



Enhancing Cross-Cultural Communication and Cognitive Health through Chinese Papercutting:

A Comparative Study of
Welsh and Chinese Adults

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DECLARATION

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STATEMENT 1

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This thesis represents a significant journey of academic and personal growth.

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ABSTRACT

This thesis explores the innovative intersection of traditional Chinese papercutting art with cognitive health and cross-cultural communication within the Welsh context. It introduces the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" as a pioneering intervention, an original contribution to the field, designed to enhance cognitive health and foster cultural exchange. By integrating theories from neuroscience, cognitive psychology, art therapy, and cultural studies, this research demonstrates how Chinese papercutting stimulates cognitive functions through stimulating neural plasticity, enhancing psychological well-being, and promoting social integration and cross-cultural understanding.

Central to this study are innovative workshops held in Wales, which serve as empirical sites to evaluate the model's efficacy. Specifically, these workshops facilitated rich data collection through participatory observation, surveys, and interviews, thereby bridging the gap between theoretical insights and practical applications. To further validate the model, the research employed two case studies targeting local Welsh individuals and Chinese immigrants to compare the intervention's effects across cultural backgrounds. The findings reveal significant cognitive, emotional, and social benefits, underscoring the potential of traditional arts such as papercutting in contemporary cognitive health interventions and cross-cultural learning environments. Moreover, this comparative approach enriches the study by providing insights into the model's versatility and effectiveness across diverse demographics.

In terms of contributions, the thesis makes substantial advancements to knowledge and practice by constructing an original theoretical model elucidating the cognitive and social benefits of Chinese papercutting; innovating research methodology by integrating participatory workshops as both intervention and data collection tools; and demonstrating the model's practical application and effectiveness in enhancing cognitive health and promoting cultural exchange. Furthermore, this research advocates for the inclusion of traditional arts in public health strategies and educational curricula, highlighting their roles of in advancing global understanding and cooperation. Ultimately, the study invites further interdisciplinary research and practical exploration into using artistic activities for cognitive health enhancement, community engagement, social cohesion, and cultural integration in an increasingly globalised society.

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Chapter 1 Introduction to the Inquiry

In the contemporary era, characterised by an unparalleled rate of global aging, the imperative of cognitive health has come to the fore, presenting a unique set of challenges and opportunities for societies and healthcare systems (WHO,2022). This study investigates the role of traditional art, particularly Chinese papercutting, in non-pharmacological cognitive enhancement within the context of Wales. By introducing the original "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*," this research aims to examine the potential benefits of engaging with Chinese papercutting, a traditional art form, for cognitive health among elderly populations, not only facilitating cognitive improvement but also fostering cross-cultural understanding.

Moreover, this research adopts a comprehensive approach, exploring the effects of Chinese papercutting on cognitive functions and emotional well-being across diverse cultural backgrounds, with a focus on Welsh and Chinese communities in Wales. It posits that participation in Chinese papercutting activities could significantly contribute to maintaining and enhancing cognitive health, supporting the idea that traditional arts serve as valuable tools for therapy and multicultural engagement (Guo, 2005; Yang, 2008). Therefore, the study bridges theoretical concepts with practical applications, demonstrating Chinese papercutting's efficacy in cognitive health interventions and its capacity to encourage cultural exchange and understanding in a multicultural setting (Bowers & Shilton, 2021; Gavron et al., 2021).

Additionally, this research merges firsthand experiences with academic inquiry, investigating the intersection between neuroplasticity—the brain's capacity to form new neural connections (Draganski et al., 2004; Kandel et al., 1998; Kolb& Gibb, 2014)—and the healing power of traditional art. While the benefits of art therapy are well-documented (Malchiodi, 2012; Stuckey & Nobel, 2010), its integration with neuroscience and cognitive enhancement from a cross-cultural perspective—specifically through the lens of a particular Chinese papercutting—remains relatively unexplored (Small & Vorgan, 2008). Therefore, this study seeks to bridge the gap between cultural traditions and modern therapeutic approaches, highlighting the potential of Chinese papercutting as a unique and effective intervention.

Consequently, the study embarks on validating the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*. This endeavour combines theoretical frameworks with practical applications. It uses workshops with Welsh locals and Chinese immigrants in Wales as a method to test the model's effectiveness in using Chinese papercutting for cognitive health benefits.

In summary, this thesis critically examines the interconnections among art, cognitive health, and cultural diversity, ultimately presenting a pioneering model designed to enhance

cognitive health and facilitate cross-cultural understanding through traditional art forms. This research aims to make significant contributions to the fields of art therapy, cognitive enhancement, and cultural studies.

1.1 Background and Context

Addressing the global challenge of an aging population, societies worldwide pay more attention to managing cognitive health, especially as conditions like dementia and Mild Cognitive Impairment (MCI) become increasingly prevalent. These conditions not only impact individual well-being but also place considerable strain on healthcare infrastructures, underscoring the need for innovative interventions (Thomas & Gutchess, 2020; National Institute on Aging, 2021). Within this context, the integration of art with cognitive health emerges as a promising field of study, engaging interdisciplinary research across art, culture, health, and social sciences (Konopka, 2014; Granger, 2014; Yan et al., 2021; Zhao, 2020).

Moreover, in our interconnected global landscape, effective cross-cultural communication is crucial, especially in devising strategies that resonate with the diverse cultural backgrounds of aging populations (Lifintsev & Wellbrock, 2019; Pethtel & Chen, 2010). Art's potential to rejuvenate the mind and enhance cognitive abilities, particularly for the elderly, is supported by research, suggesting its unique ability to bridge cultural and generational gaps (Demarin et al., 2016; Im & Lee, 2014).

This study delves into the intricate relationship between traditional Chinese papercutting and cognitive health, investigating its dual potential as a medium for cognitive enhancement and as a tool for fostering cross-cultural communication between Welsh and Chinese communities. This research aims to illuminate the synergistic relationship between cultural engagement and cognitive well-being, promoting mutual understanding and stronger connections between diverse cultural groups (British Council, 2020; Ren et al., 2022; Wales Art International, 2019; Yang, 2012).

1.1.1 The Global and Local Nexus of Aging and Cognitive Decline

Cognitive health becomes increasingly critical with age, encompassing conditions from dementia, predominantly Alzheimer's disease in the UK, to Mild Cognitive Impairment (MCI), a precursor to dementia (Cooper et al., 2013; Dementia UK, 2023; Lv et al., 2019; World Health Organisation, 2019). By 2025, the UK is projected to see over one million people living with dementia, highlighting the urgency for innovative cognitive intervention strategies (Vigliotti et al., 2018).

1.1.2 Exploring Solutions: From Pharmacological Interventions to Holistic Approaches

While pharmacological advancements, including drug treatments for MCI and dementia, represent significant strides, they also underscore the need for a broader, more holistic approach to cognitive health management. Criticisms of overreliance on pharmacological

solutions suggest the necessity of exploring non-pharmacological interventions, such as cognitive training, lifestyle modifications, and art therapy, as primary approaches (Braslow and Ellison, 2020; Braslow JT et al., 2021; Douglas, S et al., 2004). Art, including painting and music therapy, has emerged as a popular and effective means to enhance cognitive functions (Al-Obaydi et al., 2022; Bleibel et al., 2023; Golden et al., 2021).

1.1.3 Unveiling Chinese Papercutting: A Cultural Bridge to Cognitive Enhancement

This thesis focuses on Chinese papercutting, a non-pharmacological, culturally rooted intervention, to provide a comprehensive approach to cognitive health. Papercutting, a traditional Chinese art form, serves not only as a creative expression but also offers cognitive and social benefits, promoting mindfulness, creativity, and social cohesion (Chen, 2007; Chen, 2019; Huang, 2014; Jia, 2022; Mai et al., 2008; Qiao & Pei, 2021; TO et al., 2021). In the UK, the practice of papercutting reflects a unique contribution to paper craft, celebrating innovation and cultural identity (A.B. Корнієнко & І.Д. Бровко, 2020; Gildersleeve, 2014; Jones, C. 2003; Munro, 2022).

1.2 Purpose and Promise of the Study

This study delves into the cognitive health benefits that Chinese papercutting may bring to Welsh society, using participatory paradigm and cross-cultural lens. Furthermore, this exploration is pertinent in today's world where cognitive health is a key well-being indicator (Government & Cymru, 2021). Considering this, the thesis aims to illuminate the cognitive tapestry interwoven through the art of papercutting, contributing to both academic discourse and a deeper understanding of the value of traditional folk art in a globalised, AI-driven, and aging society.

1.2.1 Inquiry in Action: Research Questions and Hypotheses

This study examines the cognitive health benefits of engaging in Chinese papercutting for the aging population in Wales, focusing on the impact of cross-cultural exposure and participation. Specifically, it seeks to answer: "What are the cognitive and well-being advantages of cross-cultural engagement in Chinese papercutting among Wales's aging populations?"

Central to this investigation is the original "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*". It is hypothesised that active participation in Chinese papercutting will significantly enhance cognitive health and overall well-being among the elderly in Wales. This model posits that engaging in cross-cultural artistic activities can improve cognitive functions (Oliva et al., 2023; Kline, 2016), foster emotional well-being (Golden et al., 2021; Pifalo, 2007), and enhance social cohesion and cross-cultural understanding (Jones, 2019; Tepper & Gao, 2008; Tieri & Iosa, 2023).

The model integrates four key theoretical components. Firstly, from the perspective of Neuroscience and Neuroplasticity, engagement in Chinese papercutting is expected to stimulate brain plasticity, enhancing cognitive functions such as memory, attention, and problem-solving abilities (Draganski et al., 2004; Kandel et al., 1998). Secondly, according to Cognitive Psychology, the intricate and creative processes involved in papercutting are hypothesised to improve cognitive flexibility, emotional resilience, and psychological well-being (Langer, 1942; Malchiodi, 2012). Thirdly, the principles of Art Therapy suggest that the therapeutic aspects of papercutting provide emotional expression and psychological rehabilitation, contributing to overall mental health (Kline, 2016; Malchiodi, 2012; Stuckey & Nobel, 2010). Lastly, insights from Cross-Cultural Studies indicate that participating in this culturally enriching activity promotes cultural understanding, social integration, and community cohesion, supporting cognitive health (Berry, 1997; Hall, 1976; Marsella & Yamada, 2000; Zhao et al., 2019; Zhao et al., 2020).

By synthesising these theoretical components, the model aims to demonstrate that cross-cultural artistic engagement not only enhances cognitive function but also serves as a vital conduit for promoting overall cognitive health.

1.2.2 Framing the Exploration: Research Paradigm

This study adopts a participatory research paradigm, which emphasises collaboration between the researcher and participants, diverging from traditional neuroscience-focused and pharmacological methodologies. The participatory approach is chosen to align with the study's aim of exploring the cognitive and emotional impacts of Chinese papercutting within a cross-cultural context. By prioritising the lived experiences and active involvement of participants, this paradigm allows for a more nuanced understanding of how cultural practices influence cognitive health and emotional well-being (Denzin & Lincoln, 2018; Denzin et al., 2023;). A detailed exploration of this paradigm, along with other methodological considerations, is provided in Chapter 3, ensuring a robust foundation for the research design.

