries, progression of age, menstrual disorder, paralysis, poverty, wine abuse, syphilis, masturbation, etc. Although this list was inaccurate from today’s perspective, it reflects how medical practitioners at that time thought about dementia. He defined dementia as a brain disease that impairs one’s sensitivity, intellect, and determination (Boller & Forbes, 1998), which is similar to many people’s beliefs of dementia today. James Pritchard (1786-1848) and other nineteenth-century British doctors saw memory loss as the main feature of dementia (Berrios & Hodges, 2000). Dementia, both as a concept and a term, has been used since the late 19th century to describe a condition of progressive mental decline that interferes with daily life and the ability to perform one’s job or social responsibilities (Kurz & Lautenschlager, 2010).

In the early 20th century, dementia was largely conceptualised through a neuropathological lens. The neuropathological discoveries of Alois Alzheimer in 1906, who identified plaques and tangles in the brain of a patient with presenile dementia, became foundational for modern biomedical understandings of Alzheimer's Disease (AD) (Thakor et al., 2024). However, Alzheimer himself was hesitant to categorise this as a distinct disease. It was his colleague Emil Kraepelin who, in 1910, formally named the condition "Alzheimer's disease", positioning it as a separate nosological entity from senile dementia (George et al., 2011). For several decades thereafter, AD was a diagnosis limited to rarer early-onset cases. Meanwhile, most cases of cognitive decline in the elderly were attributed to "hardening of the arteries" (George et al., 2011) or "senility" (Kral, 1962), reinforcing the perception that dementia was a natural consequence of ageing rather than a pathological condition. This view began to shift in the mid-20th century as growing life expectancy and advancements in neuroimaging and neuropathology facilitated deeper investigations into age-related brain changes.

The Diagnostic and Statistical Manual of Mental Disorders (DSM) pays attention to the change in concepts of dementia with each new edition. The DSM classifies mental illnesses based on symptoms (George et al., 2011; Newson et al., 2021). The first edition of the DSM used the term "Organic Brain Syndrome" rather than "dementia" (Boller & Forbes, 1998). The term – "dementia" was used in "dementia praecox", which meant "schizophrenic disorder" in that manual (American Psychiatric Association [APA], 1952).

The second edition of DSM (1968) divided dementia into “senile dementia” and “pre-senile dementia” and categorised “dementia” under “psychosis”.

In the DSM-III, dementia was a standalone category, and there were specific diagnostic criteria for dementia, one of which was “a loss of intellectual abilities of sufficient severity to interfere with social or occupational functioning” (APA, 1980). This criterion is still a widespread concept today, which severely labels people with dementia causing dementia-related stigma (Rosin et al., 2020). In the DSM-III-R, it adjusted the category of dementia by putting dementia under the category of “Organic Mental Disorder” (APA, 1987). Organic mental disorders refer to the decline in mental functioning caused by non-psychiatric damage, such as physical trauma and toxins (Goldstein, 2001). Dementia in DSM-III-R was defined as impairments in memory (short-term and long-term), as well as abstract thinking, judgment and cortical functions (APA, 1987). The description could reflect most signs and symptoms of AD, but it could not be applicable to other cognitively impaired brain disorders where memory loss is less severe (Geldmacher, 2004).

In the DSM-IV, dementia was officially classified as a cognitive disorder (APA, 1994). Dementia was a progressive loss of cognitive abilities, including impaired memory abilities and one of the following: apraxia, agnosia, aphasia, or a problem with executive functioning. This progressive loss of cognitive abilities is significant enough to limit occupational and social functioning (APA, 1994). Yet, this definition may delay people from seeking medical attention for the early stages of dementia.

At the time of the publication of the DSM-IV, the concept of mild cognitive impairment (MCI) was not popular. In 1999, Peterson et al. (1999) defined people with MCI as having "a memory impairment beyond that expected for age and education yet are not demented." MCI was developed by doctors realising that no medical terms could capture the "grey area" of cognitive impairment. It also satisfies the growing clinical need for a more nuanced diagnosis of dementia than only a diagnosis of "with dementia" or "without dementia" (Peterson et al., 2014). MCI was renamed as "mild neurocognitive disorder" in the DSM-V (Sachs-Ericsson & Blazer, 2015). In contrast with "mild", "major neurocognitive disorder" was applied to replace "dementia" in the DSM-V (Eramudugolla et al., 2017). The criteria of major neurocognitive disorder in the DSM-V are:

> Evidence of significant cognitive decline from a previous level of performance in one or more cognitive domains (complex attention, executive function, learning and memory, language, perceptual-motor, or social cognition) based on:
>
> 1. Concern of the individual, a knowledgeable informant, or the clinician that there has been a significant decline in cognitive function; and
>
> 2. A substantial impairment in cognitive performance, preferably documented by standardized neuropsychological testing or, in its absence, another quantified clinical assessment. (APA, 2013, p. 603)

The criteria do not emphasise "memory loss" and try to explore the signs and symptoms from six cognitive domains, which more comprehensively depict dementia.

The introduction of “mild neurocognitive disorder” and “major neurocognitive disorder” makes it clearer that MCI could develop into dementia from “mild” to “major,” which reflects the spectrum of dementia and MCI. Moreover, the renaming of dementia is also an attempt to reduce the stigma surrounding it (Petretto et al., 2021).

The Western world’s knowledge of dementia has evolved over 2,000 years, affected by medical discoveries, cultural beliefs, and changing societal values. The term used to describe dementia has also evolved with a growing understanding, reflecting shifting views on cognitive decline and its causes. Importantly, the stigma associated with dementia today can be found in the previous notions of dementia, which emphasised a loss of memory, intellect, rationality and independence. These verbal and conceptual links have led to the marginalisation of people with dementia. In response, the new name of dementia – “major neurocognitive disorder” in English in the latest version of the DSM (APA, 2013) is an important step towards removing this stigma. This name reflects an effort to use more neutral, scientifically accurate terminology that emphasises the underlying cognitive problems rather than negative connotations. Despite the emergence of the new English term for dementia, “major neurocognitive disorder” is rarely used by clinicians and academics, and “dementia” is still the dominant expression for this health condition (Emmady et al., 2022).

2.1.5 A Brief Overview of Dementia from the Perspective of Traditional Chinese Medicine

In traditional Chinese medicine (TCM), there is a long history of the descriptions of dementia-like illnesses. In TCM literature, "dementia" is currently named as "痴呆 *chī dāi*" (Stupidity and Idiocy), and this term was first raised by Jingyue Zhang (c. 1563-1640), who first systematically explained the pathogenesis of dementia (Zhang, 2012). There were some names related to dementia-like illnesses, such as "白痴 *bái chī*" (stupidity), "善忘 *shàn wàng*" (forgetfulness), "多忘 *duō wàng*" (forgetfulness), and "呆痴 *dāi chī*" (idiocy and stupidity), used in ancient times (Yang et al., 2022).

The earliest description related to dementia can be traced back to the first TCM book, the *Yellow Emperor's Internal Classic*, completed from 475 BC to AD 220. It recorded the cause of "善忘 *shàn wàng*" (forgetfulness): Qi (a flowing energy in the body) flows into the wrong direction, and there is a lack of Qi in the lung (Li et al., 2021; Liu et al., 2012). In the Han Dynasty, Zhongjing Zhang (150-219) in his book *Shang Han Lun* (Zhang, 2018) concluded that "喜忘 *xǐ wàng*" (forgetfulness) is related to blood stasis (Liu & Cheng, 2009). This idea is considered the foundation of the current understanding of vascular dementia in TCM (Liu et al., 2012).

In the Tang Dynasty, Simiao Sun (581-682) documented in his book *Qian Jin Yi Fang* (Sun, 2017) – for people aged above 50, the loss of Qi increases with time, mental strength gradually weakens, memory becomes unreliable, initiative diminishes, and both planning and execution no longer meet their own expectations (Liu & Cheng, 2009). To some extent, Simiao Sun's statement can reflect how dementia progresses.

In the same era, Tao Wang (670-755) found that people with “喜忘 *xǐ wàng*” (forgetfulness) and “妄言 *wàng yán*” (talking nonsense) may experience sleep disorder (Li et al., 2021; Liu et al., 2012; Wang, 2011). When the time came to the Song Dynasty, Mai Hong (1123-1202) in his collection *Yi Zhi Jian* (Hong, 2018) noted that a person suddenly became forgetful, could not recognise many things, lost the ability to distinguish familiar people, and passed away in 3 years. In the Yuan Dynasty, Zhenheng Zhu (1291-1358), a well-known Chinese philosopher and physician, perceived that “健忘 *jiàn wàng*” (forgetfulness) is caused by the stagnation of Phlegm (Li et al., 2021; Zhang, 2005). In TCM, Phlegm is more than the phlegm in the respiratory tract, and it refers to a harmful liquid substance formed by fluid metabolism disorders, often due to abnormal lung, spleen, or kidney functions (Duan et al., 2020). Jingyue Zhang (c. 1563-1640), the founder of the Warm-Nourishing School of TCM in the Ming Dynasty (Tang, 2018), is the first person in the history of TCM to coin the term “痴呆 *chī dāi*” (Stupidity and Idiocy) and classify it as an independent disease (Li et al., 2021), which was written in his book *Jing Yue Quan Shu* (Zhang, 2018). Zhang (2018) believed that the causes of “痴呆 *chī dāi*” (Stupidity and Idiocy) lie in emotional stagnation, unfulfilled thoughts, excessive sensitivity and suspicion, or prolonged fright. The origin of the disease is located in the heart and the Liver-Gallbladder meridians. Clinically, it manifests as incoherent speech, inappropriate behaviour, excessive sweating, irritability, and a complex and variable set of symptoms. In the Qing Dynasty, Shiduo Chen (c. 1627-1707) wrote a book *Bian Zheng Lu* which includes a chapter about “呆病门 *dāi bìng mén*” (chapter on idiocy disease), and the aetiology, pathology, clinical symptoms, categorisation, and management of "呆病 *dāi bìng*" (idiocy disease) were all systematically explained in this chapter (Chen, 2020). From his perspective, the stagnation of Qi at the liver leads to the early stage of "呆病 *dāi bìng*" (idiocy disease), and the deficient Qi at the stomach causes the late stage of 呆病 *dāi bìng*" (idiocy disease). Chen (2020) further explained that the stagnation and deficiency of Qi contribute to the stagnation of Phlegm which is a direct etiological factor in the development of "呆病 *dāi bìng*" (idiocy disease). Impacted by Western anatomy theories, Qingren Wang (1768-1831) proposed that the brain is the dwelling place of the original spirit, and mental acuity and memory reside in the brain rather than the heart (Wang, 2005). Based on his theory, the source of memory is the brain, and the brain tissues produce memory. Therefore, the most significant factor for "善忘 *shàn wàng*" (forgetfulness) is the loss of brain tissues (Zhang, 2012). Qingren Wang is also believed to be the first TCM physician to explain dementia-like diseases from the perspective of anatomy (Li et al., 2021; Liu et al., 2012).

In modern TCM, it is generally believed that the pathological locus of dementia is in the brain and is closely related to the heart, liver, spleen, and kidneys (Pei et al., 2020; Song, 2022; Su et al., 2023; Wang et al., 2012; Zhang, 2012). Wang et al. (2019) by analysing the latest 30-year TCM literature concluded 8 common symptoms and signs of dementia including "肾虚髓减 *shèn xū suǐ jiǎn*" (kidney deficiency and fewer brain tissues), "肝肾阴虚 *gān shèn yīn xū*" (Yin deficiency of liver and kidneys), "脾肾阳虚 *pí shèn yáng xū*" (Yang deficiency of spleen and kidneys), "痰蒙清窍 *tán* *méng qīng qiào*” (obstruction of the clear orifices by Phlegm-turbidity), “气滞血瘀 *qì zhì xuè yū*” (stagnation of Qi and stasis of blood), “痰瘀互结 *tán yū hù jié*” (accumulation of Phlegm and blood stasis), “心肝火旺 *xīn gān huǒ wàng*” (excessive Yang in the heart and liver), and “心脾两虚 *xīn pí liǎng xū*” (deficiency of Qi in spleen and blood in heart). Among these signs and symptoms, the most common one of dementia is “肾虚髓减 *shèn xū suǐ jiǎn*” (kidney deficiency and fewer brain tissues). Therefore, to treat dementia, many modern TCM scholars (Chi et al., 2020; Fu et al., 2012; Wang, 2019; Wang et al., 2012; Zhang, 2012) suggested to tonify the kidneys, because the kidneys are connected to the brain in TCM and the brain tissues can be healthier if the kidneys are well treated.

Qingren Wang is a turning point in the development of TCM theories about understanding dementia. Before him, few TCM physicians related dementia-like symptoms to the brain. Nowadays, TCM physicians have generally accepted the pathological locus of dementia lies in the brain. Yet, based on their prescriptions, these medicines are not directly used for the brain health, but for other organs which they believe have connections to the brain.

2.1.6 Renaming Mental Disorders in English

Mental disorders in English are renamed through history. In general, the rationale for the English-speaking world to rename mental health conditions is based on two reasons: 1. the advancement of scientific understanding of the condition; and/or 2. the reduction of the stigma related to the condition.

For instance, the term “hysteria” was used to describe people who show symptoms of severe agitation and anxiety, and much screaming (Taylor, 1981). The origin of “hysteria” is from the Greek word “*hysterikos*” which can be translated as “of the womb” (Kadour-Peero & Dahan, 2022). This term was often understood as “diseases of women”, “suffocation of the womb”, and “liable to disorders of the womb” (Trimble & Reynolds, 2016). Therefore, the use of “hysteria” led to a concept that this disorder can only be found among women (Trimble & Reynolds, 2016). Moreover, “hysteria” is believed to carry a negative connotation which is often associated with undesirable traits including emotional instability, out-of-control behaviour, and other behaviour-related symptoms (Trimble & Reynolds, 2016). As the scientific understanding and classification of the mental disorder develops, the concept of “somatization disorder” was introduced in the DSM-IV to replace “hysteria” (APA, 1994). As defined by DSM-IV, “somatization disorder” refers to “a polysymptomatic disorder that begins before age 30 years, extends over a period of years, and is characterized by a combination of pain, gastrointestinal, sexual, and pseudoneurological symptoms” (APA, 1994, p. 445). Now, “somatization disorder” is renamed as “somatic symptom disorder” in the DSM-V (APA, 2013). People with somatic symptom disorder may experience pain, weakness or difficulty breathing leading to major distress and/or the inability to function well. Although these physical symptoms are not related to any diagnosed medical condition, people with somatic symptom disorder firmly believe that they are physically unhealthy (APA, 2024).

Another example of a renamed mental condition relates to mental retardation. The symptoms of “mental retardation” were noted from 1500 B.C. in Egypt (Scheerenberger, 1983). In 1910, the first medical definition of “mental retardation” was issued by the American Association for the Study of the Feeble-minded (Reschly et al., 2002). The concept of “mental retardation” referred to the difficulties handling the demands of daily life, intellectual deficits, and the young onset age which is prior to age 22 (Scheerenberger, 1983). “Mental retardation” was categorised into 3 levels – “idiots”, “imbeciles”, and “morons” at that time (Reschly et al., 2002). Until the release of the DSM-IV (APA, 1994), the definition of “mental retardation” was still basically the same as the understanding of this mental health condition 100 years ago. The main characteristics of “mental retardation” are markedly below-average general intellectual functioning, the onset age before 18, and the substantial limitations in 2 adaptive functioning skills, such as communication, self-care, utilisation of community resources, etc. (APA, 1994). However, the stigma surrounding “mental retardation” gained increasing attention from the scholars (Salvador-Carulla & Bertelli, 2007; Schalock et al., 2007; Sharan & Bhargava, 2008; Nash et al., 2012). In 2009, the U.S. Congress passed *Rosa’s Law* to change all references to “mental retardation” in Federal law to references to “intellectual disability” (APA, 2013; Harkin, 2010). The U.S. Congress believed that “mental retardation” and its derivatives (e.g., retard) had been used as colloquial slurs to insult other people (Harkin, 2010). In the DSM-V, the term “intellectual developmental disorder (intellectual disability)” is adopted to replace the term “mental retardation” (APA, 2013). The rationale for this change is to align with the terminology used in the World Health Organization's *International Classification of Diseases, 11th Revision* (ICD-11), which refers to the condition as "disorders of intellectual development" (APA, 2022).

2.1.7 Renaming Mental Disorders in Chinese

Renaming mental disorders has also occurred in Chinese. The renaming of mental disorders in Chinese is also mainly due to two general principles, the same as the English renaming rules – reflecting the latest understanding of the condition and reducing the stigma.

In addition to the renaming of dementia in Chinese, the renaming of schizophrenia in Chinese is also a notable experience in Chinese-speaking regions. The common Chinese translation of schizophrenia is "精神分裂症 *jīng shén fēn liè zhèng*" (Mind-splitting Disease) in Mainland China (CNCTST, 2021). In Taiwan, the Chinese translation of schizophrenia was also "精神分裂症 *jīng shén fēn liè zhèng*" (Mind-splitting Disease) before 2014 (Sartorius et al., 2014). Due to the strongly negative connotation carried by the term, the Taiwanese Society of Psychiatry conducted an online survey about the renaming of schizophrenia in 2012, and more than half of the respondents voted for "思觉失调症 *sī jué shī tiáo zhèng*" (Thought and Perception Dysfunction Disease) as the preferred term for schizophrenia (Taiwanese Society of Psychiatry, 2014). In 2014, Taiwan's Ministry of Health and Welfare officially adopted the new Chinese term "思觉失调症 *sī jué shī tiáo zhèng*" (Thought and

Perception Dysfunction Disease) for schizophrenia. This new term is believed to be less stigmatising than the old one (Sartorius et al., 2014).

Interestingly, Hong Kong has used the Chinese term "思觉失调 *sī jué shī tiáo*" (Thought and Perception Dysfunction) since 2001 (Goh et al., 2024). Yet, this term in Hong Kong is used to rename "early psychosis" but not "schizophrenia" (Taiwanese Society of Psychiatry, 2014). In 2001, the Early Assessment Service for Young People (EASY) in Hong Kong started a program to lift the public awareness of early psychosis, and reduce the stigma related to early psychosis in Hong Kong society. At that time, EASY already realised that a culturally appropriate Chinese term for early psychosis is required to achieve its target. Therefore, EASY had spent more than 6 months on testing some alternative names in local communities and proposed a new term – "思觉失调 *sī jué shī tiáo*" (Thought and Perception Dysfunction) before the official program launched (Chiu et al., 2010). The Hong Kong Hospital Authority officially recognised this term in 2001 (Taiwanese Society of Psychiatry, 2014). As for the Chinese translation for schizophrenia in Hong Kong, it is still "精神分裂症 *jīng shén fēn liè zhèng*" (Mind-splitting Disease), which is same as the Chinese term used in Mainland China (Maruta & Matsumoto, 2019).

As stated in section 2.1.3, Chinese people use a variety of Chinese terms to represent "dementia". The inconsistent use of Chinese terms for dementia is due to it having been renamed in different Chinese-speaking regions. Chinese people used to adopt "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) to name "dementia" in Mainland China, Hong Kong, and Taiwan (Chiu et al., 2014). However, the medical experts in Hong Kong pointed out that this stigmatised expression was a major obstacle to patients' seeking medical treatment. Hence, Hong Kong made continuous efforts to rename dementia (Chiu et al., 2014; Lam et al., 2012).

In 2010, the Hong Kong Jockey Club's Society for Positive Aging started a dementia renaming competition calling for people to propose a new name for "dementia". "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) was the final "champion" in this competition. Then, the Hong Kong Government and the Hospital Authority gradually used the term "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) as the alternative to "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) to avoid stigma (Lin, 2011).

However, as this term could not describe the major features of dementia (e.g., a significant number of people are living with multi-infarct dementia caused by multiple small strokes rather than brain degeneration), the Hong Kong Psychogeriatric Association later proposed to the Hong Kong Government to revise the name of dementia (Chiu et al., 2014; Lam et al., 2012; Lin, 2011). Eventually, in 2012, following the joint efforts of various associations in Hong Kong, the new term "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) was coined, trying to reach a scientific understanding of dementia and reduce stigma (Chiu et al., 2014).

Although there is no evidence that the Hong Kong government has declared "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) to be the official new term, this term is being used by the Hong Kong government (The Government of the Hong Kong Special Administrative Region, 2024) and the Hong Kong Hospital Authority (Kwai Chung Hospital, 2024).

In Taiwan, the term “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) was a common Chinese name for dementia until 1998, when a campaign to rename dementia was launched (Ouyang & Yang, 2015). Promoted by organisations such as the TADA, “dementia” was renamed as “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome), which has been required to use in Taiwan while referring to “dementia” by Taiwan’s National Communication Commission (Chiu et al., 2014).

In Mainland China, the Shanghai Municipal Civil Affairs Bureau first replaced the term “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) with “认知症 *rèn zhī zhèng*” (Cognition Syndrome) across its documents in 2018 (Shanghai Municipal Civil Affairs Bureau & Shanghai Municipal Finance Bureau, 2018). Later in 2019, the Shanghai Municipal Civil Affairs Bureau (2019) used “老年认知障碍 *lǎo nián rèn zhī zhàng ài*” (Senile Cognitive Impairment) to substitute “老年痴呆 *lǎo nián chī dāi*” (Senile Stupidity and Idiocy). However, in modern Chinese, when describing a syndrome or a disease, the expressions before the character “症 *zhèn*g” (“syndrome” or “disease”) tend to be straightforward and make the problem visible, such as “肥胖症 *féi pàng zhèng*”, (obesity, literally meaning “fat disease”), “精神分裂症 *jīng shén fēn liè zhèng*” (schizophrenia, literally meaning “mind-splitting disease”), “抑郁症 *yì yù zhèng*” (depression, literally meaning “depressed disease”), “强迫症 *qiǎng pò zhèng*” (obsessive-compulsive disorder, literally meaning “compulsion disease”), “小

儿麻痹症 *xiǎo ér má bì zhèng*” (polio, literally meaning “infantile paralysis disease”). According to The Chinese University of Hong Kong (2014), “症 *zhèng*” means “病症 *bìng zhèng*” (disease symptom). Based on the Chinese Academy of Social Sciences (2016), “症 *zhèng*” means “疾病 *jí bìng*” (disease) and “症状” (symptom). Therefore, modern Chinese usually depicts the major symptom of a health condition before the character “症 *zhèng*” (“disease” and “symptoms”). In comparison, “认知症” does not conform to this linguistic rule, as the word “认知 *rèn zhī*” (cognition) alone does not reveal what specific problems exist with one’s cognition. Therefore, this study excluded “认知症 *rèn zhī zhèng*” (Cognition Syndrome) as a potential Chinese term for dementia.

2.1.8 Research Gap and Rationale

The stigma surrounding the term “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) has been discussed by many scholars. Based on Japan (Miyamoto et al., 2011) and Hong Kong’s (Chiu et al., 2014) experience in renaming dementia, an accurate and culturally appropriate name is needed. Some scholars (Chiu & Li, 2012; Chiu et al., 2014; Lam et al., 2012) from Hong Kong interpreted why “认知障碍症 r*èn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) is less stigmatising and more scientifically accurate compared to “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). However, there is a lack of comparison between all the existing terms from the perspectives of scientific accuracy and cultural appropriateness. In addition, the lack of a consistent term for “dementia” in Chinese may hinder communication between Chinese health professionals, public health information providers and Chinese populations. Languages impact how people perceive a mental health condition (Granello & Gibbs, 2016; Richards, 2018; Reali et al., 2016). The inconsistent use of terms may confuse the understanding of dementia for Chinese. Ideally, a consistent Chinese term for dementia can be proposed which is scientific accurate, cultural appropriateness, and stigma free. Therefore, this study aims to suggest a scientifically accurate and culturally appropriate Chinese term for "dementia". This term is not necessarily for Chinese academic writing, but this term should not mislead lay Chinese people's thoughts on dementia from the scientific perspective, and should minimise the stigma inherited from the Chinese characters.

2.1.9 Research Aim

The aim of this study is to understand how Chinese dementia experts evaluate different Chinese terms for "dementia", and identify the most scientifically accurate and culturally appropriate Chinese term for "dementia".

2.2 Methodology

2.2.1 Study Design

This research employed a cross-sectional qualitative approach using semi-structured interviews. Semi-structured interviews provide flexibility to interviewers when they try to explore relevant ideas that may arise during the interview (Adeoye-Olatunde & Olenik, 2021). The dementia experts involved in the research have diverse educational, regional, and occupational backgrounds, and the semi-structured formats allowed for a range of probes and new interview questions depending on the expert's background and answers. For example, some experts had experienced a renaming dementia campaign in their regions, and were asked about these experiences.

Ethics approval was gained from the University of Sydney (Application Identifier: 2024/HE000709). Before interviews, all participants were given sufficient time to view the *Participant Information Statement* and sign the *Participant Consent Form*. All the information included in this study has been de-identified, and each participant was assigned an identification number (e.g., P01, P02, etc.), which ensures the confidentiality of the participants.

2.2.2 Participants

Recruitment was undertaken using a snowball sampling method. Snowball sampling is an effective approach to accessing hard-to-reach populations (Parker et al., 2019). This approach starts with a small group of initial participants who meet the inclusion criteria. These initial participants refer more participants who satisfy the inclusion criteria to join this research (Parker et al., 2019). We initially invited some Chinese dementia experts within our own network. At the end of the interview, we asked those experts to refer other Chinese dementia experts within their networks. Twenty-one participants were employed in this research. To reach saturation in an interview study, 9-17 interviews are sufficient, particularly for studies that hire homogeneous participants (Hennink & Kaiser, 2022). Saturation is “the point in data collection when no new additional data are found that develop aspects of a conceptual category” (Francis et al., 2010, p. 1230). Therefore, we believed the sample size of 21 was enough.

The participants were eligible if they were either: (a) a Chinese-speaking doctor or other clinician with dementia expertise; or (b) a Chinese-speaking college or university academic staff member with dementia expertise.

The inclusion criteria were chosen to select experts who either frequently interacted with people with dementia and their families or were at the forefront of dementia research with up-to-date scientific perspectives on the condition. For a more comprehensive understanding of how Chinese experts view these Chinese terms for "dementia", especially from the perspective of cultural appropriateness, we had a sampling frame where we sought to recruit dementia experts from various Chinese speaking regions internationally and in different regions across Mainland China, including Northern China, Eastern China, Southern China and Western China.

2.2.3 Data Collection

Between November 2024 and January 2025, 21 interviews were conducted in Mandarin via Zoom. The participants answered the interview questions in the languages they preferred (Mandarin, Cantonese, and English). All interviews started with the demographic questions, including occupation, workplace, and dementia-related working experience. Then, all participants were interviewed with open-ended questions about their attitudes towards "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), and the scientific accuracy and cultural appropriateness of other alternative Chinese terms. These questions included: (a) How do you see the current Chinese term for dementia – "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome)? (b) Do you think "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration

Syndrome) can scientifically represent dementia? Do you think the name can be culturally accepted by Chinese people? Why? (c) Do you think “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) can scientifically represent dementia? Do you think the name can be culturally accepted by Chinese people? Why? (d) Do you think “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome) can scientifically represent dementia? Do you think the name can be culturally accepted by Chinese people? Why? and (e) Do you think “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) can scientifically represent dementia? Do you think the name can be culturally accepted by Chinese people? Why?

After these questions, all participants were invited to provide the most scientifically accurate and culturally appropriate Chinese term for dementia. The question is: In terms of scientific accuracy and cultural appropriateness, which term is the most appropriate one to represent dementia? Or do you think none of these terms are appropriate and we need to invent a new word? Can you give a new term for dementia?

All interviews were audio recorded. These interviews lasted for 20–40 minutes.

2.2.4 Data Analysis

Descriptive demographic information was presented (i.e., region, occupation, type of job affiliation, and dementia-related work experience). Continuous data were presented as means and standard deviation (SD). Categorical data were presented as numbers and percentages. ZH and CC are fluent in Mandarin and English.

A deductive thematic analysis was undertaken. Deductive analysis is a more researcher-driven approach, which allows researchers to develop themes based on their pre-set coding frames (Braun & Clarke, 2022). In the research, we tried to explore the scientific accuracy and cultural appropriateness of each Chinese term for "dementia", and propose the most scientifically accurate and culturally appropriate Chinese term for "dementia" accordingly. The interview questions were designed to align with the research aim. The pre-set topics based on the interview questions included: "Attitudes towards '痴呆症 *chī dāi zhèng*' (Stupidity and Idiocy Syndrome)", "Scientific Accuracy of '脑退化症 *nǎo tuì huà zhèng*' (Brain Degeneration Syndrome), "Cultural Appropriateness of '脑退化症 *nǎo tuì huà zhèng'* (Brain Degeneration Syndrome)", "Scientific Accuracy of '认知障碍症 r*èn zhī zhàng ài zhèng*' (Cognitive Impairment Syndrome)", Cultural Appropriateness of '认知障碍症 r*èn zhī zhàng ài zhèng*' (Cognitive Impairment Syndrome)", "Scientific Accuracy of '失智症 *shī zhì zhèng*' (Loss of Intelligence Syndrome)", Cultural Appropriateness of '失智症 *shī zhì zhèng*' (Loss of Intelligence Syndrome)", "Scientific Accuracy of '退智症 *tuì zhì zhèng*' (Degenerative Intelligence Syndrome)", Cultural Appropriateness of '退智症 *tuì zhì zhèng*' (Degenerative Intelligence Syndrome)", and "Best Term for Dementia". Next, the codes were generated under these topics. The detailed thematic analysis process was as follows:

Step 1: Transcription of the interview data. ZH verbatim transcribed all the interview recordings. CC reviewed the transcripts and discussed any unclear content with ZH.

After both ZH and CC had approved, the transcripts were ready to be coded and analysed.

Step 2: Familiarisation with the interview transcripts. The transcripts were imported into NVivo 14 for coding purposes. ZH familiarised himself with the transcripts by thoroughly reading them. ZH added notes (e.g., “After renaming”) to the transcripts. CC familiarised himself with the transcripts by thoroughly reading them and reviewed the added notes.

Step 3: Generation of initial codes. The initial coding framework was set by ZH based on the topics. After both ZH and CC had agreed on the coding framework, ZH coded the meaning units following the coding framework. CC reviewed the allocated meaning units to each code. If there was any disagreement, ZH and CC discussed the disputed allocation until reached a consensus. During the coding of the transcripts, ZH and CC found that the participants generally used both terms ending with “症 *zhèng*” (“disease” or “syndrome”) and terms ending without “症 *zhèng*” (“disease” or “syndrome”) interchangeably (e.g. participants used “认知障碍症 r*èn zhī zhàng ài zhèng*” [Cognitive Impairment Syndrome] and “认知障碍 r*èn zhī zhàng ài*” [Cognitive Impairment] interchangeably). Therefore, while some participants used terms ending without “症 *zhèng*” (“disease” or “syndrome”), such as “认知障碍 r*èn zhī zhàng ài*” (Cognitive Impairment), the meaning units were still coded under the codes about terms ending with “症 *zhèng*” (“disease” or “syndrome”), such as codes about “认知障碍症 r*èn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome).

Step 4: Construction of themes. ZH constructed preliminary themes based on the coding framework from Step 3. ZH extracted subthemes from each theme. CC reviewed and approved the preliminary themes and subthemes.

Step 5: Review of themes. All the quotes for each code were translated into English by ZH. Based on the context, the transcript for discussing the Chinese terms of "dementia" was literally translated (e.g. "痴呆症 *chī dāi zhèng*" [Stupidity and Idiocy Syndrome]), and the transcript referring to the health condition (i.e. dementia) was literally translated with an additional free translation (e.g. "痴呆症 *chī dāi zhèng*" [Stupidity and Idiocy Syndrome; dementia]). All co-authors reviewed and discussed the themes, and a consensus was reached among them on the themes.

Step 6: Defining and naming themes. ZH and CC had a deeper discussion about how each theme relates to the others and helps achieve the research aim. ZH and CC further refined themes to ensure simplicity and clarity.

Step 7: Writing the report. ZH drafted the initial report of the study. Other co-authors reviewed and provided feedback to ZH. ZH further amended the report until all co-authors were satisfied.

This study did not calculate a statistical inter-rater reliability coefficient, such as Cohen's kappa. The purpose of the thematic analysis was interpretive rather than to quantify coder agreement. Following a consensus-based approach, coding rigour was strengthened through multiple rounds of transcript review, coder discussion, and co-author checking. ZH conducted the initial coding, while CC reviewed the coding framework, coding allocation, preliminary themes, and selected quotes. Any disagreement about the coding of meaning units or the naming of themes was discussed until consensus was reached. The final themes were further reviewed by all co-authors. This process helped ensure that the analysis remained grounded in the interview data while allowing interpretive differences to be considered and resolved.

2.3. Results

2.3.1 Results Overview

As shown in Table 1, this research involved 21 Chinese-speaking dementia experts (10 from Mainland China, 5 from Hong Kong, 2 from Taiwan, 1 from Macau, 1 from Malaysia and 2 from Australia). Among the participants from Mainland China, 4 participants were from Northern China, 2 participants were from Eastern China, 2 participants were from Southern China, and 2 participants were from Western China. Among the 21 participants, 10 were doctors, 7 were university professors, and 4 were nurses and allied health professionals. As for the type of job affiliation, 7 were from universities, 8 were from hospitals, 3 from non-governmental organisations (NGOs), and 3 from clinics. The average dementia-related work experience was 17.5 years (SD = 8.6).

Table 1 Characteristics of 21 Participants

Characteristic	**Value**	
Region, *n (%)*		
Mainland China (Northern China)	4	(19)

Mainland China (Southern China)	2	(10)
Mainland China (Eastern China)	2	(10)
Mainland China (Western China)	2	(10)
Macau	1	(5)
Taiwan	2	(10)
Hong Kong	5	(24)
Malaysia	1	(5)
Australia	2	(10)
Occupation, *n (%)*		
Doctor	10	(48)
Professor	7	(33)
Clinician	4	(19)
Type of job affiliation, *n (%)*		
University	7	(33)
Hospital	8	(38)
NGO	3	(14)
Clinic	3	(14)
Related work experience (years), *mean (SD)*	17.5	(8.6)

SD – standard deviation

With regard to the preferred Chinese term for “dementia” (see Table 2), 1 participant preferred “痴呆 *chī dāi*” (Stupidity and Idiocy), 1 participant chose “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), 13 participants selected “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome), 5 participants endorsed

“失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome), and 1 participant preferred “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome).

Table 2 Term Preference Outcome

Term	Frequency
痴呆 *chī dāi* (Stupidity and Idiocy)	1
脑退化症 *nǎo tuì huà zhèng* (Brain Degeneration Syndrome)	1
认知障碍症 *rèn zhī zhàng ài zhèng* (Cognitive Impairment Syndrome)	13
失智症 *shī zhì zhèng* (Loss of Intelligence Syndrome)	5
退智症 *tuì zhì zhèng* (Degenerative Intelligence Syndrome)	1

We identified 12 topics and 32 themes in this study. The topics, themes and the example quote for each theme are in Table 3.

Table 3 Sample Topics, Themes and Quotes

Topics	Themes	Examples
Attitudes towards “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome)	Problems of Using “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome)	*Many people use this term to describe others, which is humiliating, so many people consider this word taboo. P20*
	Neutrality of “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) among professionals	*I’m not feeling uncomfortable with this term, because I research this area. P04*
Scientific Accuracy of “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome)	Brain degeneration happens in people with dementia	*I think brain degeneration does indeed reflect part of the true pathological*

		process of “痴呆 chī dāi” (Stupidity and Idiocy; dementia). P02
	Concerns about the scientific accuracy of “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome)	*I don't think it can be fully scientifically accurate, because it only expresses the degeneration itself. P21*
	“脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) may mislead the public	*You need to determine whether it’s normal ageing or pathologing. P13*
Cultural Appropriateness of “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome)	“脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is less aggressive than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) and easily accepted by the public	*When it comes to “脑退化症 nǎo tuì huà zhèng” (Brain Degeneration Syndrome), lay people or non-medical professionals tend to find it easier to understand. P16*
	“脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) carries negative implications	*The word “degeneration” can make them feel uncomfortable. P03*
	“脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is uncommon	*In many rural areas of China, individuals with limited education may be largely unfamiliar with “脑退化症 nǎo tuì huà zhèng” (Brain Degeneration Syndrome). P05*
	“脑退化症 *nǎo tuì huà zhèng*” (Brain	*For the term “脑退化症 nǎo tuì huà zhèng” (Brain Degeneration*

	Degeneration Syndrome) is hard to pronounce	*Syndrome), it feels somewhat uncomfortable in the mouth. P12*
Scientific Accuracy of “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome)	“认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) is scientifically accurate	*First of all, the term “认知障碍症 rèn zhī zhàng ài zhèng” (Cognitive Impairment Syndrome) doesn’t emphasise the severity, so it can cover mild, moderate, and severe cases. That makes it relatively appropriate. P13*
	“认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) is broader than dementia	*“认知障碍症 rèn zhī zhàng ài” (Cognitive Impairment) also includes MCI. P09*
Cultural Appropriateness of “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome)	“认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) has been commonly used by some Chinese dementia experts	*As for the term, I feel it’s more commonly used domestically. We use it often. P19*
	“认知障碍症 *rèn zhī zhàng ài zhèng”* (Cognitive Impairment Syndrome) carries little stigma	*It consists of the words “cognitive” and “impairment” which are relatively neutral. P02*
	The public is unfamiliar with “认知障碍症 *rèn zhī zhàng ài zhèng”* (Cognitive Impairment Syndrome) and may not understand this term correctly	*Most people in China may not really understand what “认知障碍 rèn zhī zhàng ài” (cognitive impairment) means, except for professionals like us. P20*

Scientific Accuracy of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome)	The scientific accuracy of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) depends on how to interpret “智 *zhì*”	*I wonder – does “智 zhì” refer to intelligence, wisdom, or maybe IQ? P04*
	The scientific accuracy of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is low	*it does not clearly express the cognitive function, the main dysfunction, one of the most important features of the disease. P01*
Cultural Appropriateness of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome)	“失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) has been widely used and accepted by the public	*I think the consensus now should be “ 失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) which is less likely to change. P06*
	The cultural appropriateness of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is low	*Culturally speaking, “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) carries a more negative connotation. P03*
Scientific Accuracy of “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome)	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is more scientifically accurate than “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome)	*This term is more appropriate than “loss of intelligence”, because it uses “degeneration”, which denotes a gradual degeneration not fully lost. P13*
	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) partially reflects dementia	Similarly, this term overemphasise intelligence. *P12*
Cultural Appropriateness of “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome)	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is hardly used	*The term “退智 tuì zhì” (Degenerative Intelligence) hardly appears, so it so it is a brand new term to all people. P09*

	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is more culturally appropriate than 失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome)	*This term sounds more gentle than “失智症 shī zhì zhèng”. P10*
	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is culturally negative	*That term might be slightly better than using the character “失 shī” (loss) but it still isn’t much better—it still carries a bit of a negative connotation overall. P03*
	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is hard to pronounce	*From the perspective of Chinese pronunciation, having two fourth tones in a row definitely feels awkward. It doesn’t come out smoothly and feels uncomfortable to say. P12*
Best Term for Dementia	“痴呆 *chī dāi*” (Stupidity and Idiocy) is the best	*So, while both terms have their advantages, if we must find a direct equivalent for “dementia”, I would still adhere to the use of “痴呆 chī dāi” (Stupidity and Idiocy). P12*
	“脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is the best	*Personally, I would choose the term “脑退化症 nǎo tuì huà zhèng” (Brain Degeneration Syndrome). P07*
	“认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) is the best	*Personally, I prefer the term “认知障碍症 rèn zhī zhàng ài zhèng” (Cognitive Impairment Syndrome). It sounds more objective and better*

		captures the core impact and main symptoms of the condition. P01
	“失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is the best	*As long as someone has received some education or has heard others talk about it, whether through the news or other sources, most people are familiar with the term* “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). *P11*
	“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is the best	*I feel like this name is easier to pronounce. Patients can grasp it right away. P18*
The Impact of Renaming Dementia	Renaming dementia in Chinese does help the individual and the society	*I think since the name change, the general public has shown a more positive attitude, and families are more open and accepting. P16*
The Distinction between Including or Omitting the Character “症 *Zhèng*” (“disease” or “syndrome”)	No significant difference whether or not including “症 *Zhèng*” (“disease” or “syndrome”)	*I don’t think it matters. P14*
	“症 *Zhèng”* (“disease” or “syndrome”) is required when referring to dementia	*My personal feeling is that the character “症 zhèng” (“disease” or “syndrome”) at least emphasises that this is a medical condition. P03*

2.3.2 Topic 1: Attitudes towards "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome)

2.3.2.1 Problems of using "□□□ chī dāi zhèng" (Stupidity and Idiocy Syndrome).

Participants generally reported that "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) is a stigmatised term for Chinese speakers, especially for people with dementia and their families:

Although it starts from describing the symptoms, in Chinese, the term carries connotations similar to being "stupid" or "foolish", which can be quite discriminatory. (P10)

Some patients' sons and daughters would avoid using "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome) to describe their parents. They would only say, "My dad and mom's memory are not as good as before." They've become somewhat resistant to using that term. (P18)

Some participants held that the term "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) itself is the reason why many people fail to receive a timely diagnosis of dementia:

This term makes quite a lot of people with dementia may deny or hide their early symptoms, such as escaping from diagnosis and intervention. These situations are seldom found in other chronic diseases such as hypertension, which the name is quite neutral. (P14)

If I tell my patients that you may have “痴呆症 chī dāi zhèng” (Stupidity and Idiocy Syndrome), they won’t come back again. (P08)

Some participants raised concerns about the scientific accuracy of “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). They understood that this term has been used for a long time in Chinese culture, but they also thought that the term does not represent the signs and symptoms of dementia in a scientifically accurate way, especially for people in the early stage of dementia:

In Shanghai, we’re seeing more and more people in the outpatient department. Many well-off, healthy-looking uncles and aunties, dressed very elegantly, come in… When we test them, their MMSE scores are around 28 or 26, which is still quite good… Let me give you one clinical example: an older woman came in and said she believed she had a problem… Her Aβ and tau PET scans both came back positive, so she was indeed in a very early stage of this condition. But if you ask me to describe her as “痴呆 chī dāi” (Stupidity and Idiocy), I can’t type it on the medical record at all. (P13)

It tends to describe people who are already in the middle or late stages. But in reality, most patients aren’t in those stages, so I think there’s clearly a mismatch. (P07)

2.3.2.2 Neutrality of “□□□ *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) among Professionals.

Some participants working as doctors felt “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) was emotionally neutral when they used it. They merely treated the term as a name for a health condition without attaching any emotional connotation to it:

I'm not feeling uncomfortable with this term, because I research this area. (P04)

To be honest, I don't have much emotional attachment to this term. It feels quite neutral to me. (P12)

Moreover, some participants said that they use "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) while communicating and writing in professional settings:

When I was a student, I was taught to use "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome) all the time… *Sometimes I have to write grant proposals or create public education materials… Sometimes I am accustomed to using "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome) in my writing. (P20)*

For "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome), I think medical professionals are still often using the term while communicating with each other. (P03)

2.3.3 Topic 2: Scientific Accuracy of "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome)

2.3.3.1 Brain degeneration happens in people with dementia.

From the perspective of scientific accuracy, some participants thought that "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is relatively scientifically accurate, because brain degeneration occurs in people with dementia:

From both pathological and imaging perspectives, we can observe neurodegeneration in the brain. "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome; dementia) is considered a neurodegenerative disease, meaning there is a clear decline in both brain structure and function, along with the accumulation of pathological proteins in the brain. (P04)

From a biological point of view, it's scientifically valid. There really is degeneration occurring in the brain. (P12)

2.3.3.2 Concerns about the scientific accuracy of "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome).

However, most participants raised concerns about two aspects of scientific accuracy:

(i) This term can only reflect the partial cause of developing dementia, and some types of dementia are not caused by brain degeneration:

From a scientific perspective, I think "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome; dementia) is actually a general term that refers to a group of conditions. It includes neurodegenerative causes, but also non-neurodegenerative ones, such as vascular dementia, or cognitive impairment resulting from infections or acute brain injuries. So scientifically speaking, I feel that the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) doesn't fully capture the whole picture. It seems to only refer to types like Alzheimer's disease. (P10)

(ii) Some other diseases are closely related to brain degeneration, which means this term is too general to focus on dementia only:

When we talk about brain degeneration, many conditions can be described that way. For example, Parkinson's disease is also a form of brain degeneration. But it doesn't necessarily lead to dementia. Most people with Parkinson's don't develop dementia. So using "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) as a name for dementia isn't very accurate. (P15)

2.3.3.3 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) may mislead the public.

Some participants suggested that "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) could bring a misconception to the public that dementia is a normal part of ageing. They stressed that degeneration is normal for the older population, so this term may lessen the severity of dementia:

First of all, it tried to give people a sense that it is a normal ageing process. Everybody will have degeneration in some ways or another. When muscles degenerate, our eyesight degenerate, our skin degenerates, our heart degenerate, all our organ systems in physiology will be generated in old age. But we understand "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome; dementia) is not a natural deterioration in old age. It is caused by pathology and also genetic practice. We should not play down the illness. (P17)

I think one very important point is that everyone ages. As part of the normal ageing process, the brain naturally undergoes gradual shrinkage and degeneration over time. But that doesn't mean every ageing brain will develop dementia, (P13)

2.3.4 Topic 3: Cultural Appropriateness of "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome)

2.3.4.1 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is less aggressive than "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) and easily accepted by the public.