1.2.3 Charting the Course: Aims and Objectives

The primary aim of this thesis:

Unveil the Cultural and Cognitive Richness of Chinese Papercutting

Investigate the cultural heritage and historical depth of Chinese papercutting, emphasising its role in promoting cognitive health through artistic engagement and its capacity to facilitate meaningful cross-cultural communication (Aririguzoh, 2022; Guo, 2005; Zhang et al., 2022).

Bridge Traditional Arts and Cognitive Health

Explore the integration of traditional Chinese papercutting into contemporary cognitive enhancement strategies, highlighting the potential of this art form to enrich therapeutic

interventions and contribute to the cultural capital within a modern context (Haeyen et al., 2015; Malchiodi, 2012; Pifalo, 2007).

Assess the Chinese Papercutting Cross-Cultural Cognitive Enhancement Model

Rigorously evaluate the effectiveness of this innovative model in enhancing cognitive function and overall well-being among Wales's aging population, utilising Chinese papercutting as a vehicle for cross-cultural engagement and cognitive stimulation (Kline, 2016; Oliva et al., 2023; Small & Vorgan, 2008; Zhao et al., 2021;).

Expand the Model's Scope and Application

Validate the model's effectiveness and precision in promoting cognitive health, with an aim to explore its broader applicability across different cultural and demographic contexts, thereby establishing a foundation for future research and implementation in diverse settings (Deardorff & Arasaratnam-Smith, 2017; Deardorff, 2019;1976; Hofstede, 2001; Leuthold, 2010; Marsella & Yamada, 2000).

Specific objectives include:

Examination of the Historical and Cultural Roots

Unpacking the rich history and cultural underpinnings of Chinese papercutting, emphasising its significance in Chinese tradition and its evolution over time to become a celebrated form of intangible cultural heritage (Guo, 2005; Yang, 2008).

Map Papercutting's Presence and Engagement in Wales

Gauge the current level of awareness, interest, and engagement with Chinese papercutting within diverse communities in Wales, identifying key demographic groups and settings where papercutting could have the most significant impact (Belfiore & Bennett, 2008; Cohen, 1992; Putnam, 2000; Zhang et al., 2022).

Promote Cross-Cultural Understanding

Utilise Chinese papercutting as a dynamic tool to foster cross-cultural dialogue and understanding between Welsh and Chinese communities, exploring how this traditional art form can bridge cultural divides and enrich multicultural appreciation (Berry, 1997; Hofstede, 2001; Marsella & Yamada, 2000; Petrovsky et al., 2022; Zhao et al., 2019; Zhao et al., 2020).

Assess Impact on Cognitive Health

Investigate the effects of engaging in Chinese papercutting on the cognitive health of adults aged 45-70, focusing on measurable outcomes such as memory, attention, emotion, and mental flexibility to understand the potential cognitive benefits (Kandel et al., 1998; Zhao et al., 2021).

Develop Effective Participatory Workshop Models

Design comprehensive Chinese papercutting workshop models tailored to various settings and demographics across Wales. This involves determining the optimal content that is related to cognitive health enhancement, as well as timing, location, and method of delivery to maximise participation, engagement, and impact (Goldbard, 2020; Stokrocki, 2005).

Implement and Evaluate Workshops

Conduct workshops based on the developed model, employing structured methods and participatory observations to evaluate their effectiveness in enhancing cognitive health, fostering cross-cultural communication, and achieving the broader aims of the research (Malchiodi, 2012; Smith, 2006; Smith, 2015; Zhao, 2020).

Adapt and Optimise for Different Welsh Contexts

Refine the workshop model based on feedback and outcomes, ensuring it is adaptable to different regional and situational contexts within Wales, aiming for inclusivity and accessibility to all communities (Harrison, 2013; Jones & Taylor, 2019).

1.3 Unveiling New Horizons: The Significance of This Research

1.3.1 A Novel Paradigm: The Chinese Papercutting Cross-Cultural Cognitive Enhancement Model

This thesis introduces an original framework, the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*," which uniquely blends art, neuroscience, and cross-cultural insights. Unlike existing cognitive enhancement approaches, this model leverages the detailed artistry of Chinese papercutting as both a cultural practice and a strategic health intervention, setting a new precedent in the field (Guo, 2005; Harrison, 2013; Yang, 2008).

1.3.2 Theoretical Breakthroughs and Societal Contributions

Rooted in interdisciplinary scholarship, the model draws upon neuroplasticity's cognitive benefits (Kandel et al., 1998; Draganski et al., 2004), cognitive psychology's insights into art's psychological impacts (Langer, 1942; Malchiodi, 2012), and cross-cultural studies' frameworks for cultural exchange (Berry, 1997; Geertz, 1973; Hall, 1972). It uniquely synthesises these theories to illustrate how traditional art engagement not only supports cognitive health but also enriches cultural understanding (Stokrocki, 2005), offering a fresh perspective on art therapy and cognitive research.

1.3.3 Cultural Bridges and Cognitive Empowerment

Through the implementation of Chinese papercutting workshops in Wales, this model acts as a catalyst for cognitive health improvement and cultural integration. These workshops demonstrate the art form's ability to enhance cognitive function (Zeki, 2001; Small & Vorgan, 2008), facilitate cultural appreciation (Zhao, 2020;), and foster social cohesion (Bowers &

Shilton, 2021; Sawyer, 2012), exemplifying the model's practical applicability and societal benefits (Montgomery, 2021).

1.3.4 Interdisciplinary Methodology: Bridging Arts and Sciences

This research employs an innovative interdisciplinary approach, integrating qualitative methods such as interviews, art analysis, and participant observation with quantitative questionnaires. This dual approach ensures a comprehensive evaluation of Chinese papercutting's impact on cognitive health and cross-cultural understanding, showcasing the potential of combining arts and sciences to advance cognitive enhancement research (Barrett & Bolt, 2010; Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017).

1.3.5 Catalysing Global Cultural Dialogue and Cognitive Well-being

By exploring Chinese papercutting's role in cognitive health and cultural exchange, this study contributes to global dialogues on cultural diversity, heritage preservation, and mental health. It underscores the importance of integrating cultural art forms into cognitive health strategies (Smith, 2006; Jones, 2019), highlighting the model's relevance for diverse communities worldwide (Patel & Singh, 2020; Kim, 2012).

This research offers an innovative approach to addressing cognitive health issues through the lens of traditional art. By integrating Chinese papercutting into the broader context of cognitive health and cross-cultural understanding, the thesis not only contributes to academic discourse but also offers practical insights for the preservation and revitalisation of cultural heritage (Goldbard, 2006; Guo, 2005). The research's multidisciplinary nature underscores its relevance and potential impact in a rapidly changing, diverse global society (Stokrocki, 2005; Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017).

1.4 Mapping the Research Journey: Structure and Methodological Insights

1.4.1 Thesis structure overview

Literature Review:

This section lays the groundwork by exploring the intersections of neuroscience, cognitive psychology, art therapy theory and cross-cultural studies. It also delves into the rich tapestry of Chinese papercutting, situating it within historical, cultural, and anthropological discourses. This foundational review paves the way for understanding the multifaceted role of art in cognitive enhancement and cultural exchange.

Methodology Chapter:

Detailed insights into the mixed research methodology employed in this thesis are presented, highlighting the participatory paradigm that guides the exploration of participants' experiences with Chinese papercutting. This chapter will elucidate the rationale

behind choosing specific methodological tools such as surveys, interviews, and participatory observation, prior to the empirical aspects of the research.

Case Studies:

The core of the thesis revolves around two pivotal case studies — one focusing on Chinese immigrants in Wales and the other on Welsh locals. Each case study aims to uncover the nuanced impact of papercutting on cognitive health, cultural integration, and social connectivity, offering a rich, comparative analysis of the art form's influence across different community segments.

Discussion:

This segment synthesises the findings from the case studies with the theoretical discussions presented in the literature review. It critically analyses the outcomes, draw connections between theory and practice, and discusses the implications of papercutting as a tool for cognitive and cultural enhancement.

Conclusion:

Encapsulates the key findings, discusses the study's contributions to the fields of cognitive health, art therapy, and cross-cultural studies, and suggests directions for future research. It also reflects on the broader significance of integrating traditional arts into contemporary therapeutic practices and cultural dialogues.

1.4.2 Methodology Insights

This research is guided by the participatory paradigms, focusing on participants' experiences within papercutting workshops. A mix of surveys, semi-structured interviews, and participatory observation are employed to collect rich, nuanced data (Denzin & Lincoln, 2011; Creswell, 2013). This methodological blend, particularly the emphasis on participatory workshop, is designed to ensure a comprehensive understanding of the impact of Chinese papercutting on cognitive health and cross-cultural understanding, capturing the experiences from a holistic perspective (Patton, 2015).

Insight into the workshop methodology is especially pertinent as it highlights the practical application of theoretical concepts. By engaging participants in papercutting activities, the research aims to observe firsthand the cognitive and cultural shifts that occur, thereby grounding the study in practical experiences (Silverman, 2016). This focus on workshops as a methodological highlight offers a unique lens through which to examine the art form's efficacy in cognitive enhancement and cultural exchange, positioning the study at the intersection of art therapy, neuroscience, and cross-cultural studies (Merriam & Tisdell, 2015; Yin, 2018).

1.5 Setting the Stage: A Prelude to Discovery

This thesis traverses the complex landscape of global aging, with a specific focus on cognitive health and well-being, through the lens of Chinese papercutting. The structure, beginning with a theoretical literature review and transitioning to practical case studies, synthesises a holistic understanding of the subject (Kaptelinin & Nardi, 2018; Yin, 2018). The research, anchored in participatory paradigm, delves deep into the experiences of individuals engaged in papercutting, providing insights into its influence on cognitive health and cross-cultural understanding in Wales (Denzin & Lincoln, 2011; Merriam & Tisdell, 2015).

The findings are poised to make substantial contributions to non-pharmacological cognitive health practice, cross-cultural understanding, and art therapy. By highlighting cognitive benefits of engaging in a culturally rich art form, the study seeks to inspire innovative cognitive health methodologies (Hu et al., 2020; Zhao et al., 2021). It underscores the value of integrating cultural and artistic elements in enhancing cognitive health and well-being, with implications for healthcare, education, and community development policies and practices (Aririguzoh, 2022; Patel & Singh, 2020; Zhang et al., 2022).

Overall, this thesis presents a comprehensive exploration of art, culture, and cognitive health. It aims to enrich academic discourse with new perspectives on traditional art forms in cognitive health interventions and cross-cultural understanding (Leuthold, 2010; Marsella & Yamada, 2000; Montgomery, 2021; Zhao et al., 2019; Zhao, 2020;). The practical implications of this research are significant, offering innovative approaches for enhancing cognitive health in aging populations through culturally sensitive and creative methods (Goldbard, 2020; Jones & Taylor, 2019).

Chapter 2 Literature Review: Expanding Horizons

2.1 Introduction to Cognitive Challenges and Art's Therapeutic Potential

2.1.1 The Rising Tide of Cognitive Challenges in Aging Populations

The global demographic shift toward an older population presents significant challenges for public health systems, particularly in addressing the rising prevalence of cognitive decline and dementia (Fernandes et al., 2023; Grinin et al., 2023). According to the World Health Organisation (WHO, 2022), the number of people aged 60 years and older is projected to reach nearly 2.1 billion by 2050. This demographic change underscores the urgency of developing robust cognitive health strategies to effectively manage an aging population (Coradduzza et al., 2023). As this population increases, so does the focus on healthy aging, which is defined as maintaining optimal physical and mental health throughout the aging process (World Health Organisation, 2023).

Research highlighted in "The Lancet" (Livingston et al., 2020) underscores that dementia, a critical concern in cognitive health, presently affects approximately 50 million people worldwide, with nearly 10 million new cases emerging annually. Alongside dementia, Mild Cognitive Impairment (MCI)—positioned as an intermediary stage between optimal cognitive health and full-blown dementia—marks a crucial point on the cognitive disorder spectrum (Desai et al., 2023; Sherman et al., 2017). Meanwhile, the identification of MCI is particularly vital as it represents a pivotal opportunity for timely intervention (Stott & Spector, 2011). Therefore, addressing MCI and dementia within this continuum is essential for developing effective preventive strategies, highlighting the significance of this area of research in the broader context of cognitive health.

These conditions not only degrade the quality of life for affected individuals and their families but also impose substantial economic burdens on societies due to the escalating costs of healthcare and long-term care services. The economic impact varies significantly by country, reflecting differences in health and social care systems, with informal care costs often representing the largest financial strain (Morris et al., 2021; Meijer et al., 2022). Additionally, the burden of dementia disproportionately affects women, who not only experience higher rates of disability and mortality due to the disease but also provide most caregiving hours (Derreberry & Holroyd, 2019; Bamford & Walker, 2012). Consequently, this multifaceted impact of dementia highlights the critical need for countries to allocate a larger portion of their GDP to enhancing cognitive health frameworks and developing robust support systems for the aging population (Wang et al., 2008).

The emphasis on cognitive health demands innovative strategies that blend pharmacological and non-pharmacological approaches. This research explores how arts like papercutting can enhance cognitive functioning in the elderly, complementing traditional

treatments and offering holistic benefits that improve quality of life and reduce healthcare costs. Such integrated approaches underline the potential of arts-based therapies in comprehensive cognitive health interventions.

2.1.2 Global Strategies for Cognitive Decline: Integrating Pharmacological and Non- Pharmacological Approaches

Pharmacological treatments such as acetylcholinesterase inhibitors (AChEIs) have demonstrated effectiveness in various stages of dementia, significantly aiding in symptom management and cognitive function maintenance (Tariot, 2003). Concurrently, treatments like Memantine show promise for moderate to severe dementia, indicating an expansion of therapeutic options that cater to a broader range of dementia severity (Tariot, 2003). Additionally, emerging medical technologies promise to revolutionise treatment methodologies, enhancing life quality for the elderly, a development driven by the growing need to address the complex challenges of an aging population (Grinin et al., 2023).

Meanwhile, the significant impact of lifestyle factors on cognitive health is increasingly recognised within the healthcare community. Studies highlight how diet, physical activity, and social engagement—elements central to the "Blue Zones" concept—contribute to longevity and cognitive resilience (Buettner, 2016). This link is further supported by research showing that these lifestyle choices enhance neuroplasticity and overall cognitive function (Lourida et al., 2019; Peters et al., 2019; Willis & Miller, 2011). Additional research points to the effectiveness of modern lifestyle interventions in mitigating cognitive risks across diverse populations (Devranis et al., 2023; Ungvari et al., 2023). Moreover, targeted interventions like those explored by Lin et al. (2023) emphasise the potential benefits of specific non-pharmacological treatments, such as hearing aids, in mitigating cognitive decline in high-risk groups, providing valuable inspiration for exploring similar approaches like papercutting.

To effectively manage cognitive decline on a global scale, a holistic approach that synthesises medical, social, and economic insights is essential. Drawing from the foundational work of in "Global Ageing in the Twenty-First Century" (Crimmins et al., 2013), which details the complex interplay of health, social, and economic factors in aging populations, recent research by Livingston et al. (2017) and Sherman et al. (2017) further underscores the need for integrated strategies that combine medical interventions with lifestyle modifications. This approach is globally relevant, adapting to various cultural and economic contexts to enhance overall cognitive health.

Illustrating this concept, diverse strategies from South Korea, Scotland, and China demonstrate successful applications. South Korea's SUPERBRAIN program merges cognitive training with physical and social activities, effectively reducing dementia risk ("Korea Pro," 2023). Scotland's Brain Health Scotland initiative focuses on preventive education for the youth, promoting lifelong healthy brain habits ("Brain Health Scotland," 2023). Meanwhile, China leverages the Brain Cognitive Health Index to drive data-informed dementia

prevention policies (Wang, 2023). These cases exemplify how localised adaptations of comprehensive health strategies can address the challenges posed by cognitive decline in different settings, proving the global applicability and necessity of such integrated approaches.

The global response to cognitive decline requires a nuanced approach that integrates medical treatments, lifestyle modifications, and policy-based strategies. This comprehensive framework addresses the complex challenges of an aging global population and provides a sustainable roadmap for maintaining cognitive health throughout the lifespan.

2.1.3 Art as a Beacon of Hope: Non-Pharmacological Interventions

2.1.3.1 Integrating Non-Pharmacological Approaches in Cognitive Health Strategies

Pharmacological treatments, such as acetylcholinesterase inhibitors, are foundational in managing cognitive symptoms in individuals with Mild Cognitive Impairment (MCI); however, their limited effectiveness in halting disease progression necessitates exploration of complementary strategies (Cooper et al., 2013; Madhusoodanan & Ting, 2014). Considering this, there is growing empirical support for non-pharmacological interventions, which not only enhance cognitive function but also offer broader psychosocial benefits. Specifically, exercise, cognitive interventions (Gates et al., 2013; Reijnders et al., 2013; Petersen et al., 2018;), and innovative therapies such as art therapy have demonstrated significant potential in managing and possibly reversing the impacts of MCI (Arora et al., 2021; Horr et al., 2015; Magierski et al., 2020).

Research further emphasises the holistic advantages of integrating arts and cultural practices into cognitive health frameworks. These approaches engage not only the biological but also the social and psychological dimensions of cognitive disorders, providing a comprehensive treatment model (Braslow & Ellison, 2020; Julianne Holt-Lunstad, 2021). Empirical evidence supports the efficacy of these art-based interventions, showing marked improvements in cognitive performance, emotional well-being, and daily functional skills among dementia patients (Ross et al., 2023). A range of therapies including cognitive stimulation (Woods et al., 2012), cognitive training (Gates et al., 2020), occupational therapy (Bennett et al., 2019), reminiscence therapy (Woods et al., 2018), and aromatherapy (Forrester et al., 2014), supplemented by a novel group-based art appreciation and self-expression program (Okahashi et al., 2024), have shown promising results. These findings underscore the necessity of integrating diverse treatment modalities that address the complexities of MCI effectively, propelling non-pharmacological strategies to the forefront of cognitive health management.

2.1.3.2 Enhancing Art Therapy: Cultural Insights and Methodological Rigor

Art therapy not only provides psychological relief but also plays a crucial role in cognitive enhancement, offering a culturally resonant approach that spans various demographics. Studies by Im and Lee (2014) and Demarin et al. (2016) have documented improvements in psychological well-being and cognitive functions among elderly participants engaged in artistic activities. Additionally, the exploration of multisensory therapies by Douglas et al. (2004) further validates the efficacy of non-traditional treatments in cognitive care.

Cross-cultural research by Pethtel and Chen (2010) highlights significant differences in how various cultural backgrounds perceive and respond to art interventions, underscoring the need for adaptable strategies. In China, traditional art forms like papercutting have been proven effective in enhancing cognitive abilities and reconnecting elderly individuals with their cultural heritage (Chen, 2022; TO et al., 2021).

To maximise the effectiveness of these interventions, further research and validation in diverse populations are essential. Current studies often face methodological limitations, such as small sample sizes and a lack of cross-cultural comparisons, which future research must address to provide a more comprehensive understanding of the impact of art interventions on cognitive health.

In conclusion, the potential of art therapy, including culturally specific practices like Chinese papercutting, as a non-pharmacological intervention in cognitive health is evident (To et al., 2019). Establishing these practices as fundamental components of cognitive health strategies requires rigorous, culturally inclusive research. This effort calls for collaboration among researchers, healthcare professionals, and policymakers to ensure that these interventions are accessible, effective, and aligned with the cultural values and needs of diverse populations, fostering a more holistic approach to cognitive healthcare.

2.2 Neuroscience Meets Art: A Pathway to Enhanced Cognitive Health

2.2.1 The Impact of Art on the Brain: Neuroplasticity and Cognitive Renewal

2.2.1.1 Artistic Influence on Neural Adaptability

Neuroscience provides a compelling framework for understanding the transformative effects of art on cognitive health, through the lens of neuroplasticity—the brain's ability to reorganise itself by forming new neural connections in response to learning or experience. This concept is pivotal in appreciating how diverse artistic activities, such as painting, music, and movement, promote cognitive renewal and flexibility (Klorer, 2005; Dieterich-Hartwell, 2017). Research has demonstrated that engaging in these activities not only enhances specific cognitive functions but also general intellectual growth. For example, Merzenich et al. (2014) and Devranis et al. (2023) show that fine motor activities and creative tasks induce significant neuroplastic changes, improving cognitive abilities.

The activation of specific brain areas during art therapy, such as the occipital lobes and basal ganglia, underscores the profound impact of the arts on sensory and emotional processing, transcending traditional verbal communication (Lusebrink, 2004; Lusebrink, 2010). Artistic expression through these modalities allows for a complex interplay of thoughts and emotions, influencing executive functions and decision-making pathways (Fryman & McClellan, 2014). This is particularly relevant in the context of emotional regulation, a critical aspect of managing conditions like PTSD, where art therapy provides effective non-verbal strategies for managing emotional dysregulation (Badour & Feldner, 2013; Szabo et al., 2019).

Further exploring the specificity of artistic influence, engagement in visual arts like painting has been shown to enhance connectivity in the frontal lobes, critical for executive functions and problem-solving, thus fostering a richer network of neural connections crucial for cognitive flexibility and creativity (Schlegel et al., 2015). Similarly, learning to play musical instruments has been associated with improved cognitive functions, particularly in memory and attention, with studies such as those by Hyde et al. (2009) demonstrating that music training can significantly increase IQ scores and academic performance among children. Additionally, dance and movement practices not only enhance physical and emotional health but also support cognitive processes, aiding in social and emotional development (Dieterich-Hartwell, 2017). These diverse forms of artistic engagement collectively illustrate the powerful impact of the arts on neuroplasticity and cognitive renewal.