Some participants said that "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) sounds more culturally acceptable than "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome):

Culturally speaking, I think it's somewhat more acceptable, probably easier to accept compared with the term "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome). (P19)

Many participants thought that because the concept of "degeneration" is often associated with aged population and mentioned in other health conditions, the public can easily understand and accept this term:

This term, in terms of culture, can be accepted. In our culture, there's a general belief that ageing naturally comes with degeneration, so the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) is actually fairly acceptable to many people. (P09)

For example, we often talk about degenerative arthritis, so the word "degeneration" itself, at least in Taiwan, is not something we strongly reject or feel defensive about. Culturally speaking, I think the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) is, somehow, still quite acceptable. (P06)

2.3.4.2 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) carries negative implications.

However, many participants thought that "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) still carries negative connotations, which may bring mental pressure to the public:

The term "退化 tuì huà" (degeneration) also carries certain negative connotations in the Chinese context. And because the brain, especially in Chinese culture, is often associated with qualities like intelligence, superiority, or being a highly valued organ, the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) might evoke a sense of fear or anxiety in patients. (P02)

The term "退化 tuì huà" (degeneration) can also make some elderly people feel uncomfortable. It implies that they are no longer who they used to be, and something is wrong. And once something has degenerated, it suggests there's no way to return to how it was before. So the message it conveys can also feel quite negative. (P03)

2.3.4.3 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is uncommon.

Some participants, including some experienced participants who have been working in the field of dementia for more than 15 years, rarely saw the term "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome). Hence, this term can be too new for the public to use:

To be honest, the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) isn't something we commonly use. I can't speak for all of China, but at least not here in Shanghai. (P13)

Whether or not I'm doing research specifically on this topic, I've been working in nursing for nearly 40 years, and I've rarely come across the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome). So you can imagine if even professionals like us don't hear it often, the general public must find this term even more unfamiliar. (P11)

2.3.4.4 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is hard to pronounce.

Some participants highlighted an issue with the pronunciation of "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome). They felt this term is hard to pronounce in Chinese, which may affect the effectiveness of communication to the public:

In the Chinese language context, specifically in mainland China, the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) doesn't sound very natural or smooth... Subjectively, it doesn't feel like the kind of everyday, colloquial expression we commonly use in the Mainland. (P03)

For the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome), it feels somewhat uncomfortable in the mouth. Phonetically and rhythmically, it's not very smooth. Specifically, both "退 tuì" and "化 huà" are in the fourth tone, and in Mandarin, two consecutive fourth-tone syllables tend to weaken the sound, making *them less resonant. Compared to words with rising or varied tones, this tonal combination makes the term feel less impactful. So personally, I don’t think it’s ideal for broad public communication. (P12)*

2.3.5 Topic 4: Scientific Accuracy of “认知障碍症 rèn zhī zhàng ài zhèng” (Cognitive Impairment Syndrome)

2.3.5.1 “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) is scientifically accurate.

Most participants thought that “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) was scientifically accurate. Many participants said that this term can comprehensively and objectively describe the signs and symptoms of dementia:

“认知障碍 rèn zhī zhàng ài zhèng” (Cognitive Impairment) reflects how the disease manifests, and it is just the symptom of the disease. And secondly, it expresses in a very objective manner. (P19)

Cognition actually involves many different dimensions, including memory, attention, executive function, visuospatial ability, social cognition, and more. In that sense, I think “认知障碍 rèn zhī zhàng ài” (Cognitive Impairment) is a relatively good term that can comprehensively capture the nature of this disease. (P04)

Some participants commented that this term could cover different stages of dementia:

First of all, the term “认知障碍 rèn zhī zhàng ài” (Cognitive Impairment) doesn’t emphasise the severity, so it can cover mild, moderate, and severe stages. (P13)

Some participants mentioned that this term matches the latest understanding of dementia (e.g., DSM-5 and ICD-11):

The term "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment) does not indicate severity, allowing it to encompass both mild and severe cases. In this regard, it closely aligns with the classification framework used in the ICD-11 international disease diagnostic system. (P12)

"认知障碍症 rèn zhī zhàng ài zhèng" (Cognitive Impairment Syndrome) is actually a more globally recognised term. International associations focused on "认知障碍症 rèn zhī zhàng ài zhèng" (Cognitive Impairment Syndrome; dementia) often use this term, as it more specifically corresponds to what is described in the DSM-V, particularly the term "major neurocognitive disorder". (P07)

2.3.5.2 "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) is broader than dementia.

A few participants deemed the concept of "认知障碍 *rèn zhī zhàng ài*" (Cognitive Impairment) to be more inclusive than dementia, including delirium and MCI:

Personally, I feel that "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment) is a more inclusive term. The challenge is in distinguishing it from "mild cognitive impairment", because for many years, mild cognitive impairment has often been viewed as a stage before "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome; dementia). (P10)

“认知障碍 rèn zhī zhàng ài” (Cognitive Impairment) can also include acute cases, like delirium, which isn’t “痴呆症 chī dāi zhèng” (Stupidity and Idiocy Syndrome; dementia). It’s short-term and sudden. So the term actually covers quite a broader range. (P11)

2.3.6 Topic 5: Cultural Appropriateness of “认知障碍症 rèn zhī zhàng ài zhèng” (Cognitive Impairment Syndrome)

2.3.6.1 “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) has been commonly used by some Chinese dementia experts.

Some participants reported that “认知障碍症 *rèn zhī zhàng ài zhèng*” had been used by some medical practitioners in Mainland China to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome):

Right now, the term we use more often as a substitute for “痴呆症 *chī dāi zhèng*” *(Stupidity and Idiocy Syndrome) is “认知障碍 rèn zhī zhàng ài” (Cognitive Impairment). Whether in daily interactions with patients or during public education, I do think it’s being used quite a lot. (02)*

Some participants said that Hong Kong has already officially used “认知障碍症 *rèn zhī zhàng ài zhèng*” (Cognitive Impairment Syndrome) to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome):

We have adopted the term “认知障碍症 rèn zhī zhàng ài zhèng” (Cognitive Impairment Syndrome) in Hong Kong, I think since 2012. (P14)

2.3.6.2 "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) carries little stigma.

Most participants thought that this term is a highly neutral term which carries little stigma to the Chinese public. The reasons include:

(i) This term is a medical-oriented term, which does not remind people of "痴 *chī*" (Stupidity) *and* "呆 *dāi*" (Idiocy):

In Chinese culture, the term "痴呆 chī dāi" (Stupidity and Idiocy) is sometimes used as an insult. People might say, "You have '痴呆 chī dāi' (Stupidity and Idiocy)" to scold someone. But no one would ever say, "You have '认知障碍 rèn zhī zhàng ài' (Cognitive Impairment)" as an insult, because that's a highly technical, medical term. (P21)

(ii) The term "障碍 *zhàng ài*" (Impairment) has been widely used as an ending for many medical terms. These terms are well accepted by Chinese people:

I think the term is commonly used in other types of disorders in Hong Kong, such as "学习障碍 xué xí zhàng ài" (learning disorder), "社交障碍 shè jiāo zhàng ài" (social anxiety disorder), or "人格障碍 rén gé zhàng ài" (personality disorder). These kinds of terms are generally acceptable and widely recognised, both in professional fields and among the general public. (P14)

2.3.6.3 The public is unfamiliar with "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) and may not understand this term correctly.

Despite the cultural neutrality recognised by most participants, many participants also expressed concerns that this term is not familiar to the general public:

The idea of cognitive function does take some understanding. Since older adults generally have lower education levels than younger people, it might be harder for them to fully grasp it. But for their family members, it's probably easier to understand. (P02)

In Hong Kong, when we use the term "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment), sometimes older people may confuse it with "智障 zhì zhàng" (intellectual disability). I feel that "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment) is still too new for them. (P07)

In addition, some participants worried that the concept of "认知 *rèn zhī*" (cognition) among the general public is different from the concept of it among medical practitioners:

In our culture, "认知 rèn zhī" (cognition) is often linked to self-awareness or introspection, like having a clear understanding of yourself. But this meaning doesn't exactly match the medical definition of cognition, and I think that gap still exists. (P04)

2.3.7 Topic 6: Scientific Accuracy of "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome)

2.3.7.1 The scientific accuracy of "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome) depends on how to interpret "智 *zhì*".

Some participants endorsed the scientific accuracy of "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome), because "智 *zhì*" (intelligence) is closely related to cognition:

This is a good direction… It's about losing certain intellectual or cognitive abilities. Those functions are no longer there. So in that way, terms like "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), and "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment) are quite similar in meaning. (P15)

Some participants thought that the scientific accuracy depends on how people understand the character "智 *zhì*". This character can be interpreted as "智能 *zhì néng*" (intelligence), "智商 *zhì shāng*" (IQ), "智慧 *zhì huì*" (wisdom), and "心智 *xīn zhì*" ("mind" or "mental")：

I wonder – does "智 zhì" refer to intelligence, wisdom, or maybe IQ? (P04)

The character "智 zhì" can actually be interpreted in many different ways. It might refer to wisdom, mind, or intelligence. There are various interpretations, and it depends on how we choose to understand this term. (P07)

2.3.7.2 The scientific accuracy of "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) is low.

Many participants were not in favour of the scientific accuracy of this term. There are two main reasons:

(i) The signs and symptoms of dementia are not restricted to the impact on intelligence:

The term does reflect one of the main characteristics of the disease, but when people hear the character "智 zhì" (intelligence), the general public often thinks of intellectual capacity. As a result, they may misunderstand it as implying the person merely lacks intelligence. (P01)

I think "痴呆 chī dāi" (Stupidity and Idiocy; dementia) is not entirely about a decline in intellectual ability. We know that it actually involves impairments in certain domains of cognitive function. Especially in the early stages, it's only specific areas that are affected. It's not really a decline in intelligence or IQ. So the term can only partially represent the condition. (P02)

(ii) The character "失 *shī*" (loss) is an overstatement of the symptoms of dementia. Dementia is a progressive syndrome, but "失 *shī*" (loss) indicates that people with dementia lose their intelligence at once:

Personally, I feel that the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) means "loss of intelligence", as if it's completely gone. But in fact, our patients haven't completely lost their intelligence. (P13)

People with “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome; dementia) may lose their intelligence ranging from just 10% to 80%, 90%, or 100%. There’s a wide spectrum of severity… But when we use “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome), people can mistakenly think that it’s an entire loss of their intelligence. (P09)

2.3.8 Topic 7: Cultural Appropriateness of “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome)

2.3.8.1 “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) has been widely used and accepted by the public.

Some participants indicated that “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome) has been widely adopted to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome):

At present, “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) is more commonly used in Mainland China. Researchers tend to use “失智 shī zhì” (Loss of Intelligence) more often, and so do people working in aged care institutions and social workers. (P10)

“失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) has already existed for a very long time. It is originally from Taiwan, and I know that it is used in Taiwan and Macao. (P14)

Some participants mentioned that the general public can well accept and understand this term:

After consulting with Chinese-speaking representatives from relevant organisations and some family caregivers, we ultimately decided to use the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), as it is widely accepted and the vast majority of Chinese Australians know what it means. (P11)

Some participants supposed that this term is relatively culturally neutral, which brings less stigma to the public:

When you look at the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), the character"失 shī" means "loss", and that doesn't necessarily imply shame. For both patients and families, the wording makes it clearer that it's a medical issue, and it tends to foster more empathy or acceptance. (P19)

In fact, many members of the public feel that it's much, much better than the term "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome). So in terms of acceptability, it's generally quite good. (P09)

2.3.8.2 The cultural appropriateness of "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome) is low.

Many participants questioned the cultural neutrality of "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome). The reasons are as follows:

(i) This term stresses "智 *zhì*" which is highly relevant to intelligence, wisdom, and IQ. These are related to brain in Chinese culture, so this term can bring mental pressure to people:

In the Chinese-speaking context, whenever a term involves "智 zhì", whether it's related to wisdom, IQ, or intelligence, it tends to make people feel more anxious. (P02)

Culturally speaking, the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) carries a fairly strong negative connotation, at least from my perspective. The character "智 zhì" is often associated with things like IQ or intelligence in Chinese culture, so people tend to make those associations. As a result, "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) can imply that someone has become foolish. (P03)

(ii) The character "失 s*hī*" (loss) can scare the public, because it directly tells the public that people with dementia may lose their intelligence:

But in fact, the term itself is quite negative. It immediately suggests that something has been lost… As for "失智 shī zhì " (Loss of Intelligence), I think its negative emotional impact lies in the message that intelligence has already been fully lost. If it is fully lost, then there's no hope left. (P12)

This term is not quite acceptable to the patients themselves… When we use the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), people tend to assume it means the person has completely lost all of their intelligence… (P09)

(iii) This term is a literal translation from the English term "dementia". "Dementia" itself means "out of mind", which is a negative term:

“失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) is actually a literal translation from English. It means “distant from a normal state of mind”. “失智 shī zhì ” (Loss of Intelligence) still feels somewhat negative, especially because the character “失 shī” implies loss, which naturally carries a bit of a negative tone. (P01)

Moreover, some participants felt that this term is not suitable for medical practitioners to use because this term does not sound professional and is not clear in meaning:

I personally feel that it’s still not suitable for professional practitioners to use… It’s a term that can be used in public education, but at the same time, it’s quite vague. If “失智 shī zhì ” (Loss of Intelligence) is introduced and explained through proper education, people may understand that it refers to dementia. But without such promotion, even professionals might not be entirely sure what it refers to. (P21)

2.3.9 Topic 8: Scientific Accuracy of “退智症 tuì zhì zhèng” (Degenerative Intelligence Syndrome)

2.3.9.1 “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is more scientifically accurate than “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome).

The majority of participants said that “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is more scientifically accurate than “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). They speculated that “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is developed from “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). The character “退 *tuì*” (degenerative) better reflects that dementia is a neurodegenerative condition, compared with the character “失 *shī*” (loss):

Purely from a Chinese linguistic perspective, the character “退 tuì” (degenerative) aligns well with the concept of dementia. Compared to “失 shī” (loss) in “失智 shī zhì” (Loss of Intelligence), “退 tuì” (degenerative) gives a better sense of gradual weakening, which is more accurate. (P05)

I think this term is probably related to “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) and may have evolved from it. “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) sounds more severe, as it implies intelligence has been fully lost. In contrast, “退智症 tuì zhì zhèng” (Degenerative Intelligence Syndrome) seems to suggest a process of gradual degeneration. From a scientific perspective, it might be a slightly better term than “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome) because it shifts the focus toward “认知障碍 rèn zhī zhàng ài” (cognitive impairment) and emphasises the nature of degeneration. (P12)

2.3.9.2 “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) partially reflects dementia.

Some participants believed that the key issue is the character “智 *zhì*” (intelligence). This term only relates dementia to “智 *zhì*” (intelligence), which is incomprehensive to scientifically describe dementia:

The character “智 zhì” (intelligence) tends to explain it (dementia) in a relatively narrow or one-sided way. (P03)

The way we interpret the character "智 zhì" (intelligence) is often more closely associated with intelligence, which differs from the concept of cognitive decline. Therefore, from a scientific standpoint, the term may not be entirely appropriate. (P01)

2.3.10 Topic 9: Cultural Appropriateness of "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome)

2.3.10.1 退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is hardly used.

Many participants said that "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is rarely used and some had never heard of the term:

Today is the first time I've heard the term "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome). I had never come across this expression in Chinese before. (P10)

From a cultural perspective, I haven't really heard the term "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome) being used in Taiwan. (P06)

I feel "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome) is not a term that's commonly heard or used among Chinese communities. (P14)

Therefore, some participants discussed that if this term were employed in the future, efforts are needed to educate the public so that they can understand the meaning of this term:

I think even family members with a relatively high level of education would initially question the term"退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome)… because they've never heard it before… Of course, with proper public education, things can change. (P13)

If the new term "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome) is to be introduced, it will likely need to go through a phase of public education and gradual understanding. (P21)

2.3.10.2 "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is more culturally appropriate than "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome).

Some participants felt that this term is more culturally acceptable than "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome), as "退 *tuì*" (degenerative) means that something is in a declining stage, and "失 *shī*" refers something to be completely lost:

I feel that "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome) is somewhat easier to accept than "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), because "失智 shī zhì" (Loss of Intelligence) sounds like everything has been lost or completely gone. In contrast, "退智 tuì zhì" (Degenerative Intelligence) implies a kind of decline in function, so at least compared with "失 shī" (loss), it might come across as a bit more gentle. (P20)

2.3.10.3 **“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is culturally negative.**

Although some participants had the opinion that “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is more culturally appropriate than “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome), “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is still a culturally negative term:

From the perspective of culture, “退智症 tuì zhì zhèng” (Degenerative Intelligence Syndrome) can be more appropriate than “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome), but when you refer it to the disease, it’s still somewhat negative. (P01)

I think the term “退智症 tuì zhì zhèng” (Degenerative Intelligence Syndrome) might be somewhat easier for people to accept than “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome), as it emphasizes the nature of denegeration. However, I also feel that it still carries some culturally negative connotations. (P04)

2.3.10.4 **“退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is hard to pronounce.**

Some participants reported that “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome) is hard to pronounce:

“退智症 tuì zhì zhèng” (Degenerative Intelligence Syndrome) feels a bit more awkward to say. It doesn’t quite fit with our everyday language habits… It just doesn’t sound very natural, and honestly, it’s a bit uncomfortable to pronounce. It doesn’t flow well, which makes it less suitable for public communication. (P02)

From the perspective of Chinese pronunciation, having two fourth tones in a row definitely feels awkward. It doesn't come out smoothly and feels uncomfortable to say. (P12)

2.3.11 Topic 10: Best Chinese Term for Dementia

2.3.11.1 "痴呆 *chī dāi*" (Stupidity and Idiocy) is the best.

One participant endorsed "痴呆 *chī dāi*" (Stupidity and Idiocy) as the best Chinese term for "dementia". Although this participant thought that the public should be educated around the concept of "认知障碍 *rèn zhī zhàng ài*" (cognitive impairment) instead of dementia only, the participant emphasised that dementia means the late stage of cognitive impairment. Therefore, "认知障碍 *rèn zhī zhàng ài*" (Cognitive Impairment) cannot be the Chinese translation for "dementia". This participant suggested that the original term "痴呆 *chī dāi*" (Stupidity and Idiocy) should be kept as the Chinese equivalent of "dementia":

From a service perspective, we shouldn't focus solely on dementia. Instead, our approach should encompass cognitive impairment, including the stage of MCI… If we're looking to find a term for "dementia", it's important to consider that in English, "痴呆 chī dāi" (Stupidity and Idiocy; dementia) typically refers to individuals with more severe cognitive impairments. In this context, the term "痴呆 chī dāi" (Stupidity and Idiocy) aligns more closely with dementia. On the other hand, "认知障碍 rèn zhī zhàng ài" (cognitive impairment) encompasses a broader range of conditions, extending beyond the scope of dementia. So, while both terms have their *advantages, if we must find a direct equivalent for "dementia", I would still adhere to the use of "痴呆 chī dāi" (Stupidity and Idiocy). (P12)*

2.3.11.2 "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is the best.

One participant selected "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) as the best term for "dementia". This participant held that scientific accuracy should be a factor while renaming "dementia". However, the suggestions of people with dementia and their families should also be considered. If the term is overly technical, it may create a feeling of detachment for the general public, making them feel dementia is far away from them. This participant introduced that "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) was proposed by a Year 5 primary school student during a renaming competition. It was selected from over 1,000 submissions. One of the judges at the time was Nobel Prize laureate Charles Kuen Kao, who was already living with dementia. He and the other judges agreed that the name was excellent because it was easy to understand:

Personally, I would choose the term "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome)… We held a renaming competition more than 10 years ago… First of all, people with "失智 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) or "脑退化 nǎo tuì huà" (Brain Degeneration; dementia) should be included in the decision-making process, because they also have their own perspectives. In that competition, some individuals representing people with "脑退化 nǎo tuì huà" (Brain Degeneration; dementia) participated, along with their family *members. I think some terms can be used in medical settings. But in terms of care and support, the people involved don't necessarily need to know the most scientifically accurate term… In 2010, we held a competition inviting all Hongkongers to think. At that time, one important person is Professor Kuen Kao, the Nobel Prize laureate… Back then, we received more than a thousand name suggestions, and "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) was the one proposed by a primary school student in Year 5… At the time, Professor Kao and several other judges also felt that this name was very good, as it was easy to understand and could be promoted among different age groups, including primary and secondary school students, who could also grasp its meaning. (P07)*

2.3.11.3 认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) is the best.

Thirteen of twenty-one participants considered "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) to be the best term for "dementia". They generally endorsed the scientific accuracy of this term:

From a scientific perspective, I would lean more toward using the term "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment). It aligns better with the terminology we commonly use in clinical settings, including in diagnostic contexts. (P03)

Some participants believed that with continued media coverage, the term "障碍 *zhàng ài* " (impairment) has also become widely known and accepted. Accordingly, if the mass media can use the term to describe "dementia", "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) can also be accepted by the public:

From my personal perspective on medical terminology and public communication, I believe that with the general rise in education levels and the widespread dissemination of information through print and digital media, including the internet, the speed at which the public accepts new concepts and terms is likely to increase significantly… These kinds of terms come up a lot in casual conversations, like "人格障碍 rén gé zhàng ài" (personality disorder) and other impairments. You even see people online labelling themselves with these terms. (P02)

Some participants also believed this term objectively describes dementia:

Personally, I prefer the term "认知障碍症 rèn zhī zhàng ài zhèng" (Cognitive Impairment Syndrome). It is relatively objective and effectively summarizes the key impacts and clinical manifestations of the disease. (P01)

Some participants emphasised the importance of introducing the concept of "认知障碍 *rèn zhī zhàng ài*" (Cognitive Impairment). They insisted that MCI should be introduced in dementia campaigns while raising awareness of dementia. "认知障碍 *rèn zhī zhàng ài*" (Cognitive Impairment) is a culturally neutral term, so it does not pressure the public, which allows them to more peacefully explore dementia:

When we treat tumours, we should treat them before they spread throughout the body. The same principle applies there. That's why I believe the choice of terminology really matters. We need a term that the public can more easily accept, so they won't avoid the topic like people once did with cancer. It's important to treat dementia as early as possible. At the very least, I believe we shouldn't label someone in the early *stage of this disease as "痴呆 chī dāi" (Stupidity and Idiocy). So among the terms you just mentioned, my first choice would be "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment). (P13)*

If we're aiming for a term with fewer negative connotations, I would probably choose "认知障碍 rèn zhī zhàng ài" (Cognitive Impairment). The reason I prefer it is because I'm thinking more about the future rather than just the present. I believe that including MCI under this umbrella is a good thing. In reality, "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) is a progressive condition, and MCI is already part of that trajectory, which just hasn't reached a severe stage yet. So if we start treating the disease from the MCI stage and work to prevent further decline, it could make a significant difference in the future. (P09)

2.3.11.4 "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome) is the best.

Five participants chose "失智症 *shī zhì zhèng*" (Loss of Intelligence Syndrome) as the best term for "dementia". Some participants conveyed that this term is already widely adopted in their regions:

I think there's now a general consensus around the term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome). After so many years of using it in Taiwan, it's almost settled. If we were to hold a vote, I believe most people would still choose "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome). (P06)

The term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) is generally well accepted, especially within the Chinese community in Australia. People feel that it *carries little to no stigma, especially when compared to "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome). It's widely recognised and broadly accepted by the community. (P11)*

Some participants thought that scientific accuracy is important, but the public's acceptance of the term is equally important, and even more so. As long as the term carries little culturally offensive meaning and is generally accepted by the public, then it can be adopted:

From both scientific and cultural perspectives, I believe that"失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) is a more appropriate Chinese translation of "dementia". When considering both scientific accuracy and cultural appropriateness, we also need to take into account the existing level of public familiarity. Even if we create a term that is highly scientific and culturally appropriate for Chinese communities, if the public has no understanding of it, promoting the term would still be very difficult. So taking into consideration the scientific and cultural dimensions, as well as current public recognition and popularity, I personally lean toward choosing "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome). (P05)

When it comes to public education, being reasonably accurate is usually sufficient. The choice of term should also take into account cultural and other multidimensional considerations to ensure broader benefits… When it comes to the general public, what really matters is how acceptable the term is… So as long as we avoid using "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome), and agree on a scientifically *grounded, unified name that the public can gradually get used to, it should be fine… We just pick an existing name that has been used a lot, like "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome) (P21)*

2.3.11.5 "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is the best.

One participant preferred "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) above the other terms. This participant held that this term is easy to pronounce and straightforward, so the public can understand this term easily:

I feel like this name is easier to pronounce. Patients can grasp it right away. It might be better than "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome) which is a bit harder to pronounce. (P18)

2.3.12 Topic 11: The Impact of Renaming Dementia

2.3.12.1 Renaming dementia in Chinese benifits the individual and the society.

Some participants from Hong Kong and Taiwan were asked about the impact of renaming dementia in their regions. Among these participants, some said that after renaming "dementia" in their regions, the public attitude towards dementia had undergone a significant transformation, with a greater degree of comprehension and acceptance than in the past. For example, the general public has become more open to discussing dementia. More media content is focused on the topic of dementia. The public generally has more knowledge of dementia:

I think since the name changes, the general public has shown a more positive attitude, and families are more open and accepting… Citizens also have a better understanding of the disease now. They even search for information online. This is a positive outcome. (P16)

Nowadays, discussions around "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) are very common. The media talk about it frequently. Whether in TV dramas or various programs, "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) is often mentioned. There are even shows where "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) is the central theme throughout. So compared with 20 or 30 years ago, public awareness and understanding of "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) have increased significantly, much more than before. (P09)

Some participants mentioned that the public has been more willing to seek a timely diagnosis of dementia since the renaming of dementia. Many of the patients being diagnosed now are in the early stages of dementia, whereas in the past, most were only diagnosed at a late stage：

I am now seeing many elder patients are brought to see me by the family members in the early stages… Previously many senior patients were already in their second year or third year. But now they made their first visits in the first year… Usually, they come here while symptoms have been occurring for only 1 and 2 months. (P17)

So do you know what the difference is? 20 to 30 years ago, in"失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) clinics, or psychiatric clinics at that time, the "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome; dementia) cases we saw were mostly moderate to severe. People would only come to see a doctor when they become "痴呆 chī dāi (Stupid and Idiotic)". But now, over 70% of the cases we see are in the mild stage. (P09)

2.3.13 Topic 12: The Distinction between Including or Omitting the character "症 Zhèng" ("disease" or "syndrome")

2.3.13.1 No significant difference whether or not including "症 *Zhèng*" ("disease" or "syndrome").

Some participants felt that the presence or absence of "症 *Zhèng*" ("disease" or "syndrome") does not significantly affect the meaning:

I don't think there's much of a difference. (P16)

2.3.13.2 "症 *Zhèng*" ("disease" or "syndrome") is required when referring to dementia.

Some participants reported that in medical settings, "症 *Zhèng*" ("disease" or "syndrome") is required, but for the daily language use, this character is not necessarily needed:

I think this might be something that lies between medical terminology and everyday spoken language… as in our formal diagnostic records, for example, we typically write something like "hypertensive disease, stage two" rather than simply stating "hypertension", don't we? (P02)

In medical education and clinical settings, we still recommend using the full term "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome). From an educational standpoint, it's better to include the character "症 Zhèng" ("disease" or "syndrome") to reflect the medical nature of the condition. That said, among the general public, it's very common for people to drop the character "症 Zhèng" ("disease" or "syndrome"). For example, my parents often say things like, "Do we have '失智 shī zhì' (Loss of Intelligence)?" (P06)

Eleven participants said that if a term does not include "症 *Zhèng*" ("disease" or "syndrome"), this term only describes the signs and symptoms. On the other hand, if the character is included, the term means a certain disease or syndrome:

When we refer to it as a disease, we include the character "症 Zhèng" ("disease" or "syndrome") and say "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome). However, when we simply say "失智 shī zhì" (Loss of Intelligence), it might be used more to describe a symptom rather than the disease itself. (P05)

By adding the character "症 Zhèng" ("disease" or "syndrome")…. It helps clarify that we are talking about a syndrome. (P21)

If we say someone has "失智 shī zhì' (Loss of Intelligence)", it might just be referring to a symptom, specifically, an issue with their cognitive function. But when we say "失智症 shī zhì zhèng" (Loss of Intelligence Syndrome), we're referring to a broader set of problems caused by cognitive impairment as a clinical condition. (P19)

In addition, for many participants, "症 *Zhèng*" ("disease" or "syndrome") implies that the signs and symptoms are severe enough to qualify as a formal diagnosis of dementia, whereas without it, the condition may not yet meet the diagnostic threshold:

It also suggests that the disease has reached a diagnosable level, like being eligible for insurance or treatment. There's a clear line, just like the difference between feeling depressed and having clinical depression. (P20)

I think the key issue here is that, scientifically, there's a stage where someone may have "认知障碍 rèn zhī zhàng ài" (cognitive impairment) but not necessarily a disease. In English, we call this "mild cognitive impairment", meaning the person is showing some cognitive issues, but not to a degree that would qualify as a disease. That's why we refer to it as "轻度认知障碍 qīng dù rèn zhī zhàng ài" (mild cognitive impairment) rather than calling it "轻度认知障碍症 qīng dù rèn zhī zhàng ài zhèng" (mild cognitive impairment syndrome)… If we do determine that the person has an actual disease, such as Alzheimer's disease or Lewy body dementia, then we would use the term "认知障碍症 rèn zhī zhàng ài zhèng" (cognitive impairment syndrome). (P15)

I think "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome; dementia) has 7 stages… If you add the character "症 Zhèng" ("disease" or "syndrome"), the person has reached stage 4, which is an illness already… When we talk about MCI, we won't say "症 Zhèng" ("disease" or "syndrome"), because at that time, it is just a condition that means you are at risk of "脑退化症 nǎo tuì huà zhèng" (Brain

> *Degeneration Syndrome; dementia). So I think if there is a "症 Zhèng" ("disease" or "syndrome") at the end, it is a diagnosis. (P07)*

2.4 Discussion

This study employed a qualitative research method to explore the most scientifically accurate and culturally appropriate Chinese term for "dementia". Thirteen out of twenty-one participants were of the opinion that "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) was the best Chinese term for "dementia". In this section, we analyse the scientific accuracy and cultural appropriateness of "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome), "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome), "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome) and "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) based on the interview results. Moreover, the importance of renaming dementia in Chinese and the need of containing "症 *zhèng*" ("disease" and "syndrome") are discussed. At last, this section concludes why the term "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) should be adopted in the future.

2.4.1 The Scientific Accuracy and Cultural Appropriateness of "痴呆症 chī dāi zhèng" (Stupidity and Idiocy Syndrome)

In this study, we found that "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) was not perceived as a scientifically accurate term. The characters "痴 *chī*" and "呆 *dāi*" denote that people are "stupid" and "idiotic", respectively. When we compare the term to the characteristics of people with dementia, it is not accurate. People in the early stages of dementia might have reasonable levels of cognitive function, even if this is a decline from previous levels (Devita et al., 2020; Rentz et al., 2004; Starr & Lonie, 2008) and would not be considered stupid or idiotic. This finding is consistent with the statements of Dementia Australia (2025), Quinn et al. (2022) and the United Kingdom National Health Service (2025).

From the perspective of cultural appropriateness, this study confirmed the previous literature that the term "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) carries a seriously negative meaning in Chinese culture, as previously reported by Chiu et al. (2014) and Lam et al. (2012). One notable finding is that "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) can be a culturally neutral term to doctors and other clinicians, because they treat the term as a health condition instead of a stigmatised word to insult others. This finding helps to explain another finding that many Mainland Chinese medical practitioners still adopt "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) while communicating with each other, and they also use this term in formal documentation. Moreover, the general public may be reluctant and refuse to seek a diagnosis of dementia, and even refuse to admit they have dementia, because of the term "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), which supports the claim by Chiu et al. (2014).

2.4.2 The Scientific Accuracy and Cultural Appropriateness of "脑退化症 nǎo tuì huà zhèng" (Brain Degeneration Syndrome)

The term "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) tries to describe dementia based on its cause. Western medical conceptualisation of dementia is that it is caused by neurodegeneration, with different types of neurodegeneration causing different types of dementia, such as Alzheimer's Disease, frontotemporal dementia and Lewy body dementia (Gao et al., 2025; Pendlebury, 2016). This is why some participants thought that this term is scientifically accurate. However, some types of dementia, such as vascular dementia, can cause neurodegeneration, but are not primarily caused by neurodegeneration (Birajdar et al., 2023). Therefore, the term "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) can only reflect a partial cause of dementia. Additionally, brain degeneration not only relates to dementia, but also other diseases (Lam et al., 2012), such as Parkinson's Disease (Kouli et al., 2018), which is one of the reasons why participants were not in favour of "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome). Some participants perceived that the word "退化 *tuì huà*" (degeneration) results in a misconception about dementia, possibly suggesting that dementia is a normal part of ageing. It is widely believed that when people age, degeneration is common in processing speed, attention, memory, and other brain functions (Kirk, 2024). Hence, the scientific accuracy of "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is highly questionable.

In terms of cultural appropriateness, although we found that “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is more culturally acceptable than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), it still carries negative connotations in Chinese culture because “退化 *tuì huà*” (degeneration) may evoke a sense of anxiety and fear. According to the *Affective Lexicon Ontology Library* (Xu et al. 2008), the word “退化 *tuì huà*” (degeneration) shares the same category of valence (i.e. negative) and emotion type (i.e. disgust) with “痴呆 *chī dài*” (Stupidity and Idiocy), but the emotion intensity of “退化 *tuì huà*” (degeneration) is lower than that of “痴呆”, with the former being 3 and latter being 5. As for the understandability of “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), it is endorsed by many participants, because the concept of “退化 *tuì huà*” (degeneration) has already been familiar among the general public. The word “退化 *tuì huà*” (degeneration) is often used in medial settings as the components of medical terms, such as “肌肉退化 *jī ròu tuì huà”* (Sarcopenia; Xie, 2024) and “退化性关节炎 *tuì huà xìng guān jié yán*” (Osteoarthritis; Wang, 2011). In printed mass media, the word “退化 *tuì huà*” (degeneration) can be easily found in health-related articles (e.g., Chen, 2024; Wu, 2025). In contrast, we also found that “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) itself is rarely used in some regions, such as Mainland China and Taiwan. Thus, the promotion of this term requires time and effort. For “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), it may not be easy to pronounce by the Mandarin-speaking population. If a name is hard to pronounce, the public may be less likely to accept and use the name (Laham et al., 2012), which is detrimental to the effect of communication. In short, "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) is better than "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) in terms of cultural appropriateness, but this is still a relatively new term for some regions and can be hard to pronounce by Mandarin speakers.

2.4.3 The Scientific Accuracy and Cultural Appropriateness of "认知障碍症 rèn zhī zhàng ài zhèng" (Cognitive Impairment Syndrome)

The scientific accuracy of "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) was backed by the majority of participants. They agreed that this term comprehensively and objectively characterises dementia. Prior research (Singh et al., 2016; Mecocci & Boccardi, 2021; Zawar et al., 2025) has shown that dementia primarily affects people's cognitive functions. Cognitive functions cover various domains, such as learning, memory, language abilities, perception, and decision making (Kiely, 2014). In the DSM-V (APA, 2013), "dementia" is renamed as "Major Neurocognitive Disorder", which is also a reflection of the latest knowledge of dementia. "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) is seen as the Chinese translation of "major neurocognitive disorder" (Lam et al., 2012). Unlike its English counterpart, this term does not depict the severity of dementia, which provides space to include people in different stages of dementia. Despite this, this term should be distinguished from MCI which is a condition characterised by a noticeable but mild decrease in cognitive functioning. It can be reversed in some cases, but there is a chance that MCI develops into dementia (DeRight, 2022; Peterson et al., 2018). Some acute syndromes, such as delirium, also cause cognitive impairment (Tsui et al., 2022), which was reported by one participant in our study. Overall, “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) possesses high scientific accuracy, which can closely describe “dementia” but should be carefully distinguished from MCI while promoting this term.

“认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) was reported to carry little stigma in Chinese culture. We concluded two reasons: (1) This term sounds like a medical jargon, which does not remind people of any stigmatised beliefs about dementia (e.g., “stupid” and “idiotic”); (2) “障碍 *zhàng ài*” (impairment) has been commonly used in Chinese medical terms which are well accepted by the public. There are two components of this term – “认知 *rèn zhī*” (cognition) and “障碍 *zhàng ài*” (impairment). According to the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021), “认知 *rèn zhī*” (cognition) refers to the process of individual perception, memory and information application, including attention, memory, knowledge presentation, problem solving, decision-making, language communication, etc. This Chinese definition is basically the same as modern scientific understanding of “cognition”. Yet, “认知 *rèn zhī*” is used in a different way in daily conversation. Mass media always refer “认知 *rèn zhī*” to knowledge and understanding (e.g., Chen, 2024; Song, 2021; Zhou, 2024). This use of “认知 *rèn zhī*” can be related to the definition in the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016) – through thinking to understand and learn. If the public understands “认知 *rèn zhī*” in this way, they may relate dementia to the knowledge and understanding of the world. For “障碍 *zhàng ài*” (impairment), it means disability, disorder and impairment in medical settings (CNCTST, 2022),such as “学习障碍 *xué xí zhàng ài*” (Learning Disability), “行为障碍 *xíng wéi zhàng ài*” (Behavioural Disorders), and “视觉障碍 *shì jué zhàng ài*” (Vision Impairment). In daily conversation, “障碍 *zhàng ài*” literally means “obstacles” (Chinese Academy of Social Sciences, 2016). This word is categorised as a negative word in the *Tsinghua sentiment dictionary* (Li, 2011) and the *BoSonNLP sentiment dictionary* (Min et al. 2015), yet it is not listed as a negative or positive word in the *HowNet sentiment dictionary* (Dong & Dong, 2006) and the *Affective Lexicon Ontology Library* (Xu et al., 2008). In other words, it is not seen as a sentiment word in these two dictionaries. Moreover, “认知障碍 *rèn zhī zhàng ài*” (Cognitive Impairment) is an established Chinese medical term, which refers to cognitive defects or abnormalities, including perception disorder, memory disorder, and thought disorder (CNCTST, 2022). Some participants from Mainland China have already been using it to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). The participants from Hong Kong confirmed that Hong Kong has already officially been using “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) to represent “dementia” since 2012. On the other hand, some participants were concerned that the public is not familiar with this term. There is no “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) or “认知障碍 *rèn zhī zhàng ài*” (Cognitive Impairment) in either the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021) or the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016), which indicates that this term is medical terminology rarely used in Chinese daily conversation. Therefore, even though “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) may seem pejorative to a little extent, this expression is much more neutral than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). It is worth noting that notwithstanding that “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) has been officially adopted in Hong Kong, it is not common among the public in some regions such as Mainland China and Taiwan.

2.4.4 The Scientific Accuracy and Cultural Appropriateness of “失智症 shī zhì zhèng” (Loss of Intelligence Syndrome)

With regard to the scientific accuracy of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome), the participants mainly discussed it from two aspects: 1. The signs and symptoms of dementia are not limited to the impact on intelligence; 2. “失 *shī* ” (loss) overstates the signs and symptoms of dementia. In modern Chinese, the character “智 *zhì*” refers to “wisdom” and “smartness” (Chinese Academy of Social Sciences, 2016). Some participants provided some explanations of this character in medical settings such as “智力 *zhì lì*” (intelligence), “智能 *zhì néng*” (intelligence), “智商 *zhì shāng*” (IQ), “智慧 *zhì huì*” (wisdom), and “心智 *xīn zhì*” (“mind” or “mental”). All these explanations can be found in both the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021) and the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016). Therefore, the character “智 *zhì*” denotes a wide array of concepts in medical sciences. Most participants understood “智 *zhì*” as “智能 *zhì néng*” (intelligence) and “智力 *zhì lì*” (intelligence). From a neuropsychological point of view, intelligence refers to the ability to adapt to the environment, learn, absorb lessons from experience, and think about abstract things (CNCTST, 2019). The range of intelligence excludes thinking speed and memory which are also aspects of cognition. Slower thinking speed and memory loss are the significant early-stage signs and symptoms of dementia (Alzheimer’s Society, 2021). Hence, “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) fails to include these two significant signs and symptoms of dementia. Furthermore, Dementia is a neurodegenerative disorder, which gradually weakens cognitive functions (Birajdar et al., 2023; Chin, 2023; Emmady et al., 2022). Thus, even though dementia negatively impacts cognitive functions and intelligence, “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) cannot precisely depict the signs and symptoms for people in the early stages of dementia. They can still enjoy their life without being affected by significant changes caused by dementia (Dementia Australia, 2025; Quinn et al., 2022; the United Kingdom National Health Service, 2025). This problem is similar to “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), which overstates the signs and symptoms of people in the early stages of dementia. To conclude, the Chinese character “智 *zhì*” is commonly used in various terms related to wisdom, intelligence, IQ, and mind, so the term “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) may be interpreted differently by individuals. Even if the character “智 *zhì*” refers to intelligence, this term is still scientifically inaccurate, potentially leading to misunderstandings about the health condition. The character “失 *shī*” (loss) is inappropriate for individuals in the early or moderate stages, as it implies a complete loss of intelligence.

In terms of the cultural appropriateness, it seems that “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) can be the mostly used as an alternative for “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) in Chinese-speaking regions. Some participants mentioned that “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is officially employed in Taiwan and Macau to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). According to the R.O.C. Ministry of Health and Welfare (2024), the official Chinese name of “dementia” is “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) in Taiwan. The Health Bureau of Macau (2024) utilised this term to represent dementia as well. As for Mainland China, some participants mentioned that many aged care facilities use this term. In Mainland China, public aged care facilities are subsidised and managed by local civil affairs departments (The State Council of the People’s Republic of China, 2021). Given the fact that some of its municipal civil affairs departments (e.g., Beijing Municipal Civil Affairs Bureau, 2023; Chongqing Municipal Civil Affairs Bureau, 2023) have utilised “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) to represent dementia, it may explain why the aged care facilities in Mainland China use this term. Yet, the term “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) or its derivative “失智 *shī zhì*” (Loss of Intelligence) is not included in the *Contemporary Chinese Dictionary* (Chinese Academy of Social Sciences, 2016), so the prevalence of this term among the general public in Mainland China is questionable. Additionally, some participants felt that “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is culturally acceptable and carries less stigma than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). According to Taiwan Alzheimer’s Disease Association (2018), among all Chinese-speaking regions, Taiwan is the first region to rename “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), and “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) is believed to be a less stigmatised term for “dementia” in Taiwan. On the other hand, more participants understood this term in a negative way. As discussed before, the character “智 *zhì*” relates to wisdom, intelligence, IQ and mind in Chinese. These concepts are closely related to brain, so “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) suggests the brain of people with dementia is uselss, which causes mental burden. Similarly, due to the wide array of meanings of the character “智 *zhì*” in Chinese, some participants felt that medical professionals should not use “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). Doctors should communicate with patients in plain and clear language (Warde et al., 2018). The ununified understanding of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) may confuse the general public. To conclude the cultural appropriateness of “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome), this term carries less stigma than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) and has been widely adopted in some Chinese-speaking regions. Nevertheless, the acceptability of this term among Mainland Chinese people is unclear. This term connotes a useless brain, which causes a mental burden to people. The lack of a consistent understanding of “智 *zhì*” produces a barrier in communication.

2.4.5 The Scientific Accuracy and Cultural Appropriateness of "退智症 tuì zhì zhèng" (Degenerative Intelligence Syndrome)

Based on our research findings, "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) could be evolved from "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome). The only difference is between the character "退 *tuì*" (degenerative) and the character "失 s*hī*" (loss). Participants consistently interpreted the character "退 *tuì*" as degenerative, and most believed this character suggested dementia as a gradual declining health condition. This aligns with the nature of dementia – a neurodegenerative condition (Birajdar et al., 2023). Nonetheless, some participants maintained the same concern as they mentioned when asked about "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome) – intelligence is more limited than cognitive functions. Therefore, although "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is more scientifically accurate than "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome) by replacing "失 s*hī*" (loss) with "退 *tuì*" (degenerative), this term is too focused on intelligence, which is incomprehensive.

"退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) is not familiar to the participants. This term is not in either the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021) or the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016), which means this term is not frequently used in either classical or modern Chinese. This is why some participants felt that promoting this term requires more effort compared with promoting other terms. Moreover, the term "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) conveys the impression of a gradual cognitive decline, suggesting a slow progression of the condition and potentially reducing feelings of urgency or anxiety. In contrast, "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome) implies a complete loss of intelligence, which may evoke stronger negative emotions. Therefore, "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) might lessen psychological pressure and encourage individuals to confront the condition more proactively, compared with "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome). In spite of this, this term is still perceived to be slightly negative by some participants. According to the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021) and the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016), the character "退 *tuì*" commonly refers to "move backwards", "revoke", "leave", and "diminish". These concepts in Chinese culture are culturally negative. The pronunciation of "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) was perceived as unnatural by certain Mandarin-speaking participants, while some Cantonese-speaking participants found it to be easy and comfortable to pronounce. As a result, "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome) carries less stigma than "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome), but this term is rarely used in these major Chinese-speaking regions, which can be a huge barrier to communication. The Mandarin-speaking and Cantonese-speaking populations may have different levels of willingness to use this term owing to the aforesaid pronunciation difficulties.