Studies also highlight how traditional crafts, such as Chinese papercutting, not only foster cognitive enhancement but also connect individuals to their cultural heritage, enhancing both spatial and temporal processing in the elderly—a key demographic in cognitive health research (Xu et al., 2020). The integration of these insights forms a solid foundation for advocating art as a viable non-pharmacological intervention, capable of addressing the multifaceted challenges of cognitive decline. By harnessing the unique benefits of artistic engagement, this research supports a holistic approach to cognitive healthcare, promoting sustained mental health and well-being across the lifespan.

2.2.1.2 Cross-Cultural Insights into Neuroplasticity

In the field of neuroplasticity, the impact of cultural activities on the brain has increasingly demonstrated its significance. Cultural activities not only shape the brain's structure and function but also reveal new dimensions of cognitive health through cross-cultural interactions (Cardoso-Leite & Bavelier, 2014). Deep engagement in culturally significant activities, such as Chinese papercutting, is proposed to enhance cognitive resilience and support cognitive health in the elderly (Park & Gutches, 2014).

Multilingual environments are extremely beneficial for enhancing cognitive functions and social cognitive skills by optimising information processing capabilities through improved

executive functions and neuroplasticity. This enhancement not only facilitates cross-cultural communication but also promotes brain adaptability and flexibility (Kartoshkina, 2022; Sharofova, 2024). Moreover, cultural self-construal, such as independent self-concepts, profoundly influence individual psychological processes that typically occur automatically in early brain processing, further highlighting the profound impact of cultural factors on brain structure and function (Kitayama et al., 2015).

The cultural environment significantly influences the development and functioning of the human brain. Throughout evolution, brain structure and function have been shaped by the complexities of social and cultural contexts, with this adaptability further reinforced by cultural transmission and social interactions (Gutchess, 2014). These dynamics underscore the critical role culture plays in forming and maintaining neurocognitive structures.

Empirical research also highlights the impact of cross-cultural engagement on neuroplasticity, promoting cognitive flexibility and adaptability (Kitayama et al., 2015). Such findings prompt a re-evaluation of the role that both traditional and modern cultural practices play in shaping cognitive functions. They also suggest that traditional arts could serve as potent cognitive intervention tools, harnessing the synergistic effects of culture and creativity.

Traditional arts like Chinese papercutting have been recognised not only as artistic expressions but also as culturally embedded tools that can enhance psychological well-being and cognitive functions, especially in older adults (Chen, 2008; Li, 2012; Wu, 2015; Zhang, 2019; Yan et al., 2021). Cross-cultural studies not only deepen our understanding of brain function within diverse cultural contexts but also inform the design of more effective cognitive intervention strategies (Willis & Miller, 2011).

2.2.2 Mind Matters: Cognitive Psychology's Perspective on Art and Healing

Within the framework of cognitive psychology, the interaction between art and cognitive health is manifested in several dimensions, including emotions, attention, resilience, and executive functions. This interaction extends beyond the study of brain plasticity, providing theoretical frameworks and practical guidance on how art interventions can positively impact cognitive health. Empirical evidence supports the effectiveness of art interventions in enhancing cognitive functions across various cultures and age groups, demonstrating their broad applicability and potential benefits (Park et al., 2014; Kitayama et al., 2015).

2.2.2.1 Cognitive Processes and Emotional Resilience in Artistic Engagement

Artistic activities significantly enhance cognitive functions such as executive functions and alertness, primarily because they continuously strengthen the brain's attention networks. Research by Posner & Petersen (1990, 2012) initially highlighted this interaction, demonstrating that engaging in art bolsters the brain's mechanisms for attention. More recent findings further validate this effect, showing that artistic creation activates neural

pathways related to attention and neuroplasticity, exemplifying the brain's adaptability through artistic engagement (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021). However, while these studies provide valuable insights into the general benefits of art, they often do not delve deeply into the effects of specific cultural art forms like papercutting, particularly on distinct cultures and age groups. This gap indicates a rich area for exploration, suggesting that cultural specificities may offer unique cognitive benefits not captured by broader research into more generalised forms of art.

Art activates areas of the brain associated with emotions, particularly the amygdala, playing a role in emotional regulation and psychological resilience (LeDoux, 1996). This effect is evident in mindfulness-based art therapy, which has been shown to significantly enhance emotional regulation capabilities. Newland and Bettencourt's (2020) systematic review and meta-analysis demonstrated that mindfulness-based art therapy effectively reduces symptoms of anxiety, depression, and fatigue. These studies emphasise the importance of integrating mindfulness and art to promote emotional health and psychological resilience (Hinchev, 2018; Stojcevski et al., 2023).

Further research is needed to fully explore the specific impacts of different art interventions on the cognitive health of elderly populations across diverse cultural backgrounds. Traditional arts are increasingly recognised for their role in promoting psychological well-being. Zhang et al. (2019) highlighted that creative engagement in cultural arts like ceramic and papercutting can enhance cognitive flexibility and innovative thinking. This aligns with anthropological research which underscores how cultural practices support psychological resilience and community health (Jones, 2019; Stern et al., 2019).

Art, by eliciting positive emotions, expands cognitive abilities, enhances creative thinking and problem-solving skills, and fosters social connections. The beneficial effects of positive emotions on social connectivity and cognitive functions have been demonstrated in practical settings (Fredrickson, 2001); further studies by Noice et al. (2009; 2014) have validated how participation in art projects significantly enhances social connectivity and cognitive functions, highlighting the positive effects of positive emotions in real-world settings.

2.2.2.2 Cross-Cultural Art and Cognitive Flexibility: A Cognitive Psychological Perspective

Art serves as a bridge for cross-cultural communication, playing a crucial role in enhancing cognitive flexibility. By engaging in art, individuals not only improve their executive functions and alertness but also enhance their ability to adapt to different cultural backgrounds through exposure to new cultural stimuli. This adaptability is achieved through continuous cognitive challenges and novel stimuli, which help to enhance neuroplasticity and cognitive flexibility (Engel et al., 2001; Dietrich, 2004).

Especially in cross-cultural settings, art interventions have shown unique benefits in enhancing individuals' abilities to adapt to new cultures and psychological resilience. Studies

indicate that participation in cultural and artistic activities like music and papercutting not only enhances task-switching capabilities but also strengthens cognitive adaptability (Hao et al., 2023). Additionally, group art therapy has been proven to help individuals increase self-esteem, effectively adapt to new cultural environments, and enhance their psychosocial functions (Kim, Y., 2024).

These research findings underscore the importance of incorporating artistic activities into cross-cultural cognitive health intervention strategies. To maximise the benefits of art, future research should systematically assess the long-term cognitive outcomes of art interventions and examine their specific effects across different cultural populations. This research will provide scientific bases and practical guidance for designing art intervention programs tailored to specific cultural needs (Fredrickson, 2001; Noice et al., 2014).

This comprehensive perspective not only deepens our understanding of the relationship between art and cognitive health but also highlights the importance of utilising artistic activities to promote cultural adaptability and cognitive health amidst globalising trends. This methodology offers substantial support and guidance for health promotion within a diversely global society. By fostering a more inclusive and empathetic global community through the universal language of art, this research can help to enhance cognitive flexibility and resilience, thereby improving overall mental health and well-being across various cultural landscapes (Aririguzoh, 2022; Lubart & Georgsdottir, 2004; Lubart, 2010).

2.3 Cultural Tapestry: The Richness of Chinese Papercutting

2.3.1 From Ancient Art to Modern Therapy: The Journey of Chinese Papercutting

Chinese papercutting, a traditional art form dating back to the second century AD, represents a profound aspect of Chinese cultural heritage. Chen (2007) and Huang (2014) establish its historical and cultural foundations, highlighting how this art originated from the ingenious efforts of Chinese labourers and evolved into a significant cultural practice. This evolution is further explored by Bo (2007) and Chen (2008), who delve into how papercutting not only captures the essence of Chinese cultural evolution but also serves as a living tapestry reflecting generations of artistic endeavour.

In contemporary settings, papercutting transcends its aesthetic value, embodying practical applications in cognitive enhancement and social connectivity. Chen (2019) and Mai et al. (2008) explore papercutting's therapeutic potentials, such as fostering mindfulness, creativity, and social cohesion, while TO et al. (2021), and Qiao & Pei (2021) investigate the efficacy of artistic activities in improving cognitive functions and facilitating cross-cultural communication. Further, Jia (2022) emphasises the papercutting's role in promoting communication skills and community building.

This multifaceted approach underscores a gap in existing research—there is a need for comprehensive, longitudinal studies that link traditional cultural practices like papercutting with quantifiable health outcomes. Scholars like Xu Yiyi (2005) and Guo Xian (2005) highlight in their papercutting research the potential cognitive implications of this art form, setting the stage for a deeper exploration of its role in cognitive health and therapy beyond the Chinese cultural context.

2.3.2 Cultural Heritage as Social Catalyst: The Role of Papercutting

Chinese papercutting, as a traditional folk art, holds significant potential in fostering community building and social cohesion (Stern & Seifert, 2008). Cultural heritage plays a critical role in shaping social identity and fostering a sense of belonging within communities (Chen, 2022; Smith, 2006; Smith 2020). Traditional arts act as symbolic constructions of community, creating and maintaining social bonds, which are essential for community development and cohesion (Cohen, 1985; Goldbard, 2006).

Research indicates that community arts projects significantly impact social cohesion by promoting community engagement and social bonds. For instance, community arts can serve as catalysts for social change, fostering community development and cohesion through collective artistic practices (Bowers & Shilton, 2021; Sklar, 2020). These arts not only preserve cultural heritage but also facilitate community building by bringing people together, enhancing social bonds, and creating a sense of belonging (Guo, 2005; Kester, 2011).

The integration of cultural heritage in community arts projects is crucial for enhancing their impact on social cohesion and community development (Sawyer, 2012; Stern & Seifert, 2008). For example, traditional crafts like Chinese papercutting play a pivotal role in promoting social integration and identity formation (Jones, 2019; Kim, 2012). These arts facilitate community engagement and foster a sense of belonging, acting as social catalysts that enhance community well-being and cohesion (Strohmaier et al., 2021).

Art-based community interventions, such as papercutting workshops, have demonstrated their effectiveness in enhancing social cohesion and community well-being. These interventions provide a platform for collective artistic expression, fostering social bonds and community engagement (Goldbard, 2006). By providing opportunities for collective artistic expression, community arts interventions can significantly enhance creativity (Amabile, 1983), cognitive resilience (Stern et al., 2019), social cohesion and community well-being (Bar-Sela et al., 2007), highlighting the potential of traditional arts as social catalysts (Bandura, 1986; Smith, 2006;).

In summary, the dual role of traditional arts in preserving cultural heritage and fostering social cohesion is well-supported by various studies. Chinese papercutting exemplifies this dual role, acting as a powerful medium for community building and social cohesion (Bowers & Shilton, 2021; Guo, 2005; Sawyer, 2012; Stern & Seifert, 2008). The integration of cultural

heritage in community arts projects enhances their impact on social cohesion and community development, underscoring the multifaceted significance of traditional arts in community development (Jones, 2019; Strohmaier et al., 2021).