2.4.6 The Importance of Renaming Dementia in Chinese

All participants who were asked about renaming dementia affirmed that finding a different name instead of “痴呆症 *chī dāi zhèng*” is of considerable importance. Participants who had been through the experience of renaming dementia in Chinese expressed that society has been more open to discussing dementia and even including more content related to dementia in the media since renaming dementia. Our participants also noticed that with the shift in public attitudes toward dementia and an increasing awareness of the condition, an increasing number of individuals are being diagnosed at an early stage. In contrast, prior to the renaming, most dementia diagnoses reportedly occurred in the middle to late stages. In Hong Kong, according to the annual reports of the Hong Kong Alzheimer’s Disease Association (2014, 2024), the number of people receiving early detection service at their stations has increased from 308 people in 2012-13 to 649 people in 2023-24, which could be seen as an indicator for the increased public awareness of dementia and their acceptance of receiving early detection for dementia. Based on the National Health Insurance database in Taiwan, Chien et al. (2008) suggested that Taiwan’s annual treated prevalence of dementia from 1996 to 2003 rose from 0.71% to 1.92%, while the annual treated incidence rates increased from 0.76% to 1.04% between 1997 and 2003. With reference to R.O.C. Ministry of Health and Welfare (2021), the proportion of the local population who received diagnosis and treatment for dementia almost doubled, increasing from 29.2% in 2011 to 54.1% in 2020. The latest diagnostic rate in Taiwan was reported by the R.O.C. National Center for Geriatrics and Welfare

Research (2022) as 65.1% in 2022. The differences suggest a gradual increase in people's willingness to receive diagnosis and treatment regarding dementia. Therefore, based on the experience in Hong Kong and Taiwan, although it is hard to conclude that the renaming of dementia solely contributes to a more open attitude to dementia and a higher awareness of dementia, these significant changes are happening after the renaming of dementia in both regions.

2.4.7 The Distinction between Including or Omitting the Character "症 Zhèng" ("disease" or "syndrome")

During the interviews, we noticed that when participants referred to "dementia", most sometimes used terms that ended with "症 *Zhèng*" ("disease" or "syndrome"), such as "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome), and "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome). In other times, they adopted the terms that ended without "症 *Zhèng*" ("disease" or "syndrome"), such as "痴呆 *chī dāi*" (Stupidity and Idiocy), "认知障碍 *rèn zhī zhàng ài*" (Cognitive Impairment), and "失智 s*hī zhì*" (Loss of Intelligence). Thus, we were curious to investigate the differences between the two addressing ways (i.e. addressing "dementia" with "症 *Zhèng*" ["disease" or "syndrome"] or not). When asked about the differences, some participants held that the presence or absence of "症 *Zhèng*" ("disease" or "syndrome") does not significantly affect the meaning. Some participants added that it is common to omit "症 *Zhèng*" ("disease" or "syndrome") in daily conversation and media reports. For example, Dong (2025) and Yu (2025) referred "dementia" to "痴

呆 *chī dāi*” (Stupidity and Idiocy)” in the heading of their media reports, but mixed “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) and “痴呆 *chī dāi*” (Stupidity and Idiocy) to represent “dementia” in the body text. In fact, even though the content is composed by the health authorities, this phenomenon still exists. For instance, on the website of the Hualien County Health Bureau (2018), it mixed “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome) and “失智 s*hī zhì*” (Loss of Intelligence) to represent “dementia” on the same page.

Many participants indicated that the inclusion of the character “症 *zhèng*” (“disease” or “syndrome”) is necessary when referring to a specific medical condition. In contrast, if the term does not contain “症 *zhèng*” (“disease” or “syndrome”), it is generally understood as describing a symptom and sign rather than a formal diagnosis. According to the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016), “症 *zhèng*” means “疾病 *jí bìng*” (disease) and “症状 *zhèng zhuàng*” (symptom). In the *Multi-function Chinese Character Database* (The Chinese University of Hong Kong, 2014) and the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021), the character “症 *zhèng*” refers to “病症 *bìng zhèng*” (disease symptom) and “病狀 *bìng zhuàng*” (disease symptom). The Chinese counterparts of “syndrome” are “综合征 *zōng hé zhēng*” in Mainland China (CNCTST, 2019), “綜合症 *zōng hé zhèng*” in Hong Kong (Hong Kong Centre for Health Protection, 2015), and “症候群 *zhèng hòu qún*” in Taiwan (R.O.C. Ministry of Education, 2021). Despite this, Mainland China, Hong Kong and Taiwan commonly add “症 *zhèng*” at the end to address “syndrome” while naming syndromes, especially for mental disorders. For example, autism spectrum disorders refer to “自闭症 *zì bì zhèng*” in Mainland China (Public Hygiene and Health Commission of Shenzhen Municipality, 2024), Hong Kong (Autism Hong Kong, 2025) and Taiwan (ROC Foundation for Autistic Children and Adults in Taiwan, 2025). The Chinese equivalent of anxiety disorders is “焦虑症 *Jiāo lǜ zhèng*” in Mainland China (CNCTST, 2020), Hong Kong (Hong Kong Department of Health, 2019) and Taiwan (China Medical University Hospital, 2025). Furthermore, many participants added that the character “症 *zhèng*” (“disease” or “syndrome”) is appropriately used only when a patient’s symptoms are severe enough to meet established diagnostic criteria. As per the United Kingdom National Health Service (2023), “These symptoms are often mild and may get worse only very gradually. It’s often termed ‘mild cognitive impairment’ (MCI) as the symptoms are not severe enough to be diagnosed as dementia.” In Chinese, MCI is translated as “轻度认知障碍 *qīng dù rèn zhī zhàng ài*” (CNCTST, 2022) which does not contain the character “症 *zhèng*” (“disease” or “syndrome”). Thus, while diagnosing someone with dementia, the character “症 *zhèng*” (“disease” or “syndrome”) is needed, which adheres to the Chinese naming conventions for syndromic conditions. Yet, while describing someone with the symptoms of dementia, the character “症 *zhèng*” (“disease” or “syndrome”) should not be included.

2.4.8 The proposed term – "认知障碍症 rèn zhī zhàng ài zhèng" (Cognitive Impairment Syndrome)

We asked all participants to nominate their preferred term, considering its scientific accuracy and cultural appropriateness. The participants provided justifications for their choices. In the study, 13 out of 21 participants proposed using "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome).

For "痴呆 *chī dāi*" (Stupidity and Idiocy), although one participant stuck to the use of this term, by emphasising that this term is the standard Chinese expression for "dementia", the stigma surrounding "痴呆 *chī dāi*" (Stupidity and Idiocy) cannot be ignored. The way to address people with dementia is not only humiliating, but also inaccurate, by describing them as being "stupid and idiotic". Chiu et al. (2014) and Zhang (2025) reflected that "痴呆 *chī dāi*" (Stupidity and Idiocy) is easily used to label people with dementia, and strengthens the dementia-related stigma among Chinese people. This is the key reason why we conducted this research to propose a replacement term for "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome).

For "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome), one participant proposed this term because it is easily understandable. The participant introduced the origin of this term – a Year 5 student in Hong Kong having coined the term. Public health information should be easily understood by the general public (Jindal & MacDermid, 2017). In Australia, the readability of public health information should be no more than Year 8 (Canberra Health Literacy Hub, 2024; Mac et al., 2021; SA Health, 2021). Some scholars (Basch et al., 2020; Mac et al., 2024; Szabó et al., 2021) even recommended that public health material should be readable for Year 6 students to reach the maximum impact. The term – “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) is readable and understandable for Year 5 students, which means it has high readability and can be easily understood by the public. However, brain degeneration can happen in the process of normal brain ageing (Lee & Kim, 2022; Turrini et al., 2023). This term may invoke a sense that dementia is a normal part of ageing. Moreover, the concept of brain degeneration is too broad. For example, it is also related to the second most common neurodegenerative disorder: Parkinson’s Disease (Aarsland et al., 2021).

For “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome)”, this term is widely used in Taiwan, Macau, Malaysia and Singapore to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). Yet, this term is still stigmatised in some participants’ minds. In Taiwan, the place of origin of this term, some people with dementia and their families still feel that this term is stigmatised (TADA, 2018). In 2018, a new dementia renaming campaign was launched in Taiwan, which tries to rename “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome) in the future, but the new campaign did not succeed (TADA, 2018). The character “智 *zhì*” refers to wisdom, intelligence, IQ, and mind, which affects how the public understands the term. Among the participants, there was no consensus about the interpretation of this character, although most participants interpreted this character as intelligence. Despite this, the impacts of dementia are more on cognitive functions, rather than merely on intelligence. Furthermore, the character “失 *shī*” (loss) is an overstatement of dementia, when it comes to people at the early stage of dementia.

For “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome), it replaces “失 *shī*” (loss) with “退 *tuì*” (degenerative), which tries to resolve the overstatement problem in “失智症 *shī zhì zhèng*” (Loss of Intelligence Syndrome). However, the divergence in interpretations of the character “智 *zhì*” still exists. Most importantly, this term is the least familiar to the participants in comparison with other terms. To the best of our knowledge, this term is only adopted in the U.K. for local Chinese communities. Some participants felt it was hard to pronounce in Mandarin, which could further negatively impact the willingness to use the term.

Based on the evaluation of each term, we propose to use “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) as the Chinese equivalent of “dementia”. This study identifies some disadvantages of this term. For instance, the signs and symptoms of delirium are also related to cognitive impairment. This term can be too technical for the general public. However, there are more significant advantages of this term that support the proposal. First, “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) reflects the latest understanding of dementia – “Dementia is a syndrome that can be caused by a number of diseases which over time destroy nerve cells and damage the brain, typically leading to deterioration in cognitive function” (WHO, 2025).

Second, in the DSM-V, "dementia" has been renamed as "major neurocognitive disorder" which can be translated as "严重认知障碍 *yán zhòng rèn zhī zhàng ài*". If this translated term is used, it may cause confusion while referring to "mild dementia". The Chinese translation of "mild dementia" will be "轻度严重认知障碍 *qīng dù yán zhòng rèn zhī zhàng ài*" (Lam et al., 2012). The word "严重 *yán zhòng*" can also be translated as "severe". Therefore, while adopting the term to name "mild dementia", Chinese speakers may feel confused (Lam et al., 2012) and consider whether mild dementia is mild or severe. As discussed in section 2.4.7, when the symptoms develop to a disease or syndrome level that can be diagnosed, there is a character "症 *zhèn*g" ("disease" or "syndrome") at the end. Therefore, by adding the character "症 *zhèn*g" ("disease" or "syndrome"), the concept of "major" is already expressed, and it is not necessary to include it again. Thus, "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) is functionally equivalent to "major neurocognitive disorder".

Third, during the interview, some participants suggested that in raising dementia awareness campaigns, the knowledge of MCI should be included to help the public better manage the whole process of cognitive decline. The Chinese term for MCI is "轻度认知障碍 *qīng dù rèn zhī zhàng ài*" (CNCTST, 2022), which contains no "症 *zhèn*g" ("disease" or "syndrome"). Once MCI develops into dementia, the word "轻度 *qīng dù*" (mild) is no longer suitable and needed. By using "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome), it can logically explain the progress from MCI to dementia with the help of the ending character “症 *zhèn*g” (“disease” or “syndrome”).

Fourth, Hong Kong has adopted the term since 2012 (Chiu et al., 2014), which means that a large number of Cantonese speakers have been familiar with the term. Additionally, “认知障碍 *rèn zhī zhàng ài*” (Cognitive Impairment) is also an established term in the context of Mainland China (CNCTST, 2022). Some Mainland Chinese participants expressed that they had already adopted “认知障碍 *rèn zhī zhàng ài*” (Cognitive Impairment) to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). Accordingly, while “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) can be a relatively novel term for the public in some regions, it is being increasingly used in Hong Kong and Mainland China.

Fifth, “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) is a medical-oriented term which is rarely used to insult others. The word “障碍 *zhàng ài*” may carry the negative implication (Li, 2011; Min et al. 2015), but it can also be a neutral word (Dong & Dong, 2006; Xu et al., 2008). By adopting “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) in the future, even though the term still carries some negative connotation, its stigma is much less than 痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome).

2.5 Conclusions, Implications and Limitations

To the best of our knowledge, this is the first study that investigates what might be the most scientifically accurate and culturally appropriate Chinese term for “dementia”.

Previous papers (Chiu et al., 2014; Lam et al., 2012; Zhang, 2025) discussed the shortcomings of the Chinese term "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome). Through semi-structured interviews with Chinese dementia experts, this study has led to a professional understanding of Chinese terms for "dementia" from the perspectives of scientific accuracy and cultural appropriateness. Our findings suggest that "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) is the most scientifically accurate and culturally appropriate Chinese term for "dementia". Compared with "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome), "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome) and "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome), "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) receives stronger preference from Chinese dementia experts. Interviewees generally believed that this term can better reflect the main signs and symptoms of dementia, and this term brings the least stigma compared with other Chinese terms. Moreover, as more dementia awareness campaigns introduce the concepts of cognition and MCI, the adoption of "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) can help Chinese consumers relate dementia to cognition and MCI easily, which enhances their understanding of the progress of dementia.

Furthermore, this study highlights the importance of renaming dementia in Chinese and the necessity of including the character "症 *zhèn*g" while referring to "dementia". This study is the first and vital step for Chinese dementia experts to realise the inconsistent use of Chinese terms for “dementia”. The implication of this study may extend beyond academia. The research findings may help health authorities in Chinese-speaking regions reach an agreement on a scientifically accurate and culturally appropriate Chinese term for “dementia” in the future. Notably, Dementia Australia has adopted the recommendation of this study in their Chinese materials. They have gradually updated the Chinese translation of “dementia” from “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome) to “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) in its Chinese resources.

However, there are some limitations that should not be neglected. First, we only interviewed dementia experts, but lay community members were not involved in this research. Second, this study did not include Chinese linguistic and cultural scholars to assess the cultural appropriateness of each term. Third, snowball sampling may result in homogeneous participants (e.g. a participant who prefers a certain term may refer other participants who also prefer the term). Finally, there might be other Chinese terms for “dementia” that we missed in this research.

In prospective studies, we will conduct research by employing people with dementia, their families, other community members, and Chinese linguistic and cultural experts in discussing the pros and cons of each term.

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Chapter 3 A Culturally Appropriate and Linguistically Understandable Translation Protocol: For Dementia-related Public Health Information

Abstract

There are approximately 10 million people developing dementia each year globally. In a multicultural society such as Australia, people with different cultural backgrounds hold different attitudes towards dementia. Chinese people traditionally are not willing to talk about dementia, and they think getting dementia is shameful. This may be related to the Chinese name for dementia – "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome). To improve dementia literacy and reduce the stigma of dementia among Chinese-speaking people in Australia, it is necessary to produce and promote culturally relevant education about dementia in Chinese communities and evaluate the impact of this education. However, publicly available dementia information is usually translated from English with a focus on linguistic accuracy, without cultural tailoring or consideration of emotional valence. We developed a culturally appropriate and linguistically understandable (CALU) translation protocol to replace "forward and backward translation". This translation protocol aims to produce quality positive translation of dementia information with high understandability, readability, and cultural acceptability.

Keywords

Culturally Appropriate and Linguistically Understandable Translation, Dementia Literacy, CALD, Dementia Stigma

3.1 Introduction

3.1.1 Dementia and Dementia-friendly Society

People have dementia when their cognitive function deteriorates enough to interfere with their daily functioning. It is estimated that over 55 million people are living with dementia worldwide, and the annual incidence is around 10 million (World Health Organization, 2023). In Australia, it is estimated that around 433,300 people live with dementia in 2025, and this number is expected to reach 812,000 by 2054 (Dementia Australia, 2025). There are approximately 1.7 million people contributing to caring for people with dementia in Australia (Dementia Australia, 2025). Thus, the total number of people with dementia and their carers in Australia will inevitably rise over time.

Dementia is a syndrome characterised by progressive impairment of brain function, which could negatively affect an individual’s cognition, memory, behaviour, speech, and mobility (Australian Institute of Health and Welfare, 2023). There are widespread misconceptions about dementia. For instance, “dementia is a natural part of aging, so people will get dementia when they are getting old”, “people who experience memory loss have dementia”, and “young people do not get dementia” (Alzheimer Society of Canada, 2021).

To decrease stigma, the World Health Organization (WHO) and Alzheimer’s Disease

International (ADI) (2012) jointly proposed promoting dementia-friendly communities internationally. They described six steps for the evolution of communities from ignoring the problem (step 1) to building infrastructure for people with dementia and training caregivers (step 3), to generally accepting dementia as a disability (step 6). To construct a dementia-friendly society, it is essential to increase knowledge and change attitudes towards dementia (WHO, 2021). In Australia, Dementia Friendly Kiama, a dementia campaign led by Phillipson et al. (2019), has proven that through educational activities in the local community, the public has fewer negative attitudes towards dementia and more awareness of dementia.

3.1.2 Dementia-related Stigma in Chinese Culture

Australia is a multicultural society where, in 2021, 27.6% of the total population were born outside Australia (Australian Bureau of Statistics, 2022). This figure increased from 22% in 2006 (Australian Bureau of Statistics, 2007), illustrating a trend of increasing migration to Australia. In terms of ethnic groups, 5.5% of people in Australia are Chinese. Mandarin is the most spoken language other than English at home, accounting for 2.7%, and about 1.2% of Australians speak Cantonese at home (Australian Bureau of Statistics, 2022).

The culture rooted in the Chinese diaspora affects Chinese immigrants’ attitudes towards dementia. Chinese people are hesitant to discuss private issues with people outside their families (Elliott et al., 1996; Guo et al., 2019). They are particularly reluctant to disclose information about their dementia symptoms (Elliott et al., 1996). In the U.S., Chinese Americans have been shown to hold stigmatised attitudes toward dementia (Woo & Mehta, 2017). Chinese Americans may treat dementia as a mental illness, and even regard it as a contagious disease (Jones et al., 2006). The Chinese ethnic group in Australia exhibits stronger negative attitudes toward people with dementia compared with third-generation Australians, and Chinese Australians have poorer dementia literacy than people from the mainstream culture (Low et al., 2010). The stigma of dementia is a common cause for people refusing to seek medical help until the disorder develops to an advanced stage (Cheng et al., 2011; Department of Health and Social Care, 2009). Reducing the stigma of dementia may encourage Chinese Australians to seek medical advice when they have early signs of dementia. Education is a general and useful approach to increasing dementia awareness and reducing the stigma associated with the condition (Baker et al., 2019; Cheng et al., 2011; Kim et al., 2021; Phillipson et al., 2019; Siette et al., 2023). Therefore, the provision of multicultural education materials regarding dementia is vital to promoting knowledge about dementia and increasing the inclusivity of dementia awareness in Australia.

3.1.3 Dementia-friendly Language

Language is powerful in shaping people's minds about dementia (Dementia Australia, 2021; Swaffer, 2014). The words used to depict dementia and people with dementia affect the image of people with dementia, and how these people perceive themselves (Alzheimer Europe, 2022). The language about dementia used in public discourse can exhibit disrespect and offensiveness to people with dementia (Wolverson et al., 2021). In English-speaking countries, many dementia authorities have introduced their dementia-inclusive guidelines, such as *Alzheimer's Association Inclusive Language Guide* (Alzheimer's Association, 2022), *Guidelines for the ethical and inclusive communication about/portrayal of dementia and people with dementia* (Alzheimer Europe, 2022), *Person Centred Language Guidelines* (Alzheimer Society of Canada, 2017), *Positive Language* (Alzheimer's Society, 2018) and *Dementia Language Guidelines* (Dementia Australia, 2021). These guidelines share the same core principle – using accurate, respectful, inclusive and non-stigmatising language when discussing dementia and people with dementia. For instance, some words that were frequently used to describe dementia and people with dementia should be avoided, such as "demented", "senile dementia", "hopeless", "illness", etc. As far as we know, there are no specific dementia-friendly guidelines in the Chinese language.

3.1.4 Rationale for Designing the Protocol

To build a dementia-friendly society, it is necessary to promote the knowledge of dementia to culturally and linguistically diverse (CALD) people and understand their perceptions of dementia. Translation plays an essential role in disseminating this knowledge to speakers of languages other than English and, in Australia, a large number of multilingual translations of educational materials have been made available to CALD population.

Forward and backward translation has long been adopted to check the scientific accuracy of translations, especially in the field of health and medical translation (Guarda Korelo et al., 2019; Kuliś et al., 2017; Ozolins et al., 2020). When adopting the translation method in health, translators need to possess good health literacy to provide quality translation (Creeze et al., 2022, p. 7).This method has also been widely accepted by health specialists as the correct method for translating clinical or research questionnaires (Kuliś et al., 2017; Ozolins et al., 2020). Although the detailed procedure of forward and backward translation may vary in accordance with different guidelines, the core part follows the same principal steps (Kuliś et al., 2017; Sidani et al., 2010; Silveira et al., 2016; WHO, 2010):

Step 1: The source text (usually in English) is translated by professional translators with extensive knowledge in the relevant subject field. These translators' first language is the target language.

Step 2: These translators review and discuss the translations to reach a reconciled translation.

Step 3: The reconciled/agreed translation is back-translated literally into the source language, for example, English by translators (who have never seen the source text before) independent from the original translators.

Step 4: The back translation is compared to the source text to identify any discrepancies between them. Translators, back translators, and relevant health experts reach an agreement on the final translation after a group discussion with reference to the back translations.

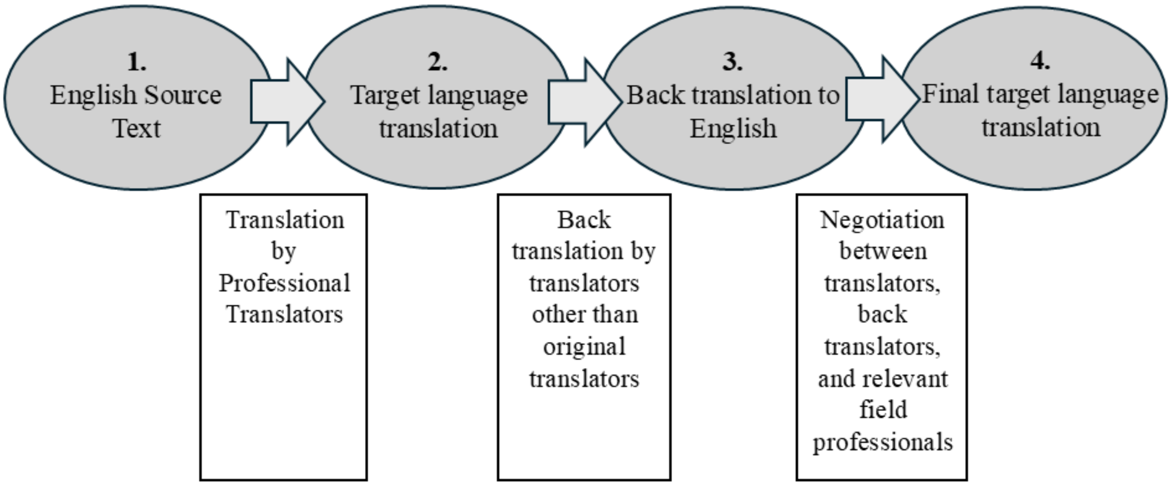

Figure 4 4-Step Forward and Backward Translation

The advantage of this approach is that the commissioners of the translations and domain experts can identify the discrepancies between the back translation and the source text caused by the errors or adjustments made by translators in the original translation (Behr, 2017). However, this approach has also been criticised by many scholars for its flaws (Brislin, 1970; Douglas & Craig, 2007; Swaine-Verdier et al., 2004). There is an assumption when assessing the translation quality after forward and backward translation that the higher the similarity between the source text and the back translation, the better the quality of the forward translation. This is a flawed assumption. Cultural adaptations are required to produce an equivalent-meaning translation in the target language (Papadakis et al., 2022; Shafiee et al., 2022). For example, if the English source text refers to "Forgetting recent events" and this is literally translated into Chinese as "忘记近期的事件 *wàng jì jìn qī de shì jiàn*", the translation would be unnatural to Chinese readers. "事件 *shì jiàn*" in Chinese usually refers to something accidental, historical, important or impactful (Chinese Academy of Social Sciences, 2016), such as “历史事件 *lì shǐ shì jiàn*” (historical events), “杀人事件 *shā rén shì jiàn*” (murder), and “公共卫生事件 *gōng gòng wèi shēng shì jiàn*” (public health crisis). The “recent events” in the English source text refers to “something that happened recently and is not necessarily an important social event”. Therefore, a culturally adapted translation for this can be “经常忘记最近发生的事 *wàng jì jìn qí de shì jiàn*”, which means “often forgetting things that happened recently”.

Further, if discrepancies exist between the original and back-translated text, it is not clear if the issue lies with the forward or backward translation (Behr, 2017).

In addition, the translation produced through forward and backward translation overlooks the characteristics of the target audience (target language users) such as their age and literacy level. While the translation might be scientifically accurate and linguistically equivalent, the translated information may not be comprehensible, acceptable or culturally appropriate to the target audience. For example, the Chinese literal translation of “General Practitioner” (GP) is “全科医生 *quán kē yī shēng* ”, and this translation can be understandable to bilingual Chinese speakers, but this translation is hard to understand for monolingual Chinese people, especially immigrants from Mainland China. Mainland China has promoted a “family doctor service” since 2016 (Gao & Yang, 2022). The role of family doctors is usually taken by general practitioners in local-community-level hospitals (Gao & Yang, 2022). As a result, “family doctor” in Mainland China is basically the same as “general practitioner” in Australia. In this case, “家庭医生 *jiā tíng yī shēng*” (family doctor) is a more familiar and clearer concept for the Chinese target audience. The target audience needs a plain, clear (Ozolins et al., 2020), and culturally adapted translation (Uysal-Bozkir et al., 2013). Hence, forward and backward translation may not always produce a translation suited to the target audience.

With regard to translating dementia-related education texts, even if the translation about dementia is scientifically accurate, it can still be stigmatised or linguistically incomprehensible in the target culture, which defeats the purpose of providing the translation – reducing the stigma of dementia and constructing a more dementia-inclusive environment. For instance, in *The Dementia Guide* provided by Dementia Australia (2022), there is a sentence depicting this guide – “This guide is for anyone who has been impacted by any form of dementia.” In its Chinese version, the translation is “本指南为遭受不同种类的痴呆症患者提供 *běn zhǐ nán wèi zāo shòu bù tóng zhǒng lèi de chī dāi zhèng huàn zhě tí gōng*”. Its literal English back translation is “This guide is provided for patients suffering from different kinds of dementia.” This translation used “suffering from” to describe people with dementia, which is a stigmatised expression because people with dementia do not have to be suffering. This expression could trigger unnecessary mental burden to people with dementia who are reading the guide. Moreover, all the above-mentioned language guidelines have suggested not to use the words “sufferer” or “suffering”.

Hence, we introduced a culturally appropriate and linguistically understandable (CALU) translation protocol for de-stigmatised dementia-related information translation, which will be a vital step for health researchers and the relevant authorities to disseminate knowledge about dementia and help CALD communities better understand dementia.

3.2 Translation Material

This chapter uses examples from the dementia educational project Face Dementia (funded by the Australian Government's Medical Research Future Fund) – a campaign aiming to encourage the Australian public, including Chinese-speakers, to seek a diagnosis of dementia. The campaign materials were designed to help people learn about the signs of dementia, recognise them in themselves or others, and start a conversation about visiting a GP to get help. Co-designed campaign resources include the Face Dementia website, PowerPoint slides for public talks, and educational leaflets. In this chapter, we focus on translating English source text to Chinese.

3.3 WHODAS 2.0 Translation Guidelines

The World Health Organisation (WHO) (2010) issued *WHODAS 2.0 Translation Package (version 1.0)*, introducing new translation guidelines for WHODAS 2.0, the WHO Disability Assessment Schedule 2.0, an assessment instrument measuring disability and health (WHO, 2012). The new guidelines consider the comprehension of the recipient (or target audience), which encourages translators to pursue conceptual equivalence rather than linguistic equivalence. There are several recommendations in the document: 1. Translators should aim for a conceptually equivalent translation rather than an etymologically equivalent translation; 2.

Translators should make translations clear and concise; 3. Translators should avoid utilising jargon to make translations understandable for the widest possible audience; 4. Translators should consider the applicability and appropriateness of lexical choices to different age and gender groups. Through these recommendations, WHO has tried to improve the understandability and acceptability of translations. Given this new guidance, WHO introduced "the standard WHO method" for translating WHODAS 2.0:

Step 1: Developing a translation team comprised of professional translators and bilingual subject matter experts with professional knowledge in relevant disciplines covered in the document. Translators are supposed to be proficient in both the source language and the target language, and they need to understand the literacy level of the target population (i.e., understand how the target audience speaks the target language).

Step 2: Establishing a monolingual team who only speaks the target language and whose members are representative of the target audience (e.g., similar literacy level).

Step 3: The translation team provides a forward translation. During the process, translators can consult the subject matter experts in the translation team to clarify any confusion in relation to the instrument itself. The forward translation is reviewed and discussed by the translators and subject matter experts.

Step 4: The reviewed translation is shown to the monolingual team for discussion and feedback. This step aims to improve the translation's acceptability, understandability, and cultural applicability, including format, diction, and any hurdles to responding to questions.

Step 5: The feedback from Step 4 is revised by the translation team. If there are any amendments made by the translation team, these amendments need to be discussed with the monolingual team.

Step 6: A back translation is produced by independent translators, who have not previously seen the source text or previous versions of the translation.

Step 7: Translators compare the back translation from Step 6 with the source text to examine conceptual and linguistic equivalence. Any changes to the back translation need to be translated into the target language again for the monolingual team to review. The process needs to be repeated until all involved parties are satisfied. Finally, a commonly agreed translation of WHODAS 2.0 is reported.

These translation guidelines were designed to translate WHODAS 2.0 into diverse languages. WHODAS 2.0 includes seven versions (e.g., 36-item Interviewer-administered, 36-item Self-administered, 12-item Self-administered, etc.). These questionnaires and scales evaluate people’s disability levels (WHO, 2010) and can be referenced by medical practitioners. Therefore, translating WHODAS 2.0 requires not only high scientific accuracy but also the users’ full comprehension of the content. Otherwise, it will negatively affect the reliability of WHODAS 2.0 scores. These translation guidelines require the involvement of target audience representatives. This is a useful step to ensure the understandability of the translation from the perspective of the target audience.

However, these translation guidelines were not designed for translating public health educational material. The protocol does not consider the effectiveness of the translated material in persuading the target audience. Whilst much dementia-related information is for the purpose of education, public health information intends to promote behaviour change in the target audience, so the translation of this type of information should be prepared with persuasiveness and impact in mind. Additionally, these guidelines require bilingual subject matter experts in the translation process to facilitate the translation. Such bilingual subject matter experts (especially for certain language pairs) may not be available in a public health campaign team. Monolingual members may assist translators to produce linguistically natural translations in the target language, but some members of the target audience may be bilingual. For instance, in Face Dementia, although Chinese Australians are one group of our target audience, many of these Chinese Australians can be bilingual and even master English well. This is why we employed a mix of Sydney-based Chinese Australians with different English proficiency levels to test our translation. Accordingly, for the translation of educational material for dementia, a translation model that considers cultural appropriateness and the actual situation is needed.

3.4 CALU Translation Process

In Face Dementia, one of our aims was to decrease the stigma around dementia. Dementia-related stigma includes negative associations, stereotypes, attitudes and behaviours around dementia and people with dementia (Low & Purwaningrum, 2020). Therefore, we add the principle of "positive translation" into the translation process. There are 3 recommendations we attached importance to:

Recommendation 1:

The translation should achieve scientific accuracy. It is more challenging to translate health texts than other scientific texts, as medical translation requires translators to be equipped with some basic understanding of the human body, the development of disease, and other health concepts (Dharmawan et al., 2019). A translation error can mislead patients, thus negatively impacting the quality of treatment and healthcare (Shamsi et al., 2020). For example, a common incorrect translation of dementia is "老年痴呆 *lǎo nián chī dāi*", which means "senile dementia". This translation can be even mistakenly used by some professional organisations, such as UCSF Memory and Aging Center (n.d.) and Mi access (n.d.), and public media, such as SBS (Chen, 2016) and BBC (Shang, 2014). This mistranslation is a widely used term in the Chinese community, which has led Chinese people to believe that dementia only occurs in old people.

Recommendation 2:

The translation should have high readability, understandability and acceptability for a target audience of Chinese Australians, some of whom might have limited education or health literacy. For example, the Mediterranean diet is associated with a lower risk of developing dementia (Shannon et al., 2023). This dietary habit is often mentioned in public health educational materials. Yet, this dietary habit is significantly different from the Chinese dietary habit (Zhang et al., 2015). Older Chinese people tend to have a lower literacy level of dietary knowledge (Wang et al., 2020). Therefore, merely literally translating “Mediterranean diet” as “地中海饮食 *dì zhōng hǎi yǐn shí*” without cultural adaptation may make little sense to older Chinese people.

Recommendation 3:

The translation should not contain any discriminatory or stigmatised expressions that could cause mental burdens to the target audience of the translation. For example, a popular translation of “dementia” in Mainland China is “痴呆症 *chī dāi zhèng*”, which means “Stupidity and Idiocy Syndrome”. This Chinese translation is extremely offensive towards people with dementia and their family members, which may cause Chinese people with signs of dementia to refuse to seek medical help and diagnosis due to the stigmatised translation (Chiu et al., 2014). Some Australian health organisations have used “脑退化症 *nǎo tuì huà zhèng*” – “Brain Degeneration Syndrome”, which is an attempt to refer to dementia in a more scientific way through a potential cause of dementia. However, “退化 *tuì huà*” in Chinese has a variety of meanings in different settings, which can be “degeneration” in pathology, “devolution” in biology, “involution” in organology, and “regression” in psychology.

Hence, the use of “退化 *tuì huà*” might suggest a semantic connection between the natural aging process and dementia, and this might mislead people with dementia and their families to believe that dementia is an irreversible degeneration of the organ, which can lead to much psychological stress and even abandonment of treatment.

Considering the pros and cons of forward and backward translation and WHODAS 2.0 Translation Guideline, we developed a novel translation protocol for translating dementia materials from English to Chinese, which involves translators, dementia experts, and community members. The 4 translation principles are also embedded into the protocol aiming to develop CALU translation. The core steps are as follows:

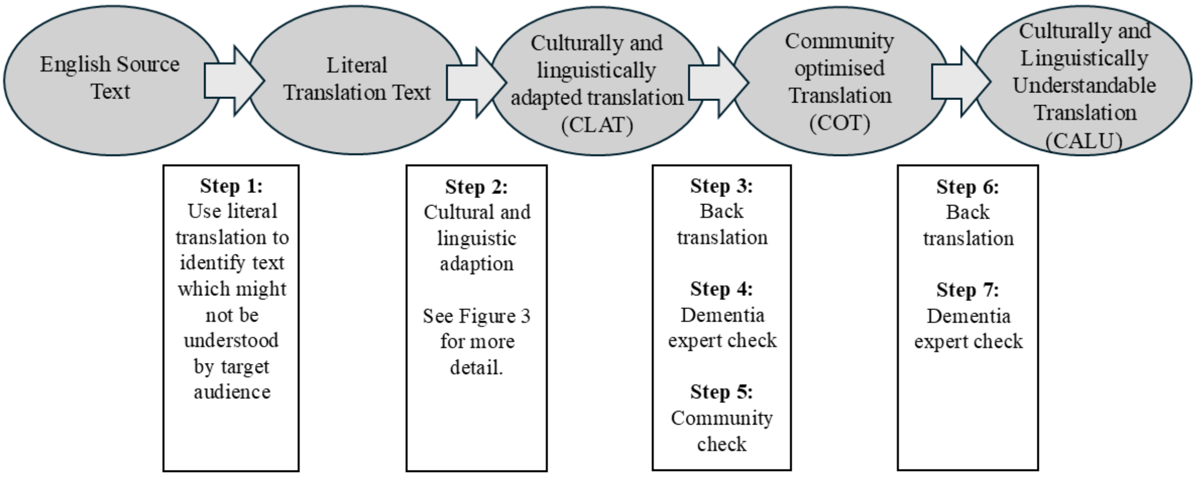

Figure 5 Process of Culturally and Linguistically Understandable Translation (CALU)

Step 1: One professional translator, a native speaker of the target language, provides a literal translation of the English source text. For example, the source text is “There are times when some family members are concerned about dementia signs and symptoms, but other family members don’t see a need for an assessment.” The literal Chinese translation is “有时一些家庭成员会担心痴呆症的症状和体征，但其他家庭成员

却认为没有必要进行评估 *yǒu shí yī xiē jiā tíng chéng yuán huì dān xīn chī dāi zhèng de zhèng zhuàng hé tǐ zhēng, dàn qí tā jiā tíng chéng yuán què rèn wéi méi yǒu bì yào jin xíng píng gū*". After a review of the literal translation, the translator will realise which piece of literal translation needs "extra" care because the literal translation is incomprehensible and unidiomatic. The translator needs to highlight the words and sentences that are hard to translate. For instance, the literal translation – "有时一些家庭成员会担心痴呆症的症状和体征 *yǒu shí yī xiē jiā tíng chéng yuán huì dān xīn chī dāi zhèng de zhèng zhuàng hé tǐ zhēng*" (There are times when some family members are concerned about dementia signs and symptoms) was highlighted, because the literal translation could make Chinese readers feel unnatural and confused for two reasons:

(i) "担心 *dān xīn*" (concern about) is usually used in conjunction with pronouns (e.g., they, she, he, you, etc.) in Chinese. In the source sentence, it means, "There are times when some family members are concerned that she/he is showing dementia signs and symptoms". The source sentence omits the meaning of "the person who probably has dementia".

(ii) In the setting of public health, "signs" and "symptoms" denote different concepts, although both terms can be mentioned at the same time in public health educational resources. In short, a "symptom" is the subjective feeling of patients themselves, and a "sign" is the manifestation that doctors perceive (King, 1968). "症状 *zhèng zhuàng*" (symptoms) and "体征 *tǐ zhēng*" (signs) are not quite distinguishable among lay Chinese people. Many Chinese people are more used to "症状 *zhèng zhuàng*" (symptoms) in their daily language use, tending to use "症状 *zhèng zhuàng*" (symptoms) to represent both concepts of signs and symptoms. In many Chinese public media reports related to promoting Alzheimer's Disease knowledge, these reports only mention "症状 *zhèng zhuàng* " (symptoms) of dementia rather than "signs and symptoms", such as the reports by *China Central Television News* (Qiao, 2015) and *People's Daily* (Li & Zhang, 2016). Hence, in terms of cultural appropriateness, putting the "signs" and "symptoms" together may be unnecessary and confuse the Chinese public.

Step 2: Based on the highlighted parts from Step 1, the translator will provide a culturally and linguistically adapted translation (CLAT), which undergoes adaptation at two levels – the cultural and the linguistic. Cultural adaptation ensures that the translation minimises negative psychological effects and does not contain any discriminatory expressions. For example, in the literal Chinese translation from Step 1, "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) is the most commonly used term to describe dementia in Mainland China. This term is pejorative in Chinese culture (Chiu et al., 2014), which may cause a heavy mental burden to the target audience. Therefore, the term needs to be replaced by a more culturally neutral Chinese term, "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome). We added "俗称痴呆症 *sú chēng chī dāi zhèng*" (commonly known as Stupidity and Idiocy Syndrome) behind it as an explanation for the replacement, which enhanced the understandability and acceptability of the new expression, but this explanation would only be used once when the new term first time appears in a document. Linguistic adaptation helps produce understandable expressions and idiomatic expressions to minimise the likelihood of translationese appearing in the translation. The term “translationese” refers to unnatural elements in a translation due to constraints of the source text and “formal fidelity”, which leads some translators to adhere to source text structures while failing to naturally convey the content in the target language (Chesterman, 2004). Therefore, the translator added back the omitted meaning – “the person who probably has dementia” to the Chinese translation. The translator also omitted the word “signs” in the translation, because the omission would not affect people’s understandability and would make the Chinese translation more natural to the Chinese audience. Therefore, the first version of CLAT is “有时一些家庭成员会担心家中的某位成员有认知障碍症的症状，但其他家庭成员却认为没有必要进行评估 *yǒu shí yī xiē jiā tíng chéng yuán huì dān xīn jiā zhōng de mǒu wèi chéng yuán yǒu rèn zhī zhàng ài zhèng de zhèng zhuàng, dàn qí tā jiā tíng chéng yuán què rèn wéi méi yǒu bì yào jìn xíng píng gū*” (Sometimes some family members are concerned that a member in the family has symptoms of dementia, but other family members do not think an evaluation is necessary).

After the first version of CLAT, a second professional translator, also a native speaker of the target language, is required to check if there are any words or expressions that can be improved in the first version of CLAT. The involvement of the second translator is to avoid errors and minimise translator bias. For example, the second translator still believed that “有时一些家庭成员会担心家中的某位成员有认知障碍症的症状 *yǒu shí yī xiē jiā tíng chéng yuán huì dān xīn jiā zhōng de mǒu wèi chéng* *yuán yǒu rèn zhī zhàng ài zhèng de zhèng zhuàng*" (Sometimes some family members are concerned that a member in the family has symptoms of dementia) was unidiomatic for Chinese readers. This translation mentioned the concept of "family members" twice in this sentence to represent "a person who probably has dementia" and "family members other than the person". The first version of CLAT might be questioned by the target audience – "What family members are you referring to?" Hence, the second translator amended as follows (the second version of CLAT): "有的时候，有人出现认知障碍症的症状, 他的部分家庭成员很担心，但其他家庭成员却认为没有必要进行评估 *yǒu de shí hòu, yǒu rén chū xiàn rèn zhī zhàng ài zhèng de zhèng zhuàng, tā de bù fèn jiā tíng chéng yuán hěn dān xīn, dàn qí tā jiā tíng chéng yuán què rèn wéi méi yǒu bì yào jìn xíng píng gū*" (Sometimes, when someone shows symptoms of dementia, some family members are concerned, but others don't think an evaluation is necessary). The second version of CLAT is then negotiated with and approved by the first translator, and a reconciled CLAT is produced. For example, in this case, the first translator felt the second version of CLAT was more natural and approved it.

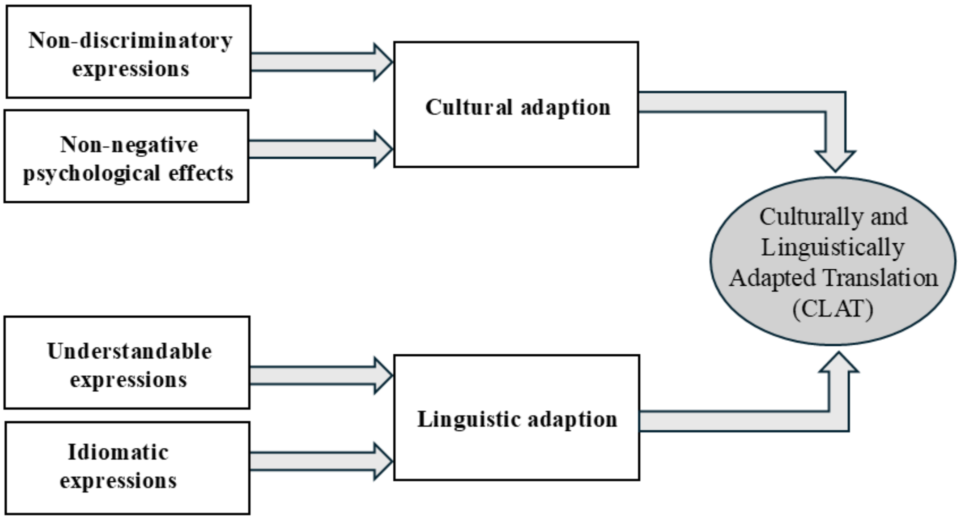

Figure 6 Process of Culturally and Linguistically Adapted Translation (CLAT)

Step 3: Both translators provide the reconciled back translation of the reconciled CLAT.

Step 4: Dementia experts check the reconciled back translation to see if the CLAT is still scientifically accurate. At least one dementia expert is needed for this step. If dementia experts agree the CLAT is scientifically accurate, it will be ready for the community check. If dementia experts are not satisfied with the CLAT's scientific accuracy, they need to explain the words or expressions that might be inaccurate or misleading and send them back to translators for amendment. For example, in this case, the dementia expert was satisfied with the adjustments in the CLAT, so there was no need to send it back to the translators for scientific accuracy.

Step 5: When the back translation is verified by dementia experts, the CLAT will be presented to community representatives (i.e. people with similar backgrounds to the target audience, in this case, older people and family members of older people with similar education levels, similar literacy, etc.). This step checks that the target audience can understand the translation, and feel the material is culturally suitable and acceptable (e.g., the target audience fully comprehends the translation and does not feel embarrassed while reading the translation). We designed a questionnaire (Table 4) to ask the community representatives for their opinions on the CLAT.

Table 4 Questionnaire for Assessing Culturally and Linguistically Adapted Translation (CLAT)

	If not, please mark or comment below...
The website is easy for me to understand Yes | No	Words/phrases that you don’t understand Any mistakes
The language is very familiar to me Yes | No	Terms which are unknown or confusing
The information is culturally appropriate for my community/culture Yes | No	Parts that concern you Parts that are not appropriate for your community/culture
The main message of the website is clear Yes | No	Parts that you do not understand Information you don’t believe
The language is motivating, engaging for me Yes | No	

In Face Dementia, a Chinese version of the questionnaire was given to these representatives. Representatives could adjust the CLAT in terms of wording, phrasing, and any expression they were unsatisfied with, which was intended to produce a community-optimised translation (COT). The COT provided by the community members is not always superior to the CLAT, so both translators need to check if the COT is more understandable and idiomatic than the CLAT. If the COT is "better", the COT should be marked and back-translated. Otherwise, the CLAT is to be kept. For example, one community representative provided the following COT: "当家人出现了一些认知障碍症的症状，有人觉得要做检查，有人觉得没必要 *dāng jiā rén chū xiàn le yī xiē rèn zhī zhàng ài zhèng de zhèng zhuàng, yǒu rén jué dé yào zuò jiǎn chá, yǒu rén jué dé méi bì yào*" (When a family member shows some symptoms of dementia, some people think that there is a need to do a check-up, while some think that it is not necessary). Although the COT is significantly different from the literal translation and the CLAT, this COT is more linguistically natural compared with the literal translation and the CLAT. This COT is also culturally acceptable as it does not contain any discriminatory or culturally negative expressions.

Step 6: The COT is back-translated and reconciled by both translators.