2.3.3 Chinese Papercutting: A Medium for Cross-Cultural Understanding

Chinese papercutting serves as a powerful medium for cross-cultural understanding and communication. Traditional arts play a significant role in facilitating cross-cultural dialogue and understanding by providing a shared platform for artistic expression (Beamon et al., 2006, Leuthold, 2010). Interdisciplinary art education builds bridges between different cultures, highlighting the role of traditional arts in facilitating cross-cultural dialogue (Stokrocki, 2005).

The development of intercultural competence through artistic practices underscores the effectiveness of art as a tool for cultural exchange (Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017). Traditional arts like papercutting facilitate cross-cultural communication by providing a shared platform for artistic expression, fostering cultural empathy and social integration (Yang, 2008; Zhao et al., 2019; Zhao, 2020). These arts enhance the appreciation of diverse cultural narratives and promote social integration through collaborative art projects (Patel & Singh, 2020).

Recent studies highlight the significant impact of traditional arts on cross-cultural understanding, particularly through their ability to enhance cultural empathy and social integration (Haeyen & Noorthoorn, 2021; Santos & Johnson, 2019). Traditional arts like papercutting serve as effective tools for cultural exchange, fostering a deeper understanding of diverse perspectives (Berry, 1997). The collaborative nature of these practices encourages participants to share their cultural experiences, further promoting unity and cross-cultural communication (Hofstede, 1980; Bandura, 1986, 2001).

The integration of traditional arts into intercultural programs underscores their effectiveness in enhancing cross-cultural empathy and understanding (Ting & Chung, 2012; Kim, 2012). By providing a platform for shared artistic expression, these arts facilitate cultural exchange and strengthen social bonds (Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017; Gudykunst & Nishida, 1986). In summary, traditional arts like Chinese papercutting are powerful mediums for fostering cross-cultural understanding and communication, playing a critical role in promoting cultural empathy and social integration (Yang, 2008; Patel & Singh, 2020; Stokrocki, 2005).

2.4 Bridging Worlds: Papercutting at the Crossroads of Cultures

2.4.1 Cross-Cultural Dialogue Through Art: Enhancing Cognitive and Social Bonds

Traditional arts have long been acknowledged as effective tools for promoting cognitive health and social connectivity, with particular emphasis on their role in fostering cross-

cultural understanding (Leuthold, 2010; Bowers & Shilton, 2021). Chinese papercutting, with its intricate patterns and rich cultural significance, provides a distinctive avenue for engaging both cognitive functions and social interactions. The act of papercutting not only stimulates fine motor skills and cognitive planning but also offers participants the opportunity to share their creations and stories, facilitating cross-cultural dialogue and empathy (Vazquezf & Leonardo, 2012; Cross et al., 2011).

The importance of integrating traditional art forms like papercutting into cognitive health strategies is highlighted by their ability to bridge cultural divides while enhancing brain function (Bolwerk et al., 2014). Drawing from Gardner's theory of multiple intelligences, papercutting engages spatial and interpersonal intelligences, both crucial for navigating the complexities of different cultures and fostering mutual understanding (Gardner, 1993). Research by Draganski et al. (2004) and Small & Vorgan (2008) supports the cognitive benefits of such activities, showing how engaging in meticulous tasks like papercutting can improve memory and attention through the stimulation of fine motor skills and hand-eye coordination.

Additionally, Jin Zhilin (2005) provides an important historical perspective on Chinese traditional arts, underlining how papercutting has evolved to address modern therapeutic needs. Jin's work highlights the adaptability of papercutting in various cultural and therapeutic contexts, making it not only a tool for preserving cultural heritage but also a means of cognitive enhancement. This resonates with the neuroaesthetic principles explored by Oliva et al. (2023), who discuss how art-based therapies, including papercutting, can enhance brain plasticity and executive functions. These principles have been applied in neurorehabilitation settings, where innovative approaches like virtual art therapy have been shown to improve cognitive and motor functions in stroke patients and individuals with traumatic brain injuries (Tierl & Iosa, 2023; Kline, 2016).

Crowder et al. (2020) also highlight the mental health benefits of integrating traditional arts into therapeutic frameworks, demonstrating that papercutting can significantly enhance psychological well-being. Further research supports the idea that arts-based interventions reduce anxiety and depression, while fostering emotional resilience and social bonding (Gassner et al., 2022; Jia et al., 2020). The inclusion of traditional crafts like papercutting in mental health interventions aligns with growing evidence that such activities stimulate cognitive processes, enhance learning, and promote cultural empathy (Lopez et al., 2019; Park & Gutches, 2014).

In summary, the cognitive and cultural dimensions of papercutting make it an invaluable tool for promoting both mental agility and cross-cultural dialogue. The interdisciplinary nature of this art form offers a holistic approach, addressing both cognitive health and social well-being in increasingly globalised societies. This dual focus paves the way for further exploration of papercutting as a key component in cognitive enhancement and cultural education programs.

2.4.2 Unveiling the Model: Addressing the Gap in Cognitive Enhancement Research

Existing models, such as Bennett's Constructivist Theory of Intercultural Communication (Bennett, 1986) and Berry's Acculturation Framework (Berry, 1997), offer valuable insights into cultural interactions but do not specifically address the integration of traditional artistic practices with cognitive health interventions. Similarly, Hofstede's Cultural Dimensions Theory (Hofstede, 1980) provides a broad understanding of how culture influences behaviour, yet it lacks application in contexts that intertwine cognition and artistic expression.

The gaps in these theoretical models can be summarised as follows:

Intercultural Communication Models

Bennett's Constructivist Theory focuses on how individuals develop attitudes toward cultural differences, an important aspect of intercultural competence. However, it does not consider the cognitive benefits that can arise from engaging in traditional artistic practices such as papercutting (Bennett, 1993). Similarly, Berry's Acculturation Framework examines how individuals adapt to new cultures but does not explore how traditional art forms can support this adaptation through cognitive and emotional engagement (Berry, 1997).

Cognitive Health and Traditional Arts

Cognitive health strategies are often dominated by medical and pharmacological approaches, with limited integration of traditional art forms. Although research by Draganski et al. (2004) and Small and Vorgan (2008) highlights the cognitive benefits of acquiring new skills, these studies do not focus on traditional arts or their cross-cultural applications. The lack of a comprehensive model linking traditional artistic practices like Chinese papercutting to cognitive health improvements presents a significant gap in the literature.

Cross-Cultural Studies

While cross-cultural studies emphasise the importance of understanding cultural dynamics, they often overlook the potential of traditional arts as tools for cognitive and social enhancement. Studies such as those by Cross et al. (2011) demonstrate the social benefits of multicultural interactions through art but fail to offer a detailed framework for integrating these practices into cognitive health strategies.

In addition to these theoretical gaps, there is a notable scarcity of empirical research on the practical application of traditional arts in cognitive enhancement workshops. Existing studies tend to focus on theoretical implications rather than concrete methodologies for implementation, particularly when it comes to optimising both cognitive and cross-cultural benefits.

To address these gaps and build upon existing research, this section introduces a new model that offers a comprehensive framework. The *Chinese Papercutting Cross-Cultural*

Cognitive Enhancement Model aims to integrate key theoretical and practical insights from neuroscience, cognitive psychology, art therapy, and cross-cultural studies. This model suggests that traditional art engagement can reshape brain structure and improve cognitive functions, as evidenced by neuroscientific research on learning and plasticity (Draganski et al., 2004).

Moreover, this model draws from recent insights in cultural psychology and educational theory, proposing that traditional art, such as Chinese papercutting, can serve as a bridge between cognitive skills and intercultural understanding (Willis & Miller, 2011). The work of Malchiodi (2012) further supports this approach, demonstrating that creative processes offer significant emotional and psychological benefits, which are closely tied to cognitive health.

The model is designed around structured workshops in which participants engage in Chinese papercutting while exploring the cultural narratives embedded in the art form. This dual engagement—both cognitive and cultural—enhances cognitive flexibility and fosters cultural empathy. The workshops are also guided by Csikszentmihalyi's (1990) concept of “flow,” which refers to deep, focused engagement that promotes learning and satisfaction. These workshops integrate traditional Chinese papercutting techniques with discussions on cultural symbolism and meaning, aiming to foster both artistic skill development and cultural sensitivity (Bellandi & Santini, 2019).

By synthesising the cognitive benefits of art with cultural learning, this model offers a forward-thinking approach to enhancing cross-cultural understanding and cognitive health through the traditional art of papercutting.

2.5 Toward a Holistic Model: Theoretical Foundations and Practical Implications

2.5.1. The Model in Focus: A Synergistic Approach to Cognitive Health

Theoretical foundations:

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" bridges traditional art forms with modern cognitive health interventions by integrating principles from neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies. Through the practice of Chinese papercutting, this model aims to enhance cognitive functions, promote emotional well-being, foster social integration, and facilitate cross-cultural understanding. Grounded in theories of neuroplasticity (Draganski et al., 2004; Zatorre et al., 2012), cognitive psychology (Park & Bischof, 2013; Brown & Ryan, 2003), art therapy (Malchiodi, 2012; Stuckey & Nobel, 2010), and cross-cultural studies (Bennett, 1993; Hofstede, 1980), it highlights how traditional art practices can contribute significantly to cognitive and emotional health while fostering cross-cultural connections.

Core Components and Relationships

- Cognitive Health Enhancement:

Based on neuroplasticity and cognitive psychology, engaging in papercutting stimulates brain plasticity and cognitive functions, including memory, attention, and problem-solving skills.

- Emotional Well-being:

Drawing from art therapy, papercutting offers a creative outlet for emotional expression, reducing stress and enhancing psychological resilience.

- Social Integration:

Papercutting workshops provide a platform for social interaction and community building, fostering a sense of belonging and social cohesion.

- Cross-Cultural Understanding:

By integrating cross-cultural studies, the model promotes cultural empathy and respect through shared artistic experiences and intercultural dialogue.

Key Hypotheses of the Model:

- Improve cognitive functions such as learning, memory, creativity, and problem-solving.
- Enhance emotional well-being by providing a means for stress reduction, emotional expression and psychological Resilience
- Promote cross-cultural understanding and influence cultural empathy and cultural exchange
- Provide therapeutic function through emotional expression and cognitive rehabilitation
- Foster social cohesion and Community Engagement among participants.

Practical Applications

The model can be applied in various settings, including educational institutions, community centres, therapeutic and rehabilitation programs, and corporate training sessions. It offers a structured approach to leveraging traditional art forms for modern cognitive and emotional health benefits, as well as for fostering cross-cultural understanding.

Innovations and Contributions

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" offers a novel interdisciplinary framework that highlights the multifaceted benefits of traditional art. By

integrating diverse theoretical perspectives, it provides a comprehensive approach to enhancing cognitive and emotional health and promoting social and cultural integration.