Step 7: The back translation of COT is reviewed by dementia experts to check if the translation is scientifically accurate. Once the back translation of COT is approved by dementia experts, the COT will be the final version of the Chinese translation, which is the CALU translation. For example, the dementia expert found the back translation (i.e., When a family member shows some symptoms of dementia, some people think that there is a need to do a check-up, while some think that it is not necessary) from Step 6 could deliver the intended meaning of the source text accurately. In this case, the COT from Step 5 was the final CALU translation, which was used in our Chinese material. On the other hand, dementia experts sometimes may find it necessary to amend the source texts based on the feedback provided by translators and the COT to enhance persuasiveness. Both translators will discuss and produce the translation for the amended source texts until the translators and the dementia experts are satisfied with it.

The process of CALU translation is designed for translating dementia-related educational resources and research material whose target audience is the general public. Compared with the traditional forward and backward translation process and the WHODAS 2.0 translation guideline, this process considers the factor of cultural appropriateness. For the Face Dementia campaign, the translation process is more practically suitable than the one outlined in *WHODAS 2.0 Translation Package (version 1.0)*.

The CALU protocol is theoretically informed by the limitations of formal equivalence and back-translation, the WHO's emphasis on conceptual equivalence and target-audience comprehension, and functionalist approaches to translation that prioritise the communicative purpose of the target text. Its practical contribution is to translate these theoretical principles into a staged procedure involving translators, dementia experts, and community representatives. This makes CALU translation particularly suitable for dementia-related public health information, where translation quality depends not only on scientific accuracy but also on cultural appropriateness, linguistic understandability, persuasiveness, and stigma reduction.

3.5 Conclusions and Future Work

The promotion of culturally-tailored dementia information is crucial in promoting dementia-friendliness. Promoting knowledge among CALD population relies on the provision of high-quality and culturally appropriate translation. The protocol outlined in this chapter provides a novel translation process for dementia-related resource translation to achieve CALU translation. Traditionally, high-quality health and medical translation has been considered synonymous with scientifically accurate translation, but in the context of public health awareness campaigns, other key factors are whether the target audience can understand the translation and how impactful and persuasive the translation is. This protocol is designed to pursue a linguistically and culturally effective translation, so the target audience can understand the original text more thoroughly. Moreover, the translation produced by this protocol is expected to have a positive impact on the target audience's attitudes towards dementia. Future research includes a community-based survey to test whether the CALU translation achieves its aims in comparison to standard professional translation.

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Chapter 4 Culturally Appropriate and Linguistically Understandable Translation Strategies: For Dementia-related Public Health Information

Abstract

Dementia is the seventh leading cause of death for the global population and the leading cause of death for Australians. As more people from diverse cultural backgrounds live in Australia, there is an urgent need for Australian public health authorities to provide not only scientifically accurate but also culturally appropriate and linguistically understandable (CALU) information to improve health literacy. The CALU translation protocol for translating dementia-related public health information was proposed. The protocol introduced a novel translation process that considers scientific accuracy, readability, understandability, and cultural appropriateness. Yet, the protocol did not include the translation strategies for translators to reference. By applying the concepts of pragmatic equivalence and dementia-inclusive language, this study showcases detailed translation strategies when producing the CALU translation for dementia-related public health information. Moreover, practical translation case studies were utilised to illustrate why these translation strategies are helpful to provide CALU translations. This study sheds light on the practical application of CALU translation strategies, which can be further applied to other stigmatised condition-related public health information translation.

Keywords

Culturally Appropriate and Linguistically Understandable Translation, Translation Strategies, Dementia, Public Health Information, CALD, Pragmatic Equivalence, Functional Equivalence, Dynamic Equivalence

4.1 Introduction

4.1.1 An Overview of Public Health Information Translation

According to the latest census (Australian Bureau of Statistics [ABS], 2022a), Australia is a multilingual society with around 300 languages spoken at home. Around 22.8% of Australians speak languages other than English at home rising from 21.6% in 2016 (ABS, 2017). In addition to English, Mandarin, Arabic, Vietnamese, Cantonese, and Punjabi are the most spoken languages at home (ABS, 2022a). There are approximately 3.4% of Australians with low English proficiency (ABS, 2022b). People who speak languages other than English at home, tend to have higher levels of low English proficiency such as Vietnamese (30.5%), Mandarin (25.9%), and Cantonese (23.7%) speakers. Therefore, it is important to facilitate effective communication with the culturally and linguistically diverse (CALD) population in Australia (Burns & Kim, 2011).

Public health communication is of importance to CALD communities (Burns & Kim, 2011; Herrera-Espejel & Rach, 2023). Language barriers cause serious health disparities for migrants (Turner et al., 2014). In Australia, the CALD population tends to have low health literacy, hold strong religious and cultural beliefs on health issues, and utilise fewer health services (Khatri & Assefa, 2022). Thus, Australian health authorities and official health information sharing platforms, such as Queensland Health (n.d.), Mental Health Australia (n.d.), Health Translations (n.d.) and Healthdirect (n.d.), provide translated versions of selected public health information. The COVID-19 outbreak highlighted the importance of public health communication (Finst et al., 2020) including to CALD communities (Wild, 2021). Translation has a critical role in intercultural communication (Cappuzzo, 2021). High-quality and trusted public health information translations should be delivered in a timely manner to CALD people, which facilitates social inclusion and health equality (Gonzalez & Amanatidou, 2023).

4.1.2 Who Should Do Public Health Information Translation

One major aim of public health communication is behaviour change (Porat et al., 2020), which requires high trustworthiness of public health information (Jenkins et al., 2020). Although machine translation (MT) is a cost-effective and time-saving way to provide basic translated health information, raw MT outputs include many translation errors, which lowers the trustworthiness of the translation (Pym et al., 2022). This is why human post-editing is always required when using MT to translate public health information (Hu, 2022). Much research (Dew et al., 2015; Herrera-Espejel & Rach, 2023; Kirchhoff et al., 2011; Turner et al., 2014) has been done to prove the high feasibility of using MT and human post-editing to translate public health information. However, these studies mainly evaluate translation quality based on linguistic equivalence between the source text (ST) and the target text (TT), but overlook the role of the cultural appropriateness of the TT.

In Australia, the Department of Home Affairs (2019) has acknowledged that a major limitation of applying MT tools, the fact that it is not able to take into account cultural conventions and sensitivities while translating a document. The NSW (New South Wales) Multicultural Health Communication Service (2020) issued a position statement objecting to the use of MT tools in health settings. NSW Health (2017) has prohibited the use of MT for translating health information by health organisations and staff, because MT tools are not reliable for the purpose of language politeness and appropriateness, language variations, and linguistic preferences. SA (South Australia) Health (2023) also has banned the use of generative language translation tools (including MT tools and AI tools) in health communication. Although other states, such as Victoria (The Victorian Department of Health, 2023), Queensland Health (2023), and Western Australia (WA Health, 2025), do not explicitly prevent the use of MT tools and AI tools in health communication, they all stipulate the that qualified translators and interpreters who are certified by National Accreditation Authority for Translators and Interpreters (NAATI) should be used in in health communication. Thus, human translators are still the key to providing public health information translation in Australia.

4.1.3 Linguistic Competence in Public Health Information Translation

It is strongly recommended that plain language should be used in public health information (Grene et al., 2017; Quesenberry, 2017; Rudd et al., 2004; Stableford & Mettgar, 2007). The *Plain Writing Act of 2010* (US) defines “plain language” as “writing that is clear, concise, well-organized, and follows other best practices appropriate to the subject or field and intended audience”. In medical and health settings, plain language usually refers to everyday language, short sentences, and no jargon (Rudd et al., 2010). Peter et al. (2023) suggested that medical and health professionals should use more “we” and “you” if possible, keep each sentence less than 20 words, and adopt consistent terms for the same concept throughout.

Each language has its own characteristics around word orders, sentence structure, vocabulary, and so on (Moravcsik, 2013). These language differences mean that literal translation (LT) of plain English does not result in plain Chinese, Vietnamese or Arabic. For example, English follows subject-verb-object sentence structure, while Chinese follows topic-comment structure (Turner et al., 2015). LT has been used to address the linguistic equivalence challenges when translating from English to other languages, but LT may fail to deliver the public health information appropriately (Gray et al., 2024). As shown in Example 1 which is English and translated Chinese material from the US. Centers for Disease Control and Prevention (2016, p. 4), there are two problems in the Chinese translation: 1. This Chinese translation directly places the relative clause before its antecedent, but in doing so makes the attribute in Chinese overly long and renders the sentence quite unnatural; 2. The Chinese translation of “authorities” is unfamiliar to Chinese readers. For the first problem, if the prepositive attributive in Chinese is too long, the sentence may be complex to read smoothly (Huang & Duan, 2022). The Chinese character “的 *de*” is the marker of attributives, which means the attributives are always present in front of the character “的 *de*” (Cui & Sung, 2021). In Example 1, the attributive in Chinese is “任何发生在

接种天花疫苗之后 *rèn hé fā shēng zài jiē zhǒng tiān huā yì miáo zhī hòu*", which is too long as a single attributive segment in one clause. In English-Chinese translation, a common way to translate an attributive clause is to make the attributive clause a conditional adverbial clause in Chinese (Huang & Duan, 2022). In this example, an improved translation might be "如果您在接种完天花疫苗后，出现了任何反应 *rú guǒ nín zài jiē zhòng wán tiān huā yì miáo hòu, chū xiàn le rèn hé fǎn yìng*" (If you, after getting the smallpox shot, have any reactions).

As for the second problem in the example, a "public health authority" in the U.S. refers to an authority of the government in charge of public health matters, such as health departments and cancer registers (U.S. Department of Health and Human Services, 2017). The Chinese LT of "health authority" is "卫生当局 *wèi shēng dāng jú*" (health authority, n.d.). Yet, "当局 *dāng jú*" in Chinese means "the leaders in governments, political parties and schools" (Chinese Academy of Social Sciences, 2016), which means the Chinese collocation of "卫生当局 *wèi shēng dāng jú*" is not linguistically right in Chinese. In Chinese, "部门 *bù mén*" (department) typically refers to working units in an organisation that performs multiple tasks (R.O.C. Ministry of Education, 2021). China's national public health authority – the National Health Commission of the People's Republic of China – is also a "部门 *bù mén*" (department) under the State Council of the People's Republic of China (2023). In China's local health authorities' official documents, "部门 *bù mén*" (department) is also adopted to categorise public health authorities (Beijing Municipal Health Commission, n.d.; Health Commission of Zhejiang Province, n.d.). Therefore, the improved Chinese translation of “public health authority” can be “公共卫生部门 *gōng gòng wèi shēng bù mén*” (public health department).

Example 1

ST: You should report any reactions that happen after getting the smallpox shot to state public health authorities.

LT: 你应该报告任何发生在接种天花疫苗之后的反应给州公共卫生当局。

nǐ yīng gāi bào gào rèn hé fā shēng zài jiē zhǒng tiān huā yì miáo zhī hòu de fǎn yìng gěi zhōu gōng gòng wèi shēng dāng jú.

BT: You should report any reaction that happens after you get the smallpox shot to state public health authorities.

The above example demonstrates that the LT of public health information does not always achieve linguistic equivalence in the translated material. Even if the English public health information is prepared in plain English, it does not necessarily mean the LT is plain in the target language. Therefore, to achieve a plain (linguistically understandable) translation, additional nuanced adjustments in translation are needed.

4.1.4 Cultural Competence in Public Health Information Translation

In today’s public health communication, the provision of scientifically accurate messages is not enough (Rubinelli, 2025). Michael et al. (2013) developed a translation standard for high-quality public health information translation. The standard consists of 10 components, one of which requires a cultural and linguistic assessment of the translated texts. To enhance the persuasiveness of public health information, the cultural context of the target audience cannot be ignored (Betsch et al., 2016; Kreuter & McClure, 2004; Rubinelli, 2025).

This is illustrated by situations in which native English-speaking individuals from different cultural backgrounds remain deeply affected by their own cultural identities and beliefs (Rumbaut & Massey, 2013). Kalichman and Coley (1995) randomly divided 100 African American women into three groups. Each group watched one of three HIV testing videos. The narrator in the first video was an African American man. The second video's narrator was an African American woman. The third video used the same narrator as the second video, and added some culturally relevant content (e.g., if not getting an HIV test, the woman may risk herself, her family, and even her unborn children). The results showed that the people watching the third video were more willing to have an HIV test compared with the people watching the first and second videos.

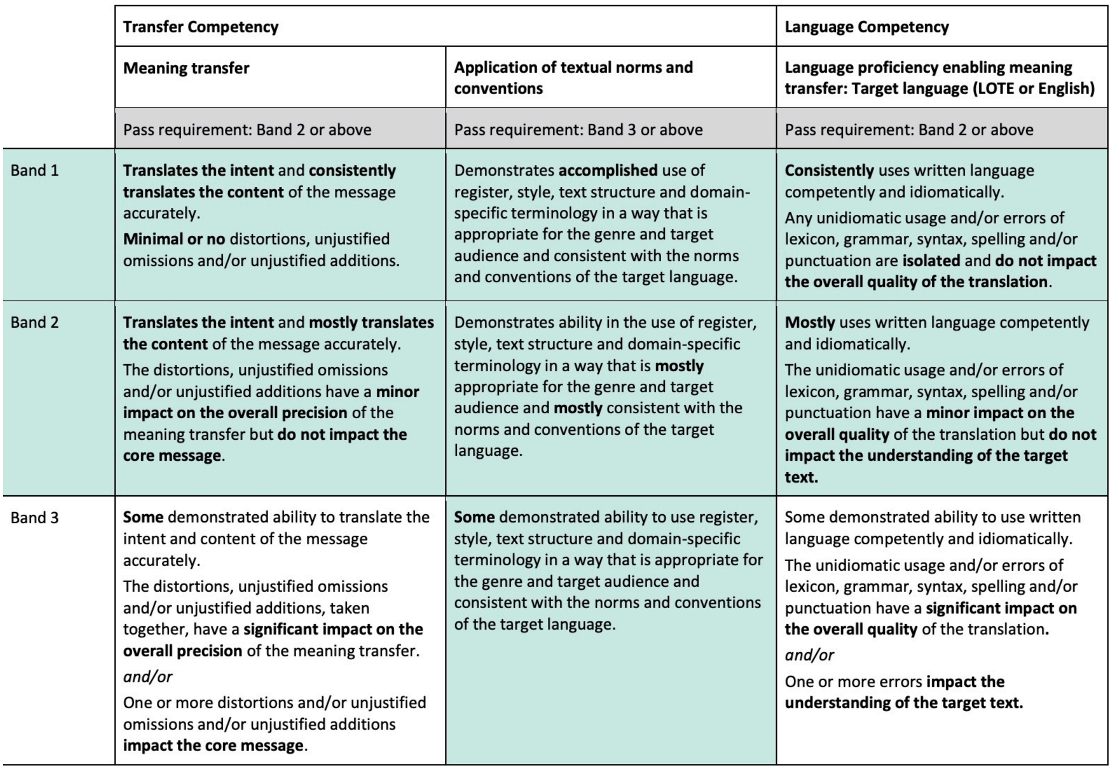
Regarding public health communication among people from diverse languages and cultures, multilingual translation is necessary (Pérez & Luquis, 2013). When designing public health education activities, health educators should understand the cultural factors that may trigger certain behaviours in specific cultural groups and the cultural taboos that may prevent these groups from changing their health behaviour (Pérez & Luquis, 2013). Cultural adaptation is a vital step in making educational material more culturally relevant and accessible to the target cultural group (Marshall et al., 2021). Amundsen et al. (2024) translated and culturally adapted material about the work-health interface from English to Norwegian. In their translation and cultural adaptation process, they removed all culturally inappropriate information and had meetings to reach a consensus about how to translate the concepts, words, and expressions that were hard to translate from English to Norwegian. Through the cultural adaptation, their translated material seemed to be understandable, acceptable, and valued by their target audience. Fisher et al. (2014) conducted a study to adapt the Thinking Healthy Program (THP) originally designed and adopted for women in Pakistan to women in Vietnam. They formed an adaptation group to translate and check the accuracy of the Vietnamese translation. The team was also responsible for determining how the target conditions are named in Vietnamese, and fitting Vietnamese idioms, images, and tailoring content to align with Vietnamese idioms, visuals, and situational context, without altering fundamental components. For example, they removed the descriptions culturally inappropriate to the Vietnamese society, such as “permission from a male family member was required in order to be able to leave the household”. After such cultural adaptation, they tested the adapted THP’s content with a group of six Vietnamese women. They found the culturally adapted THP is comprehensible, attractive and helpful to the participants.

Some public health studies that use cultural adaptation (e.g., Hackethal et al., 2013; Ko et al., 2014; Marshall et al., 2021) employ focus groups to understand how the target audience perceives certain health issues and to culturally adjust the content. Marshall et al. (2021) culturally adapted the early obesity intervention program – Health Beginnings, for Arabic and Chinese mothers in Australia. They utilised focus groups with Arabic and Chinese mothers to learn their attitudes, beliefs, and practices about Healthy Beginnings' content, and accordingly adjusted the translated information for Arabic and Chinese mothers. For example, Arabic mothers in this research believed breastfeeding is a norm in their culture, but Chinese mothers did not think like that, even though they recognised its importance. The research team then incorporated feedback from focus groups to refine the content for each cultural group.

Cultural adaptation using focus groups can be effective in designing public health information, as the process helps produce relevant, interesting, and useful content for the target audience (Albor et al., 2024). However, not all public health information undergoes cultural adaptation before being translated into other languages. In Australia, most translated public health information is merely a translation of the original English content, such as *The Dementia Guide* (Dementia Australia, 2022), *Understanding Brain Tumours* (Cancer Council, 2022), and *Diabetes Information Sheet for Parents and Carers* (NSW Department of Education, 2024).

4.1.5 The Relevant Qualities of NAATI Translators

In Australian health settings, some states, such as Victoria (The Victorian Department of Health, 2023) and Tasmania (Tasmanian Government, 2016), highly recommend using NAATI-certified translators for health translation. On the other hand, some states, such as New South Wales (NSW Health, 2017), Queensland (Queensland Health, 2023), and Western Australia (Government of Western Australia, 2020), clearly require NAATI-certified translators for health translation. NAATI-certified translators should be equipped with intercultural competence, which means that they comprehend the interplay between culture and language, identify important and subtle culturally specific details in texts, and effectively apply this knowledge to the translation process (NAATI, n.d.). According to the NAATI-certified translator assessment criteria (NAATI, 2024), the test assesses transfer competency and language competency (see Figure 7). Under the subcategory of application of textual norms and conventions, NAATI requires translators to be able to "use register, style, text structure and domain-specific terminology in a way that is appropriate for the genre and target audience and consistent with the norms and conventions of the target language" (NAATI, 2024, p. 1). This may explain why public health information needs to be translated by NAATI-certified translators in Australia, because they are supposed to be not only linguistically competent but also culturally competent.



	Transfer Competency		**Language Competency**
	Meaning transfer	**Application of textual norms and conventions**	**Language proficiency enabling meaning transfer: Target language (LOTE or English)**
	Pass requirement: Band 2 or above	Pass requirement: Band 3 or above	Pass requirement: Band 2 or above
Band 1	**Translates the intent** and **consistently translates the content** of the message accurately. **Minimal or no** distortions, unjustified omissions and/or unjustified additions.	Demonstrates **accomplished** use of register, style, text structure and domain-specific terminology in a way that is appropriate for the genre and target audience and consistent with the norms and conventions of the target language.	**Consistently** uses written language competently and idiomatically. Any unidiomatic usage and/or errors of lexicon, grammar, syntax, spelling and/or punctuation are **isolated** and **do not impact the overall quality of the translation**.
Band 2	**Translates the intent** and **mostly translates the content** of the message accurately. The distortions, unjustified omissions and/or unjustified additions have a **minor impact on the overall precision** of the meaning transfer but **do not impact the core message**.	Demonstrates ability in the use of register, style, text structure and domain-specific terminology in a way that is **mostly** appropriate for the genre and target audience and **mostly** consistent with the norms and conventions of the target language.	**Mostly** uses written language competently and idiomatically. The unidiomatic usage and/or errors of lexicon, grammar, syntax, spelling and/or punctuation have a **minor impact on the overall quality** of the translation but **do not impact the understanding of the target text.**
Band 3	**Some** demonstrated ability to translate the intent and content of the message accurately. The distortions, unjustified omissions and/or unjustified additions, taken together, have a **significant impact on the overall precision** of the meaning transfer. *and/or* One or more distortions and/or unjustified omissions and/or unjustified additions **impact the core message**.	**Some** demonstrated ability to use register, style, text structure and domain-specific terminology in a way that is appropriate for the genre and target audience and consistent with the norms and conventions of the target language.	Some demonstrated ability to use written language competently and idiomatically. The unidiomatic usage and/or errors of lexicon, grammar, syntax, spelling and/or punctuation have a **significant impact on the overall quality** of the translation. *and/or* One or more errors **impact the understanding of the target text.**

Figure 7 NAATI-certified Translator Assessment Rubric (NAATI, 2024, p. 1)

4.1.6 Dementia Stigma and Translation

Dementia stigma causes the public stereotype, prejudice and discrimination against people with dementia and their family members. The stigma further makes people with dementia lose their self-dignity (Nguyen & Li, 2020). Dementia-related stigma lowers the public willingness to seek help about dementia (Low & Purwaningrum, 2020). Mentioning the term "dementia" may evoke negative feelings, and some people with dementia even tend to avoid using the term (Zeilig, 2015). Some descriptions (e.g., victims, sufferers, and kill) may exacerbate the negative feelings and further strengthen the stigma (Putland & Brookes, 2024). Therefore, for dementia educational and promotional material, translators should also consider the dementia-related stigma in the target audience's culture and avoid the language that contributes to people's fear and stigma.

4.1.7 Translation Equivalence in Translating Public Health Information

Earlier studies (e.g., Alhussaini, 2021; Colina et al., 2016; Michael et al., 2013; Ozolins et al., 2020; Teng, 2019) discussed that there are some well-known translation equivalence theories applied translating medical and public health information – formal and dynamic equivalence (Nida, 2003), Skopos theory (Reiss & Vermeer, 2014), and pragmatic equivalence (Baker, 2018). Given the importance of linguistic and cultural competence in translating public health information, it is crucial to understand what translation equivalence should be pursued and achieved during the process of translating public health information.

4.1.7.1 Formal and Dynamic Equivalence

It is generally believed that the concept of formal and dynamic equivalence was first raised by Nida in 1964 (Alrymayh, 2024; Kim, 2015). If a translation achieves formal equivalence, that means the translation is literally translated from the ST, mirroring the form and the content of the ST (Nida, 2003). This type of equivalence requires translators to lean more towards the ST by following a word-by-word rendition, which makes the sentence structure of the TT is as close as the structure of the ST (Nida, 2003). Translators' subjectivity should be minimised when pursuing formal equivalence. Therefore, the LT should always be applied if formal equivalence is needed (Tymoczko, 2014). There are some reasons for choosing the translation with formal equivalence: 1. The translation can deliver the meaning of the ST faithfully (Pietryga, 2020); 2. The translation is more objective (Tymoczko, 2014); 3. The translation is logically direct and simple (Tymoczko, 2014). Therefore, formal equivalence (LT) can still be chosen in translating public health information to ensure the accuracy of the translation. In public health information translation, back-translation (BT) is a common method to check the accuracy of translation (Colina et al., 2016). Brislin (1970) proposed this method based on some theoretical foundations: 1. BT can represent the TT perfectly; 2. BT is the LT of the TT; 3. The higher similarity between the ST and BT, the higher translation equivalence that the TT achieves. However, Brislin (1970) also admitted that there are some problems in this method: 1. It is not always that there is an equivalent word or expression in the target language, so translators have their own rules while translating these ST; 2. Translators themselves can sometimes realise the poor quality of TT without the involvement of monolingual people; 3. The grammatical features vary among languages. For some language pairs, even if the BT is the same as the ST, the TT can be still meaningless in the target language. Therefore, the drawbacks of the BT method also reflect the limitations of formal equivalence (LT). LT can be useful when it can help deliver the meaning of the ST clearly to the target users, but some adjustments in terms of the sentence structure and word choices are necessary to ensure the equivalence in meaning (Harkness, 2003).

The translation with dynamic equivalence is “not so concerned with matching the receptor-language message with the source-language message, but with the dynamic relationship” (Nida, 2003, p. 159). In other words, this type of translation tries to let the target audience of the TT understand the original meaning of ST as the source-language users. According to Hatim and Munday (2019), formal equivalence is preferred when LT can convey the meaning of ST clearly, but the dynamic translation should be considered when the formal possibilities are exhausted. Dynamic equivalence suits the highly contextualised ST, which often requires translators to make TT more explicit to improve the understandability. The translation with dynamic equivalence is less objective than the translation with formal equivalence, because translators make more adjustments to achieve dynamic equivalence (Tymoczko, 2014). These adjustments include re-ordering the sequences of a sentence, repeating, explicating, gisting, and other techniques (Hatim & Munday, 2019).

In public health communication, accessible information should be relevant to the target audience, by understanding their demographics (World Health Organization [WHO], n.d.), health literacy (U.S. Centers for Disease Control and Prevention, 2024), and cultural characteristics (WHO, n.d.). Therefore, dynamic equivalence is more likely to be used in public health information translation, because the ST is not often designed for multicultural groups, which means that translators need to take more cultural considerations.

4.1.7.2 Functional Equivalence (Skopos Theory)

Skopos theory was coined by Vermeer in the 1970s (Nord, 2016). “Skopos” is a Greek word, which means “aim” and “purpose” (Reiss & Vermeer, 2014). Skopos theory is a well-known “functionalist theory” that focuses on functional equivalence in translations (Alhussaini, 2021). Nida and Taber (2003, p. 1) posited an answer for a classic translation question – “*Is this a correct translation?*” They believed that the correct translation is determined by the target audience. If the average target audience can understand the translation correctly, this is a correct translation. In other words, a LT can be a correct translation for the target audience who understands it well. Yet, the same translation is regarded as an incorrect translation when the target audience fails to comprehend it. Similarly, Skopos theory does not treat the ST as the ultimate authority (Jabir, 2006). Under the framework, translations are not produced according to the structure and the words of the ST (Alhussaini, 2021). It emphasises that every translation has its purpose guided by the skopos (purpose) of the TT, which means that how to translate the ST (e.g., translation strategies, language tone, and cultural consideration) should be determined by the purpose of the translation (Reiss & Vermeer, 2014).

Furthermore, this theory highlights the importance of intercultural coherence. With reference to the coherence rule, a translation should be "coherent with the situation in which it is received" (Reiss & Vermeer, 2014, p. 98). Nord (2018, p. 30) explained the coherence rule by stating, "*A target text is an offer of information formulated by a translator in a target culture and language about an offer of information formulated by someone else in the source culture and language.*" In public health, multilingual public health information enables people who do not speak English to access information in the same way as the English-speaking population (Dew et al., 2018), which is basically the same as Nord's (2018) statement. High understandability is a key feature of public health information (Mac et al., 2021), ensuring that the public can easily comprehend the information (Kelly et al., 2023). Thus, by adopting Skopos theory in translating public health information, the translations should be easily understandable to the public (target audience). Black (2018) conducted an experiment comparing the mental health information translations produced by using the back-translation method with the translations produced by Skopos theory. The study found that the translations following Skopos theory were preferred overall by the target audience.

As explained in section 4.1.3, the LT of plain English is not equivalent to a plain translation in the target language. Therefore, linguistic adjustments should be made to ensure a plain translation for the target audience. Moreover, cultural adaptations are needed for different cultural groups to improve the effectiveness of health communication (Escoffery et al., 2018). Hence, culturally tailored translated information is encouraged for use, and common cultural adaptation methods that can be employed in translation include the use of culturally specific examples (stories), equivalent concepts in the target language, and culturally appropriate language (Amundsen et al., 2024; Fisher et al., 2014; Marshall et al., 2021). In brief, linguistic and cultural adjustments reflect the core of Skopos theory. In the context of public health information translation, Skopos theory overlaps with the claim of Nida and Taber (2003) – a correct translation is an understandable translation to the target audience.

4.1.7.3 Pragmatic Equivalence

According to Baker (2018), a translation with pragmatic equivalence focuses on coherence and implicature. She further distinguished coherence and cohesion in translation studies. In her theory, coherence is “the network of conceptual relations which underlie the surface text” (Baker, 2018, p. 235). On the other hand, cohesion is “the network of surface relations which link words and expressions to other words and expressions in a text” (Baker, 2018, p. 235). Hence, pragmatic equivalence requires translations to be constructed based on the underlying relations (Scarpa, 2019). As for implicature, Baker borrowed this concept from Grice (1975), who defined this term as what the speaker implies instead of what the speaker literally says. As a result, translators should fully understand the intention and the hidden meaning of the ST and provide an explicit TT for the target audience, to achieve pragmatic equivalence (Baker, 2018). Moreover, Colina (2015) stated that pragmatic translations should consider how the ST is used in its social and cultural context (Colina, 2015; Hale, 2014). Translators should realise how the TT will be understood by the target language audience. This is why translators need to consider additional non-linguistic factors to achieve pragmatic equivalence, such as culture, the relationship between the message sender and recipient, and emotion (Colina, 2015).

In public health information translation, Eremenco et al. (2005) conceded that 100% equivalence in translation is unattainable, and translators should achieve as close to semantic or conceptual equivalence as possible. Yet, Ozolins et al. (2020) proposed a higher equivalence requirement in health translation, which is pragmatic equivalence. They explained that translations with pragmatic equivalence cause the same effect on the target language audiences as the effect of the ST on the source language audiences. For example, health materials are designed for the source language audiences for the purpose of education, and if the translated health materials need to have the same educational effect on the target language audiences, the translation should achieve pragmatic equivalence (Colina et al., 2016). More specifically, a health leaflet contains illocutionary intent to encourage the source language audiences to take action to improve their health, and the translated version of the health leaflet should be equipped with the same intention (Teng, 2019).

To conclude, in cross-cultural communication, pragmatic equivalence ensures that the source message can be conveyed to different language users without distorting the original coherence and implicature (Baker, 2018). Due to the features of pragmatic equivalence, scholars (Amundson et al., 2024; Colina, 2015; Colina et al., 2016; Gharedaghi et al., 2019; Ozolins et al., 2020; Scarpa, 2019; Teng, 2019) have endorsed its importance in public health information translation.

4.1.8 Dementia-inclusive Language

Language reflects how people think and respect others (Swaffer, 2014). In the field of dementia, language influences how the public perceives people with dementia, and even affects how people with dementia view themselves. Appropriate language use may encourage people with dementia to be more confident and more willing to help themselves (Swaffer, 2014). Yet, public discourses and policies may contain inappropriate language that devalues and demeans people with dementia (Wolverson et al., 2021). People with dementia prefer understandable, familiar, and more positive terms (Wolverson et al., 2021). English language guidelines for dementia communities have been developed by organisations such as Dementia Australia (2021), Alzheimer’s Association (2022), Alzheimer Europe (2022), and Alzheimer Society Canada (2017). These guidelines share some common principles, such as dignity, cultural considerations, positive communication, and destigmatising language.

4.1.8.1 Dignity

Dignity is closely related to personal feelings and experiences (Huang et al., 2020; van Gennip et al., 2016), and it is a multi-attribute concept including respect, self-worth, independence, and privacy (Huang et al., 2020; UK Department of Health, 2009). In the context of dementia, there are more nuanced strategies to maintain the dignity of people with dementia. While communicating with people with dementia, others should treat people with dementia with warmth and authenticity. People with dementia should be given opportunities to express themselves independently (Alzheimer Society Canada, 2017). Dementia is not the only identity for people with dementia, so others should introduce other identities when portraying someone with dementia (Alzheimer Europe, 2022). For example, the Facing Dementia Together (n.d.) website introduces three Chinese Australians living with dementia, and all three people are introduced in the first paragraph of each story without mentioning they are diagnosed with dementia. They can be a chef, a traditional Chinese medicine practitioner, a soldier, a father, a mother, and in addition, they are also people with dementia. Moreover, terms related to dementia also affect people's dignity (Dementia Australia, 2021). People with dementia are still "people", so it is appropriate to describe them as "people with dementia" or "people living with dementia" instead of "dementia patients" when used outside the medical context (Dementia Australia, 2021). Moreover, when choosing dementia-related terms, others should respect people with dementia regarding the term choice (i.e., use or non-use of some terms).

4.1.8.2 Cultural Considerations

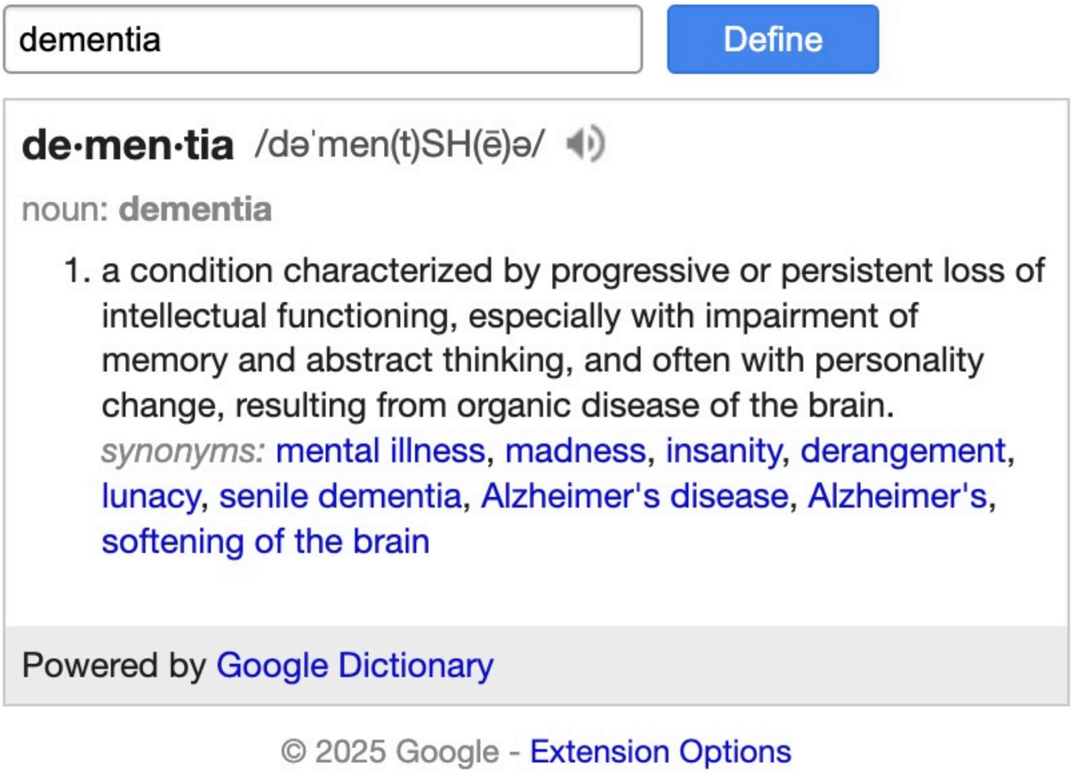
In health communication, culture-sensitive information is essential to enhance the effectiveness of communication with target audiences from diverse cultural backgrounds (Betsch et al., 2016). Language can mirror the culture of the people speaking it (Shashkevich, 2019), and is shaped by cultural and social norms (Alzheimer's Association, 2022). For instance, it has been noticed that the term "dementia" is not culturally appropriate for people from some cultures (Alzheimer Society Canada, 2017; Dementia Australia, 2021). In a Canadian national survey, 54% of the French-speaking Canadians found the French equivalent of dementia, "*démence*", offensive or derogatory. Conversely, merely 16% of English-speaking Canadians felt the same about the term "dementia" (Leger, 2017). The common Chinese equivalent of dementia is "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), but this Chinese term is pejorative and a source of dementia-related stigma in Chinese culture (Chiu et al., 2014). Therefore, some words and expressions may be culturally appropriate for the English-speaking population, but the translation can be meaningless and even offensive for other cultural groups (Dementia Australia, 2021). Individuals involved in communication about dementia should be mindful of the cultural differences and the evolution of language (Alzheimer Europe, 2022). A suggested solution for understanding the target culture is to consult people from the target culture about the culturally appropriate terms and expressions (Alzheimer Society Canada, 2017; Dementia Australia, 2021).

4.1.8.3 Positive Communication

The predominant information about dementia is from a biomedical perspective, covering topics such as diagnosis, pathogenesis, and treatment (de Vugt & Droes, 2017). Much discourse about dementia is related to fear, stigma, and negative attitudes (Wolverson et al., 2015). However, there is an urgent need to deliver more positive information about dementia to balance the views about dementia (de Vugt & Droes, 2017). Empowering language should focus on what people with dementia “can do” rather than what they “cannot do”, which encourages people to positively engage in daily activities (Dementia Australia, 2021). Positive information about dementia helps people with dementia and their families better adapt to life after diagnosis and live well with the condition (Vernooij-Dassen & Jeon, 2016). Lin and Lewis (2015) proposed the concept – “dementia positive”. They defined it as “positivity towards dementia with an intentional emphasis on strength finding, manifesting through attitudes, beliefs, communication, and behaviors” (Lin & Lewis, 2016, p. 242). Dementia positive changes how society perceives people with dementia. People with a positive attitude believe that people with dementia can live a meaningful life, which ultimately helps build a dementia-inclusive society and improves the lives of people with dementia and their families (Lin & Lewis, 2016). Yet, an overly positive portrayal of people with dementia cannot sufficiently reflect the reality of their lives, which possibly gives the public the impression that dementia is unproblematic. Some people who are “severely” impacted by dementia can be obscured by this type of description (Fletcher, 2019). This is why individuals responsible for portraying dementia should strive for a “balanced and positive” representation of dementia (Alzheimer Europe, 2022).

4.1.8.4 Destigmatising Language

Stigmatisation surrounding diseases is a global health issue (Rewerska-Juśko & Rejdak, 2020). Dementia stigma is a prominent burden taken by people with dementia (Swaffer, 2014), and is causing more burden to them today (Rewerska-Juśko & Rejdak, 2020). Language not only shapes how people think and behave, but also reinforces stereotypes about dementia (Wilson et al., 2021). For example, society uses words such as “sufferers” and “victims” referring to people with dementia, which implies they are helpless (Swaffer, 2015). When people search for the definition of “dementia” in a popular online dictionary with more than 2 million users – Google Dictionary (see Figure 8), the synonyms of “dementia” include: mental illness, madness, insanity, derangement, lunacy, senile dementia, Alzheimer’s disease (AD), Alzheimer’s, and softening of the brain (Google, n.d.). Some synonyms (e.g., mental illness, madness, insanity, derangement, lunacy and senile dementia) are not scientifically accurate and suitable to refer to people with dementia. According to the *Dementia Language Guidelines* by Dementia Australia (2021), dementia is not a mental illness but a condition. In these language guidelines (Alzheimer Society Canada, 2017; Dementia Australia, 2022), there is a list of words that should not be used when talking about dementia and people with dementia, such as illness, disease, senile dementia, aggressor, sufferer, and victim. Although the language guidelines developed by Alzheimer Europe (2022) and Alzheimer’s Association (2022) do not specifically provide a list of expressions that should or should not be used, both guidelines emphasise that people should carefully review their expressions to ensure no stigmatising connotations. Stigmatised descriptions (including some inaccurate descriptions) of dementia bring stigmatisation to people with dementia, causing long-term trauma to them and social stigma around them (Mason et al., 2024).



de·men·tia /dəˈmen(t)SH(ē)ə/

noun: **dementia**

1. a condition characterized by progressive or persistent loss of intellectual functioning, especially with impairment of memory and abstract thinking, and often with personality change, resulting from organic disease of the brain.
   synonyms: mental illness, madness, insanity, derangement, lunacy, senile dementia, Alzheimer's disease, Alzheimer's, softening of the brain

Powered by Google Dictionary

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Figure 8 Definition of Dementia in Google Dictionary (Google, n.d.)

4.1.9 Theoretical Positioning of CALU Translation

CALU translation is not proposed as a replacement for established translation theories, but as a practice-oriented framework that operationalises several established theoretical insights in the specific context of dementia-related public health communication. Its theoretical foundation draws primarily on dynamic equivalence, functional equivalence/Skopos theory, pragmatic equivalence, cultural adaptation, plain-language health communication, and dementia-inclusive language.

First, CALU translation extends the logic of dynamic equivalence by prioritising the response of target readers rather than formal correspondence between the source text and the target text. In dementia-related public health translation, a formally accurate translation may still fail if it is difficult to understand, culturally inappropriate, emotionally burdensome, or stigmatising. CALU translation therefore treats reader comprehension, emotional reception, and cultural acceptability as central criteria of translation quality.

Second, CALU translation is closely aligned with functional equivalence and Skopos theory because the purpose of dementia-related public health information is not merely to transfer information, but to improve dementia literacy, reduce stigma, and encourage timely help-seeking. From this perspective, translation choices should be guided by the communicative function of the target text. The CALU protocol therefore allows linguistic restructuring, explicitation, omission of unnecessary expressions, and culturally relevant reformulation when these strategies better serve the public health purpose of the text.

Third, CALU translation develops pragmatic equivalence in the context of health communication. Dementia-related public health texts often contain implicit intentions: they seek to reassure readers, reduce fear, encourage family discussion, and motivate help-seeking behaviour. CALU translation therefore attends not only to semantic content, but also to implicature, tone, interpersonal force, and likely reader interpretation in the target culture.

Fourth, CALU translation incorporates cultural adaptation and dementia-inclusive language as necessary extensions of translation theory in the context of stigmatised health conditions. For dementia-related information, translation quality cannot be assessed only by linguistic accuracy or source-text fidelity. A translation may be semantically accurate but still reproduce stigma through culturally negative terms, deficit-based expressions, or emotionally harmful wording. CALU translation therefore adds a stigma-sensitive dimension to public health translation by requiring translators to avoid discriminatory expressions and adopt accurate, respectful, positive, and culturally acceptable language.

The novelty of CALU lies in bringing these theoretical principles together into a concrete translation protocol and a set of operational strategies for dementia-related public health information. While dynamic equivalence, Skopos theory, pragmatic equivalence, and cultural adaptation provide the theoretical basis, CALU specifies how these principles can be applied in practice through scientific accuracy, cultural appropriateness, and linguistic understandability. In this sense, CALU contributes to translation studies by bridging translation theory, health communication, and dementia-inclusive language, and by offering a replicable framework that can be tested and adapted for other stigmatised health conditions and language pairs.

4.2 CALU Translation Strategies

As introduced above, to produce culturally appropriate and linguistically understandable (CALU) translations of dementia-related health information, translators should be equipped with linguistic and cultural competence, and the health context knowledge so that they understand the reasons for the word and expression choice and the deeper intent of the communication. Translators should use inclusive language by following the core points (i.e. dignity, cultural considerations, positive communication, and destigmatising language) outlined by dementia language guidelines. In addition, CALU translations of dementia-related health information should achieve dynamic equivalence, functional equivalence (Skopos theory), and pragmatic equivalence. These translation strategies are designed based on the three recommendations in Chapter 4: (a) The translation should achieve scientific accuracy; (b) The translation should have high readability, understandability and acceptability for a target audience of Chinese Australians, some of whom might have limited education and health literacy; (c) The translation should not contain any discriminatory or stigmatised expressions that could cause mental burdens to the target audience of the translation. Therefore, I designed a set of CALU translation strategies (see Table 5) for translating dementia-related information from English to Chinese.

Table 5 CALU Translation Strategies

Dimensions	Subcategories	Strategies

Scientific Accuracy (SA)	SA 1	Use scientifically accurate terms and expressions (to ensure scientific accuracy)
Cultural Appropriateness (CA)	CA 1	Use culturally relevant and plain words (to improve the understandability)
	CA 2	Use culturally relevant and plain expressions (to improve the understandability)
	CA 3	Use culturally relevant examples (to improve understandability and actionability)
	CA 4	Use culturally positive language (to build a neutral image of dementia)
Linguistic Understandability (LU)	LU 1	Use explicit language (to unveil the hidden message and reduce the ambiguity)

	LU 2	Omit unnecessary words and expressions (to improve the readability)
	LU 3	Use short sentences (to improve the readability)

4.3 Research Gap and Aim

Although many studies emphasise the need for cultural adaptation and linguistic adjustments in public health information translations, few focus specifically on translating public health information for a stigmatised condition such as dementia-related public health information. Translators must be very careful when translating this information, as the stigma related to dementia is deeply rooted in Chinese culture (Wong et al., 2020; Woo & Mehta, 2017). In the previous study, the CALU translation process was proposed for translating dementia-related public health information. However, the CALU translation strategies were not specified in the previous study for translation practitioners to reference. Therefore, this study aims to provide a set of CALU translation strategies and comprehensively analyse why these translation strategies are essential for translating dementia-related public health information.

4.4 Methodology

4.4.1 Research Design

This study employs a qualitative approach to illustrate the importance of CALU translation strategies by case studies (Susam-Sarajeva, 2009). This study compares the Chinese LT and the CALU Chinese translation for each case. The aim of this approach is to help deeply analyse why CALU translation strategies should be adopted in translating dementia-related public health information from English to Chinese. All CALU translations have been reviewed by two professional translators to ensure consistency. Given the nature of this study, no ethics approval was required for this study.

4.4.2 Data Collection

All the English STs were selected from the materials of "Face Dementia" and "Facing Dementia Together" public health campaigns. All the materials used in both campaigns were composed in English by dementia experts. All the CALU Chinese translations were produced by ZH and reviewed by MJ. Both ZH and MJ agreed on the CALU translations after discussions. For the Chinese LTs, they were produced by ZH, and reviewed by MJ. Both ZH and MJ reached an agreement on the Chinese LTs.

4.4.3 Data Analysis

This study employed an in-depth comparative analysis of Chinese LTs and CALU Chinese translations of dementia-related public health English information. The entire data set (including ST, LT and CALU translation) was coded in Microsoft Excel. If any strategies had been applied in the translation, the translation was coded with the codes in Table 5. Each CALU translation strategy was illustrated by several examples, to showcase why the translation strategy is important in each example. The analysis mainly focuses on scientific accuracy, pragmatic equivalence (i.e. cultural appropriateness & linguistic understandability), and inclusive language use. In each comparison case, the following structure was used:

(i) English ST

(ii) The Chinese LT (followed by Chinese Pinyin)

(iii) The CALU Chinese translation of the English ST (followed by Chinese Pinyin)

(iv) The BT of the CALU Chinese translation

In some cases, several translation strategies were applied to one case. The case would be only analysed under one translation strategy category. The discussed parts for each case were highlighted in bold and underlined. Accordingly, the following was displayed for each case:

Example 2

ST: If you want to track your thinking and memory over time, **<u>you might want to try</u>** the Brain Track App by Dementia Australia.

LT: 如果你想长期追踪自己的思维和记忆，**<u>你可能想尝试一下</u>**澳大利亚痴呆症协会的大脑轨迹应用。

rú guǒ nǐ xiǎng cháng qí zhuī zōng zì jǐ de sī wéi hé jì yì, **nǐ kě néng xiǎng cháng shì yī xià** ào dà lì yà chī dāi zhèng xié huì de dàn ǎo guǐ jì yìng yòng

CALU Translation: 如果您想记录下来自己在思考和记忆能力上的变化，**我们建议您**使用“脑力关爱小助手”（Brain Track APP）这个手机程序。这是由澳大利亚认知障碍症协会（Dementia Australia）的医学专家们设计的。

rú guǒ nín xiǎng jì lù xià lái zì jǐ zài sī kǎo hé jì yì néng lì shàng de biàn huà, **wǒ men jiàn yì nín** shǐ yòng “nǎo lì guān ài xiǎo zhù shǒu” (Brain Track APP) zhè ge shǒuj ī chéng xù. zhè shì yóu ào dà lì yà rèn zhī zhàng ài zhèng xié huì (Dementia Australia) de yī xué zhuān jiā men shè jì de.

BT: If you want to record changes in your thinking and memory abilities, **we recommend you to use** the Brain Track app, which was designed by medical experts at Dementia Australia.

4.5 Discussion

4.5.1 SA 1 Use scientifically accurate terms and expressions (to ensure scientific accuracy)

Public health information may contain scientific findings, bridging the knowledge gap among the public. Therefore, the scientific accuracy of public health information translations must be ensured (Lin & Ji, 2019). Although the scientific accuracy is usually checked by health professionals (Lin & Ji, 2019), monolingual health professionals can only rely on the BT of the TT. If the BT cannot reflect the issues of scientific accuracy in the translation, it is hard for monolingual health professionals to verify its scientific accuracy (Colina et al., 2016). According to NAATI (2015), a NAATI-certified translator should be research competent, which means the translator is capable of obtaining the knowledge in the subject area before doing the translation task. Therefore, the translators should have the necessary knowledge of dementia while translating dementia-related public health information. If necessary, the translators need to do some research to gain the knowledge of dementia.

Example 3

ST: Dementia is the umbrella term for a group of diseases which affect **the brain**.

LT:痴呆症是一组影响**大脑**的疾病的总称。

chī dāi zhèng shì yī zǔ yǐng xiǎng **dà nǎo** de jí bìng de zǒng chēng

CALU Translation: 认知障碍症并非一种单一的疾病，而是一系列影响**脑部**健康疾病的总称。

rèn zhī zhàng ài zhèng bìng fēi yī zhǒng dān yī de jí bìng, ér shì yī xì liè yǐng xiǎng **nǎo bù** jiàn kāng jí bìng de zǒng chēng.

BT: Dementia is not a single disease, but a general term for a series of diseases that affect **brain** health.

In Example 3, the word “brain” can be easily and mistakenly translated as “大脑 *dà nǎo*” which literally means “cerebrum”. For instance, in the Chinese version of *The Dementia Guide* by Dementia Australia (2022, p. 14), when it comes to the introduction of the relationship between dementia and brain, “brain” is translated as “大脑 *dà nǎo*” (cerebrum). WHO (2025) also made this mistake in its Chinese resource about the definition of dementia. As per the Cambridge Dictionary (brain, n.d.), the Chinese translations of "brain" are "脑 *nǎo*" (brain) and "大脑 *dà nǎo*" (cerebrum). However, the brain mainly consists of three parts – cerebrum, cerebellum, and brainstem (Johns Hopkins Medicine, n.d.). The frontal and temporal lobes in the cerebrum play a significant role in humans' cognitive functions. Distinct types of dementia cause different symptoms, because they affect different parts of the cerebrum (Dementia Australia, 2023). For example, AD affects the parts of the cerebral cortex controlling reasoning, language and behaviours (National Institute on Aging, 2024). In addition, the cerebellum was traditionally believed to control motor ability, and thus the relationship between cerebellar degeneration and dementia has been largely ignored (Fyfe, 2016). Yet, cerebellar atrophy can be found in people with AD and frontotemporal dementia (Gellerson et al., 2017). As for the brainstem, it affects people's cognitive and behavioural functions. It has been found that the change in brainstem volume and structure happens in people with AD (Lee et al., 2015). Therefore, it is scientifically inaccurate to translate "brain" as "大脑 *dà nǎo*" (cerebrum). This mistranslation misleads the target audiences to believe that dementia only affects the cerebrum, and may ignore the changes in the cerebellum and the brainstem. In Example 3, the CALU translation is "脑部 *nǎo bù*" (brain). In Chinese, the term "脑部 *nǎo bù*" (brain) is commonly employed in compound phrases such as "脑部健康 *nǎo bù jiàn kāng*" (brain health; e.g., Zhao, 2025), "脑部活动 *nǎo bù huó dòng*" (brain activity; e.g., Zhang, 2023), and "脑部疾病 *nǎo bù jí bìng*" (brain disease; e.g., Yuan, 2022).

Example 4

ST: Some people have fears, concerns or worries about seeking a dementia **diagnosis** - either for themselves or their loved one.

LT: 有些人对于寻求痴呆症**诊断**感到恐惧、担心或担忧——无论是为自己还是为所爱的人。

yǒu xiē rén duì yú xún qiú chī dāi zhèng **zhěn duàn** gǎn dào kǒng jù, dān xīn huò dān yōu——wú lùn shì wèi zì jǐ hái shì wéi suǒ ài de rén.

CALU Translation: 有些人对自己或亲戚朋友去医院**诊断**是否有认知障碍症而感到恐惧或担忧。

yǒu xiē rén duì zì jǐ huò qīn qī péng yǒu qù yī yuàn **zhěn duàn** shì fǒu yǒu rèn zhī zhàng ài zhèng ér gǎn dào kǒng jù huò dān yōu.

BT: Some people feel fear or worry about going to the hospital for a **diagnosis** of dementia for themselves or their relatives and friends.

Example 5

ST: I'm scared about what a **diagnosis** of dementia might mean for my life.

LT: 我害怕痴呆症的**诊断**对我的生活意味着什么。

wǒ hài pà chī dāi zhèng de **zhěn duàn** duì wǒ de sheng huó yì wèi zhe shén me.

CALU Translation: 我害怕**确诊**认知障碍症会影响我的生活。

wǒ hài pà **què zhěn** rèn zhī zhàng ài zhèng huì yǐng xiǎng wǒ de sheng huó.

BT: I am afraid that a **definitive diagnosis** of dementia will affect my life.

By comparing Example 4 and Example 5, “diagnosis” is translated as “诊断 *zhěn duàn*” (diagnosis) and “确诊 *què zhěn*” (definitive diagnosis) in the CALU translations, respectively. In Example 4, “seeking a dementia diagnosis” means “having a doctor to check if the loved ones have dementia”. In this case, the word “diagnosis” follows its medical definition – “the process of identifying a disease, condition, or injury from its signs and symptoms” (National Cancer Institute, n.d.b). “Seeking a diagnosis” does not necessarily mean that the person is diagnosed with a certain medical condition, but involves a series of tests and assessments (Dementia Australia, 2025b). One primary aim of Facing Dementia Together is to encourage people to see GPs in terms of dementia (Facing Dementia Together, 2025). Example 4 reflects people’s concerns about seeking medical help because of dementia. Therefore, it is scientifically accurate to adopt “诊断 *zhěn duàn*” (diagnosis) in this case.

On the other hand, the “diagnosis” in Example 5 refers to the definitive diagnosis. The ST expresses a concern faced by the public – if a person is diagnosed with dementia, the definitive diagnosis may affect the person’s life. Definitive diagnosis is a final diagnosis that is made after obtaining test results (National Cancer Institute, n.d.a). The anxiety and the scary related to dementia are common (Maxfield et al., 2024). For instance, if a person is diagnosed with dementia, the person may not drive anymore according to the medical assessment result (NSW Government, 2024), and the person may be treated as someone losing their legal capacity, so the person cannot make a lawful will (Dickens, 1997). Accordingly, although the literal translation of "diagnosis" is "诊断 *zhěn duàn*" (diagnosis), it should be translated as "确诊 *què zhěn*" (definitive diagnosis) to make the translation more scientifically accurate, when the ST refers to the person who has been diagnosed with dementia.

4.5.2 CA 1 Use culturally relevant and plain words (to improve the understandability)

A culturally relevant message delivers meaningful and useful information to a specific cultural group, which improves the recipients' knowledge and empowers them (Clark, 2017). In education settings, the teaching outcome is improved by using culturally relevant words from the instructors, because students can more easily understand the instruction (Herron et al., 2009). One of the goals of public health communication is to improve the health literacy of the public (Ishikawa & Kiuchi, 2010), which is also a type of education. Moreoever, the use of plain language has been extensively employed in the writing of plain English public health information (Grene et al., 2017; Quesenberry, 2017), but a literal rendering of everyday English texts does not always result in equally straightforward expressions in the target language. More specifically, translators should avoid the use of technical jargon and instead employ easy and colloquial target language to enhance the understandability of the translation.

Example 6

ST: The cause of the changes may be **treatable and reversible**.

LT: 这些变化的这些变化的原因可能是**可以治疗和可逆的**。

zhè xiē biàn huà de yuan yīn kě néng shì **<u>kě yǐ zhì liáo hé kě nì de</u>**

CALU Translation: 造成这些变化的病因，有的是**<u>可以治疗的</u>**，有的甚至是可以**<u>恢复如初</u>**的。

zào chéng zhè xiē biàn huà de bìng yīn, yǒu de shì kě yǐ zhì liáo de, yǒu de shèn zhì shì kě yǐ **<u>huī fù rú chū</u>** de.

BT: For some of the causes of these changes, some are treatable, and some are even curable.

In Example 6, the ST conveys that not all the changes are due to dementia, and some causes of the changes are treatable and reversible. In English, “treatable” and “reversible” share similar but distinct definitions in medical and health settings. Treatable cases are potentially reversible cases (Piccini et al., 1998). A treatable condition means that medical interventions have some effects on the condition (e.g., slowing down progression and improved health), but it does not necessarily mean this condition can be cured or recovered to the original status (Batten et al., 2019). Yet, “reversible” means that something “can be changed back to what it was before” (reversible, n.d.). The most common cause of dementia-like symptoms is depression which is a reversible condition (Tripathi & Vibha, 2009). Thus, reversible causes are “more treatable” than treatable causes. In Chinese, “reversible” means “可逆的 *kě nì de*” (reversible, n.d.). According to the Chinese Academy of Social Sciences (2016) and the R.O.C. Ministry of Education (2021), “可逆 *kě nì*” (reversible) is only collocated as “可逆反应 *kě nì fǎn yìng*” (reversible reaction) used in chemistry, which refers to a chemical reaction that proceeds in the direction of both products and reactants under certain conditions. It can be seen that "可逆 *kě nì*" (reversible) is not an everyday Chinese expression. Therefore, "可逆 *kě nì*" (reversible) is not adopted in this case, and "恢复如初 *huī fù rú chū*" (recover to its original state) is used to make the meaning more explicit and understandable to the Chinese readers. This four-character expression is not uncommon that can be found on prime media in Mainland China (e.g., Chen et al., 2024; Zhu, 2024), consisting of two parts – "恢复 *huī fù*" (recover) and "如初 *rú chū*" (like original state). "恢复 *huī fù*" (recover) is commonly used in Chinese public health information. For example, Chen (2023), from China Central Television (CCTV) News, released a piece of public health information introducing how to recover from COVID-19. Throughout the information, Chen (2023) used "恢复 *huī fù*" (recover) in the heading and the body texts 23 times in total, to tell the public how to manage health and recover better after getting COVID-19. In Mainland China, CCTV is the media network that engages the largest audience, and more than 10% of the total population watches its certain program at the same time (Luo, 2015). CCTV is responsible for the propaganda of the Chinese Communist Party, so the target audience for CCTV is the entire population in Mainland China (Luo, 2015), which requires the language used by CCTV to be accessible to the public. Based on this, it can be concluded that "恢复 *huī fù*" (recover) is familiar to the Chinese audience. With reference to "如初 *rú chū*" , this means "like before" or "as it was originally" (Chinese Academy of Social Sciences, 2016; R.O.C. Ministry of Education, 2021). In brief, "恢复如初 *huī fù rú chū*" (recover to its original state) is scientifically accurate and culturally familiar to the Chinese readers.

Example 7

ST: Knowing the signs can help you to recognise if you or a **loved one** may be experiencing the changes of dementia.

LT: 了解这些迹象可以帮助您识别您或**您所爱的人**是否正在经历痴呆症的变化。

liǎo jiě zhè xiē jì xiàng kě yǐ bang zhù nín shí bié nín huò **nín suǒ ài de rén** shì fǒu zhèng zài jīng lì chī dāi zhèng de biàn huà.

CALU Translation: 通过了解认知障碍症的症状，您可以更好地识别自己或**亲朋好友**是否出现了这些症状。

tōng guò liǎo jiě rèn zhī zhàng ài zhèng de zhèng zhuàng, nín kě yǐ gèng hǎo de shí bié zì jǐ huò **qīn péng hǎo yǒu** shì fǒu chū xiàn le zhè xiē zhèng zhuàng.

BT: By understanding the symptoms of dementia, you can better recognise if you or **relatives or friends** may be experiencing symptoms of dementia.

The Chinese LT of "loved one" is "爱的人 *ài de rén*". This LT can be comprehended as "the person you love" by Chinese speakers. The LT covers a wide range of people for Chinese speakers. Yet, the underlying meaning of "loved one" is a person who is loved by another, which usually refers to a family member or close friend (loved one, n.d.). In Chinese, there is a four-character idiom sharing a similar concept, which is

"亲朋好友 *qīn péng hǎo yǒu*" (relatives and friends). According to the Chinese Academy of Social Sciences (2016), this word means "亲戚朋友 *qīn qi péng yǒu*" (relatives and friends). The two terms are interchangeable in daily conversation, but "亲朋好友 *qīn péng hǎo yǒu*" (relatives and friends) is opted over "亲戚朋友 *qīn qi péng yǒu*" (relatives and friends), because the former involves fewer character strokes. The two words share three characters – "亲 *qīn*", "朋 *péng*" and "友 *yǒu*". Their sole orthographic divergence is the substitution of "好 *hǎo*" in the former for "戚 *qi*" in the latter. On standard stroke-count conventions, "好 *hǎo*" has six strokes, whereas "戚 *qi*" has eleven. With both being plain four-character words, the one with fewer character strokes usually places less reading burden on Chinese readers (Sung et al., 2016). As a result, the adoption of "亲朋好友 *qīn péng hǎo yǒu*" (relatives and friends) not only renders the underlying meaning of "loved one", but also considers the readability of the text.

Example 8

ST: Get family **<u>support</u>** for an assessment

LT: 获得家人的**<u>支持</u>**来进行评估

huò dé jiā rén de **<u>zhī chí</u>** lái jìn xíng píng gū

CALU Translation: 让家人**<u>支持</u>**"患者"去做检查

ràng jiā rén **<u>zhī chí</u>** "huàn zhě" qù zuò jiǎn chá.

BT: Ask the family to **<u>support</u>** the "patient" to get check-ups

Example 9

ST: There are treatments and **supports** for dementia.

LT: 有针对痴呆症的治疗和**支持**。

yǒu zhēn duì chī dāi zhèng de zhì liáo hé **zhī chí**.

CALU Translation: 针对认知障碍症，我们是有治疗手段和**帮扶措施**的。

zhēn duì rèn zhī zhàng ài zhèng, wǒ men shì yǒu zhì liáo shǒu duàn hé **bāng fú cuò shī** de.

BT: Targeting dementia, we have treatments and **help measures**.

The English word "support" is used in both Example 8 and Example 9. Example 8 is a heading used in the Facing Dementia Together website. The content under the heading is about how to persuade family members to support the person showing signs and symptoms of dementia to get an assessment. Among the definitions of "support" in the Cambridge Dictionary (support, n.d.), the "support" in Example 8 means to "*agree with and give encouragement to someone or something because you want him, her, or it to succeed*". In this case, the Chinese LT of "support" is "支持 *zhī chí*" (support, n.d.). There are two definitions for "支持 *zhī chí*": 1. "Providing encouragement to"; 2. "sustain, or maintain" (Chinese Academy of Social Sciences, 2016). Accordingly, it is CALU to translate "support" as "支持 *zhī chí*" because Chinese speakers also use this word as English speakers use "support" to encourage others to do something.

In Example 9, the "supports for dementia" refers to the practical help to people with dementia provided by My Aged Care, the National Disability Insurance Scheme, and local services. For example, people with dementia can apply for Australian Government-funded services (e.g., respite care, personal care, residential care, etc.) through My Aged Care. Local governments may also offer help (e.g., garden maintenance, meal delivery, community transport, etc.) to people with dementia (Dementia Australia, 2022). The "supports" in this context refers to "emotional or practical help" (support, n.d.). In Australia, the Chinese translated materials (e.g., Department of Health, Disability and Ageing, 2025; Dementia Australia, 2022) about the support services for people with dementia, "supports" is often translated as "支持 *zhī chí*" which is the same Chinese word adopted in Example 8. However, drawing on the definitions of "支持 *zhī chí*" (Chinese Academy of Social Sciences, 2016), this Chinese word means "sustain" and "encourage", which is not equivalent to "emotional or practical help". Thus, "支持 *zhī chí*" is not a CALU translation in Example 9. "帮扶 *bāng fú*" means "help and assistance" (Chinese Academy of Social Sciences, 2016). This word is commonly used to describe help and assistance for those in need, particularly disadvantaged groups (e.g., China Social Assistance Foundation, 2025; Shan, 2024; Zhou et al., 2023). In Mainland China, the government frequently employs it to refer to its support programs (e.g., Liu et al., 2023; Ji et al., 2024). Moreover, "措施 *cuò shī*" refers to "*the detailed approach taken to deal with a situation*" (Chinese Academy of Social Sciences, 2016). The collocation "帮扶措施 *bāng fú cuò shī*" (help measures) outlined by Chinese mass media and government documents is the detailed measures for some situations (e.g., Qian, 2020; Ministry of Agriculture and Rural Affairs of the People's Republic of China, 2024). Therefore, "帮扶措施 *bāng fú cuò shī*" (help measures) refers to the practical help in Chinese, which should be adopted in Example 9 to indicate that the "supports" represent practical supports provided by the government.

Through comparing Example 8 and Example 9, it can be briefly concluded that, in spite of translating the same word, translators should still consider the hidden meaning behind the word in each context and provide the translation that truly conveys the intention of the ST.

Example 10

ST: Do you identify as **Chinese**?

LT: 你认同是**中国人**么？

nín rèn tóng shì **zhōng guó rén** me

CALU Translation: 您是**华人**么？

nín shì **huá rén** me?

BT: Are you **ethnic Chinese**?

Example 10 was used in Face Dementia to recruit the Chinese audience. When the word "Chinese" refers to a group of people, its Chinese LT is "中国人 *zhōng guó rén*" (Chinese, n.d.). However, this literal translation usually refers to the people whose nationality is the People's Republic of China (Li, 2016). There are also some other Chinese words that could be translated as “Chinese” in English but carry distinct meanings. According to China’s Overseas Chinese Affairs Office of the State Council (2021), there are three common, similar but different words in Chinese – “华侨 *huá qiáo*” (overseas Chinese), “华裔 *huá yì*” (people of Chinese descent), and “华人 *huá rén*” (ethnic Chinese). In brief, “华侨 *huá qiáo*” (overseas Chinese) refers to Chinese citizens residing abroad, which usually describes two types of Chinese citizens: those who have obtained permanent residency in the country of residence, and those who have not obtained permanent residency in the country of residence but have obtained legal residence status in the country of residence for more than 5 consecutive years (including 5 years). “华裔 *huá yì*” (people of Chinese descent) refers to people of Chinese descent but not Chinese nationality. For “华人 *huá rén*” (ethnic Chinese), the word can be explained from broad and narrow perspectives. Broadly speaking, “华人 *huá rén*” (ethnic Chinese) encompasses all Chinese people within China, as well as overseas Chinese, which is a general term describing all ethnic Chinese whose ancestors originated from China. In a narrower sense, it primarily refers to ethnic Chinese living overseas and holding foreign nationality, often referred to as “overseas Chinese” (Li, 2016). Face Dementia campaign aimed to persuade older Chinese people in Western Sydney to see GPs. Therefore, the literal translation – “中国人 *zhōng guó rén*” (citizen of China) is inappropriate to be used for addressing Chinese people in Western Sydney. For Chinese working-age immigrants in Australia, their retired parents tend to visit and live with them (Xiong & Hoon, 2020). Although the Australian government provide Subclass 103 Parent visa for these parents to permanently live in Australia (Department of Home Affairs, 2025), these visa holders are not Australian citizens. Accordingly, for this kind of older Chinese people in Australia, they are "华侨 *huá qiáo*" (overseas Chinese). For older Chinese Australians (with Australian citizenship), they fall under the category of "华裔 *huá yì*" (people of Chinese descent), or in the narrower sense, "华人 *huá rén*" (ethnic Chinese). The target audience of Example 10 is all older Chinese people living in Western Sydney regardless of their nationalities. Therefore, the broader definition of "华人 *huá rén*" (ethnic Chinese) is more appropriate in Example 10, as it includes all individuals whose ancestry can be traced back to China. At the same time, the adoption of this translation can attract broader public interest in the campaign, as this wording is more inclusive.

Example 11

ST: Things are improving and there is a strong movement to **reduce dementia stigma**.

LT: 事情正在改善，有一个强大的运动来**减少痴呆症的污名**。

shì qíng zhèng zài gǎi shàn, yǒu yī gè qiáng dà de yùn dòng lái **jiǎn shǎo chī dāi zhèng de wū míng**.

CALU Translation: 情况正在改善，社会正掀起一股强劲的浪潮，要**减少人们对认知障碍症患者的偏见**。

qíng kuàng zhèng zài gǎi shàn, shè huì zhèng xiān qǐ yī gǔ qiáng jìng de làng cháo, yào **jiǎn shǎo rén men duì rèn zhī zhàng ài zhèng de piān jiàn**.

BT: The situation is improving and there is a strong wave in society to **reduce the prejudice against dementia patients**.

Example 11 is intended to show readers that society as a whole is striving to reduce the stigma associated with dementia. The Chinese LT of the term "stigma" is rendered as "污名 *wū míng*" (social stigma) in psychology (CNCTST, 2014b), whereas it is commonly translated as "病耻感 *bìng chǐ gǎn*" (self-stigma) in behavioural medicine (CNCTST, 2022). According to CNCTST (2014b), "污名 *wū míng*" (social stigma) means "a negative portrayal of an individual's or group's attributes, behaviours, or reputation that fosters an adverse public perception". "病耻感 *bìng chǐ gǎn*" (self-stigma) refers to a form of negative emotional experience emerging after the onset of illness, which is frequently linked to self-stigmatisation (CNCTST, 2022). In Example 11, "dementia stigma" typically means the broader societal negative perceptions of individuals with dementia, which is "污名 *wū míng*" (social stigma). Yet, the word "污名 *wū míng*" (social stigma) is a jargon (CNCTST, 2014b), which cannot be found in either the *Modern Chinese Dictionary* (Chinese Academy of Social Sciences, 2016) or the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021). Hence, "偏见 *piān jiàn*" (prejudice), a more common word, is adopted in this example to replace "污名 *wū míng*" (social stigma). The CALU translation of "reduce dementia stigma" is "减少人们对认知障碍症患者的偏见 j*iǎn shǎo rén men duì rèn zhī zhàng ài zhèng huàn zhě de piān jiàn*", which means "reduce the prejudice against dementia patients".

4.5.3 CA 2 Use culturally relevant and plain expressions (to improve the understandability)

The reason for using culturally relevant expressions is the same as CA 1 (use culturally relevant words). The concept of “expression” in this context is “a group of words used in a particular situation or by particular people” (expression, n.d.). In the education setting, the use of familiar language increases students’ motivation for learning thereby achieving a better learning outcome (Aronson & Laughter, 2016). The employment of culturally relevant and plain expressions provides translators with the opportunity to refine lexical choice, sequencing and syntactic structure, thereby generating translations that are both culturally appropriate and accessible to the target audience.

Example 12

ST: Facing Dementia **Together**.

LT: 一起面对痴呆症

yī qǐ miàn duì chī dāi zhèng

CALU Translation: 共面认知障碍症

gòng miàn rèn zhī zhàng ài zhèng

BT: Confronting dementia **together**

“Facing Dementia Together” is the name of a campaign aimed at destigmatising dementia and increasing help-seeking for dementia in Chinese, Arabic and

Vietnamese communities in South-western Sydney (Facing Dementia Together, 2025). For a public campaign, the campaign name is "*an information shortcut regarding intent*" (Weber et al., 2012, p. 563). This English name succinctly conveys the intent of this campaign in three words. Many well-known campaigns also employ short word campaign names, such as "Black Lives Matter" (Francis & Wright-Rigueur, 2021) and "Me Too" (Burke, 2021). For Chinese campaigns, the word count of campaign names appears to be more than in English, due to the language differences. In Mainland China, there have been many campaigns (mainly political campaigns) since 1949, such as "三反五反运动 *sān fǎn wǔ fǎn yùn dòng*" (Three-anti and Five-anti Campaigns) from 1951 to 1952 (Sheng, 2006), "反右运动 *fǎn yòu yùn dòng*" (Anti-Rightist Campaign) in 1957 (Wang, 2020), and "大炼钢铁运动 *dà liàn gang tiě yùn dòng*" (Great Steelmaking Campaign) in 1958 (Shabad, 1959). Among these campaigns, there used to be a nationwide health campaign – "爱国卫生运动 *ài guó wèi shēng yùn dòng*" (Patriotic Health Campaign), which aimed to improve public hygiene and sanitisation (Yang, 2004). This campaign used the emotional word, "爱国 *ài guó*" (patriotic), to call for people in China to work together on this campaign (Yang, 2004). While translating "Facing Dementia Together" into Chinese, the stigma associated with dementia in Chinese (Chiu et al., 2014) and the collectivist culture prevalent among Chinese people (Wang & Liu, 2010) were taken into consideration. Dementia is seen as a tragic, scary, and challenging topic for Chinese people to discuss (Zhao et al., 2023). By considering the collectivism in Chinese culture, "共同面对 *gòng tóng miàn duì*" (confronting together) is often used to encourage Chinese people to work together to confront difficulties (e.g., Dong, 2024; Liao & Wu, 2025; Zhao, 2019). This explains that the adoption of this culturally relevant expression encourages Chinese community members to stand together to confront dementia, a challenging topic for Chinese people. Yet, "dementia" has been translated as "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome), which includes 5 Chinese characters and must be included in the translation of the campaign name. In terms of a campaign name, "共同面对认知障碍症 *gòng tóng miàn duì rèn zhī zhàng ài zhèng*" (confronting cognitive impairment syndrome together) is lengthy, which is not printer-friendly especially for the brand, posters, banners, and other Chinese printable materials. To shorten the translation, "共面 *gòng miàn*" (confronting together), an abbreviated form of "共同面对 *gòng tóng miàn duì*" (confronting together; e.g., Jiangsu Football Association, 2019), is utilised in Example 12.

Example 13

ST: Know the signs. Ask a GP. Stay connected.

LT: 了解体征。问全科医生。保持联系。

liǎo jiě zhēng zhào. wèn quán kē yī shēng. Bǎochí liánxì.

CALU Translation: 早知早治问医生，同心同德互帮忙。

zǎo zhī zǎo zhì wèn yī shēng, tóng xīn tóng dé hù bang máng.

BT: <u>Early knowing early treatment asking doctors, same heart same virtue mutual help.</u>

Example 13 is the tagline used in Facing Dementia Together. In Chinese advertisements, Chinese advertisers extensively use Chinese couplets, including idioms and proverbs (Zhang, 2001). Chinese couplets are one of the most significant traditional Chinese cultural heritages. Chinese couplets usually express positive and blessing messages to people with rich emotions (Zhu et al., 2023). As a campaign to de-stigmatise dementia, Chinese couplets are culturally relevant and powerful to impress and persuade Chinese community members to take action. The implicit logic of the messages “Know the signs” and “Ask a GP” is to encourage Chinese communities to recognise the signs and symptoms of dementia at an early stage and thereby seek medical help and receive treatment promptly. With regard to “Stay connected”, this expression is common in health settings, which tries to keep people socially active to help one another (e.g., Christine, 2020; NSW Health, 2020). On account of the use of Chinese couplets and the intention of the tagline, the CALU translation in Example 13 is “早知早治问医生，同心同德互帮忙 *zǎo zhī zǎo zhì wèn yī shēng, tóng xīn tóng dé hù bang máng*” (early knowing early treatment asking doctors, same heart same virtue mutual help). The phrase “早知早治 *zǎo zhī zǎo zhì*” (early knowing, early treatment) is frequently employed in health articles (e.g., Liu, 2022; Xu, 2021) and books (e.g., Chen, 2023; Xiao, 2023) targeting laypeople. “问医生 *wèn yī shēng*” (asking doctors) is a pragmatic equivalent to “Ask a GP”. Because the initial half of the couplet has seven Chinese characters, the latter half should also correspond to seven. The three-character translation, “互帮忙 *hù bang máng*” (mutual help), transfers the hidden meaning of “Stay connected”, but there remains a gap of four characters to be filled in order to achieve symmetry with the number of characters in the first line of the couplet. Since the phrase “早知早治 *zǎo zhī zǎo zhì*” (early knowing, early treatment) in the first line of the couplet repeats its first and third characters, the corresponding line should likewise adopt a four-character construction with an identical repetition pattern so as to maintain rhetorical symmetry and antithetical balance. The literal meaning of “同心同德 *tóng xīn tóng dé*” is “same heart same virtue”, and it actually denotes a state in which individuals share common intentions and act in concert (R.O.C. Ministry of Education, 2021). The governments of Mainland China (e.g., Xi, 2019), Hong Kong (e.g., Hong Kong Special Administrative Region, 2017) and Taiwan (R.O.C. Executive Yuan, 2018) also use this Chinese idiom often in their official documents to unite the people. Therefore, the key message that “同心同德互帮忙 *tóng xīn tóng dé hù bang máng*” (same heart same virtue mutual help) conveys is “all community members work together to help each other”. This message is pragmatically equivalent to the ST – “Stay connected”.

Example 14

ST: <u>Old age is a risk factor for dementia,</u> but dementia is not inevitable.

LT: <u>老年是痴呆症的一个风险因素，</u>但痴呆症不是不可避免。

<u>lǎo nián shì chī dāi zhèng de yī gè fēng xiǎn yīn sù,</u> dàn chī dāi zhèng bù shì bù kě bì miǎn.

CALU Translation: <u>老人更容易得认知障碍症，</u>但这不是一定的。

<u>lǎo rén gèng róng yì dé rèn zhī zhàng ài zhèng,</u> dàn zhè bù shì yī dìng de.

BT: <u>Older people get dementia more easily</u>, but this is not necessarily the case.

Risk factors in the health context refer to people's "attributes, characteristics or exposures" which increase the possibility of developing health conditions (Australian Institute of Health and Welfare, 2024). Yet, its LT, "风险因素 *fēng xiǎn yīn sù*", is a technical term (China National Committee for Terminology in Science and Technology [CNCTST], 2014a), which means that laypeople may have limited understanding of this term. By applying the definition of "risk factors" to Example 14, the first clause means that "old age is a characteristic that increases the possibility of developing dementia". Accordingly, a more colloquial way in Chinese is "老人更容易得认知障碍症 *lǎo rén gèng róng yì dé rèn zhī zhàng ài zhèng*", which means that "older people get dementia more easily". Chinese mass media frequently adopt the syntactic structure "subject + more easily + develop a disease" to attract attention and communicate health knowledge (e.g., Huang, 2016; Peng & Qin, 2025).

Example 15

ST: <u>You may worry</u> that a diagnosis **<u>will be distressing</u>**. **<u>Whilst this is true for many people</u>**, they also sometimes feel relief.

LT: **你可能会担心**诊断会**令人痛苦**。**虽然这对许多人来说是真的**，但他们有时也会感到宽慰。

nǐ kě néng huì dān xīn zhěn duàn huì **lìng rén tòng kǔ**. **suī rán zhè duì xǔ duō rén lái shuō shì zhēn de**, dàn tā men yǒu shí yě huì gǎn dào kuān wèi.

CALU Translation: **确诊认知障碍症可能会让您感到痛苦**。**虽然很多人都会有这种感受**，但有时他们也会感到如释重负。

què zhěn rèn zhī zhàng ài zhèng kě néng huì ràng nín gǎn dào tòng kǔ. suī rán hěn duō rén dōu huì yǒu zhè zhǒng gǎns hòu, dàn yǒu shí tā men yě huì gǎn dào rú shì zhòng fù.

BT: **Being diagnosed with dementia can make you feel distressed. While many people have this feeling**, there are also times when they feel a sense of relief.

The intention of Example 15 is to relieve people’s worry about receiving a definitive diagnosis of dementia. In Chinese, “worry” means “担心 *dān xīn*” (worry, n.d.). Within Chinese syntax, the verb “担心 *dān xīn*” rarely combines with epistemic or deontic modal auxiliaries (e.g., can, may). As a predicate, it most frequently follows the subject directly, rather than being mediated by modal elements. When the object rather than the person is construed as the grammatical subject, the first sentence in Example 15 may alternatively be understood as “being diagnosed with dementia may make you feel distressed”. In this way, the Chinese translation is “确诊认知障碍症可能会让您感到痛苦 *què zhěn rèn zhī zhàng ài zhèng kě néng huì ràng nín gǎn dào tòng kǔ*”, which is CALU for Chinese speakers. For the second sentence, the “this” in the ST is equivalent to "the worry" (the diagnosis is distressing). After adopting the culturally relevant expression in the first sentence, the "this" refers to "being diagnosed with dementia may make you feel distressed". To enhance the transparency of the pronoun's referent and to simplify the sentence structure, the CALU translation has been formulated as "虽然很多人都会有这种感受 *suī rán hěn duō rén dōu huì yǒu zhè zhǒng gǎns hòu*" (While many people have this feeling).

Example 16

ST: Research has shown **staying physically, mentally and socially active** slow the progression of dementia.

LT: 研究显示，**保持身体、精神和社交活跃**可以减缓痴呆症的进展。

yán jiū xiǎn shì, **bǎo chí shēn tǐ, jīng shén hé shè jiāo huó yuè** kě yǐ jiǎn huǎn chī dāi zhèng de jìn zhǎn.

CALU Translation: 研究表明，**多运动，多动脑，多社交**，能减缓认知障碍症的病情发展。

yán jiū biǎo míng, **duō yùn dòng, duō dòng nǎo, duō shè jiāo,** néng jiǎn huǎn rèn zhī zhàng ài zhèng de bìng qíng fā zhǎn.

BT: Research has indicated that **exercising more, using the brain more, and socialising more** can slow the progression of dementia.

Example 16 is used in the information about post-diagnosis dementia to help people with dementia slow down the progression of the condition. The expressions, such as physically active, mentally active and socially active, are commonly employed in English public health information (e.g., Harvard Health, 2020; U.K. National Health Service, 2022). However, their Chinese LTs, "身体活跃 *shēn tǐ huó yuè*", "精神活跃 *jīng shén huó yuè*", and "社交活跃 *shè jiāo huó yuè*", are not everyday Chinese expressions.

If someone is physically active, it means the person actively engages in bodily movement that requires skeletal muscles (WHO, 2024). In plain English, if a person actively does physical activities (fitness, strength, flexibility and balance), the person is physically active (Tasmanian Department of Health, 2020). In plain Chinese, "运动 *yùn dòng*" means exercise and sports activities (Chinese Academy of Social Sciences, 2016). "多运动 *duō yùn dòng*" (exercise more) is an expression frequently adopted by mass media and governments to inspire the public to exercise more (e.g., Government of Hong Kong, 2024; Tong, 2016; Wu et al., 2025). While "多运动 *duō yùn dòng*" (exercise more) does not fully overlap with "being physically active", the former is a concept encompassed within the latter. In addition, "多运动 *duō yùn dòng*" (exercise more) constitutes a widely used expression in everyday Chinese discourse to promote healthy living. Accordingly, the CALU translation of "being physically active" is expressed as "多运动 *duō yùn dòng*" (exercise more).

As for "being mentally active", a more academic term is "cognitive engagement", which refers to using the brain to think and work hard (Alzheimer's Association, n.d.). In short, "being mentally active" is equivalent to "using the brain actively", which is literally rendered as "积极用脑 *jī jí yòng nǎo*". Compared with "用脑 *yòng* *nǎo*" (use the brain), "动脑 *dòng nǎo*" (exercise the brain) is a more common expression, because "用脑 *yòng nǎo*" (use the brain) is not included in the *Revised Chinese Dictionary* (R.O.C. Ministry of Education, 2021). "动脑 *dòng nǎo*" (exercise the brain) is also often used by mass media to introduce the benefits of using the brain (e.g., Gao, 2024; Lang & Yang, 2019). Meanwhile, the expression "多运动 *duō yùn dòng*" (exercise more) was previously employed, so the construction "多 + verb" (more + verb) is also adopted here to maintain parallelism and rhetorical consistency. Accordingly, the CALU translation of "mentally active" is "多用脑 *duō yòng nǎo*" (excerise the brain more).

If a person keeps socialising with others face-to-face and online, then the person can be counted as being "socially active" (Godman, 2025). In other words, "being socially active" means "keeping socialising with others". Since both "physically active" and "socially active" were previously translated into three-character Chinese expressions, the translation here likewise adopts a three-character form, namely "多社交 *duō shè jiāo*" (socialising more). While the phrase "with others" is omitted, the intended meaning of the ST remains preserved. This choice also maintains structural consistency with the earlier translations, thereby contributing to smoother rhythm and readability.

4.5.4 CA 3 Use culturally relevant examples (to improve understandability and actionability)

In public health information, actionability is a vital criterion for assessing information quality (Ito & Furukawa, 2024). Public health authorities frequently include actionable examples to prompt actions (Caballero et al., 2020). In dementia-related educational materials, it is common to include examples regarding reducing the risk of dementia to promote health behaviour change (e.g., Alzheimer’s Disease International, 2020; Victoria Department of Health, 2014). Moreover, much of the public health information on dementia adds examples in the section on signs and symptoms of dementia, to improve the understandability (e.g., Dementia Australia, 2025a; Healthdirect, 2024). The employment of culturally relevant examples facilitates multicultural readers’ understanding of the content.

Example 17

ST: Difficulty remembering or following **religious practices** or attending church/ temple activities.

LT: 难以记住或遵循**宗教习俗**或参加教堂/寺庙活动。

nán yǐ jì zhù huò zūn xún **zōng jiào xí sú** huò cān jiā jiào táng/sì miào huó dòng.

CALU Translation: 难以记住或遵循**宗教习惯，比如祷告、诵经、烧香**或参加教会或寺庙活动。

nán yǐ jì zhù huò **zūn xún zōng jiào xí guàn, lì rú dǎo gào, sòng jīng, shāo xiāng** huò cān jiā jiào huì huò sì miào huó dòng.

BT: Difficulty remembering or **following religious rituals, such as praying, chanting, burning incense**, or attending church or temple activities.

Example 17 is a symptom of dementia. Chinese Australians are the target readers of the ST. According to Tao & Stapleton (2018), Christianity and Buddhism are the two largest religions among Chinese Australians, with approximately 25% and 15% of the Chinese population, respectively, identifying as adherents, and nearly 55% of them have no beliefs. Therefore, to illustrate the "religious practices" in this example more specifically, it is culturally relevant to add some examples of religious practices relevant to Christianity and Buddhism. For Christianity, prayer plays a central role in Christian religious practice, which helps adherents communicate with God (Finney & Malony Jr, 1985). In addition, chanting is also an integral part of Christian worship, which happens on occasions such as weddings, funerals, and the Mass (Meyers, 2016). It functions as a means of reflecting on Scripture, uniting the congregation in worship, articulating sincere devotion, and cultivating a profound spiritual connection with God (Haug, 2022). For Chinese Buddhism, chanting and burning incense are the main forms of worship. Chanting includes reciting praises, mantras, sutras, and Buddha names in morning and evening rituals, as well as other ceremonies (Chen, 2005). Moreover, the most common form of worship in Chinese Buddhism is burning incense (Poceski, 2012). The burning of incense in Chinese Buddhist practice is regarded as a sacred gesture of reverence, embodying devotion, wisdom, and moral virtue. As the fragrant smoke rises, it is believed to cleanse and sanctify the surrounding space, establish a serene and contemplative atmosphere for meditation, and convey respect and veneration to Buddhist deities as well as to ancestors (Tam, 2012). Accordingly, in Example 17, culturally relevant examples of religious practices (i.e., praying, chanting, and burning incense) are added to make readers feel more culturally connected to them.

Example 18

ST: Eat a balanced diet, like the Mediterranean diet, with healthy foods.

LT: 饮食均衡，例如地中海饮食，多吃健康食品。

yǐn shí jūn héng, lì rú dì zhōng hǎi yǐn shí, duō chī jiàn kāng shí pǐn.

CALU Translation: 吃东西要荤素搭配，多吃全谷物食品（比如玉米、**紫米、薏米）、**新鲜蔬果、白肉（比如家禽和鱼虾）、橄榄油，**少吃腌制品（比如腊肠、咸菜、咸鱼）**、红肉（比如猪、牛、羊）、甜食。

chī dōng xī yào hūn sù dā pèi, duō chī quán gǔ wù shí pǐn (bǐ rú yù mǐ, **zǐ mǐ, yì mǐ),** xīn xiān shū guǒ, bái ròu (bǐ rú jiā qín hé yú xiā), gǎn lǎn yóu, **shǎo chī yān zhì pǐn (bǐ rú là cháng, xián cài, xián yú),** hóng ròu (bǐ rú niú yáng zhū), tián shí.

BT: When eating, you should balance meat and vegetables, eat more whole-grain foods (such as corn, **black rice, and coix seed),** fresh fruits and vegetables, white meat (such as poultry, fish, and prawns), and olive oil, **and eat less pickled foods (such as La sausages, Chinese pickled vegetables, and salted fish),** red meat (such as beef, lamb, and pork), and sweets.

Example 18 is used to inform people about how to reduce the risk of dementia through diet. The ST is plain, and includes “the Mediterranean diet” as an example of “a balanced diet” and “healthy foods”. Nevertheless, the concept of “Mediterranean diet” is relatively strange to Chinese people. When its literal translation “地中海饮食 *dì zhōng hǎi yǐn shí*” tested with community members, few people understood what that meant. Hence, more culturally relevant examples should be introduced to explain what “a balanced diet” and “healthy foods” refer to in this example. First, “a balanced diet” is a health concept standing for “a wide variety of foods in the right proportions” (U.K. National Health Service, 2025). In Chinese, there is a similar and common health concept – “荤素搭配 *hūn sù dā pèi*” (a balanced diet of meat and vegetables), which is often introduced in diet health news articles, encouraging people to keep a balanced diet rather than overly eating meat or being a vegetarian (e.g., Fan, 2019; Zhang, 2024). Second, the Mediterranean diet mainly involves eating many fresh plant foods (e.g., whole grains, vegetables, fruits, etc.), olive oil as the main source of fat, moderate amounts of white meat, limited amounts of red meat, sweets and other processed foods (Queensland Government, 2023).

Since Example 18 is not designed to introduce the Mediterranean diet, it is inappropriate to explain the diet in detail in the translation. Accordingly, the key content of the diet is divided into two parts, “eat more” and “eat less”, to make the translation easier to comprehend. For the “eat more” part, whole-grain foods, fresh fruits and vegetables, white meat and olive oil are introduced. Culturally relevant examples are employed for “whole-grain foods”. The common whole-grain foods eaten by the Chinese include corn, millet, black rice, oats, buckwheat and coix seed (China Agricultural University, 2021). In comparison with the common whole-grain foods (e.g., whole oats, buckwheat, millet, etc.) consumed in Australia (Raman, 2023), black rice and coix seed are more culturally relevant to Chinese people. Chinese people traditionally make black rice cake and porridge, and black rice is frequently consumed by Chinese people (Kushwaha, 2016). Coix seed is a significant food and medicinal source in China, and it is believed to detoxify the human body in traditional Chinese medicine (Meng et al., 2023). Therefore, the culturally relevant examples of whole-grain foods are black rice and coix seed.

For the "eat less" part, pickled foods, red meat, and sweets are included. Processed foods are not only associated with dementia (Henny et al., 2024), but also with certain cancers (Kliemann, 2022). Pickled foods (e.g., pickled vegetables and salted meat), as a form of processed food, are considered a significant risk factor for cancer among the Chinese population (Ren et al., 2012), because pickled foods are heavily consumed by Chinese people (Song et al., 2012). Compared with other processed foods, such as sweetened drinks, chips, biscuits, and frozen pizzas and nuggets (U.K. National Health Service, 2023), the use of "pickled foods" is more culturally relevant than the use of "processed foods" for Chinese Australians in Example 18. Three popular pickled foods consumed by Chinese people are selected – "腊肠 *là cháng*" (La sausage), "咸菜 *xián cài*" (Chinese pickled vegetable), and "咸鱼 *xián yú*" (Chinese salted fish). La sausages are the most popular Chinese sausages in the global market (Zhang & Tan, 2012). La sausages differ from region to region, and they are similar to Italian fermented sausages such as salami (Allen, 2015). With reference to Chinese pickled vegetables and Chinese salted fish, both foods have attracted researchers' concerns regarding the health of the Chinese population (e.g., Donal et al., 2019; Ren et al., 2012; Wu et al., 2016) and have long been a focal point in Chinese media coverage about healthy diets (e.g., Wang, 2019; Zhang, 2019).