Table 2.1 Framework of the Chinese Papercutting Cross-Cultural Cognitive Enhancement Model

Theoretical Foundation	Key Components	Data Collection Methods and Target Population (In this research)	Model Application
- Neuroplasticity - Cognitive Psychology - Art Therapy - Cross-Cultural Studies	<u>Cognitive Health</u> - Learning - Memory - Creativity - Problem-solving		<u>Fields of Application</u> -Educational Integration -Public Health Initiatives -Cultural Exchange Programs -Community Building Corporate -Training and Team Building -Research and Development
	<u>Emotional Well-being</u> - Stress Reduction - Emotional Expression - Psychological Resilience	<u>Methodology</u> - Mixed-Methods Approach - Workshops - Questionnaires - Participatory Observations - Interviews	
	<u>Cross-Cultural Understanding</u> - Cultural Empathy - Social Interaction		<u>Future Exploration</u> -Interdisciplinary Exploration and Cross-Cultural Integration -Global Perspectives and the Creative Economy Sustaining -Impact through Longitudinal Studies and Policy Integration -Methodological Innovation and Practical Applications
	<u>Therapeutic Applications</u> - Art Therapy -Emotional Expression - Cognitive Rehabilitation	<u>Target Population</u> - Welsh Population Aged 45-70 - Chinese Immigrants in Wales Aged 45-70	
	<u>Community and Social Integration</u> - Social Cohesion - Community Engagement		

2.5.2 Key Application Areas of Theoretical Foundations in Papercutting Workshops

This thesis introduces the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*," a novel framework that integrates traditional Chinese papercutting art with cognitive health enhancement and cross-cultural communication within the Welsh context. This model is constructed upon four foundational theoretical pillars: neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies. By leveraging these diverse theoretical perspectives, this chapter identifies specific concepts and application areas from these theories that can be practically implemented in this research.

2.5.2.1 Neuroplasticity in Action: Developing Cognitive Functions through Papercutting

The concept of neuroplasticity refers to the brain's ability to reorganise itself by forming new neural connections in response to learning and experience (Draganski et al., 2004; Small & Vorgan, 2008). This is key to understanding how Chinese papercutting can stimulate cognitive functions.

By engaging in papercutting, participants are introduced to new techniques and intricate patterns, which promotes intellectual growth and creative thinking. The artistic nature of this practice encourages cognitive flexibility and innovation, in line with the principles of neuroplasticity (Kandel et al., 1998; Zeki, 2001).

Furthermore, the precise hand movements required in papercutting enhance fine-motor skills, which are closely linked to improved cognitive abilities (Khoury-Metanis & Khateb, 2024). This activity also activates various brain regions associated with visual and motor control, thereby enhancing overall brain function (Draganski et al., 2004; Small & Vorgan, 2008).

Additionally, the creative process of papercutting involves making numerous decisions and solving artistic problems, strengthening decision-making and problem-solving skills. As participants work through complex designs, they must continuously assess patterns, anticipate outcomes, and adjust their approach in real-time. This dynamic process fosters cognitive control by requiring sustained attention and mental flexibility, leading to enhanced memory, concentration, and a greater ability to navigate complex tasks both in art and daily life (Ramachandran & Hirstein, 1999; Chatterjee, 2004).

In this section and those that follow, the relevant concepts from each of the four theoretical foundations used to construct this model will be presented in separate tables for clarity, focusing on the specific applications in papercutting workshops.

Table 2.2 Specific Applications of Neuroplasticity in Papercutting Workshops

Application Area	Description	References
Intellectual and Creative Growth	Engaging in papercutting challenges participants with new techniques and patterns, fostering both intellectual development and creative thinking.	Kandel et al. (1998); Zeki (2001); Zaidel (2015)
Fine-Motor Skills and Brain Activation	The precise hand movements required in papercutting enhance fine-motor skills, which are closely linked to improved cognitive abilities. This activity also activates various brain regions associated with visual and motor control, thereby enhancing overall brain function.	Draganski et al. (2004); Small & Vorgan (2008); Smith et al. (2022)
Decision Making, Problem Solving, and Cognitive Control	The creative process of papercutting involves making numerous decisions and solving artistic problems, strengthening these cognitive skills. This process also requires sustained attention and cognitive control, improving memory and concentration.	Ramachandran & Hirstein (1999); Chatterjee (2004); Brown et al. (2021)

2.5.2.2 Cognitive Psychology in Practice: Enhancing Perception and Social Learning

Cognitive psychology focuses on understanding mental processes such as perception, memory, and problem-solving. Engaging in papercutting provides an engaging and challenging task that helps build psychological resilience and supports emotional regulation. Additionally, according to Social Cognitive Theory (Bandura, 1992; 2001), the interactive and social nature of the workshops enhances social learning and collective participation, which further reinforces cognitive development through observation and imitation.

The detailed attention required in papercutting improves perceptual skills and memory, as participants must remember intricate patterns and apply them accurately (Goldstein, 2019). The repetitive nature of the task fosters concentration and mindfulness, which are key components in cognitive psychology (Brown & Ryan, 2003). The artistic process also aids in emotional recovery by providing an outlet for emotions, allowing individuals to process their feelings through creative expression (Malchiodi, 2012) and enhances psychological resilience, helping participants cope with emotional challenges and build mental strength (Gantt & Tinnin, 2009).

Participating in papercutting workshops enhances social interactions and connectivity among participants, creating a supportive community environment that fosters positive emotions and overall well-being (Smith et al., 2021). The successful creation of papercutting art generates a sense of accomplishment and happiness, contributing to improved mental health (Fredrickson, 2001). By incorporating cognitive psychology principles, Chinese

papercutting workshops can enhance cognitive resilience, emotional well-being, and social connectivity.

Table 2.3 Specific Application of Cognitive Psychology in Papercutting Workshops

Application Area	Description	References
Psychological Resilience	Papercutting offers an engaging and challenging task that helps build psychological resilience.	Brown & Ryan (2003); Collie et al. (2006); Pifalo (2007); Haeyen et al. (2015); Gussak & Rosal (2016)
Emotional Processing and Recovery	The artistic process aids in emotional regulation and recovery by providing a therapeutic outlet for emotions.	Malchiodi (2012); Castro & Murray (2010); Golden (2010); Bellandi & Santini (2019)
Social Connectivity	Participating in papercutting workshops enhances social interactions and connections among participants.	Lubart & Georgsdottir (2004); Pike (2014); Lubart (2010); Lu et al. (2019)
Positive Emotions	Successfully creating papercutting art generates positive emotions and contributes to overall well-being.	Fredrickson (2001); Harris & Thompson (2022)

2.5.2.3 Art Therapy in Papercutting: A Path to Emotional and Psychological Healing

Art therapy utilises creative processes to improve mental and emotional well-being. In the context of this model, papercutting serves as an effective form of art therapy by providing a safe and expressive medium for participants to process and express emotions. The act of creating art fosters self-awareness and self-esteem, as individuals see their ideas take tangible form (Riley, 1999).

Engaging in papercutting offers psychological rehabilitation by supporting emotional processing and reducing stress (Malchiodi, 2012). The creative process involved in papercutting allows individuals to channel their emotions into their art, facilitating emotional expression and promoting mental clarity (Moon, 2010).

Furthermore, the communal aspect of papercutting workshops promotes social bonding and reduces feelings of isolation, creating a sense of belonging and support (Potash et al., 2014). This social interaction is crucial for emotional health, as it provides participants with a platform to share experiences and build connections. By integrating art therapy principles, Chinese papercutting workshops can significantly enhance emotional expression, self-awareness, and psychological rehabilitation.

Table 2.4 Specific Applications of Art Therapy in Papercutting Workshops

Application Area	Description	References
Emotional Expression	Papercutting provides a safe and expressive medium for participants to process and express emotions.	Bar-Sela et al. (2007); Emery (2004); Moon (2010); Hu et al. (2021)
Self-Awareness and Self-Esteem	Creating and showcasing personal art projects enhances self-awareness and boosts self-esteem.	Riley (1999); Johnson et al. (2021)
Psychological Rehabilitation	The creative act of papercutting supports psychological recovery and overall happiness.	Malchiodi (2012); Uttley et al. (2015); Slattery et al. (2020)

2.5.2.4 Cross-Cultural Engagement: Building Empathy and Integration through Papercutting

Cross-cultural studies examine psychological and social functions across different cultural contexts. This theoretical framework is vital for understanding how Chinese papercutting can facilitate cultural empathy and social integration. Papercutting serves as a medium for cultural exchange, allowing participants from diverse backgrounds to share and understand each other's cultural narratives (Geertz, 1973).

Engaging in cross-cultural art practices, like papercutting, enhances participants' adaptability to different cultural environments and promotes cultural empathy (Berry, 1997). The culturally resonant methods used in these practices facilitate understanding and adaptation among participants from diverse backgrounds, fostering a sense of unity and shared experience (Hofstede, 1980).

Participating in papercutting workshops also bolsters cognitive resilience and flexibility, as individuals learn to navigate and appreciate cultural complexities (Chen & Starosta, 2000). The collaborative nature of these workshops encourages participants to reconstruct their self-identity, fostering a deeper understanding of themselves and others (Kim, 2012; Ting-Toomey, 1999). The potential synergistic effects of collaborative art projects across cultures further enhance cognitive and social benefits (Lubart, 2010; Lubart & Georgsdottir, 2004; Lu et al., 2019; Pike, 2014), making Chinese papercutting an ideal medium for cross-cultural understanding and cognitive enhancement. Additionally, the interactive and social nature of the workshops, as highlighted by Social Cognitive Theory (Bandura, 2001), reinforces the importance of social interactions in cognitive and cultural education (Pike, 2014).

Table 2.5 Specific Applications of Cross-Cultural theories in Papercutting Workshops

Application Area	Description	References
Psychosocial Functions	Papercutting activities promote psychosocial functions in a cross-cultural setting.	Hofstede (1980); Gavron et al. (2021)
Cross-Cultural Adaptability	Engaging in cross-cultural art practices enhances participants' adaptability to different cultural environments.	Berry (1997); Golden (2010)
Culturally Resonant Approach	The model employs culturally resonant methods to facilitate understanding and adaptation among participants from diverse backgrounds.	Chen & Starosta (2000); Deardorff (2009); Deardorff & Arasaratnam-Smith (2017); Gudykunst & Nishida (1986); Hofstede (2001)
Cognitive Resilience and Cognitive Flexibility	Cross-cultural artistic activities bolster cognitive resilience and flexibility.	Bellandi & Santini (2019); Castro & Murray (2010); Golden (2010); Ting-Toomey (1999)
Cultural Empathy	Papercutting fosters cultural empathy, allowing participants to better understand and appreciate different cultures.	Bennett (1993); Berry (1997); Hall (1976); Hofstede (1980); Goleman (1995)
Self-Conceptual	Papercutting encourages participants to reconstruct their self-identity, fostering a deeper understanding of themselves and others.	Kim (2012); Kitayama et al. (2015)

2.5.3 From Theory to Practice: Preliminary Insights into Workshop Design

The *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* provides the theoretical framework that underpins the design of the workshops. While grounded in principles of neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies, the papercutting workshops translate these ideas into practical, hands-on activities that stimulate cognitive growth, foster emotional well-being, and enhance cultural understanding, applying these concepts in practice. The details of the model's theoretical foundations will be further expanded in Chapter 3.