Example 19

ST: Engage in activities that challenge your brain, like puzzles or memory games.

LT: 参与挑战大脑的活动，例如**拼图或记忆游戏**。

cān yù tiǎo zhàn dà nǎo de huó dòng, lì rú **pīn tú huò jì yì yóu xì**.

CALU Translation: 玩一些需要动脑的游戏，比如麻将、扑克牌、围棋。

wán yī xiē xū yào dòng nǎo de yóu xì, bǐ rú **má jiàng, pū kè pái, wéi qí**.

BT: Play some games that require using the brain, such as mahjong, poker cards, and Go.

Example 19 tells readers how to reduce the risks of dementia by challenging the brain. In the ST, it listed out puzzles and memory games. Yet, puzzles and memory games are too general to inform target readers. It is essential to incorporate culturally relevant examples to inform Chinese Australians, thereby increasing the actionability of the translation. Mahjong and poker cards are popular games among older Chinese people, because of various playing strategies and patterns (Wang et al., 2022). Playing mahjong and poker cards has been empirically proven to be effective in lowering the risk of dementia among the older population (Du et al., 2025; Tian et al., 2022; Wang et al., 2022). With regard to Go, this is an ancient board game which is far more complex than chess due to its board and rules (Cobb, 1997). This game remains popular in China, Japan, and Korea, particularly among older individuals (Liboriussen & Martin, 2016). There is also evidence that Go can lower the risk of dementia and improve the quality of life of people with dementia (Lin et al., 2015). Hence, these games (i.e. mahjong, poker cards and Go) are employed as the culturally relevant examples in Example 19.

4.5.5 CA 4 Use culturally positive language (to build a neutral image of dementia)

The stigma surrounding dementia causes shame for many individuals with dementia and their families (Swaffer, 2014). To reduce the stigma, it is crucial to use appropriate language to describe dementia and people with dementia (Brooke et al., 2018; Swaffer, 2014). Therefore, it is necessary to apply culturally positive language to remove the label of dementia. The adoption of "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) in place of "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) exemplifies the use of the culturally positive language in the translation of dementia-related information. By adopting culturally positive language, readers experience less psychological pressure while reading the translation, resulting in a higher willingness to complete reading it.

Example 20

ST: Hiding difficulties won't help. **Ask your GP** - understanding any medical reasons for the changes can lead to treatments for symptoms and services which can help you.

LT: 隐瞒困难没有帮助。**问你的全科医生**—了解导致这些变化的任何医学原因可以造成针对症状的治疗和服务，这可以帮助你。

yǐn mán kùn nán méi yǒu bang zhù. **wèn nǐ de quán kē yī shēng**—liǎo jiě dǎo zhì zhè xiē biàn huà de rèn hé yī xué yuan yīn kě yǐ zào chéng zhēn duì zhèng zhuàng de zhì liáo hé fú wù, zhè kě yǐ bang zhù nǐ.

CALU Translation: 把困难藏在心里并不能解决问题。**您不妨去看看家庭医生**，弄清楚**是什么原因**导致了这些变化，才能对症下药，并得到相应的帮助。

bǎ kùn nán cáng zài xīn lǐ bìng bù néng jiě jué wèn tí. **nín bù fáng qù kàn kān jiā tíng yī shēng**, nòng qīng chǔ shì shén me yuan yīn dǎo zhì le zhè xiē biàn huà, cái néng duì zhèng xià yào, bìng dé dào xiāng yìng de bang zhù.

BT: Keeping your problems to yourself won’t solve them. **You might** see the family doctor to find out what reasons causing these changes so you can get the right treatment and help.

Example 20 is used to correct a common myth about dementia – “I should hide any difficulties I have, so that other people don’t realise”. “Ask your GP” is an imperative sentence. In Chinese, imperative sentences function as instructions and requests. When imperative sentences serve as instructions, the tone is strong and decisive as this is an order or prohibition (Jiang & Ren, 2023). The use of median- (e.g., will, should, ought to, etc.) and low-value modality (e.g., can, may, etc.) softens tones and makes Chinese discourse more positive (Cheng, 2019). As a result, there are two adjustments: 1. the addition of a subject converts the sentence from an imperative form into a declarative one ; 2. A modal verb “不妨 *bù fáng*” (might) is added to soften the sentence’s tone and make it sound more positive. The full meaning of “不妨 *bù fang*” is “can have a try, and can be done without any impediment” and is commonly employed when making suggestions to others (Chinese Academy of Social Sciences, 2016). Subsequently, the CALU translation of “Ask your GP” is “您不妨去看看家庭医生 *nín bù fáng qù kàn kān jiā tíng yī shēng*” (You might see the family doctor).

Example 21

ST: People with dementia can continue to do things for themselves and their families. **Most people with dementia continue to live at home**.

LT: 有痴呆症的人可以继续为自己和家人做事。**大多数有痴呆症的人继续生活在家里**。

chī dāi zhèng huàn zhě kě yǐ jì xù wèi zì jǐ hé jiā rén zuò shì. **dà duō shù chī dāi zhèng huàn zhě jì xù jū jiā sheng huó**.

CALU Translation: 认知障碍症患者还是可以生活自理以及照顾家人的。**大多数患者都可以在家里生活，不必去养老院**。

rèn zhī zhàng ài zhèng huàn zhě hái shì kě yǐ sheng huó zì lǐ yǐ jí zhào gù jiā rén de. **dà duō shù huàn zhě dōu kě yǐ zài jiā lǐ sheng huó, bù bì qù yang lǎo yuan**.

BT: People with dementia can still take care of themselves and their families. **Most patients can live at home and do not have to go to a nursing home**.

Example 21 aims to address a common misconception that people with dementia become useless and must live in nursing homes. In the ST, the second sentence simply states that most people with dementia continue to live at home, without highlighting that nursing home care is unnecessary, which holds particular significance for Chinese Australians. Influenced by Confucian culture, older Chinese individuals often value being cared for by their adult children (Lei et al., 2022). Although more older Chinese are going to nursing homes due to the "one-child policy" (Chen et al., 2020), many who hold traditional beliefs still feel reluctant to accept nursing homes (Chen et al., 2020). Furthermore, for Chinese adult children, sending parents to nursing homes conflicts with a traditional value – "孝顺 *xiào shùn*" (filial piety), which creates significant mental pressure from other family members (Lu et al., 2021). The belief in home care is also reflected in some four-character Chinese idioms, such as "天伦之乐 *tiān lún zhī lè*" (the happiness of family union), "合家团圆 *hé jiā tuán yuán*" (the entire family united), and "三代同堂 *sān dài tóng táng*" (three generations living together). Therefore, it is insufficient merely to state that most dementia patients live at home. It is also important to emphasise that, even after being diagnosed with dementia, people with dementia do not necessarily need to move into nursing homes. This helps to ease the concerns of many older Chinese individuals and their families.

Example 22

ST: People living with dementia find it **<u>harder</u>** to manage their health.

LT: 跟痴呆症一起生活的人发现管理他们的健康**<u>更困难</u>**。

gēn chī dāi zhèng yī qǐ sheng huó de rén fā xiàn guǎn lǐ tā men de jiàn kāng **gèng kùn nán.**

CALU Translation: 管理自身健康对于认知障碍症患者来说**并不容易**。

guǎn lǐ zì shēn jiàn kāng duì yú rèn zhī zhàng ài zhèng huàn zhě lái shuō **bìng bù róng yì.**

BT: Managing personal health is **not easy** for people with dementia.

When dementia produces significant symptoms, it can interfere with managing other medical conditions such as diabetes, hypertension and heart disease (Austrom et al., 2018). Example 22 serves to acknowledge the reality that managing the health of people with dementia presents challenges. The subsequent content informs people with dementia of the necessity to undergo regular health check-ups. In the ST, the adjective "harder", originating from the word "hard" and rendered in Chinese as "更困难 *gèng kùn nán*" (harder), signifies complexity and multiple impediments (Chinese Academy of Social Sciences, 2016). The employment of the comparative form highlights the exceptional difficulty of health management for people living with dementia. This wording may generate psychological burden for readers, particularly for those affected by dementia. The culturally positive adjustment in this example is using "不容易 *bù róng yì*" (not easy). Although "不容易 *bù róng yì*" (not easy) and "困难 *kùn nán*" (hard) are similar in everyday Chinese usage and can often be used interchangeably, the expression "不容易 *bù róng yì*" (not easy) frequently appears in contexts with positive connotations. For example, "这次比赛，他能一举夺魁，真是

不容易 *zhè cì bǐ sài, tā néng yī jǔ duó kuí, zhēn shi bù róng yì*” (R.O.C. Ministry of Education, 2021), which means “It was truly not easy for him to win first place in this competition”. Therefore, using “不容易 *bù róng yì*” (not easy) can still convey the meaning of the original sentence while alleviating the psychological burden on the reader.

Example 23

ST: A lot can be done to help slow the progress of dementia and help people to better manage the changes and live well with dementia regardless of their age or stage.

LT: 很多可以被做来延缓痴呆症的进程，帮助人们更好地管理变化，并且很好地与痴呆症生活，无论年龄或阶段。

hěn duō kě yǐ bèi zuò lái yán huǎn chī dāi zhèng de jìn chéng, bang zhù rén men gèng hǎo de guǎn lǐ biàn huà, bìng qiě hěn hǎo de yǔ chī dāi zhèng sheng huó, wú lùn nián líng huò jiē duàn.

CALU Translation: 我们可以做很多事情来延缓认知障碍症的病情发展，更好地控制病情，让患者无论在什么年纪或者病情发展到什么阶段，都可以与认知障碍症共存，好好生活。

wǒ men kě yǐ zuò hěn duō shì qíng lái yán huǎn rèn zhī zhàng ài zhèng de bìng qíng fā zhǎn, gèng hǎo de kòng zhì bìng qíng, ràng huàn zhě wú lùn zài shén me nián jì huò zhě bìngq íng fā zhǎn dào shén me jiē duàn, dōu kě yǐ yǔ rèn zhī zhàng ài zhèng gong cún, hǎo hào sheng huó.

BT: **<u>We can do lots of things</u>** to slow down the progress of dementia, and better manage the condition, allowing patients, regardless of age and stage, to coexist well with dementia.

According to Van Lissa (2016), using first-person expressions (e.g., I, we, my and our) helps gain more trust from readers than using third-person expressions (e.g., it, they, and their). Additionally, using the first person makes articles clearer and more concise, which avoids verbose sentence structures (Brennan, 2024). In Chinese, first-person narration elicits stronger behavioural intention among the audience than third-person narration (Fu & Yu, 2022). Example 23 introduces a section that presents methods for slowing down the progress of dementia. The use of first-person narration in this context can foster a sense of closeness between readers and the author, thereby increasing their behavioural intentions to adopt these methods. Thus, the CALU translation is "我们可以做很多事情 *wǒ men kě yǐ zuò hěn duō shì qíng*" (we can do lots of things) to motivate readers and relieve their concerns about being diagnosed with dementia.

4.5.6 LU 1 Use explicit language (to unveil the hidden message and reduce the ambiguity)

According to Baker (2018), translators should delve into the hidden meanings behind the ST and make the hidden meaning messages explicit to achieve the pragmatic equivalence. Due to the syntactic and semantic differences between languages, it is common for translators to make implicit messages explicit, thereby facilitating readers' understanding (Mundhenk, 2025). Further, the use of explicit language and instructions is beneficial for clearly conveying knowledge to the information recipients (Moody, 2014).

Example 24

ST: Many people living with dementia **wished they had received their diagnosis earlier** but put off getting an assessment because of denial or confusing dementia with old age.

LT: 许多患有痴呆症的人**希望自己能早点得到诊断**，但由于否认或将痴呆症与老年混淆而推迟接受评估。

xǔ duō huàn yǒu chī dāi zhèng de rén **xī wàng zì jǐ néng zǎo diǎn dé dào zhěn duàn,** dàn yóuyú fǒu rèn huò jiāng chī dāi zhèng yǔ lǎo nián hùn xiáo ér tuī chí jiē shòu píng gū.

CALU Translation: 许多认知障碍症患者**都曾表示要是早点确诊就好了**，但由于他们否认自己有病，或误将认知障碍症以为是年纪大了造成的，导致他们没有及时检查。

xǔ duō rèn zhī zhàng ài zhèng huàn zhě **dōu céng biǎo shì yào shi zǎo diǎn què zhěn jiù hǎo le**, dàn yóu yú tā men fǒu rèn zì jǐ yǒu bìng, huò wù jiāng rèn zhī zhàng ài zhèng yǐ wéi shì nián jì dà le zào chéng de, dǎo zhì tā men méi yǒu jí shí jiǎn chá.

BT: Many patients with dementia **expressed that if they had received a definitive diagnosis earlier, it would have been better,** but because they denied that they had the disease or mistakenly believed that dementia is caused by ageing, they did not seek timely examination.

In English, there are distinctions between "hope" and "wish" in terms of semantics and pragmatics. According to Wheatley (1958), "hope" is used for a realistically attainable future (e.g., I hope that X will go), but "wish" connotes an unlikely or counterfactual state of affairs (e.g., I wish that X had gone). The underlying meaning of Example 24 is that many people living with dementia did not get their diagnosis early, and they wished they had received the diagnosis earlier, so that they could have received treatment and support earlier. In Chinese, the LTs of "hope" and "wish" are the same – "希望 *xī wàng*", which cannot help Chinese readers sense the difference between "hope" and "wish". Therefore, the CALU translation uses a more explicit way to render the ST – "都曾表示要是早点确诊就好了 *dōu céng biǎo shì yào shi zǎo diǎn què zhěn jiù hǎo le*" (expressed that if they had received a definitive diagnosis earlier, it would have been better). In this example, the subjective is people who are diagnosed with dementia, so the "diagnosis" in this sentence is the "definitive diagnosis" which is "确诊 *què zhěn*". By adopting the structure "要是早点…就好了 *yào shi zǎo diǎn ... jiù hǎo le*" (if …, it would have been better), the CALU translation reflects the regret of many people with dementia.

Example 25

ST: To reduce stigma, it is important to have contact with **<u>people living with dementia</u>** and their carers.

LT: 为了减少污名，跟**与痴呆症一起生活的人**及其护理人员接触非常重要。

wèi le jiǎn shǎo wū míng, gēn **yǔ chī dāi zhèng yī qǐ sheng huó de rén** jí qí hù lǐ rén yuán jiē chù fēi cháng zhòng yào

CALU Translation: 跟**认知障碍症患者**和照顾他们的人接触，对于减少人们对认知障碍症患者的偏见是很重要的。

gēn **rèn zhī zhàng ài zhèng huàn zhě** hé zhào gù tā men de rén jiē chù, duì yú jiǎn shǎo rén men duì rèn zhī zhàng ài zhèng huàn zhě de piān jiàn shì hěn zhòng yào de.

BT: Engaging with **patients with dementia** and their caregivers is important in reducing the prejudice against dementia.

In English dementia information for the public, people who have dementia are typically referred to as “people with dementia” (e.g., Dementia Australia, 2024; WHO, 2025) or “people living with dementia” (e.g., Dementia Australia, 2024; U.K. Alzheimer’s Society, 2022). Both descriptions are deemed inclusive and respectful (Dementia Australia, 2021). The Chinese LTs for them are “有痴呆症的人 *yǒu chī dāi zhèng de rén*” (people with dementia) and “和痴呆症一起生活的人 *hé chī dāi zhèng yī qǐ sheng huó de rén*” (people living with dementia), respectively. For the Chinese LT “和痴呆症一起生活的人 *hé chī dāi zhèng yī qǐ sheng huó de rén*” (people living with dementia), it may mislead people to understand it as “people living with people with dementia”. The LT is not explicit enough to address “people living with dementia”.

Chinese people tend to believe dementia is a normal part of ageing (Dong et al., 2025; Jia et al., 2020). This also partially explains why Chinese people delay their first medical appointment for dementia. In Facing Dementia Together, to persuade Chinese people to seek medical help, one significant approach is to tell them that dementia is a "brain disease" that should be timely diagnosed and treated. It is common to refer to people with dementia as "患者 *huàn zhě* (patient)" (e.g., WHO, 2025) and "病人 *bìng rén* (patient)" (e.g., Dementia Treatment and Research Centre, 2025) in Chinese health settings. Both words are largely interchangeable in Chinese, but there are still nuanced differences between them. "病人 *bìng rén*" (patient) means ill people, and "患者 *huàn zhě*" (patient) are ill (or injured) people who need medical treatment (R.O.C. Ministry of Education, 2021). In other words, people as "病人 *bìng rén*" (patient) do not have to receive medical treatment. For example, if someone is a "病人 *bìng rén*" (patient), the ill person can stay home without receiving any medical treatment until the person recovers. Thus, the concept of "病人 *bìng rén*" (patient) is greater than "患者 *huàn zhě*" (patient). Due to the differences between the two words, "认知障碍症患者 *rèn zhī zhàng ài zhèng huàn zhě*" (patient with dementia) is selected as the CALU translation for "people with dementia" and "people living with dementia", which emphasises the need for them to seek medical help. The use of "患者 *huàn zhě*" (patient) also aligns with the aim of Facing Dementia Together.

Example 26

ST: If you're over 75 years old, Medicare **<u>funds annual GP check-ups</u>**.

LT: 如果您超过 75 岁，Medicare 资助您**每年的全科医生检查**。

rú guǒ nín chāo guò 75 suì, Medicare zī zhù nín **měi nián de quán kē yī shēng jiǎn chá**.

CALU Translation: 如果您年满 75 岁，政府医保（Medicare）**会为您提供一年一次的免费体检**。

rú guǒ nín nián mǎn 75 suì, zhèng fǔ yī bǎo (Medicare) **huì wèi nín tí gōng yī nián yī cì de miǎn fèi tǐ jiǎn.**

BT: If you are 75 or older, Medicare **provides you with a free annual health check-up**.

The purpose of Example 26 is to inform people aged 75 and above that they are entitled to free health check-ups, and to encourage readers not to miss such an opportunity. In Australia, people aged 75 and older can access a free and comprehensive medical assessment once a year. This assessment includes a review of medical history, a physical examination, and consultations about physical, psychological and social wellbeing (Department of Health, Disability and Ageing, n.d.). The English source text employs the verb "fund" to convey that the assessment is offered at no cost. As a verb, "fund" signifies the allocation of financial resources to support a given activity (fund, n.d.). Yet, the verb "fund" can be "fully fund" or "partially fund" (fund, n.d.). Consequently, there is a need to emphasise that this medical assessment is "fully funded" which means it is free of charge. This is why the

CALU translation is “会为您提供一年一次的免费体检 *huì wèi nín tí gōng yī nián yī cì de miǎn fèi tǐ jiǎn*” (provide you with a free annual check-up).

4.5.7 LU 2 Omit unnecessary words and expressions (to improve the readability)

Omission is a common strategy in translation practice (Baker, 2018; Dimitriu, 2004). The prerequisite of this strategy is to ensure that the omission does not delete any messages that affect readers’ understanding towards the ST. This strategy helps keep the essential message, avoids redundancy, and provides a more concise translation to readers (Mahmud et al., 2023). Then, readers can access a plainer translation, which reduces their cognitive load and enables them to grasp the key points more easily.

Example 27

ST: Some people have **fears, concerns or worries** about seeking a dementia diagnosis.

LT: 有些人对于寻求痴呆症诊断感到**恐惧、担心或担忧。**

yǒu xiē rén duì yú xún qiú chī dāi zhèng zhěn duàn gǎn dào **kǒng jù, dān xīn huò dān yōu.**

CALU Translation: 有些人**害怕**去医院检查是否有认知障碍症。

yǒu xiē rén **hài pà** qù yī yuàn jiǎn chá shì fǒu yǒu rèn zhī zhàng ài zhèng.

BT: Some people **fear** going to the hospital to get checked for dementia.

In Example 27, the ST adopts “fears”, “concerns” and “worries” to describe certain people’s attitudes towards seeking a dementia diagnosis. Regardless of which feeling,

或养老院。

the connotation is consistently negative. In English, “fear” means “an unpleasant emotion or thought that you have when you are frightened or worried by something dangerous, painful, or bad that is happening or might happen” (fear, n.d.). “Concern” is “a worried or nervous feeling about something, or something that makes you feel worried” (concern, n.d.). “Worries” represents “a feeling of being unhappy and frightened about something” (worry, n.d.). Thus, “fears”, “concerns” and “worries” are highly interchangeable in English, which means that it is appropriate to omit two of them in the translation. In Chinese, the LTs of the three words also share similar definitions. If the three words were translated in a strictly one-to-one manner, readers might instead be puzzled as to why three words with nearly the same meaning are used. Compared with the LTs of “concerns” and “worries” – “担忧 *dān yōu*” and “担心 *yōu lǜ*”, the LT of “fear” – “害怕 *hài pà*” conveys a stronger negative emotion and more effectively reflects some people’s resistance to seek medical assessment of dementia. Therefore, the CALU translation retains the term “害怕 *hài pà*” (fear) while omitting the other two words.

Example 28

ST: You can tell that someone has dementia because they are unable to communicate and usually live in an **assisted living facility** or nursing home.

LT: 你可能会说某人有痴呆症，因为他们无法沟通，且通常住在**辅助生活设施**或养老院。

nǐ kě néng huì shuō mǒu rén yǒu chī dāi zhèng, yīn wèi tā men wú fǎ gōu tōng, qiě tōng cháng zhù zài **<u>fǔ zhù shēng huó shè shī</u>** huò yǎng lǎo yuàn.

CALU Translation: 如果一个人无法沟通，并且住在养老院，那么这个人就有认知障碍症。

rú guǒ yī gè rén wú fǎ gōu tōng, bìng qiě zhù zài yǎng lǎo yuàn, nà me zhè gè rén jiù yǒu rèn zhī zhàng ài zhèng.

BT: If a person is unable to communicate and lives in a nursing home, then that person has dementia.

Example 28 is a myth about recognising people with dementia. This sentence metions two places: one is "an assisted living facility", and the other is "a nursing home". Assisted living facilities provide residents with daily care, and residents live in their own apartments or rooms. Nursing homes do not only provide daily care, but also more medical care to the residents (U.S. National Institute on Aging, n.d.). Despite their comparable roles in providing elder care, the two types of facilities are not identical. The Chinese LT of "assisted living facility" is "辅助生活设施 *fǔ zhù shēng huó shè shī*" makes no sense to Chinese readers. A more understandable Chinese translation is "提供辅助看护的养老院 *tí gōng fǔ zhù kān hù de yang lǎo yuàn*" (assisted living facility, n.d.), which means "nursing homes that provide assisted care". Therefore, both types of facilities can be called "养老院 *yǎng lǎo yuàn*" (nursing home) in a broad sense. Since this example is intended to illustrate a misconception, its purpose is not to clarify the distinction between the two types of care facilities, but rather to highlight that not living at home does not indicate the presence of dementia. In the Chinese context, the counterpart to home-based care is institutional care in nursing homes (Wang et al., 2016). Thus, the CALU translation omits “assisted living facility” and retains only “nursing home”, thereby providing readers with a clearer understanding.

4.5.8 LU 3 Use short sentences and clauses (to improve the readability)

Using short sentences is a common strategy for writing plain English (Petelin, 2010; Riddel & Igarashi, 2021). According to the *Oxford Guide to Plain English* (Cutts, 2020), the recommended sentence length is 15-20 words. Unlike English, there are no clear differences between the main clauses and the subordinate clauses in Chinese. This also explains why Chinese writing frequently features lengthy sentences consisting of several loosely connected clauses, which are not tightly subordinated syntactically but maintain semantic coherence (Lyu & Feng, 2023). These long sentences do not necessarily mean these Chinese sentences have low readability. Lengthy sentences are not inherently unreadable. Nevertheless, when a single clause becomes overly extended, it may reduce reading comfort by limiting natural pauses and obscuring the clause’s focal meaning. Therefore, when translating from English to Chinese, it is important not only to ensure that individual sentences are not excessively long, but also to keep each clause concise.

Example 29

ST: **It can be embarrassing talking to a GP or family about changes and difficulties you might be experiencing, and uncomfortable telling someone about changes you have noticed in them.**

LT: 与全科医生或家人谈论您可能正在经历的变化和困难可能会令人尴尬，并且告诉别人您注意到的他们身上的变化也会让人感到不舒服。

yǔ quán kē yī shēng huò jiā rén tán lùn nín kě néng zhèng zài jīng lì de biàn huà hé kùn nán kě néng huì lìng rén gān gà, bìng qiě gào sù bié rén nín zhù yì dào de tā men shēn shàng de biàn huà yě huì ràng rén gǎn dào bú shū fú.

CALU Translation: 如果要您主动去跟别人诉说自己正在经历的变化，您可能会觉得尴尬。或者，如果让您提醒别人，他们出现了一些变化，可能也会让人不舒服。

rú guǒ yào nín zhǔ dòng qù gēn bié rén sù shuō zì jǐ zhèng zài jīng lì de biàn huà, nín kě néng huì jué dé gān gà. huò zhě, rú guǒ ràng nín tí xǐng bié rén, tā men chū xiàn le yī xiē biàn huà, kě néng yě huì ràng rén bú shū fú.

BT: **If you tell someone about the changes you're going through, you may feel embarrassed. Or, if you remind others that they've changed, this makes people uncomfortable.**

The Chinese LT of the ST in this example contains 59 characters in total, with 39 in the first clause and 28 in the second. The CALU translation divides the full sentence into two sentences. Then, the first clause of the LT is further divided into two clauses in the first sentence of the CALU translation. The CALU translation transforms the original sentence into one composed of a conditional adverbial clause (22 words) and a main clause (9 words). The second clause in the English ST actually describes a different scenario – reminding others to be aware of changes. Therefore, in the CALU translation, this part is separated into an independent sentence. In the second sentence, it is composed of four clauses. The first clause only contains the word “or” as the sign of a new and different sentence. The second and third clauses jointly constitute the conditional adverbial component of the second sentence. The second clause (9 characters) serves as the principal clause within this structure, exhibiting a complete subject–verb–object configuration, whereas the third clause (10 characters) functions as its object complement, further specifying the content of the reminder – “they have experienced some changes”. The fourth clause (10 characters), in turn, operates as the main clause of the entire sentence. After the segmentation, the CALU translation becomes more readable and easier to follow for readers.

Example 30

ST: Getting a diagnosis during the **early stages** means you will have more time to **understand** and **adjust to the condition**, as well as make positive **lifestyle changes** that can improve your quality of life or that of your loved one.

LT: 在**早期阶段**得到诊断意味着您将有更多的时间**了解和适应这种情况**，并积极改变**生活方式**提高您或您所爱的人的生活质量。

zài **zǎo qī jiē duàn** dé dào zhěn duàn yì wèi zhe nín jiāng yǒu gèng duō de shí jiān **liǎo jiě hé shì yìng zhè zhǒng qíng kuàng**, bìng jī jí gǎi biàn **shēng huó fāng shì** tí gāo nín huò nín suǒ ài de rén de shēng huó zhì liàng.

CALU Translation: 如果您是在**早期确诊的**，您就可以有更多的时间来**了解这个病**，然后**去适应它**，同时积极地改变**生活方式**，从而提高您或您亲朋好友的生活质量。

rú guǒ nín shì zài **zǎo qī què zhěn de**, nín jiù kě yǐ yǒu gèng duō de shí jiān lái **liǎo jiě zhè gè bìng**, rán hòu qù **shì yìng tā**, tóng shí jī jí dì gǎi biàn **shēng huó fāng shì**, cóng ér tí gāo nín huò nín qīn péng hǎo yǒu de shēng huó zhì liàng.

BT: If you are **diagnosed early**, you have more time to **learn about the disease**, **adapt to it**, and make positive **lifestyle changes**, thereby improving the quality of life for you or your loved ones.

In Example 30, the Chinese LT of the ST contains two clauses, including 30 and 29 characters, respectively. The CALU translation also employs a single sentence, as the ST introduces the benefits of early dementia diagnosis – a complete semantic unit that is not suitable for division into several independent sentences. However, the CALU translation utilises five clauses within that sentence. The first clause (11 characters) is a conditional adverbial clause indicating that if dementia can be diagnosed at an early stage. The second (17 characters), third (7 characters), and fourth clauses (12 characters) respectively outline three distinct benefits – namely, having additional time to gain a better understanding of the disease, to adjust to it, and to make positive changes in lifestyle. The fifth clause (17 characters) illustrates the ultimate outcome, which is the improvement of the quality of life. The CALU translation segments the sentence into five clauses based on functional and semantic considerations, thereby facilitating readers' comprehension of each clause's key message and enhancing their overall understanding of the meaning expressed in the source text.

4.6 Conclusions, Implications and Limitations

This study introduced the CALU translation strategies that can be adopted when translating stigmatised conditions-related public health information, such as dementia-related public health information. By comparing the LTs and the CALU translations, the study provided an in-depth analysis of the problems in the LTs and the rationale and logic behind the CALU translations. All the CALU translations have been utilised in community-based dementia campaigns – Face Dementia and Facing Dementia Together. According to community feedback, community members generally endorsed and understood the CALU translations well. Due to current translation policies in Australia, human translators remain responsible for translating public health information. This study offers empirical evidence for health translation practitioners and encourages critical reflection on the necessity of addressing both cultural and linguistic dimensions in the translation of dementia-related public health information. Given that dementia has long been subject to the issue of stigma in different cultures, translators must pay special attention to adjusting culturally inappropriate expressions, rather than merely pursuing lexical or syntactic fidelity to the source text.

Some limitations within the study cannot be ignored. First, all research materials were written by the same group of dementia experts, resulting in a relatively uniform writing style in the English source texts, which may reduce the generalisability of the translation strategies. Second, this study examined only the translation of dementia-related public health information from English to Chinese, without extending its scope to other language pairs. As a result, the translation examples presented may not fully capture the issues that could emerge in cross-linguistic translation involving different language pairs. Third, this study contrasted the CALU translations with the LTs. In reality, however, the translations adopted by Australian health authorities are not LTs but are produced by NAATI-certified translators. Consequently, this comparison may not adequately reflect the practical advantages of the CALU translation over the versions currently in use.

In future studies, more English STs from different health authorities (e.g., WHO, Dementia Australia) will be included to analyse. More examples from different language pairs will be employed to illustrate the generalisability of these translation strategies. Additionally, more authentic translations extracted from health authority websites will be used for comparison with the CALU translations.

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Chapter 5 Effectiveness and Acceptability of a Culturally and Linguistically Appropriate Translation Protocol: Evidence from Community Testing

Abstract

Prior chapters have introduced the culturally appropriate and linguistically understandable (CALU) translation process and strategies. This study employed a survey with the target readers by comparing a CALU translation and a translation provided by a translator certified by the National Accreditation Authority for Translators and Interpreters (NAATI). The study found that CALU translation gains higher preferences from the target readers in terms of “willingness to share”, “readability”, “comprehensibility”, “familiarity of wording”, “persuasiveness”, “suitability for family and friends” and “trustworthiness”. The survey results empirically evidence the necessity of applying the CALU translation protocol when translating public health information.

Keywords

Reader Response, Community Survey, Culturally Appropriate and Linguistically Understandable Translation, Translation Comparison

5.1 Introduction

5.1.1 Reader Response in Translation Studies

Traditional translation studies have focused much on the translator's side in terms of translation strategies, translation equivalence, and translation comparison. These studies investigate what and how translators can do to provide namely "good", "equivalent" translations (Walker, 2021). Yet, translation serves as a tool of communication (Valdeón, 2012), which aims to facilitate communication between message senders and receivers. The quality of translation should not only be determined by translators. To assess the effectiveness of the tool, the reception of readers should be taken seriously (Brems, 2012). In the history of translation studies, there are some well-known reader-oriented theories: dynamic equivalence theory, functional equivalence theory, pragmatic equivalence theory, user-centred translation theory, acceptability and adequacy, and translation reception. However, there is an urgent need for researchers to understand how readers read, sense, and understand the translation (Walker, 2021).

Reader response is a theory that values the responsibility of readers in interpreting textual meaning (Browne et al., 2021). Readers are the consumers of translated materials, and they have the right to praise or criticise the translations they read (Chan, 2009). The interpreted meaning of the text is distinct between translators who are bilingual and other readers who are monolingual (Baer, 2014). Xu (2016) believed that the quality of translation is not solely dependent on formal correspondence but is decided by reader response. Although translation scholars have acknowledged the importance of reader response, only in recent years have translation scholars begun to engage more directly with empirical reception research. The research methods borrow from cognitive science, psycholinguistics, and experimental reading research. For instance, Arenas and Toral (2020) invited 88 readers to evaluate the translation quality of a machine-translated translation, a post-edited translation and a human-translated translation of a fictional story from English to Catalan via surveys. Sha and Lai (2016) conducted 6 one-on-one interviews with readers to understand how they respond to a translated consumer survey. Chen (2022) conducted content analysis of reader responses and translator responses in a discussion forum to understand how readers evaluated the translation and how readers and translators interacted. In addition to these traditional social science research methodologies, some reader response studies employ eye-tracking technology to assess reader responses. Whyatt et al. (2023), through eye-tracking, understood the differences in reading efforts between reading high- and low-quality translations. Gerrits and Guerberof-Arenas (2025) also utilised eye-tracking to compare the cognitive load when readers read different translations of the same source text (ST).

The development of translation studies has witnessed a growing interest in reader response, signalling a move toward reader-oriented research. Understanding how readers respond to translations is vital for improving translators’ competence and enhancing overall translation quality.

5.1.2 Research Gap and Research Aim

Previous chapters have provided the theoretical foundation for the culturally appropriate and linguistically understandable (CALU) translation, including the process of producing CALU translations and the CALU translation strategies. Although the development of CALU translations inherently requires target readers' participation – reading the translation, providing feedback, and allowing the translation to be revised based on their opinions, the number of readers involved in this process is often limited. Typically, no more than two readers review the same segment of text. Therefore, despite the rigorous procedures involved, it is not yet clear whether CALU translations are preferred by readers overall. Therefore, this study aims to test whether CALU translations are genuinely more favourably received by readers compared to conventional translations.

5.2 Methodology

5.2.1 Study Design

This study employed a cross-sectional community survey. All the data were collected online (via Qualtrics) and offline (via offline community engagement) from July to September 2024. This is a mixed-method study which includes qualitative and quantitative analysis of the survey results. The ethics approval was granted by the University of Sydney Human Research Ethics Committee (Application Identifier: 2024/HE000053).

5.2.2 Participants and Recruitment

All the participants were required to be able to read Simplified or Traditional Chinese and to be living in Australia. In addition, they had to be either people aged 65 years or older, or adult family members of someone aged 65 years or older. People aged 65 years or older are at high risk of dementia (Bowman et al., 2019). Their adult family members are in the best position to notice the signs of dementia (Nogueras et al., 2016). Thus, both groups of people are the target audience of dementia-related public health information.

We distributed anonymous online and paper surveys with the help of a Chinese aged care service provider and through our own network. Online respondents completed the survey via Qualtrics, and offline respondents filled out the survey in aged care facilities and other local community centres in Sydney. For the online survey, respondents were encouraged to share the Qualtrics link with their eligible friends and family members. We provided all participants with a brief participant information statement. The return of a completed questionnaire was taken as an indication of their consent for us to collect the data.

5.2.3 Survey Design

This survey comprises 5 sections: demographics, personal experience with dementia, attitudes towards dementia, attitudes towards a poster, and attitudes towards translations. The sections relevant to this study are the demographics and attitudes toward translations. The demographic information includes postcode, age, sex, country of birth, first year of arrival in Australia, ethnicity, language spoken at home, language proficiency (very good, good, not good, not good at all), religion, and highest education qualification. These items are highly recommended to include when surveying ethnic minorities in dementia-related research (Brijnath et al., 2022). The section for attitudes towards translations compares two different translations of the same ST. The survey questions (see Appendix C, Appendix D and Appendix E) are adjusted based on the *Patient Education Materials Assessment Tool for Printable Materials* (PEMAT-P), which was created by the U.S. Agency for Healthcare Research and Quality (2020). The surveyed items include the comparison of readability, understandability, familiarity with the wording, translation trustworthiness, persuasiveness, cultural appropriateness, willingness to share, and overall preference. Two translations are included – a translation provided by a translator certified by the National Accreditation Authority for Translators and Interpreters (NAATI) and a CALU translation provided by ZH and MJ. We found a NAATI translator through a Google search and provided the person with the same text extracted from the Face Dementia website. Respondents were provided with three options: “Version 1” (NAATI-standard translation), “Version 2” (CALU translation), and “They are the same”. At the end of the survey, there was an open-ended question asking respondents for any other comments (not only for translations, but also anything else respondents wanted to add).

5.2.4 Quantitative Analysis

5.2.4.1 Statistical Analysis.

Descriptive statistics were used to summarise participant characteristics and responses to the translation comparison items. Frequencies and percentages were reported for categorical variables, and medians and interquartile ranges were reported for continuous variables. Missing data were excluded on a variable-by-variable basis.

Bivariate associations between categorical participant characteristics and overall version preference were examined using Pearson's chi-square tests of independence. Where expected cell counts were small, Fisher–Freeman–Halton exact tests were used instead. Pairwise comparisons were conducted for categorical variables with more than two levels only when the omnibus test was statistically significant; raw p-values are reported.

Cramer's V was used only as an effect-size measure for appropriate bivariate associations between categorical variables. It was not used for single-variable descriptive distributions. Where cross-tabulations contained sparse cells, effect sizes were interpreted cautiously or not reported, because sparse data can make effect-size estimates unstable. Statistical significance was set at $\alpha = .05$. Analyses were conducted in Jamovi (v2.5.5)

5.2.4.2 Multivariable modelling.

Multivariable analysis was conducted using multinomial logistic regression. This model was selected because the dependent variable, overall version preference, consisted of three nominal outcome categories: “NAATI-standard translation”, “CALU translation”, and “They are the same”. The CALU translation was used as the reference outcome category because the study aimed to examine which factors were associated with selecting either the NAATI-standard translation or judging the two versions as equivalent, compared with preferring the CALU translation.

The multinomial logistic regression model therefore estimated two adjusted contrasts: “NAATI vs CALU” and “They are the same vs CALU”. Predictors were selected based on conceptual relevance and significant bivariate associations. These included age, religion, highest qualification, Mandarin language status, and survey format. To reduce sparse-cell problems, religion and highest qualification were collapsed into broader categories before modelling.

Model assumptions and diagnostics were considered before interpreting the results. These included the nominal structure of the dependent variable, independence of observations, absence of complete separation, sufficient observations across outcome categories after collapsing sparse groups, and absence of problematic multicollinearity among predictors. Model fit was assessed using likelihood ratio tests, Akaike Information Criterion (AIC), and McFadden’s pseudo-R^2. For each contrast, coefficients (β), standard errors (SE), odds ratios (ORs), 95% confidence intervals (CIs), and p-values were reported.

Given the modest sample size and sparse cells in some subgroups, the multivariable model was treated as an exploratory adjusted analysis rather than definitive evidence of predictor effects. Results with wide confidence intervals were interpreted cautiously.

5.2.5 Qualitative Analysis

The comments relevant to translation quality were analysed by means of inductive thematic analysis (Braun & Clarke, 2022). The data content drives inductive thematic analysis, but not based on an established theory or framework (Braun & Clarke, 2022). ZH reviewed all the comments and retained only those relevant to the quality of translations. The rest of the comments were filtered. ZH translated all the comments from Chinese to English. LD reviewed the translated comments. All the translated comments were imported into NVivo 14 for coding. Then, ZH generated the initial coding framework, and it was reviewed, discussed and negotiated with LD. ZH and LD independently coded the comments based on the agreed coding framework. If there was any discrepancy, ZH and LD discussed and reached a consensus. After coding, ZH formed themes and sub-themes based on codes which were reviewed and approved by LD. Finally, ZH reported results and findings of the thematic analysis, and refined it based on other authors' feedback.

A statistical inter-rater reliability coefficient was not calculated because the purpose of the analysis was to develop interpretive themes from a small set of open-ended comments rather than to quantify coding agreement. Instead, analytic trustworthiness was strengthened through independent coding, comparison of coding decisions, consensus discussion, review of translated comments, and co-author checking.

5.3 Results

5.3.1 Demographic Result

Among 140 respondents (see Table 6), 63.3% were female, 35.3% male, and 1.4% preferred not to disclose sex. The median age was 67 years (IQR = 35). Most participants identified as Chinese (97.6%), with small proportions reporting Indonesian (1.6%) or Burmese (0.8%) ethnicity. The median length of time in Australia was 16 years (IQR = 21.5). The religion was reported: 69.5% reported Other/No religion, 19.8% Buddhism, and 10.7% Christianity. The highest qualification was university for 63.2%, secondary school for 20.6%, TAFE for 6.6%, and ≤ primary school for 9.6%. The survey format was online for 43.6% and paper for 56.4%.

Table 6 Demographic Characteristics of 140 Participants in Chinese Translation

Characteristic	**Distribution**	
Sex, *n (%)*		
Female	88	(63.3)
Male	49	(35.3)
Prefer not to answer	2	(1.4)
Age (years), *median (IQR)*	67	(35)
Ethnicity, *n (%)*		
Chinese	123	(97.6)
Indonesian	2	(1.6)

Burmese	1	(0.8)
Length of time in Australia (years), *median (IQR)*	16	(21.5)
Religion, *n (%)*		
Other/no religion	91	(69.5)
Buddhism	26	(19.8)
Christianity	14	(10.7)
Highest qualification completed, *n (%)*		
University (undergraduate or postgraduate)	86	(63.2)
TAFE (certificate/TRADE)	9	(6.6)
Secondary school (high school)	28	(20.6)
<=Primary school	13	(9.6)
Format of survey, *n (%)*		
Online	61	(43.6)
Paper	79	(56.4)

Note. Missing data: sex (1), Length of time in Australia (10), ethnicity (14), religion (9) and highest qualification completed (4).

IQR = interquartile range

5.3.2 Language Characteristic Results

Most participants completed the survey in Simplified Chinese (85.0%), with 15.0% using Traditional Chinese. Mandarin was spoken at home by 71.3% of respondents, Cantonese by 30.9%, English by 5.0%, and Shanghainese by 4.3%. Self-reported reading ability in Chinese was high, with 60.3% "very well" and 35.3% "well".

Table 7 Language Variables of 140 Participants in Chinese Translation

Characteristic	Distribution	
Language of survey, *n (%)*		
Simplified	119	(85.0)
Traditional	21	(15.0)
Region born in, *n (%)*		
Mainland China	112	(80.0)
Hong Kong	15	(10.7)
Taiwan	3	(2.1)
Other	10	(7.1)
How well read in Chinese, *n (%)*		
Very well	82	(60.3)
Well	48	(35.3)
Not well	2	(1.5)
Not at all	4	(2.9)
Language speak at home, *n (%)*		

Mandarin (Y/N)	97	(71.3)
Cantonese (Y/N)	43	(30.9)
English (Y/N)	7	(5.0)
Shanghainese (Y/N)	6	(4.3)

Note. Missing data: reading ability in Chinese (4), language spoken at home (4).
IQR = interquartile range.

5.3.3 Translation Comparison Results

Among all the respondents (see Table 8), 62.6% (N=87) preferred the CALU translation, 16.5% (N=23) preferred the NAATI-standard translation, and 20.9% (N=29) believed the quality of both versions was the same. Except for the item testing "trustworthiness", the results of the other test items were largely consistent with the overall preference, with 80 or more respondents favouring the CALU translation in terms of "willingness to share" (59.0%; N=82), "readability" (61.9%; N=86), "comprehensibility" (58.6%; N=82), "familiarity of wording" (59.3%; N=83), "persuasiveness" (60.7%; N=85), and "suitability for family and friends" (57.1%; N=80). Trustworthiness showed a narrower margin (CALU = 52.1%, NAATI = 15.0%, same = 32.9%).

Table 8 Results of Chinese Translation Comparison

Characteristic	**Distribution**	
Overall preference, n (%)		
NAATI	23	(16.5)

CALU	87	(62.6)
They are the same	29	(20.9)
More likely to share with friends and family, *n (%)*		
NAATI	25	(18.0)
CALU	82	(59.0)
They are the same	32	(23.0)
Easier to read, *n (%)*		
NAATI	27	(19.4)
CALU	86	(61.9)
They are the same	26	(18.7)
Easier to understand, *n (%)*		
NAATI	24	(17.1)
CALU	82	(58.6)
They are the same	34	(24.3)
Words feel more familiar, *n (%)*		
NAATI	28	(20.0)
CALU	83	(59.3)
They are the same	29	(20.7)
More trustworthy, *n (%)*		
NAATI	21	(15.0)
CALU	73	(52.1)

They are the same	46	(32.9)
More convincing, *n (%)*		
NAATI	23	(16.4)
CALU	85	(60.7)
They are the same	32	(22.9)
More appropriate for you and your family, *n (%)*		
NAATI	27	(19.3)
CALU	80	(57.1)
They are the same	33	(23.6)

Note. Missing data: easier to read (1), more likely to share with friends and family (1), version prefer (1).

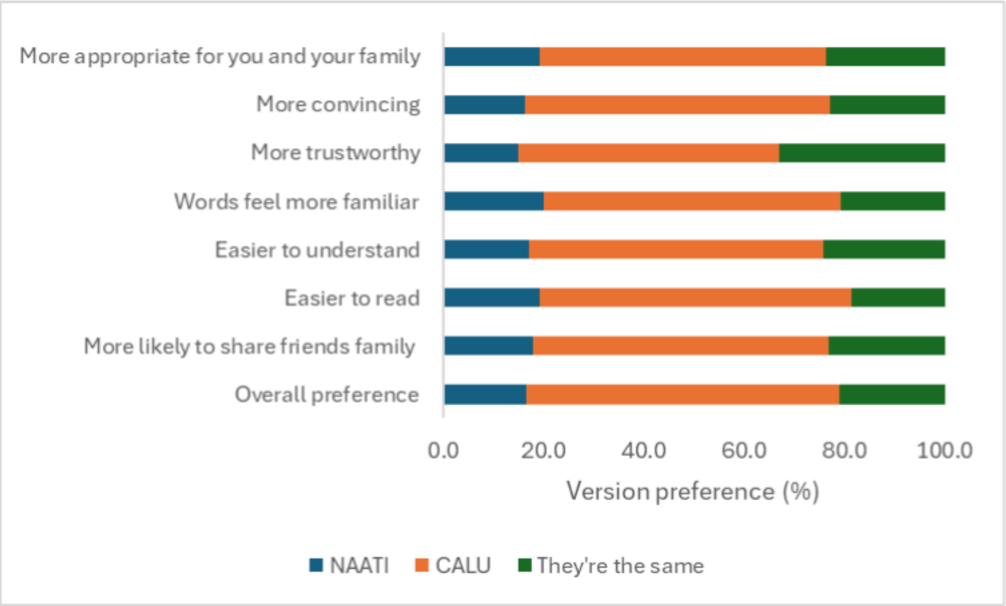

Figure 9 Translation Comparison Results

5.3.4 Bivariate Associations

Survey format was significantly associated with overall version preference, $\chi^2(2, N = 139) = 21.29$, $p < .001$; Cramer’s V = .39. Online respondents overwhelmingly preferred the CALU translation (83.6%), whereas paper respondents were more evenly distributed, with a higher proportion selecting “They are the same” (32.1% vs 6.6% online).

Religion was also significantly associated with preference, $\chi^2(4) = 16.24$, $p = .003$. Pairwise comparisons indicated significant differences between Buddhism vs Other/No religion ($p = .02$), Buddhism vs Christianity ($p = .007$), and Christianity vs Other/No religion ($p = .003$). Preference for the CALU translation was highest among participants reporting Other/No religion (71.4%) and Buddhism (50%), but only 35.7% of Christians preferred the CALU translation.

Highest qualification showed a weaker but still significant association, $\chi^2(6) = 8.02$, $p = .046$. Pairwise comparisons indicated a significant difference between university and secondary school ($p = .013$). The CALU translation was the most preferred translation across all qualification levels: university (73.3%), TAFE (44.4%), secondary school (42.9%), and ≤ primary school (46.2%), with university graduates more likely to prefer the CALU translation than secondary school graduates.

Mandarin language status was also significantly associated at the bivariate level, $\chi^2(2) = 5.84$, $p = .016$. Among Mandarin speakers, 69.1% preferred the CALU translation compared with 46.2% of those who did not speak Mandarin at home.

5.3.5 Multinomial Logistic Regression

The overall model was significant (likelihood ratio $\chi^2(16) = 45.54$, $p < .001$; AIC = 227.47; McFadden’s pseudo-$R^2 = 0.19$). Omnibus tests indicated religion contributed significantly ($\chi^2(4) = 16.24$, $p = .003$), while age, qualification, Mandarin, and format did not reach significance at $\alpha = .05$.

Adjusted contrasts revealed, format (paper vs online) was associated with ‘They are the same’ vs CALU (OR = 6.42, 95% CI [1.11, 37.05], p = .037), but not with NAATI vs CALU (OR = 1.68, p = .533), indicating a contrast-specific effect of format.

Adjusted contrasts for religion, Christianity vs Other/No was associated with higher odds of NAATI vs CALU (OR = 9.57, 95% CI [2.14, 42.67], p = .003); other religion contrasts were not significant. Age, highest qualification, and Mandarin were not significantly associated after adjustment.

Table 9 Multinomial Logistic Regression Predicting Version Preference (Reference = CALU)

Contrast	Predictor	β	SE	OR (95% CI)	p
They are the same vs CALU					
	Intercept	-3.168	1.243	0.04 [0.00, 0.48]	0.011
	Age (years)	0.004	0.021	1.00 [0.96, 1.05]	0.842
	Religion: Buddhism vs Other/No	0.903	0.570	2.47 [0.81, 7.54]	0.113
	Religion: Christianity vs Other/No	0.574	0.969	1.78 [0.27, 11.86]	0.553

	Qualification: Secondary vs University	0.367	0.705	1.44 [0.36, 5.75]	0.602
	Qualification: TAFE vs University	0.879	1.059	2.41 [0.30, 19.19]	0.406
	Qualification: ≤Primary vs University	-0.004	0.849	1.00 [0.19, 5.26]	0.997
	Format: paper vs online	1.860	0.894	6.42 [1.11, 37.05]	0.037
	Mandarin: Yes vs No	0.232	0.597	1.26 [0.39, 4.06]	0.697
NAATI vs CALU					
	Intercept	-2.407	1.331	0.09 [0.01, 1.22]	0.071
	Age (years)	0.018	0.021	1.02 [0.98, 1.06]	0.384
	Religion: Buddhism vs Other/No	-0.920	0.922	0.40 [0.07, 2.43]	0.319
	Religion: Christianity vs Other/No	2.258	0.763	9.56 [2.14, 42.67]	0.003
	Qualification: Secondary vs University	0.156	0.894	1.17 [0.20, 6.74]	0.861
	Qualification: TAFE vs University	1.512	1.120	4.54 [0.50, 40.74]	0.177

Qualification: ≤Primary vs University	-0.376	1.167	0.69 [0.07, 6.76]	0.747
Format: paper vs online	0.516	0.828	1.68 [0.33, 8.49]	0.533
Mandarin: Yes vs No	-1.206	0.698	0.30 [0.08, 1.18]	0.084

Note. OR = odds ratio; CI = confidence interval; SE = standard error. McFadden's pseudo-R^2 = .19; LR model $\chi^2(16) = 45.54$, $p < .001$. Reference outcome = Version 2; reference categories: Other/No religion, University, online, non-Mandarin.

5.3.6 Qualitative Result

Of the 140 completed surveys, 25 respondents left comments relevant to translation quality comparison. The themes and the sub-themes are displayed in Table 10.

Table 10 Themes and Sub-themes from Comments

Themes	**Sub-themes**	**Examples**	**Number of responses**
Version 2 is better	Version 2 is plainer and easier to understand	*I feel that version 2 is more colloquial and easier to understand. P02* *The wording of the first one is more unfamiliar than the second one, like "罹患 lí huàn" (suffering from). The last sentence is not understandable at all. P07* *Try to use simple language and short sentences. P01*	35.3% (N=12)

	Version 2 is friendlier and more positive	*Compared to version 1, the language of version 2 is gentler and friendlier. P22* *A warmer and more caring feeling. Patients need more psychological care. P15* *Middle-aged and elderly people fear developing dementia, largely because they fear becoming unable to care for themselves. The final paragraph of Version 2 can alleviate this anxiety to some extent, helping potential users overcome it. P13*	26.5% (N=9)
	Version 1 is too literal	*The language in version 1 is too formal, like a machine translation, and the expression "what impact will it have on my life" is very ambiguous. P16* *Version 1 is like machine translation. P22*	8.8% (N=3)
	Version 2 is more explicit and detailed	*The heading is important, but I don't know what the first headings are asking me to do. The second one is about prompt diagnosis. P07* *The first version didn't say what the changes were, but the second version specified what the changes were. P10* *The annotation in version 2 for "脑退化症 nǎo tuì huà zhèng" (brain degeneration syndrome) is very helpful. P17*	20.6% (N=7)
There is no significant difference between the two versions		*I can't tell the differences between the two versions. P23*	8.8% (N=3)

5.4 Discussion

5.4.1 Discussion of Quantitative Results

Most respondents reported an overall preference for the CALU translation. This provides empirical evidence that CALU translation outperforms normal NAATI-standard translation in the context of dementia-related public health information. This evidence is statistically significant, proving the effectiveness of the CALU translation process and strategies.

Religion emerged as a strong independent predictor: Christians were substantially more likely to prefer the NAATI-standard translation over the CALU translation. This may be attributed to their habitual exposure to religious texts such as the Bible, which are commonly translated by NAATI-certified translators. This familiarity likely influences their reading preferences. The survey format showed a specific effect: paper respondents were more likely to perceive both versions as equivalent, though the omnibus test was non-significant, indicating that format influences certain contrasts rather than overall preference patterns.

The pattern of tests reflects the structure of the multinomial model, which estimates separate logits for each non-reference category relative to the CALU translation. The omnibus test asks whether a predictor improves model fit across both logits combined, while the per-contrast tests evaluate effects within each specific comparison.

Religion’s omnibus significance indicates that, taken together, its coefficients across the two logits improve model fit; the significant Christianity vs Other/No contrast (NAATI vs CALU) shows where that signal resides. In contrast, format did not reach omnibus significance because its effect was heterogeneous across logits – strong for “They-are-the-same vs CALU” but negligible for “NAATI vs CALU”. Consequently, the joint (2-df) test did not reject the null, yet the single per-contrast effect for “They-are-the-same vs CALU” remained statistically significant after adjustment.

Practically, this means religion influences overall version choice patterns (especially increased NAATI preference among Christians), while format specifically increases the propensity to judge the versions as equivalent (paper vs online), without shifting preferences toward NAATI over CALU.

The choice of survey format affects the survey results (Ball, 2019). Online respondents can answer the survey at their own pace and convenience, which increases the response rate (Callegaro et al., 2015). The advantages of online surveys also allow respondents to read surveys more thoroughly and provide more reliable answers (Chang &Vowles, 2013). de Bernardo and Curtis (2013) found that online respondents tend to have higher income, higher educational level, and be younger compared to offline respondents. These factors can be correlated with the survey items (Dolnicar et al., 2009). Moreover, online respondents can adjust the page view to enlarge or reduce the font size so that the text becomes clearer and easier to read. When we conducted offline surveys, we noticed that some participants could not read the surveys clearly due to the font size. This potentially leads to a higher proportion of offline respondents who selected “they are the same”. The format effect also has interpretative significance. Paper respondents were more likely to select “They are the same” rather than CALU translation, but they were not significantly more likely to prefer NAATI translation over CALU translation. This suggests that format may have affected the degree of perceived distinction between the two translations, rather than shifting preference towards the conventional translation. In practical terms, this finding highlights that translation evaluation is shaped not only by the wording of the translation itself, but also by the conditions under which readers encounter and compare translated texts.

Age, education, and Mandarin language status did not retain significance after adjustment, suggesting that bivariate associations were confounded by other variables or limited by sample size and sparse cells. Wide confidence intervals for some predictors underscore the need for larger, more balanced samples to improve precision.

The regression findings should be interpreted not only as demographic differences in version preference, but also as evidence that translation reception is shaped by readers’ prior linguistic, cultural, and textual expectations. The higher odds of NAATI preference among Christian respondents may suggest that familiarity with formal, institutionally mediated translation styles influences perceptions of trustworthiness and acceptability. This does not mean that NAATI translation is inherently more suitable for Christian readers; rather, it indicates that translation preference is partly shaped by readers’ previous exposure to particular genres and registers of translated

Chinese. This finding supports the CALU translation argument that translation reception cannot be assessed only by source-text fidelity, but must also consider the target reader’s cultural and communicative background.

5.4.2 Discussion of Qualitative Results

Most of the respondents who left comments preferred the CALU translation (version 2), which is in line with the quantitative results. The reasons include that “version 2 is plainer and easier to understand”, “version 2 is friendlier and more positive”, “version 1 is too literal”, and “version 2 is more explicit and detailed”. These reasons well reflect the usefulness of CALU translation strategies. Among these responses, the most frequently mentioned sub-themes are “version 2 is plainer and easier to understand” (35.3%; N=12), “version 2 is friendlier and more positive” (26.5%; N=9), and “version 2 is more explicit and detailed” (20.6%; N=7). According to CALU translation strategies, CA 1 (use culturally relevant and plain words), CA 2 (use culturally relevant and plain expressions), CA 4 (use culturally positive language), and LU 1 (use explicit language) correspond to these sub-themes. For CA 1 and CA 2, both strategies improve the understandability of the translation, which is reflected in the sub-theme – “version 2 is plainer and easier to understand”. For example, a 50-year-old male respondent (P07) mentioned that, “*The wording of the first one is more unfamiliar than the second one, like ‘罹患 lí huàn’ (suffering from).*” The NAATI-standard version adopted “罹患 *lí huàn*” (suffering from) to translate “diagnosis”. Although the word can convey the meaning of “a diagnosis of ”, the Chinese character “罹 *lí*” is uncommon in daily Chinese. Using everyday language enhances the understandability of medical and health information (Pal et al., 2025). Therefore, the NAATI-certified translator did not realise the use of plain language.

As for CA 4 (use culturally positive language), this strategy is the factor contributing to the sub-theme “version 2 is friendlier and more positive”. For instance, P15, a 48-year-old female, commented, “A warmer and more caring feeling. Patients need more psychological care.” In the NAATI-standard translation, the translator made an addition in the translation, which is “您需要知道 *nín xū yào zhī dào*” (you need to know). The NAATI-certified translator might want to emphasise the fact by adding this clause in front of the fact that “It is the symptoms of dementia that interfere with independence, not the diagnosis.” However, this clause sounds like an order or command, which causes psychological burden to information receivers (Markowitz & Slovic, 2020).

Regarding LU 1, this strategy satisfies readers’ appetite as evidenced by the sub-theme – “version 2 is more explicit and detailed”. As P21, a 65-year-old female, noted that, “The second version’s content is richer and clearer”. In the English ST, there is a sentence – “Getting help (e.g. cleaning or transport) does not mean that we have lost control of our lives”. In the first version, the NAATI-certified translator adopted the strategy to make “cleaning or transport” more detailed. The translator translated “cleaning” as “清洁护理 *qīng jié hù lǐ*” (cleaning and care), and rendered “transport” as “搭乘交通工具 *dā chéng jiāo tōng gōng jù*” (take public transport). However, this adjustment does not make “cleaning or transport” clear enough. Readers may still feel unclear about what help people with dementia receive. The translation of the two examples in the CALU translation is more detailed than in the NAATI-standard translation. In the CALU translation, the translation of “cleaning” is “有人帮您打扫卫生 *yǒu rén bāng nín dǎ sǎo wèi shēng*” (someone helps to clean your place), and the translation of “transport” is “陪同您出行 *péi tóng nín chū xíng*” (accompany you on your trip). Both translations are more detailed than the NAATI-standard translation, because readers understand that the “help” is provided by someone to help people with dementia clean their places and accompany them on their trip. The finding that readers prefer more detailed and explicit information aligns with the claim by Mundhenk (2025) and Moody (2014).

In addition, three responses (8.8%) complain that “version 1 is too literal”, which means that the NAATI-standard translation is more like a literal translation to their minds. Inappropriate literal translation causes “translationese”, which makes readers feel unnatural and reduces the translation quality (Nida & Taber, 2003). P16, a 41-year-old male, criticised that “*The language in version 1 is too formal, like a machine translation, and the expression ‘对我的生活带来什么影响’ is very ambiguous*”. The ST of the sentence is “I’m scared about what a diagnosis of dementia might mean for my life.” The translation in the NAATI-standard translation is “我担心如果确诊罹患失智症，这将对我的生活带来什么影响 *wǒ dān xīn rú guǒ què zhěn lí huàn shī zhì zhèng, zhè jiāng duì wǒ de shēng huó dài lái shén me yǐng xiǎng.*” (I am worried if I am diagnosed with dementia, what it might mean for my life). It can be seen that “what it might mean for my life” is quite a literal translation of “what a diagnosis of dementia might mean for my life”. Compared with the NAATI-standard translation, the CALU translation is more culturally relevant and explicit – “我很害怕一旦确诊脑退化，我的生活就会受到影响 *wǒ hěn hài pà yī dàn què zhěn nǎo tuì huà, wǒ de shēng huó jiù huì shòu dào yǐng xiǎng*”, which means “I am afraid that once I am diagnosed with dementia, my life will be affected”. The CALU translation expresses the concern (i.e., my life will be affected by the diagnosis) straightforwardly.

Three responses (9.1%) state that “there is no significant difference between the two versions”. All three responses came from participants aged 65 or above. However, given the very small number of responses in this category, this pattern should be interpreted cautiously and should not be taken as evidence that older participants were less able to distinguish between the two translations. Rather, these responses may reflect a range of possible factors, including reading context, survey format, familiarity with health-related language, or the perceived practical equivalence of the two versions. Therefore, this finding is reported descriptively and is not used to make a broader claim about age and translation sensitivity.

Moreover, one comment is about “a larger font is needed”, which is not counted as a theme because of only one comment. However, this comment should be taken seriously because texts in larger font are more memorable (Luna et al., 2019), and larger font facilitates higher readability and understandability of learning materials (Rello et al., 2016). With age, older people’s eyesight deteriorates, increasing their likelihood of developing visual impairment (Smith et al., 2017). Accordingly, using a larger font is more friendly to older people.

The qualitative findings are directly connected to the conceptual basis of CALU translation. Participants' comments that Version 2 was plainer, friendlier, more explicit, and less literal correspond closely to the three dimensions of CALU translation: scientific accuracy, cultural appropriateness, and linguistic understandability. These findings also align with established translation theories. The criticism that Version 1 sounded too literal reflects the limitation of formal equivalence in public health translation. The preference for clearer and more explicit wording supports pragmatic equivalence, because the CALU translation made the intended health message easier to infer. The preference for warmer and more positive language supports dementia-inclusive language, because the translation reduced fear and stigma while preserving the source message. Therefore, the qualitative findings do more than describe reader preference; they explain how CALU strategies produce a translation that better fulfils the communicative purpose of dementia-related public health information.

6.5 Conclusion, Implication and Limitation

This study surveyed the target readers' responses by comparing a translation by a NAATI-certified translator and a CALU translation of the same English ST extracted from the Face Dementia website. The respondents generally favoured the CALU translation. Christians were more likely to prefer the NAATI-standard translation. The online respondents showed a great tendency to prefer the NAATI translation. Moreover, the survey comments also reflect why CALU translation strategies make translations more readable, comprehensible, and positive. Therefore, the study provides quantitative and qualitative evidence of why the CALU translation outperforms NAATI-standard translation.

This study employed a mixed-methods approach to investigate translation quality based on target readers' feedback, which provides the novelty of the research method in translation studies. The method can be further employed to test the effectiveness of the CALU translation approach to translate other stigmatised health condition-related public health information.

However, there are some limitations that should be acknowledged. First, we did not switch the order of the two versions to mitigate order effects. In future research, a counterbalanced design should be adopted. Second, the font size of the survey was relatively small for older participants, especially for those with visual impairments. Paper surveys with different font sizes can be prepared for future research. Third, most of the respondents were based in New South Wales, and only one aged care service provider organised offline respondents. Consequently, these respondents may not be representative enough of the entire target population. Future research can recruit a more diverse group of respondents to improve the representativeness of the target readers. Fourth, the section on translation quality comparison in the survey was placed at the end of a long survey consisting of 50 questions. Some respondents might lose patience in comparing the translation after answering 41 questions in other sections. For future research on CALU translation, we will conduct an independent study that focuses exclusively on translation-related questions. Fifth, we adopted "脑退化 *nǎo tuì huà*" (Brain Degeneration Syndrome) as the Chinese translation of "dementia" rather than "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome), because Dementia Australia adopted "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) at that time. Future research will adopt "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) in the CALU translation.

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Chapter 6 Discussion and Conclusion

6.1 Overview of Thesis

This thesis aims to propose a scientifically accurate and culturally appropriate Chinese term for "dementia" and to establish a culturally appropriate and linguistically understandable (CALU) translation approach for translating dementia-related public health information. There are four research questions that need to be addressed to achieve the research aims. This thesis comprises four body chapters that address the four research questions, respectively. Chapter 2 is the cornerstone chapter for achieving both research aims. This chapter has proposed a scientifically accurate and culturally appropriate Chinese term for "dementia" – "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome). In the absence of this scientifically accurate and culturally appropriate Chinese term for "dementia", when translators translate dementia-related English materials into Chinese, they may end up using the traditional Chinese term, "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), which is neither scientifically accurate nor culturally appropriate. Consequently, regardless of how other lexical choices are modified, such translations can evoke psychological discomfort among Chinese readers, thereby potentially reinforcing their fear and stigma about dementia and even discouraging them from engaging with the translated materials.

Chapter 3 has developed a CALU translation protocol incorporating a 7-step translation process and three key recommendations (i.e., ensure the scientific accuracy, achieve high readability, understandability and acceptability, and avoid any discriminatory or stigmatised expressions). The 7-step translation process was developed based on the WHODAS 2.0 translation guideline and adjusted according to the facts that translators and health information providers may encounter. Traditional health and medical translation focuses on scientific accuracy, but for a more general and educational dementia-related information, the CALU translation protocol aims to provide CALU translations to improve readers' dementia literacy and reduce their stigmatising attitudes towards dementia.

Chapter 4 is an addition to Chapter 3, establishing a set of CALU translation strategies that synthesise dynamic equivalence, functional equivalence, pragmatic equivalence, the three translation recommendations outlined in Chapter 3, and dementia-inclusive language guidelines. These translation strategies were illustrated in detail through English-Chinese translation case studies.

Chapter 5 tests the effectiveness and acceptability of CALU translations by comparing a CALU translation and a translation provided by a professional translator certified by the National Accreditation Authority for Translators and Interpreters (NAATI). A translation comparison survey was distributed to target readers. This chapter qualitatively and quantitatively analysed the survey results. This chapter found that Chinese Australians (the target readers) preferred the CALU translation.

6.2 Summary of Findings

This doctoral research includes four research questions:

Q1: What Chinese term for "dementia" should be adopted to reduce dementia stigma in Chinese culture?

Q2: What translation process can produce CALU translations of dementia-related public health information?

Q3: What translation strategies can produce CALU translations of dementia-related public health information?

Q4: Are CALU translations more acceptable than normal translations from the perspective of target readers?

This section presents the findings that address each research question.

6.2.1 What Chinese term for "dementia" should be adopted to reduce dementia stigma in Chinese culture?

In Chinese, there are six terms for "dementia": "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome), "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome), "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome), "失智症 s*hī zhì zhèng*" (Loss of Intelligence Syndrome), "认知症 *rèn zhī zhèng* " (Cognition Syndrome) and "退智症 *tuì zhì zhèng*" (Degenerative Intelligence Syndrome). This study found that different Chinese-speaking regions adopt different Chinese terms for "dementia". Even for Mainland China itself, there is no consensus on the term choice for "dementia". This study found that in the Chinese naming system for "diseases" and "syndromes", modern Chinese typically precedes the character "症 *zhèng*" ("disease" and "symptoms") with the major symptom of a health condition. Among these existing Chinese terms. Therefore, this study excluded “认知症 *rèn zhī zhèng* ” (Cognition Syndrome) as an option for participants to analyse and choose.

For “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome), this study found it to be a scientifically inaccurate term, as it only reflects the signs and symptoms of people in the later stages of dementia. This term stigmatises dementia among the public, but this term can be culturally neutral for dementia experts themselves.

For “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome), this term is too general to focus on dementia. This term may cause people to misbelieve that dementia is a normal part of ageing, because the human brain degenerates with age. This term is more culturally appropriate than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) because it is less offensive in Chinese, but this term is too new for certain regions and hard to pronounce in Mandarin.

For “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome), this term overstates the signs and symptoms of dementia. The negative impacts of Dementia are not limited to people’s intelligence. Moreover, the Chinese character “智 *zhì*” has various meanings, which may cause different interpretations by Chinese people. This term carries fewer negative connotations than “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome) and has been widely adopted in Chinese-speaking regions. However, this term implies a useless brain, which imposes a psychological burden on the public.

For “退智症 *tuì zhì zhèng*” (Degenerative Intelligence Syndrome), this term is more scientifically accurate than “失智症 s*hī zhì zhèng*” (Loss of Intelligence Syndrome), because “退 *tuì*” (degenerative) reflects the nature of dementia. However, it is still hard to interpret what “智 *zhì*” means. Moreover, even if “智 *zhì*” is interpreted as “intelligence”, this term is still scientifically inaccurate as dementia is not limited to the impacts on intelligence. In terms of cultural appropriateness, this term is rarely used in Chinese-speaking regions, which means Chinese people are unfamiliar with this term.

For “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome), this term comprehensively and objectively depicts the signs and symptoms of dementia. This term can help the public understand the development of dementia (i.e., from mild cognitive impairment to dementia). In the DSM-V, “dementia” has been renamed as “major neurocognitive disorder” which is basically equivalent to “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome), because “症 *zhèn*g” (“disease” or “syndrome”) represents this condition has been serious. Although some acute syndromes, such as delirium, lead to cognitive impairment, this term is still deemed most scientifically accurate compared with other options. Many medical practitioners in Mainland China have used this term to replace “痴呆症 *chī dāi zhèng*” (Stupidity and Idiocy Syndrome). The Hong Kong government and hospitals have used this term since 2012. Among the 21 participants, 13 chose this term as the most scientifically accurate and culturally appropriate term. I quote one participant’s statement to prove the potential benefits of using this term, ‘*Since the name changes* *(to cognitive impairment syndrome), I feel that public attitudes have improved; relatives are more open-minded, taking their elderly family members to see a doctor sooner and ensuring they undergo necessary tests and treatment. The public's understanding of the condition has also grown, with people now searching for information online. These are all positive developments*. (P16)'

Therefore, this study proposes "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) as the most scientifically accurate and culturally appropriate Chinese term for "dementia".

6.2.2 What translation process can produce CALU translations of dementia-related public health information?

The traditional forward and backward translation approach has often been adopted to translate clinical and research questionnaires to achieve high scientific accuracy. This is a 4-step translation process: (i) the source text (ST) is translated by professional translators; (ii) the translators review and reach an agreed translation; (iii) the agreed translation is back-translated by independent translators from the forward translators to the source language; and (iv) the forward translators, the backward translators and health experts compare the backward translation and the ST, and discuss the discrepancies to reach an agreed translation. However, this approach assumes that the higher the similarity between the ST and the back translation, the better the quality of the forward translation. This assumption fails to consider the linguistic understandability and the cultural acceptability of the translation, which means that this 4-step process overlooks how well the target readers accept the translation.

Regarding translating dementia-related public health information, a CALU translation process was designed in this study to fix the problems in the forward and backward translation model. This CALU translation process is a 7-step process: (i) a professional translator provides the literal translation of the ST and highlights any places that may be incomprehensible for the target readers; (ii) the translator makes cultural and linguistic adaptations, and the second translation reviews and adjusts the translation to minimise the negative psychological effects and improve the linguistic understandability; (iii) both translators provide an agreed back translation of the adapted translation from the last step; (iv) health experts check the scientific accuracy of the back translation; (v) the verified translation is given to the community members to test and get feedback from them; (vi) the community feedback is integrated into the translation which is then back-translated; (vii) health experts check the scientific accuracy and negotiated with both translators to reach an agreed translation which is the CALU translation.

6.2.3 What translation strategies can produce CALU translations of dementia-related public health information?

Through post-editing, the machine translation can achieve good accuracy. Nevertheless, only human translators are qualified to provide public health information translation in Australia. In English, using plain English has been common sense for public health information writers. Yet, translators should realise that translating plain English is not equivalent to plain translation. Accordingly, translators need to be linguistically competent to produce plain translations to facilitate target readers' understanding. Additionally, existing research highly suggests that public health information translation should undergo cultural adaptations to target different cultural groups. For the cultural adaptation, this can be achieved through the translators' adjustments and the community feedback. Thus, translators should be culturally competent in translating public health information.

This study was informed by the key principles of dynamic equivalence, functional equivalence, and pragmatic equivalence and aligned with the core values of existing dementia-inclusive language guidelines in developing the CALU translation strategies. The CALU translation strategies are divided into three dimensions: scientific accuracy (SA), cultural appropriateness (CA), and linguistic understandability (LA). The detailed strategies are: "use scientific accurate terms and expressions (SA 1)", "use culturally relevant and plain words (CA 1)", "use culturally relevant and plain expressions (CA 2)", "use culturally relevant examples (CA 3)", "use culturally positive language (CA 4)", "use explicit language (LU 1)", "omit unnecessary words and expressions (LU 2)", and "use short sentences (LU 3)".

6.2.4 Are CALU translations more acceptable than normal translations from the perspective of target readers?

The study compared a CALU translation and a NAATI-standard translation by surveying target readers. The respondents were either individuals aged 65 years or older or their adult family members. This study found that the respondents (62.6%; N=87) generally preferred the CALU translation. Moreover, only 16.5% (N=23) of respondents preferred the NAATI-standard translation, and 20.9% (N=29) of respondents held that both versions are the same. Respondents who were younger, secular, Mandarin-speaking, and who used the online format tended to prefer the CALU translation. Through the thematic analysis of survey comments, this study found that respondents, who favoured the CALU translation, thought it is plainer, easier to understand, friendlier, and more colloquial, positive, explicit, and detailed than the NAATI-standard translation. This study adopted a mixed-methods approach to qualitatively and quantitatively support the effectiveness and acceptability of the CALU translation.

6.3 Implications

6.3.1 Renaming Dementia in Chinese

This study has some important practical implications. Previous studies merely discussed the stigma caused by the Chinese term "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome). This is the first study that systematically analyses existing Chinese terms for dementia in terms of scientific accuracy and cultural appropriateness. The study proposes "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) as the most scientifically accurate and culturally appropriate Chinese term for "dementia". This proposal has been recognised by Dementia Australia. In its previous Chinese versions (see Figure 10 and Figure 11) of *The Dementia Guide*, Dementia Australia adopted "痴呆症 *chī dāi zhèng*" (Stupidity and Idiocy Syndrome) and "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome) to represent "dementia". In its latest Chinese version (see Figure 12), Dementia Australia has adopted "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive

Impairment Syndrome) to replace “脑退化症 *nǎo tuì huà zhèng*” (Brain Degeneration Syndrome). This study’s outcome has been widely reported by SBS Australia (Huang, 2025) and the University of Sydney (Blake, 2025)

Dementia
Australia®

癡呆症
指南

為癡呆症患者、
他們的家人和照
顧者服務。

Figure 10 2023 Chinese Version of the Dementia Guide (Dementia Australia, 2023)

Figure 11 2024 Version of The Dementia Guide (Dementia Australia, 2024)

Figure 12 2025 Version of The Dementia Guide (Dementia Australia, 2025)

Moreover, this study has attracted considerable attention from Alzheimer's Disease International and other dementia experts from the Asia-Pacific region. I have been invited to the Asia-Pacific Regional Symposium (New Era of Dementia Care) in 2025 to present the results with other dementia experts. This study is expected to inform the health authorities in Chinese-speaking regions about the necessity to adopt a scientifically accurate and culturally appropriate term for "dementia".

With regard to the methodological implications, this study provides a methodological approach for researchers and health authorities to rename stigmatised health conditions. When renaming a health condition, both scientific accuracy and cultural appropriateness should be fully considered. Health and medical experts from different regions should be involved rather than a single origin.

6.3.2 The CALU Translation Model

The CALU translation model (i.e., CALU translation process and strategies) has been applied to dementia campaigns, "Face Dementia" and "Facing Dementia Together". In both campaigns, the participants demonstrated a clear understanding of the CALU translations. Moreover, they proactively took printed copies of the CALU-translated materials home to share with their relatives and friends. I also helped Dementia Australia identify translation problems in its Chinese materials to provide a more CALU Chinese translation. The CALU translation model has been reported by the University of Sydney (Lim, 2024)

The CALU translation model has been empirically backed up. In the future, this translation model can be further applied when translating other stigmatised health condition-related information. Health information providers can reference the CALU translation model to provide CALU translations for multicultural communities. Health translators should also refer to the CALU translation strategies and recommendations. When they translate public health information, it is vital to maintain the scientific accuracy and cultural appropriateness. When appropriate, translators should also actively consult authoritative sources to ensure the scientific rigour and reliability of the translated content.

6.4 Limitations

This research has some limitations that should be acknowledged. These limitations relate not only to the individual studies reported in the thesis, but also to the extent to which the findings can be generalised, operationalised, and translated into large-scale public health practice.

6.4.1 Sampling Constraints and Representativeness

The study of renaming dementia in Chinese relied on interviews with dementia experts. This was appropriate for evaluating the scientific accuracy of Chinese dementia terms, because dementia experts are well positioned to assess whether a term reflects the clinical and conceptual features of dementia. However, expert perspectives cannot fully represent how lay Chinese-speaking communities understand, feel about, and use these terms in everyday life. The absence of lay community members in this part of the research means that the study cannot determine whether the proposed term “认知障碍症 *rèn zhī zhàng ài zhèn*g” (Cognitive Impairment Syndrome) is equally acceptable, familiar, memorable, and usable among different groups of Chinese-speaking community members, including older people, carers, recent migrants, people with lower literacy, and people living with dementia.

The study of renaming dementia study also adopted snowball sampling. Although this approach was useful for recruiting a specialised and relatively hard-to-reach group of Chinese-speaking dementia experts, it may have produced a more homogeneous sample than a broader recruitment strategy would have achieved. Participants connected through professional networks may share similar disciplinary assumptions, clinical vocabularies, or attitudes towards terminology reform. As a result, the findings should be interpreted as expert-informed evidence rather than as a representative account of all Chinese-speaking dementia professionals.

Sampling constraints also affected the survey study. Respondents were recruited through convenience sampling, including online networks and one Chinese aged care service provider. This recruitment strategy allowed access to target readers, but it limits the representativeness of the sample. Most respondents were based in New South Wales, and the offline sample was shaped by the community settings in which the survey was distributed. Therefore, the findings cannot be assumed to represent all Chinese-speaking Australians or Chinese-speaking communities internationally.

6.4.2 Methodological Limitations of Empirical Studies

The empirical studies relied substantially on self-reported evaluations. In Chapter 5, participants were asked to indicate which translation they preferred in relation to readability, understandability, familiarity, trustworthiness, persuasiveness, cultural appropriateness, willingness to share, and overall preference. These are important reader-response measures, especially because CALU translation is concerned with how target readers receive translated health information. However, self-reported preference does not necessarily correspond to actual comprehension, recall, stigma reduction, information-sharing behaviour, or help-seeking behaviour.

The translation comparison survey also had several design limitations. The order of the two translations was not counterbalanced, which means that order effects cannot be ruled out. The survey font size was relatively small for some older participants, particularly those completing the paper version. In addition, the translation comparison section was placed at the end of a longer survey consisting of 50 questions. Respondents may therefore have experienced fatigue before reaching the translation comparison section. These factors may have influenced their ability or willingness to compare the two versions carefully.

The survey was conducted before Dementia Australia adopted "认知障碍症 *rèn zhī zhàng ài zhèn*g" (Cognitive Impairment Syndrome) in its Chinese materials. For this reason, the CALU translation tested in Chapter 5 used "脑退化症 *nǎo tuì huà zhèng*" (Brain Degeneration Syndrome), the term adopted by Dementia Australia at that time.

This should be taken into account when interpreting the relationship between the terminology reform proposed in Chapter 2 and the reader-response findings reported in Chapter 5.

6.4.3 Lack of Comprehension and Behavioural Outcome Measures

This thesis did not directly measure comprehension, knowledge gain, recall, stigma reduction, or behavioural change. Although the survey included perceived understandability, persuasiveness, trustworthiness, and willingness to share, these remain self-reported indicators. They do not show whether readers actually understood more information, remembered it better, felt less stigma after reading it, discussed dementia with family members, searched for further information, or sought medical advice earlier.

This limitation is important because the broader purpose of dementia-related public health communication is not only to produce preferred translations, but also to improve dementia literacy, reduce stigma, and encourage timely help-seeking. The findings of this thesis therefore provide evidence for the acceptability and perceived effectiveness of CALU translation, but they should not be read as definitive evidence of behavioural impact. Demonstrating such impact would require further studies using comprehension tests, pre/post stigma measures, recall tasks, behavioural intention measures, and longitudinal or implementation-focused designs.

6.4.4 Limits of Generalisability across Texts, Language Pairs and Health Conditions

The CALU translation process and strategies were developed and illustrated using dementia-related English source texts from the Face Dementia and Facing Dementia Together campaigns. These materials were produced within a specific public health context and shared a relatively consistent writing style. As a result, the strategies identified in this thesis may not capture all translation challenges that arise in other health topics, genres, institutions, or language pairs. This thesis focused on English-to-Chinese translation. The proposed CALU framework may be relevant to other language pairs, but its specific strategies cannot be assumed to transfer directly. Other languages and cultures may involve different stigma mechanisms, literacy issues, idiomatic conventions, religious associations, and health-system concepts. The CALU framework should therefore be treated as an adaptable framework rather than a fixed template.

6.4.5 Practical Limitations of Upscailing CALU Translation

While CALU translation has clear applied potential, adopting it at scale would involve practical challenges. CALU translation requires more than a professional translator working alone. It involves translator reflection, expert review, community feedback, back-translation, and iterative revision. This process may require additional time, funding, trained personnel, community partnerships, and institutional commitment.

6.5 Future Studies

Future studies should build on the findings and limitations of this thesis by moving from expert evaluation and reader preference towards community validation, experimental testing, cross-linguistic comparison, and implementation research.

6.5.1 Community Validation of Chinese Dementia Terminology

Future research should examine how lay Chinese-speaking community members perceive different Chinese terms for dementia. Such studies should include older Chinese-speaking people, family carers, people living with dementia, recent migrants, long-term migrants, and people with different levels of education and Chinese literacy. This would complement the expert-based findings of this thesis by testing whether "认知障碍症 *rèn zhī zhàng ài zhèng*" (Cognitive Impairment Syndrome) is not only scientifically accurate and professionally acceptable, but also understandable, emotionally acceptable, memorable, and usable in everyday community settings. This research could use focus groups, interviews, and survey experiments. For example, participants could be asked to explain what each term means, rate its emotional valence, identify whether it sounds stigmatising, and indicate whether they would use it when speaking with family members or health professionals.

6.5.2 Experimental Testing of CALU Translation Outcomes

Future studies should test CALU translations using outcome measures beyond self-reported preference. A counterbalanced experimental design could compare CALU translations with conventional professional translations across several outcome domains, including actual comprehension, recall, perceived stigma, emotional burden, trust, willingness to share, and help-seeking intention. This would allow future research to determine whether CALU translations not only feel more acceptable to readers, but also improve understanding and support the behavioural goals of dementia-related public health communication.

Such studies could also examine whether CALU effects differ by age, education, migration history, Chinese reading proficiency, language spoken at home, and prior dementia experience. This would provide a stronger theoretical test of CALU as a reader-oriented, culturally responsive translation model.

6.5.3 Larger and More Representative Reader-response Studies

Future reader-response studies should use larger and more diverse samples. Recruitment should extend beyond one state and one community service provider, and should include Chinese-speaking communities across different Australian states and territories, as well as Chinese-speaking populations in Mainland China, Hong Kong, Taiwan, Malaysia, and Singapore. A larger sample would also allow more robust multivariable analysis and the testing of potential interactions, such as whether survey format effects differ by age, education, or Chinese reading proficiency.

Future surveys should also use counterbalanced translation order, larger font sizes, shorter translation-focused instruments, and separate online and paper design optimisation. These improvements would reduce order effects, accessibility problems, and survey fatigue.

6.5.4 Cross-linguistic and Cross-condition Applicaitons of CALU Translation

Future research should test whether CALU translation can be adapted to other language pairs and other stigmatised health conditions. Dementia is only one example of a health condition where terminology and translation can intensify fear, shame, or avoidance. CALU translation may also be relevant to public health information about mental illness, cancer, disability, HIV, infertility, and other conditions that carry stigma in particular cultural communities.

Cross-linguistic research should not simply replicate the English–Chinese strategies presented in this thesis. Instead, it should investigate how stigma, plain-language needs, cultural appropriateness, and pragmatic equivalence operate differently across languages and communities. This would help determine which aspects of CALU translation are generalisable and which need to be locally adapted.

6.5.5 Corpus-based Analysis of Existing Public Health Translations

Future studies could conduct corpus-based and critical discourse analyses of existing multilingual dementia resources released by health authorities and professional organisations. This research could examine how dementia is named, how people with dementia are described, whether translated materials use literal or culturally adapted language, and whether stigmatising or deficit-based expressions appear across language versions. Such work would provide a broader evidence base for identifying common translation problems and refining CALU strategies.

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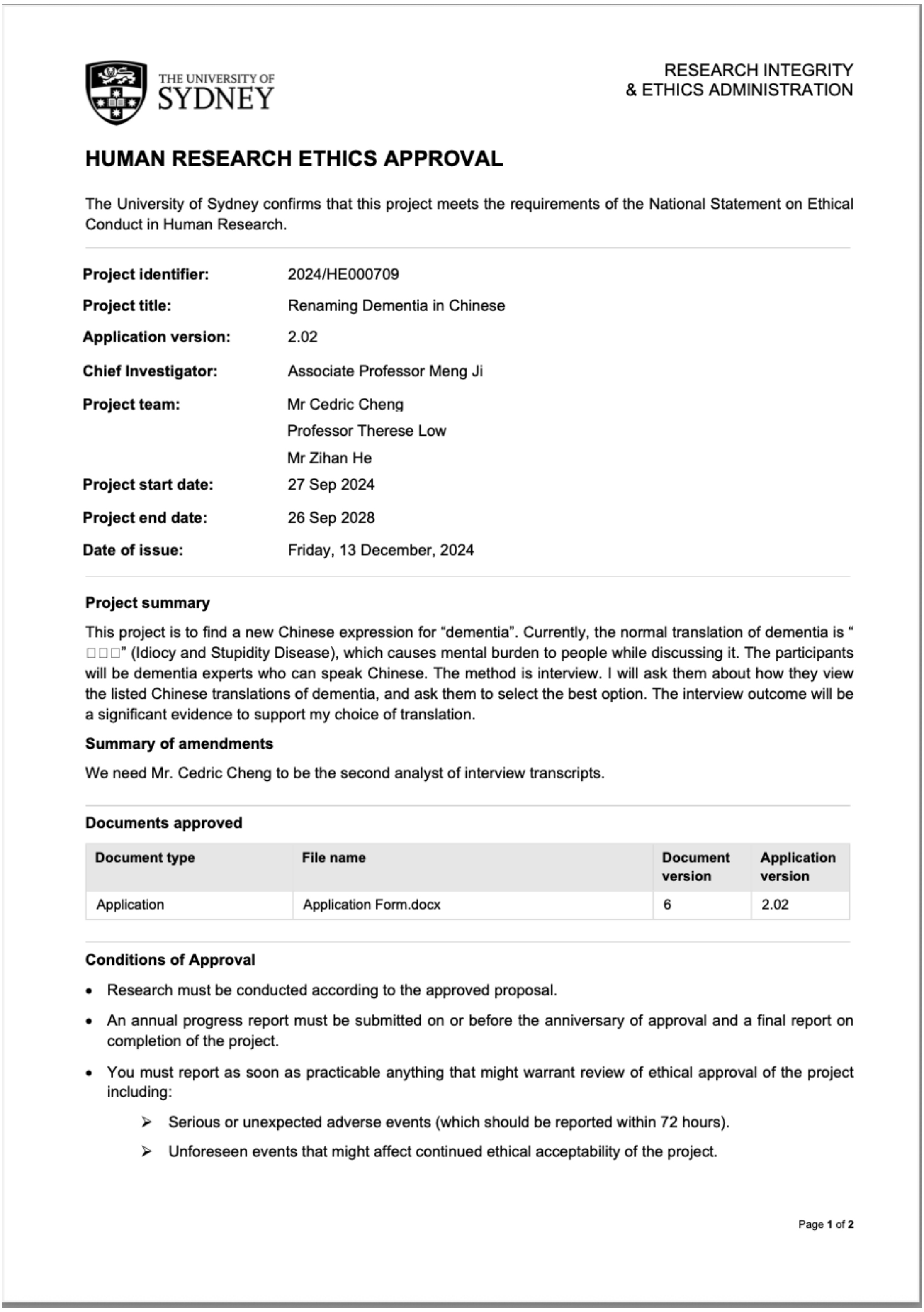
Appendix A – Human Ethics Approval 2024/HE000709



THE UNIVERSITY OF SYDNEY

RESEARCH INTEGRITY
& ETHICS ADMINISTRATION

HUMAN RESEARCH ETHICS APPROVAL

The University of Sydney confirms that this project meets the requirements of the National Statement on Ethical Conduct in Human Research.

Project identifier:	2024/HE000709
Project title:	Renaming Dementia in Chinese
Application version:	2.02
Chief Investigator:	Associate Professor Meng Ji
Project team:	Mr Cedric Cheng Professor Therese Low Mr Zihan He
Project start date:	27 Sep 2024
Project end date:	26 Sep 2028
Date of issue:	Friday, 13 December, 2024

Project summary

This project is to find a new Chinese expression for “dementia”. Currently, the normal translation of dementia is “□□□” (Idiocy and Stupidity Disease), which causes mental burden to people while discussing it. The participants will be dementia experts who can speak Chinese. The method is interview. I will ask them about how they view the listed Chinese translations of dementia, and ask them to select the best option. The interview outcome will be a significant evidence to support my choice of translation.

Summary of amendments

We need Mr. Cedric Cheng to be the second analyst of interview transcripts.

Documents approved

Document type	File name	Document version	Application version
Application	Application Form.docx	6	2.02

Conditions of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted on or before the anniversary of approval and a final report on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
    - Serious or unexpected adverse events (which should be reported within 72 hours).
    - Unforeseen events that might affect continued ethical acceptability of the project.