Each workshop session is structured to challenge cognitive functions through papercutting tasks, encouraging problem-solving and creativity while progressively increasing in complexity to align with the principles of neuroplasticity (Draganski et al., 2004; Kleim &

Jones, 2008). These tasks are designed not only to improve cognitive flexibility but also to provide emotional benefits, as participants are encouraged to express themselves through art, boosting self-esteem and emotional resilience (Malchiodi, 2012).

The workshops also integrate cultural discussions and artistic techniques, allowing participants to engage with both the historical and creative aspects of papercutting. These activities serve as a vehicle for cultural learning, enabling participants to appreciate and adapt to different cultural perspectives. By tailoring the content to the cultural backgrounds of the participants, the workshops foster a sense of inclusion and promote cross-cultural interactions (Deardorff, 2009; Berry, 1997; Deardorff & Arasaratnam-Smith, 2017).

Moreover, a core component of the workshops is the collaborative learning environment. Facilitators are trained to create an atmosphere where participants can observe, practice, and share techniques with one another, enhancing the social dynamics that support learning (Slattery et al., 2020; Uttley et al., 2015). This group-based approach encourages not only skill development but also social integration, as participants learn from and support each other.

Furthermore, the workshops incorporate a combination of surveys and interviews to evaluate their effectiveness, which are administered throughout the workshop process. These tools assess participants' experiences in both cognitive development and cross-cultural understanding. Positive feedback and testimonials from participants, reflecting their appreciation and enjoyment of the workshop, will further illustrate its impact. These stories will provide qualitative data on cognitive growth, social engagement, and cultural exchange (Simpson & Lee, 2024; Anderson, 2022).

Additionally, Chapter 3 will delve deeper into the specific strategies and steps involved in workshop design, ensuring that the model is not only grounded in solid theoretical foundations but also practically adapted to maximise cognitive and cultural benefits. Throughout the implementation process, empirical data will be gathered through observation, surveys, and interviews, allowing us to continuously refine the model, ensuring it remains adaptable and effective across diverse cultural contexts.

Chapter 3 Crafting the Research Journey: Design and Methodology

This thesis explores the impact of Chinese papercutting art on cognitive health within the cross-cultural context of Wales, examining its role and mechanisms as intangible cultural heritage in a globalised, technology-driven, and aging society. By investigating the therapeutic and cultural significance of Chinese papercutting, this research aims to highlight its potential to address cognitive decline and foster cross-cultural understanding in a rapidly changing world. This chapter outlines the methodological framework of the thesis, including the philosophical assumptions, theoretical paradigms, and key components of the research design, providing a structured approach to understanding how papercutting can serve as a tool for both cognitive health enhancement and cultural exchange.

3.1 Navigating Through Participatory Lenses

Methodological paradigms guide researchers in the choice and application of theoretical orientations and research methods (Creswell & Poth, 2018). In this study, philosophical assumptions including ontology, epistemology, axiology, and methodology (Denzin et al., 2023) are intricately connected to exploring the cognitive and cultural dimensions of Chinese papercutting art through the lenses of participatory paradigms.

3.1.1 Delving into Philosophical Foundations

Ontology

This study views Chinese papercutting not only as an art form but as a conduit for cognitive enrichment and cultural exchange. It recognises the art's multifaceted impact on cognitive health and social functions within diverse cultural contexts, reflecting the interconnectedness of cultural practices and cognitive well-being (Creswell, 2018; Smith & Firth, 2011). Within the participatory paradigm, this ontology embraces the concept of participative reality, which is co-created by mind and given cosmos, highlighting the collaborative and dynamic nature of knowledge creation (Denzin & Lincoln, 2023).

Epistemology

The research approach emphasises close engagement with participants, seeking deep insights into how individuals from various cultural backgrounds perceive and experience papercutting art. This involves participatory observation, in-depth interviews, and surveys, aligning with the study's focus on understanding cognitive impacts from a culturally sensitive perspective (Guba & Lincoln, 1988; Polkinghorne, 1989; Schwandt, 2007). The participatory paradigm underscores critical subjectivity in participatory transactions, emphasising experiential, propositional, and practical knowing (Heron & Reason, 1997).

Axiology

The study values the role of papercutting art in enhancing cognitive health and facilitating cross-cultural communication. It highlights the significance of this traditional art in cultural inheritance and its impact on diverse populations, particularly the elderly, in terms of cognitive engagement and social integration (Crotty, 1998; Moustakas, 1994). This intrinsic value is included and formative, reflecting the participatory paradigm's emphasis on the moral process toward revelation and the congruence of multiple forms of knowing (Denzin & Lincoln, 2023).

Methodology

Reflecting the study's participatory approach, a mixed-methods strategy is chosen to capture the nuanced effects of papercutting art on cognitive health and cross-cultural interactions. This strategy combines quantitative and qualitative data, providing a holistic view of the art's impact in a cross-cultural Welsh Chinese setting (Creswell, 2014; Tashakkori & Teddlie, 2010). The thesis follows a participatory paradigm (See Table 3.1), where participants are actively involved in the research process, ensuring their voices and experiences directly influence the study. The research also emphasises using language that reflects the shared experiences and cultural backgrounds of those involved (Denzin & Lincoln, 2023; Reason & Bradbury, 2008).

Table 3.1 Basic Beliefs of Alternative Inquiry Paradigms (Source: Denzin&Lincoln,2023, p.76)

Issue	Positivism	Postpositivism	Critical Theory et al.	Constructivism	Participatory ^a
Ontology	Naïve realism—"real" reality but apprehensible	Critical realism—"real" reality but only imperfectly and probabilistically apprehensible	Historical realism—virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallized over time	Relativism—local and specific co-constructed realities	Participative reality—subjective-objective reality, co-created by mind and given cosmos
Epistemology	Dualist/objectivist; findings true	Modified dualist/objectivist; critical tradition/community; findings probably true	Transactional/subjectivist; value-mediated findings	Transactional/subjectivist; co-created findings	Critical subjectivity in participatory transaction with cosmos; extended epistemology of experiential, propositional, and practical knowing; co-created findings
Methodology	Experimental/manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/manipulative; critical multiplism; falsification of hypotheses; may include qualitative methods	Dialogic/dialectical	Hermeneutical/dialectical	Political participation in collaborative action inquiry; primacy of the practical; use of language grounded in shared experiential context

3.1.2 Embracing Participatory Paradigm

The choice of the participatory paradigm in this research was driven by the need to deeply understand the intricate relationships between Chinese papercutting art, cross-cultural exchange, and cognitive health. This paradigm emphasises practical knowing, critical subjectivity, and living knowledge, aligning with the research's objectives to actively involve participants in the research process (Denzin & Lincoln, 2023; Kemmis & McTaggart, 2005). By fostering a co-creative process, this approach allows participants to directly shape their learning experiences while contributing to a shared understanding of how traditional art can influence cognitive development and cultural interaction.

In this thesis, the participatory paradigm views knowledge as dynamic and co-constructed through interactions and shared experiences (Freire, 1970). Participants not only learn through the practice of papercutting, but they also bring their own cultural backgrounds and experiences into the process, which fosters a reciprocal exchange of knowledge (Kolb, 1984). This paradigm aligns well with the study's objectives, which are to promote cognitive health and cross-cultural understanding through hands-on, experiential learning (See Table 3.2).

In terms of research quality, the participatory paradigm emphasises the congruence of practical, presentational, experiential, and propositional knowledge (Heron & Reason, 1997). In this case, knowledge is not abstract or theoretical but grounded in the real-world context of the papercutting workshops, where participants' cognitive growth and cultural understanding are directly shaped by their involvement in the artistic process (Schön, 1983). This approach moves away from traditional research standards, focusing instead on the participants' personal growth and transformative experiences as the main signs of success (Denzin et al., 2023). In the context of this research, these transformative experiences are seen in how participants develop cognitive flexibility and cultural understanding through their engagement with papercutting.

Table 3.2 Paradigm Positions on Selected Issues (Source: Denzin & Lincoln, 2023, p. 78)

Issue	Positivism	Postpositivism	Critical Theories	Constructivism	Participatory ^a
Nature of knowledge	Verified hypotheses established as facts or laws	Nonfalsified hypotheses that are probable facts or laws	Structural/historical insights	Individual and collective reconstructions sometimes coalescing around consensus	Extended epistemology; primacy of practical knowing; critical subjectivity; living knowledge
Knowledge accumulation	Accretion—"building blocks" adding to "edifice of knowledge"; generalizations and cause-effect linkages		Historical revisionism; generalization by similarity	More informed and sophisticated reconstructions; vicarious experience	In communities of inquiry embedded in communities of practice
Goodness or quality criteria	Conventional benchmarks of "rigor": internal and external validity, reliability, and objectivity		Historical situatedness; erosion of ignorance and misapprehensions; action stimulus	Trustworthiness and authenticity including catalyst for action	Congruence of experiential, presentational, propositional, and practical knowing; leads to action to transform the world in the service of human flourishing
Values	Excluded—influence denied		Included—formative		
Ethics	Extrinsic—tilt toward deception		Intrinsic—moral tilt toward revelation	Intrinsic—process tilt toward revelation	
Inquirer posture	"Disinterested scientist" as informer of decision makers, policy makers, and change agents		"Transformative intellectual" as advocate and activist	"Passionate participant" as facilitator of multivoice reconstruction	Primary voice manifest through aware self-reflective action; secondary voices in illuminating theory, narrative, movement, song, dance, and other presentational forms
Training	Technical and quantitative; substantive theories	Technical; quantitative and qualitative; substantive theories	Resocialization; qualitative and quantitative; history; values of altruism, empowerment, and liberation		Coresearchers are initiated into the inquiry process by facilitator/researcher and learn through active engagement in the process; facilitator/researcher requires emotional competence, democratic personality and skills

3.1.3 Applying the Participatory Paradigm in Papercutting Workshops

The participatory paradigm plays a crucial role in shaping the structure and dynamics of the papercutting workshops. In these workshops, participants are not passive subjects but active co-researchers, contributing to both the development of the sessions and the overall research process. This aligns with the participatory paradigm's emphasis on collaboration and shared knowledge creation (Heron & Reason, 1997).

Practically, the workshops are designed to foster a co-creative environment where participants engage in reflective learning and mutual collaboration. They are encouraged to

share their techniques, artistic approaches, and cultural perspectives, contributing to a dynamic exchange of ideas. This interaction not only stimulates cognitive engagement but also reinforces the workshops' dual focus on cognitive health and cross-cultural communication (Reason & Bradbury, 2008).

By integrating the skills of papercutting with discussions about cultural heritage and identity, the workshops facilitate a deeper connection between art and cognitive flexibility, which underpins neuroplasticity and cognitive development (Draganski et al., 2004). The participants' reflections on how the artistic process relates to their personal experiences further enhance the collaborative nature of the learning experience, promoting both individual and collective growth.

Additionally, the workshops are designed to allow participants to influence and shape the activities. This level of ownership and agency is critical in the participatory paradigm, as it ensures that the research and learning outcomes are co-constructed through lived experiences. The researcher's role is to facilitate this process, ensuring that the workshops remain inclusive, responsive, and adaptive to the participants' needs and feedback (Heron & Reason, 1997).