Page **1** of **2**

- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Researchers working on this project must be sufficiently qualified by education, training, and experience for their role, or adequately supervised. Changes to the project team must be reported and approved.
- Researchers must disclose any actual, potential of perceived conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Research data and primary materials must be retained and stored in accordance with relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures, and governance requirements.
- If your research project is a clinical trial and is being sponsored by the University or is to be conducted on a University of Sydney site, you must comply with additional University governance requirements prior to commencing your Clinical Trial.
- The University may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

Ethics Committee Representative

Chair
On behalf of the University of Sydney

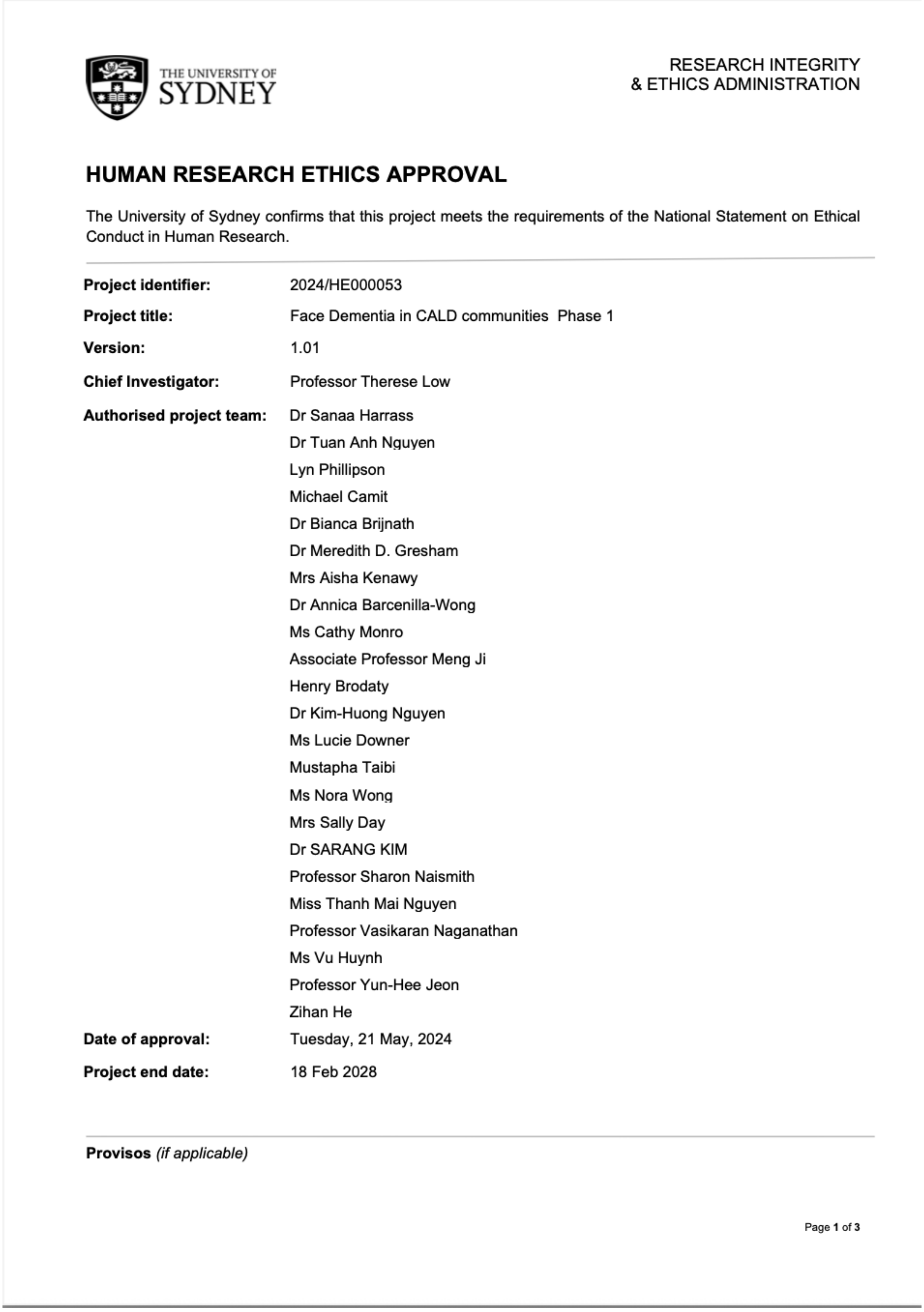
The University of Sydney HRECs are constituted and operate in accordance with the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research (NHMRC). All personnel named on the project should be acquainted with these documents.

Research Integrity & Ethics Administration
Research Portfolio
Level 3, Michael Spence Building (F23)
The University of Sydney
NSW 2006 Australia

T +61 2 9036 9161
E human.ethics@sydney.edu.au
W intranet.sydney.edu.au/ethics

ABN 15 211 513 464
CRICOS 00026A

Appendix B – Human Ethics Approval 2024/HE000053



THE UNIVERSITY OF
SYDNEY

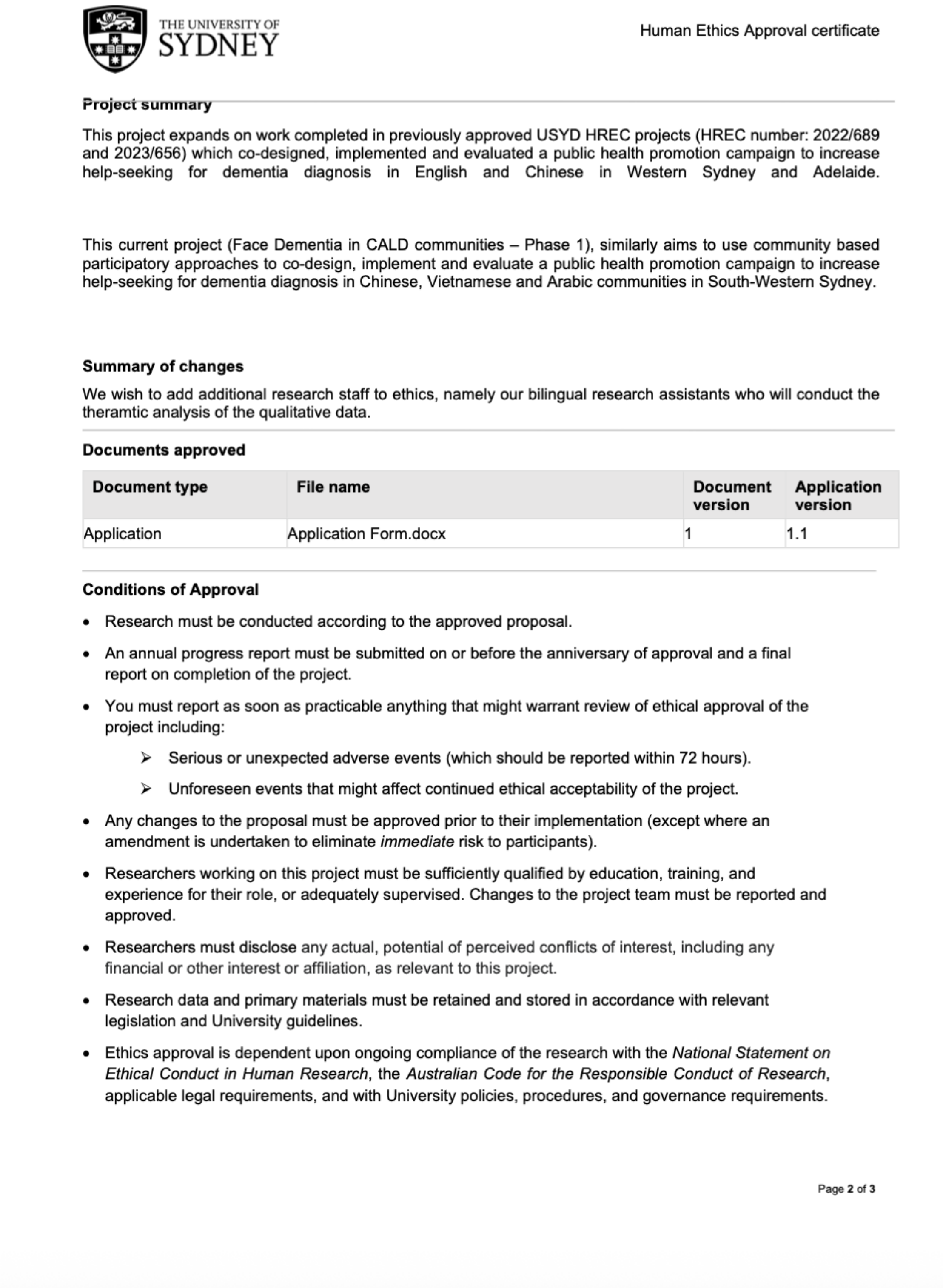
RESEARCH INTEGRITY
& ETHICS ADMINISTRATION

HUMAN RESEARCH ETHICS APPROVAL

The University of Sydney confirms that this project meets the requirements of the National Statement on Ethical Conduct in Human Research.

Project identifier:	2024/HE000053
Project title:	Face Dementia in CALD communities Phase 1
Version:	1.01
Chief Investigator:	Professor Therese Low
Authorised project team:	Dr Sanaa Harrass Dr Tuan Anh Nguyen Lyn Phillipson Michael Camit Dr Bianca Brijnath Dr Meredith D. Gresham Mrs Aisha Kenawy Dr Annica Barcenilla-Wong Ms Cathy Monro Associate Professor Meng Ji Henry Brodaty Dr Kim-Huong Nguyen Ms Lucie Downer Mustapha Taibi Ms Nora Wong Mrs Sally Day Dr SARANG KIM Professor Sharon Naismith Miss Thanh Mai Nguyen Professor Vasikaran Naganathan Ms Vu Huynh Professor Yun-Hee Jeon Zihan He
Date of approval:	Tuesday, 21 May, 2024
Project end date:	18 Feb 2028

Provisos *(if applicable)*



Project summary

This project expands on work completed in previously approved USYD HREC projects (HREC number: 2022/689 and 2023/656) which co-designed, implemented and evaluated a public health promotion campaign to increase help-seeking for dementia diagnosis in English and Chinese in Western Sydney and Adelaide.

This current project (Face Dementia in CALD communities – Phase 1), similarly aims to use community based participatory approaches to co-design, implement and evaluate a public health promotion campaign to increase help-seeking for dementia diagnosis in Chinese, Vietnamese and Arabic communities in South-Western Sydney.

Summary of changes

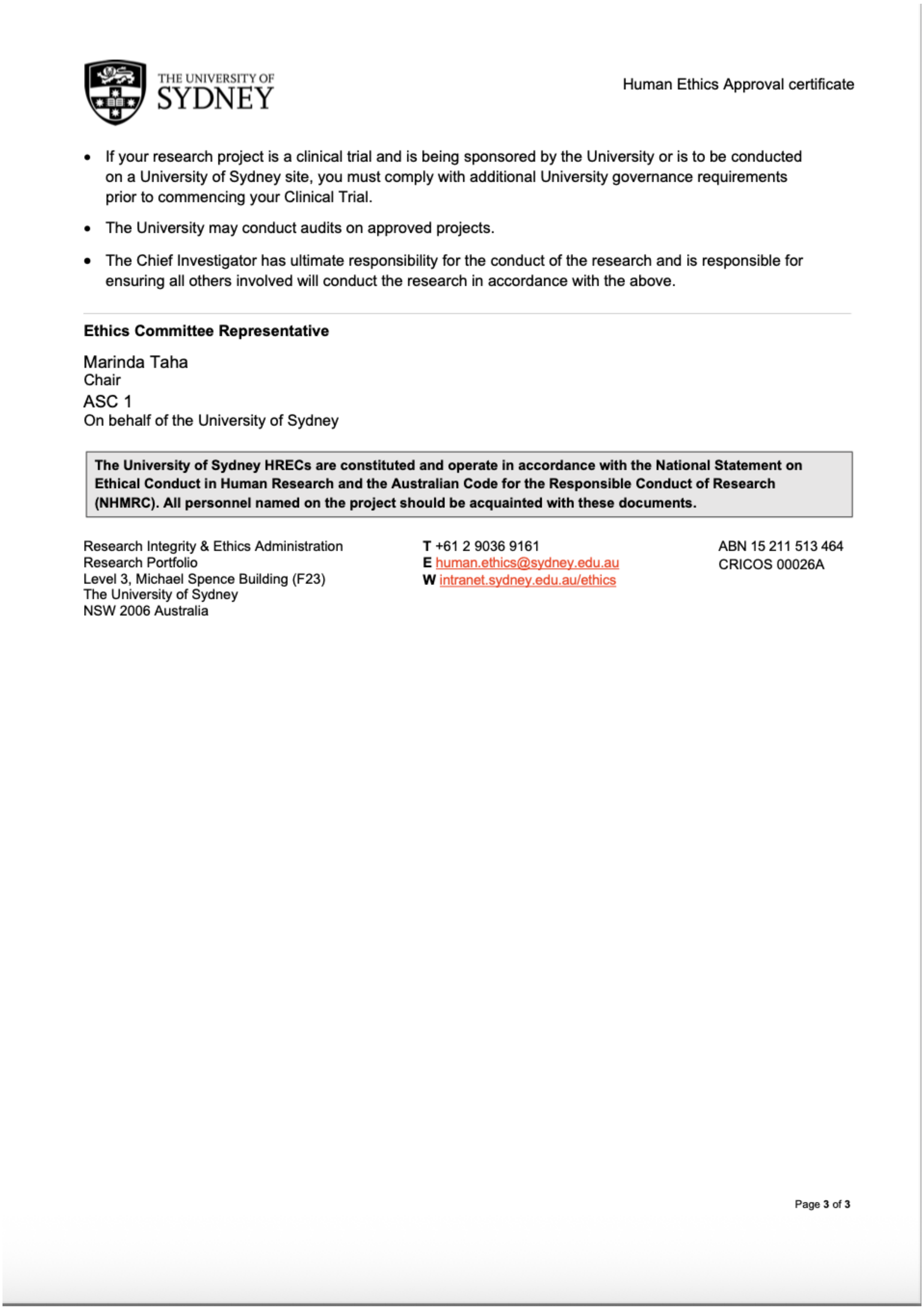
We wish to add additional research staff to ethics, namely our bilingual research assistants who will conduct the theramtic analysis of the qualitative data.

Documents approved

Document type	File name	Document version	Application version
Application	Application Form.docx	1	1.1

Conditions of Approval

- Research must be conducted according to the approved proposal.
- An annual progress report must be submitted on or before the anniversary of approval and a final report on completion of the project.
- You must report as soon as practicable anything that might warrant review of ethical approval of the project including:
    - Serious or unexpected adverse events (which should be reported within 72 hours).
    - Unforeseen events that might affect continued ethical acceptability of the project.
- Any changes to the proposal must be approved prior to their implementation (except where an amendment is undertaken to eliminate *immediate* risk to participants).
- Researchers working on this project must be sufficiently qualified by education, training, and experience for their role, or adequately supervised. Changes to the project team must be reported and approved.
- Researchers must disclose any actual, potential of perceived conflicts of interest, including any financial or other interest or affiliation, as relevant to this project.
- Research data and primary materials must be retained and stored in accordance with relevant legislation and University guidelines.
- Ethics approval is dependent upon ongoing compliance of the research with the *National Statement on Ethical Conduct in Human Research*, the *Australian Code for the Responsible Conduct of Research*, applicable legal requirements, and with University policies, procedures, and governance requirements.



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Human Ethics Approval certificate

- If your research project is a clinical trial and is being sponsored by the University or is to be conducted on a University of Sydney site, you must comply with additional University governance requirements prior to commencing your Clinical Trial.
- The University may conduct audits on approved projects.
- The Chief Investigator has ultimate responsibility for the conduct of the research and is responsible for ensuring all others involved will conduct the research in accordance with the above.

Ethics Committee Representative

Marinda Taha
Chair
ASC 1
On behalf of the University of Sydney

The University of Sydney HRECs are constituted and operate in accordance with the National Statement on Ethical Conduct in Human Research and the Australian Code for the Responsible Conduct of Research (NHMRC). All personnel named on the project should be acquainted with these documents.

Research Integrity & Ethics Administration
Research Portfolio
Level 3, Michael Spence Building (F23)
The University of Sydney
NSW 2006 Australia

T +61 2 9036 9161
E human.ethics@sydney.edu.au
W intranet.sydney.edu.au/ethics

ABN 15 211 513 464
CRICOS 00026A

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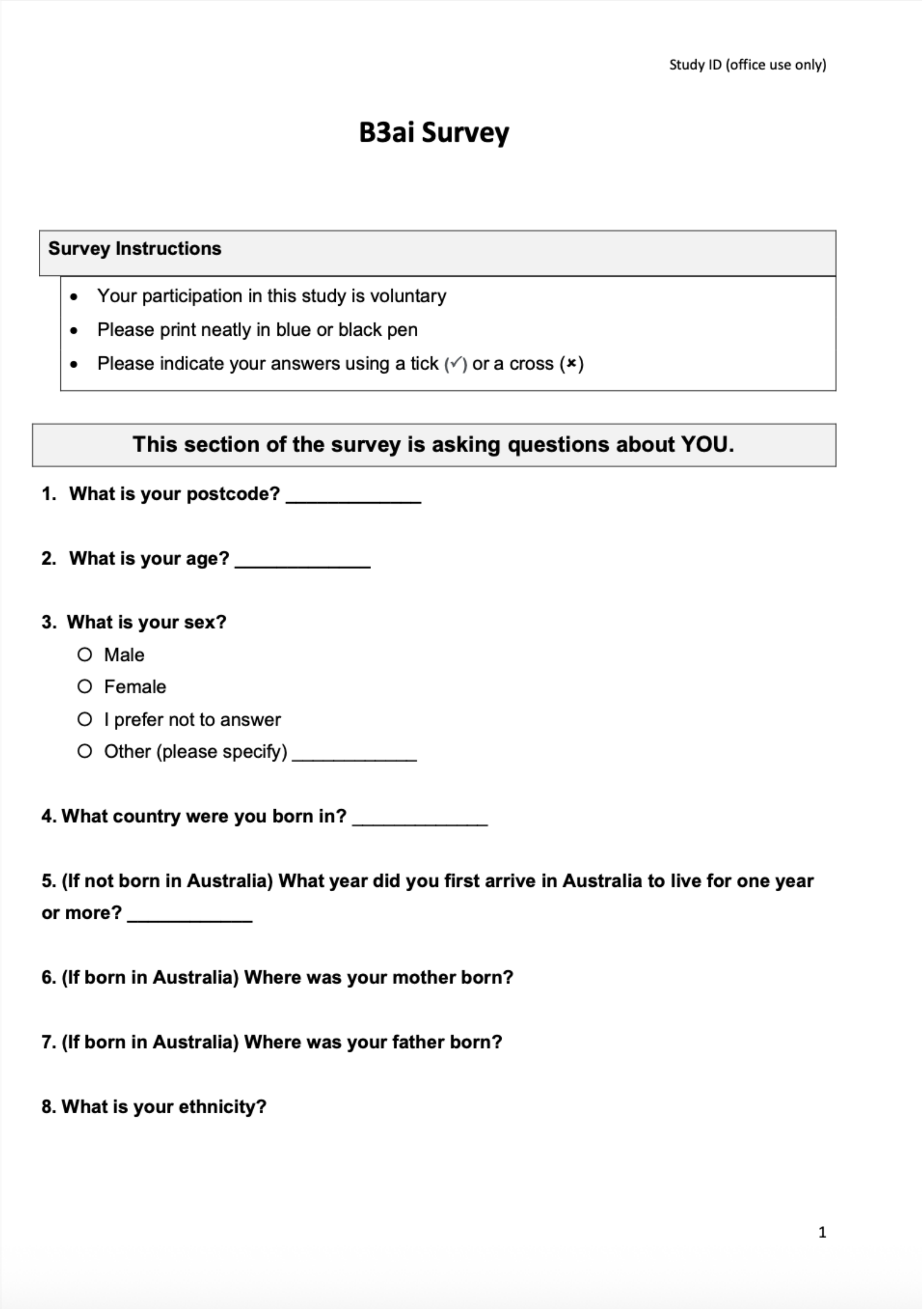
Appendix C – Translation Survey (English)



Study ID (office use only)

B3ai Survey

Survey Instructions

- Your participation in this study is voluntary
- Please print neatly in blue or black pen
- Please indicate your answers using a tick (✓) or a cross (×)

This section of the survey is asking questions about YOU.

1. What is your postcode? _____________

2. What is your age? _____________

3. What is your sex?

○ Male
○ Female
○ I prefer not to answer
○ Other (please specify) ____________

4. What country were you born in? _____________

5. (If not born in Australia) What year did you first arrive in Australia to live for one year or more? ____________

6. (If born in Australia) Where was your mother born?

7. (If born in Australia) Where was your father born?

8. What is your ethnicity?

9. What language do you speak at home? (Select all that apply.)

- ○ English
- ○ Arabic
- ○ Cantonese
- ○ Mandarin
- ○ Vietnamese
- ○ Other (please specify which language) ____________

10. How well do you read in [Language]?

Very well Well Not well Not at all

11. How well do you read in English?

Very well Well Not well Not at all

12. What is your religion?

Buddhism | Christianity | Hinduism | Islam | Judaism | Other | Secular/no religion | Did not answer

13. What is the highest qualification you have completed?

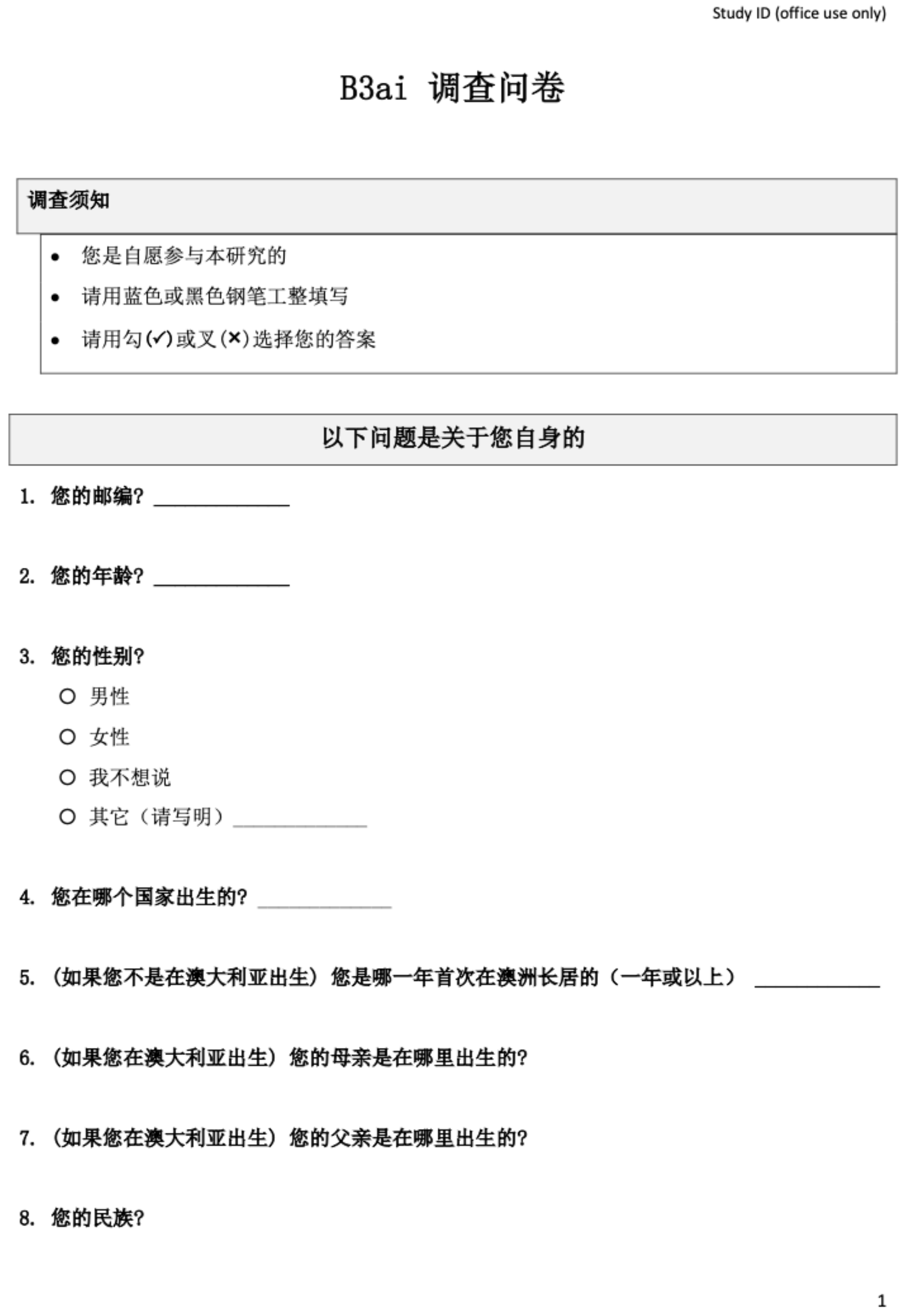
- ○ Did not complete primary school
- ○ Primary school
- ○ Secondary school (high school)
- ○ TAFE (Certificate/Trade)
- ○ University (Undergraduate or Postgraduate)
- ○ Other (please specify) _______________

	Version 1	Version 2	They are the same
42. Which version is easier to read?			
43. Which version is easier to understand?			
44. Which version uses words that feel more familiar?			
45. Which version is more trustworthy?			
46. Which version is more convincing?			
47. Which version is more appropriate for you and your community?			
48. Which version are you more likely to share with friends and family?			
49. Which version do you prefer?			

50. Additional comments here:

Thank you for completing the survey!

Appendix D – Translation Survey (Simplified Chinese)



Study ID (office use only)

B3ai 调查问卷

调查须知

- 您是自愿参与本研究的
- 请用蓝色或黑色钢笔工整填写
- 请用勾(✓)或叉(×)选择您的答案

以下问题是关于您自身的

1. 您的邮编？ ______________

2. 您的年龄？ ______________

3. 您的性别？

○ 男性

○ 女性

○ 我不想说

○ 其它（请写明）______________

4. 您在哪个国家出生的？ ______________

5. （如果您不是在澳大利亚出生）您是哪一年首次在澳洲长居的（一年或以上） ____________

6. （如果您在澳大利亚出生）您的母亲是在哪里出生的？

7. （如果您在澳大利亚出生）您的父亲是在哪里出生的？

8. 您的民族？

9. 您在家使用什么语言？（可多选）

- ○ 英语
- ○ 阿拉伯语
- ○ 广东话
- ○ 普通话
- ○ 越南语
- ○ 其它（请写明具体语言）____________

10. 您觉得您这门语言的阅读能力如何?

非常好　　好　　不好　　一点也不好

11. 您觉得您的英文阅读能力如何?

非常好　　好　　不好　　一点也不好

12. 您的宗教信仰是什么?

佛教 ｜ 基督教 ｜ 印度教 ｜ 伊斯兰教 ｜ 犹太教 ｜ 其他 ｜ 不信教 ｜ 不回答

13. 您的最高学历是?

- ○ 小学没读完
- ○ 小学
- ○ 中学（包括高中）
- ○ 职业高中（比如澳大利亚 TAFE 职业技术教育学院）
- ○ 大学（本科或研究生）
- ○ 其它(请写明) _______________

14. 您是否认识（或曾经认识）患有阿尔茨海默氏症或其他类型痴呆症(又称“认知障碍症”、“脑退化症”、“失智症”)的人？（可多选）

- □ 否
- □ 是，我的家庭成员
- □ 是，我的朋友
- □ 是，其它(请写明)：_________________

这是两版关于痴呆症的信息

版本 1

有些人因担心自己或至亲罹患失智症而害怕接受诊断，他们为此感到焦虑、恐慌或担忧。 以下内容可帮助您缓解此类情绪。

直面恐惧和焦虑

“我担心如果确诊罹患失智症，这将对我的生活带来什么影响。”

对于很多人来说，确诊罹患失智症确实让人痛苦，但一些患者有时也会感到如释重负。接受诊断可帮助您了解您所经历的变化并为将来作打算，这是积极的一步。

诊断可帮助您维持生活上的独立自主

“我害怕失去独立自主的能力，我也害怕去疗养院。”

您可能担心确诊罹患失智症会让您或您的至亲失去独立自主的能力。 您需要知道，影响您自主能力的是失智症本身，而不是诊断过程。超过三分之二的失智症患者生活在我们周围。确诊罹患失智症并不等于您将需要护理服务。失智症患者可以为自己和他人做很多事情。 获得帮助（例如清洁护理或搭乘交通工具）并不意味着我们无法掌控自己的生活。

版本 2

不管是为自己还是为亲戚朋友，只要是去医院检查是否得了脑退化（俗称“痴呆症”），对一些人来说，就会感到恐惧和担忧。以下的信息能帮您消除恐惧。

直面恐惧和焦虑

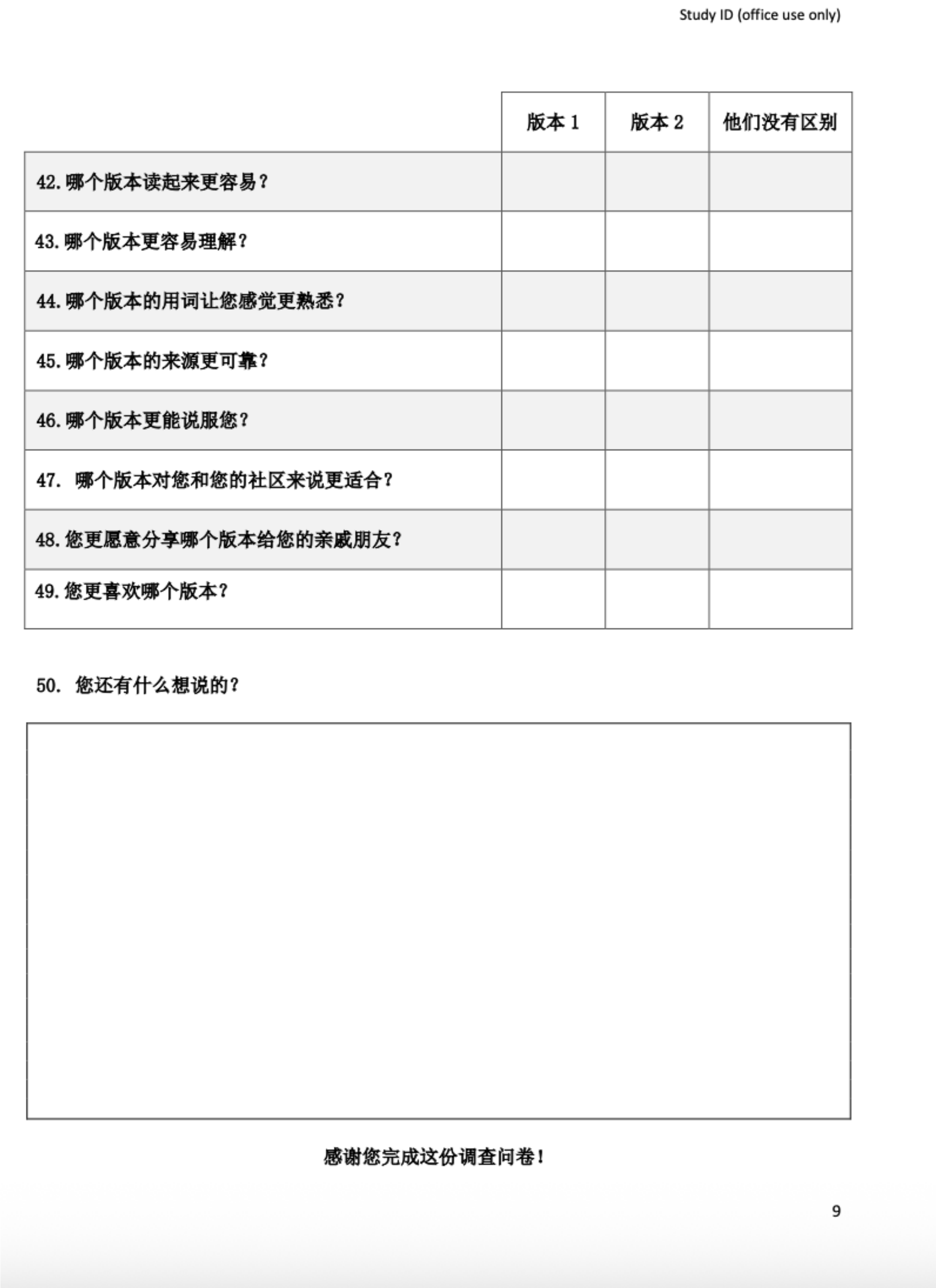
“我很害怕一旦确诊脑退化，我的生活就会受到影响。”

您可能会担心确诊脑退化会让人非常焦虑。虽然很多人都会有这种担心，但有时人们也会因为确诊而感到如释重负。确诊未必是一件坏事，因为您现在就可以理解为什么自己在生活中出现了这些变化（比如思维、行动、记忆等方面），从而更好地为将来做打算。

及时确诊，生活无忧

“我害怕丧失基本的生活自理能力，害怕进养老院。”

您可能害怕确诊脑退化会让您或您的亲戚朋友失去生活自理的能力。但真正造成影响的是脑退化的症状，而不是诊断结果。超过三分之二的脑退化患者仍然生活在社区中。确诊并不代表您就会被送到护理机构。脑退化患者依旧可以为自己和他人做很多事情。同时，得到帮助（例如有人帮您打扫卫生或陪同您出行）也不意味着您生活不能自理。



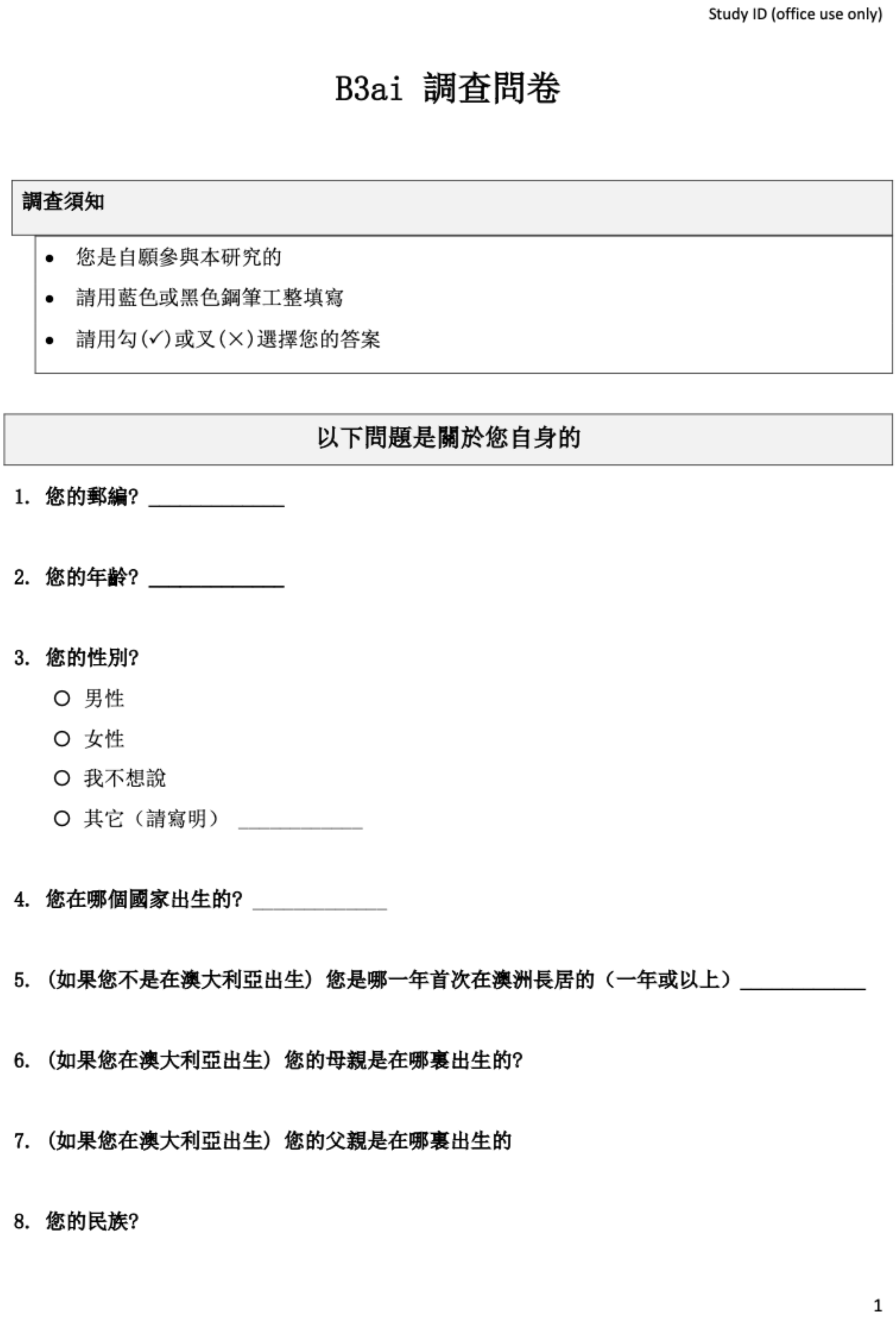
Study ID (office use only)

	版本 1	版本 2	他们没有区别
42. 哪个版本读起来更容易？			
43. 哪个版本更容易理解？			
44. 哪个版本的用词让您感觉更熟悉？			
45. 哪个版本的来源更可靠？			
46. 哪个版本更能说服您？			
47. 哪个版本对您和您的社区来说更适合？			
48. 您更愿意分享哪个版本给您的亲戚朋友？			
49. 您更喜欢哪个版本？			

50. 您还有什么想说的？

感谢您完成这份调查问卷！

Appendix E – Translation Survey (Traditional Chinese)



Study ID (office use only)

B3ai 調查問卷

調查須知

- 您是自願參與本研究的
- 請用藍色或黑色鋼筆工整填寫
- 請用勾(✓)或叉(×)選擇您的答案

以下問題是關於您自身的

1. **您的郵編? ____________**

2. **您的年齡? ____________**

3. **您的性別?**
   - ○ 男性
   - ○ 女性
   - ○ 我不想說
   - ○ 其它（請寫明） ____________

4. **您在哪個國家出生的? ____________**

5. **（如果您不是在澳大利亞出生）您是哪一年首次在澳洲長居的（一年或以上） ____________**

6. **（如果您在澳大利亞出生）您的母親是在哪裏出生的?**

7. **（如果您在澳大利亞出生）您的父親是在哪裏出生的**

8. **您的民族?**

9. 您在家使用什麼語言？（可多選）

○ 英語
○ 阿拉伯語
○ 廣東話
○ 普通話
○ 越南語
○ 其它（請寫明具體語言）____________

10. 您覺得您這門語言的閱讀能力如何？

非常好　　好　　不好　　一點也不好

11. 您覺得您的英文閱讀能力如何？

非常好　　好　　不好　　一點也不好

12. 您的宗教信仰是什麼？

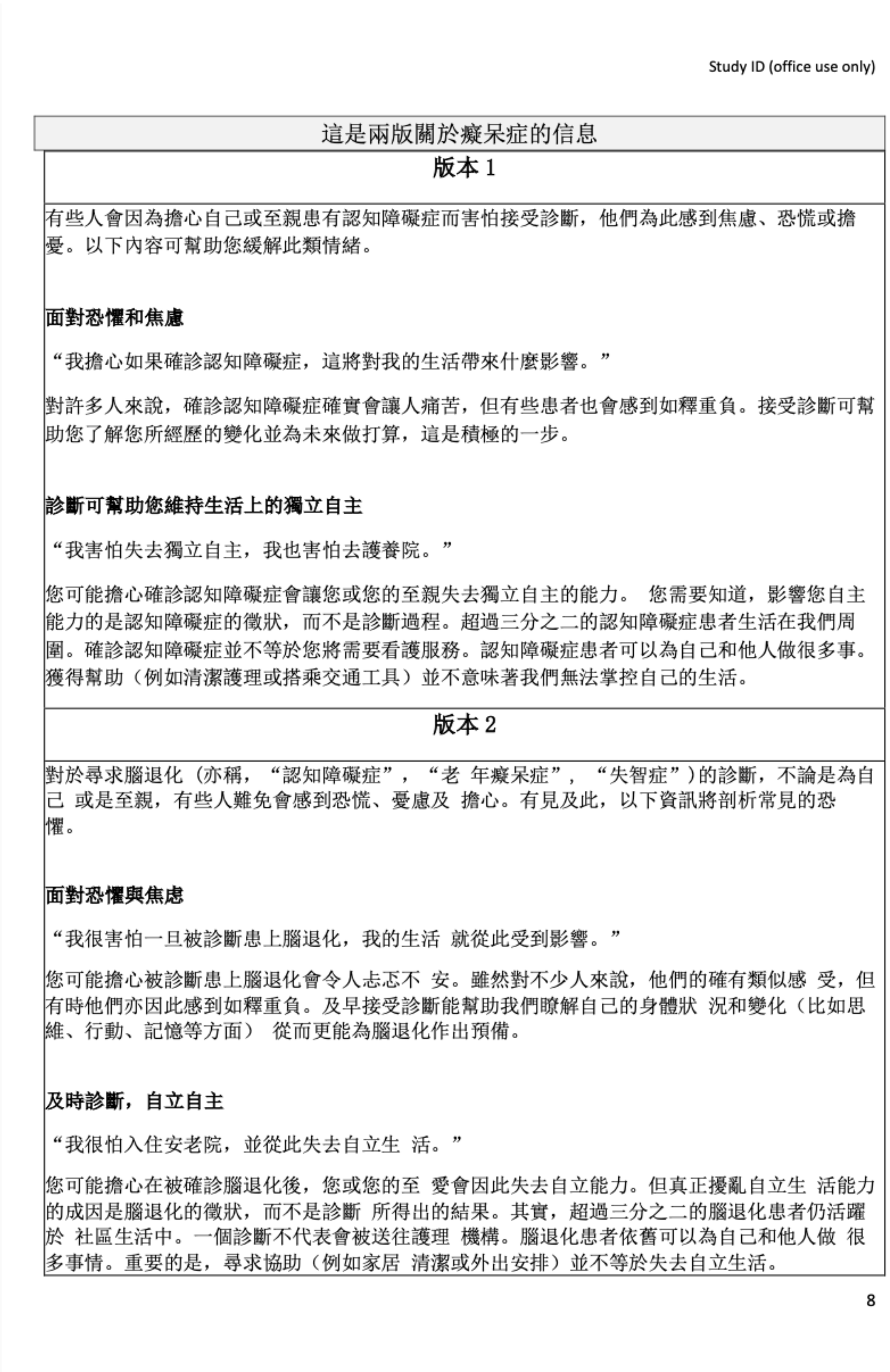
佛教 ｜ 基督教 ｜ 印度教 ｜ 伊斯蘭教 ｜ 猶太教 ｜ 其他 ｜ 不信教 ｜ 不回答

13. 您的最高學歷是？

○ 小學沒讀完
○ 小學
○ 中學（包括高中）
○ 职业高中（比如澳大利亞 TAFE 職業技術教育學院）
○ 大學（本科或研究所）
○ 其它(請寫明）_______________

14. 您是否認識（或曾經認識）患有阿爾茨海默氏症或其他類型癡呆症(又稱“認知障礙症”、“腦退化症”、“失智症”)的人？（可多選）

□ 否
□ 是,我的家庭成員
□ 是,我的朋友
□ 是,其它（请寫明）: _________________



Study ID (office use only)

這是兩版關於癡呆症的信息

版本 1

有些人會因為擔心自己或至親患有認知障礙症而害怕接受診斷，他們為此感到焦慮、恐慌或擔憂。以下內容可幫助您緩解此類情緒。

面對恐懼和焦慮

“我擔心如果確診認知障礙症，這將對我的生活帶來什麼影響。”

對許多人來說，確診認知障礙症確實會讓人痛苦，但有些患者也會感到如釋重負。接受診斷可幫助您了解您所經歷的變化並為未來做打算，這是積極的一步。

診斷可幫助您維持生活上的獨立自主

“我害怕失去獨立自主，我也害怕去護養院。”

您可能擔心確診認知障礙症會讓您或您的至親失去獨立自主的能力。 您需要知道，影響您自主能力的是認知障礙症的徵狀，而不是診斷過程。超過三分之二的認知障礙症患者生活在我們周圍。確診認知障礙症並不等於您將需要看護服務。認知障礙症患者可以為自己和他人做很多事。獲得幫助（例如清潔護理或搭乘交通工具）並不意味著我們無法掌控自己的生活。

版本 2

對於尋求腦退化 (亦稱，“認知障礙症”，“老 年癡呆症”，“失智症”)的診斷，不論是為自己 或是至親，有些人難免會感到恐慌、憂慮及 擔心。有見及此，以下資訊將剖析常見的恐懼。

面對恐懼與焦慮

“我很害怕一旦被診斷患上腦退化，我的生活 就從此受到影響。”

您可能擔心被診斷患上腦退化會令人忐忑不 安。雖然對不少人來說，他們的確有類似感 受，但有時他們亦因此感到如釋重負。及早接受診斷能幫助我們瞭解自己的身體狀 況和變化（比如思維、行動、記憶等方面） 從而更能為腦退化作出預備。

及時診斷，自立自主

“我很怕入住安老院，並從此失去自立生 活。”

您可能擔心在被確診腦退化後，您或您的至 愛會因此失去自立能力。但真正擾亂自立生 活能力的成因是腦退化的徵狀，而不是診斷 所得出的結果。其實，超過三分之二的腦退化患者仍活躍於 社區生活中。一個診斷不代表會被送往護理 機構。腦退化患者依舊可以為自己和他人做 很多事情。重要的是，尋求協助（例如家居 清潔或外出安排）並不等於失去自立生活。

8

	版本 1	版本 2	它們沒有區別
42. 哪個版本讀起來更容易？			
43. 哪個版本更容易理解？			
44. 哪個版本的用詞讓您感覺更熟悉？			
45. 哪個版本的來源更可靠？			
46. 哪個版本更能說服您？			
47. 哪個版本對您和您的社區來說更適合？			
48. 您更願意分享哪個版本給您的親戚朋友？			
49. 您更喜歡哪個版本？			

50. 您還有什麼想說的？

感謝您完成這份調查問卷！