3.1.4 Research Methods Aligned with the Participatory Paradigm

The research methods employed in this study are closely aligned with the principles of the participatory paradigm, emphasising collaboration, shared experiences, and the co-creation of knowledge. Three primary methods are used: in-depth interviews, participatory observation, and surveys. Each method is designed not only to gather data but also to facilitate participants' active engagement in constructing their own meanings and narratives, particularly regarding their cognitive experiences with papercutting (Lincoln & Guba, 2000).

In-depth interviews

These allow participants to reflect on their personal experiences with papercutting, offering insights into how the art impacts their cognitive health and cultural understanding. The conversational format encourages participants to express their thoughts openly, making them active contributors to the research process.

Participatory observation

Researchers engage in the workshops alongside participants, experiencing the process firsthand. This immersive approach allows for real-time observation of cognitive and cultural dynamics, giving researchers deeper insight into how papercutting influences both cognitive function and cross-cultural interaction (Heron & Reason, 1997). Through this method, the researchers also gather qualitative data by observing participants' interactions and reactions.

Surveys

Used to complement qualitative methods, surveys collect quantitative data on cognitive and cultural outcomes, providing a broader picture of the workshops' impact. These are administered before and after the workshops to measure changes in participants' cognitive flexibility and cultural awareness.

In terms of data analysis, thematic analysis is employed to identify recurring themes in the participants' narratives and workshop interactions (Braun & Clarke, 2006). The analysis goes beyond surface-level data interpretation, weaving individual experiences into a cohesive understanding of how cross-cultural artistic engagement influences cognitive development. This method also allows for the integration of both qualitative and quantitative data, offering a more comprehensive view of the research outcomes (Creswell & Poth, 2018).

Ensuring research quality is essential in the participatory framework. Lincoln & Guba's (2000) criteria—credibility, transferability, dependability, and confirmability—are used to maintain rigor throughout the study. This ensures that the findings are authentic, reliable, and applicable to other settings, enhancing the study's broader relevance.

3.2 Blueprint of Inquiry

3.2.1 Adopting the Case Study Approach

Theoretical and Empirical Support for Case Study Research

The case study method was chosen for its ability to provide an in-depth exploration of how Chinese papercutting influence cognitive health in individuals and communities. This approach is particularly suited for understanding how diverse cultural backgrounds and social environments shape perceptions and experiences of papercutting art (Ragin & Becker, 1992; Swanborn, 2010). By focusing on specific contexts, this method enables a comprehensive investigation of Chinese papercutting as mediums for promoting cognitive health in various settings.

Grounded in the work of Simons (2009) and Denzin & Lincoln (2018), the case study approach is widely recognised in social science research for its ability to reveal complex behaviours and psychological activities within distinct contexts. Yin (2018) highlights the strength of case studies in exploring complex phenomena in real-life contexts, providing rich qualitative data that can support the development of theoretical models. In this thesis, case study approach offers a detailed lens to explore the cognitive and cultural implications of papercutting and is essential for examining the nuanced impact of papercutting art across cultural boundaries, allowing for a thorough analysis of its role in cognitive health promotion. Moreover, two distinct case studies are used in this research, to investigate how the dissemination of Chinese papercutting art in Wales influences cognitive health, offering valuable insights into both cognitive and cultural outcomes.

Criteria for Case Selection

---Case One - Exploring Memory and Cognitive Health through Papercutting: The Perspective of Chinese Immigrants

The Chinese immigrant group is selected for their unique role in preserving cultural heritage and cultural memory within a cross-cultural context. This case study will examine the impact on cognitive functions of engaging in traditional Chinese papercutting activities among Chinese immigrants in a foreign cultural environment. It aims to provide insights into how their heritage cultural practices can serve as cognitive health tools for immigrants, such as evoking cultural memory, maintaining their cultural identity, and enhancing other aspects of cognitive abilities (Huang, 2021; Lucchetti & de Diego-Cordero, 2021; Mi & Chen, 2021; Liu, 2019).

---Case Two - Chinese Papercutting as a Medium to Enhance Cognitive Health in the Welsh Community

This case is selected based on the current lack of systematic communication and awareness of Chinese papercutting in the Welsh community. The focus is on exploring how Chinese papercutting can enhance cultural exchange and cognitive health, particularly in areas like creativity, memory, understanding and cultural resilience (Taylor, 2015; Moore, 2016). This case study aims to reveal the potential of papercutting art in fostering cognitive health and cultural understanding in Welsh context. Moreover, this research addresses the cognitive challenges inherent in cross-cultural contexts, specifically examining the concept of cultural cognition, which explores how engaging in traditional cultural practices can influence cognitive processes (Haslam et al., 2010).

3.2.2 Crafting Workshops as Research Tools

3.2.2.1 Integrating the New Model in Workshop Design

The integration of the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* into the workshop design involves several key components:

Neuroplasticity-Inspired Content Design

The workshop begins with basic patterns that form the foundational elements of Chinese papercutting. Participants progress through practice sessions to create themed artworks, with the complexity of activities gradually increasing to foster problem-solving and decision-making abilities (Draganski et al., 2004). This learning approach stimulates brain activity and enhances cognitive skills. Unlike other papercutting activities, participants are not provided with pre-designed templates but are encouraged to engage in creative and freehand cutting, offering a significant cognitive challenge (Kleim & Jones, 2008).

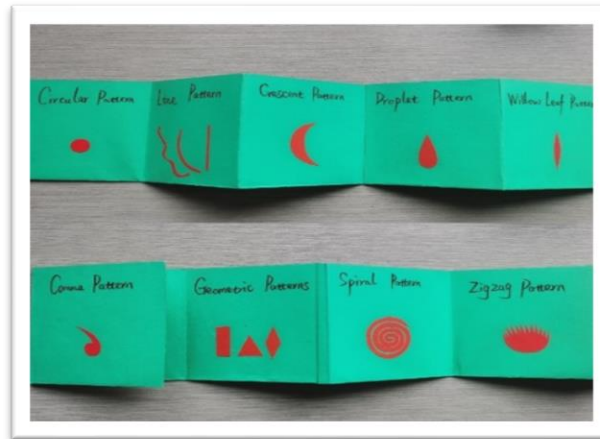


Figure 3.1 Researcher-Designed Teaching Aids: Participants Learning Basic Chinese Papercutting Patterns

Creative tasks and problem-solving challenges are structured to enhance decision-making and creative thinking, thereby promoting neuroplasticity (Kleim & Jones, 2008). The precise hand movements required in papercutting enhance fine-motor skills, which are closely linked to improved cognitive abilities (Kempermann, 2019). Additionally, papercutting activates various brain regions associated with visual and motor control, thereby enhancing overall brain function (Ramachandran & Hirstein, 1999).

The incorporation of scissors as a primary tool and the utilisation of traditional Chinese Xuan paper for cutting and mounting significantly enhance cognitive and motor functions, for these activities stimulate hand-eye coordination, focus, learning, problem-solving, and creativity. The workshop initiates with the acquisition of basic patterns and gradually advances to the creation of complex pieces within a three-hour intensive session, offering a substantial cognitive challenge. This progressive increase in task difficulty, coupled with the workshop's intensity, effectively promotes neuroplasticity by enabling the brain to adapt and reinforce its neural connections in response to new skills and tasks (Draganski et al., 2004). Moreover, the engagement with traditional materials and tools provides a unique sensory and cultural experience, further enriching the cognitive and creative stimulation.

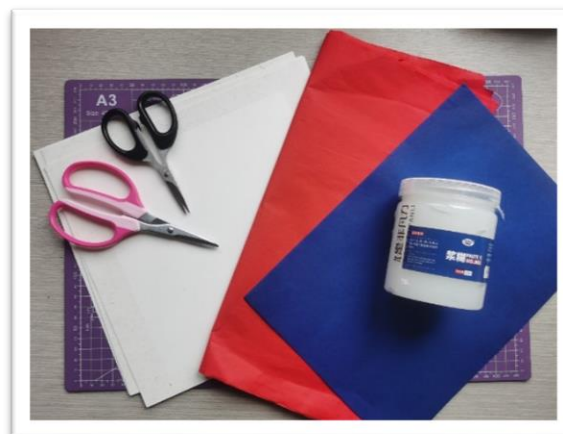


Figure 3.2 Basic Tools for Traditional Chinese Papercutting: Scissors, Xuan Paper, and Mounting Materials

Cognitive Psychology Principles in Content Design:

The workshop includes interactive sessions and group discussions to strengthen social connections and elicit positive emotions, carefully chosen to enhance the learning experience and immersion (Khoury-Metanis & Khateb, 2024; Brown, 2019), aligning with the broaden-and-build theory of positive emotions (Fredrickson, 2001). Introducing participants to the auspicious meanings behind Chinese papercutting motifs, such as gourds, happiness, and pomegranates, provides positive mindfulness at the start of the workshop (Davis, 2018; Guo, 2005). The researcher prepared artworks of auspicious motifs like gourds, pomegranates, peony, and ruyi, and introduced these motifs using metaphors, following the principles outlined in Kopp's metaphor therapy (Kopp, 1995). This approach leverages Erickson's therapeutic use of metaphor, which emphasises the power of indirect suggestion and client-generated imagery (Erickson, Rossi & Rossi, 1976). By integrating these culturally rich symbols, the workshop not only enhanced participants' understanding and appreciation of the art but also engaged their cognitive and emotional processes, promoting mindfulness and psychological well-being.



Figure 3.3

Figure 3.3 Gourd in Chinese Papercutting Symbolising Fortune and Prosperity



Figure 3.4

Figure 3.4 Pomegranate in Chinese Papercutting Symbolising Abundance of Offspring

Moreover, progressive learning stages are designed to ensure successful experiences, which are critical for building psychological resilience and maintaining mental health (Bonanno, 2004). Creative thinking is emphasised throughout the sessions to foster cognitive flexibility and resilience (Csikszentmihalyi, 1996). By introducing participants to the symbolic meanings behind the motifs and using metaphorical explanations, the workshop facilitated a deeper cognitive engagement and emotional connection, further promoting resilience and mindfulness. This method aligns with the concept of neuroplasticity, where the brain's ability to reorganise itself by forming new neural connections is stimulated through creative and meaningful activities (Kleim & Jones, 2008; Kempermann, 2019). Utilising the

metaphorical significance of auspicious motifs in Chinese papercutting serves as a psychological tool that not only enriches the artistic experience but also enhances cognitive and emotional resilience, demonstrating the effectiveness of metaphor therapy in a cultural context.



Figure 3.5

Figure 3.5 Tree of Life in Chinese Papercutting Symbolising Long Life



Figure 3.6

Figure 3.6 Circular Flowers in Chinese Papercutting Symbolising Happiness

Art Therapy Framework for Activity Planning

After learning basic patterns, participants are encouraged to engage in a state of flow, experiencing the tactile relationship between scissors and paper, and becoming attuned to the lines and shapes they create through a subconscious process. Subsequently, they create collages that express personal stories and emotions. Facilitators and volunteers actively support and encourage participants throughout this process. Art therapy techniques are employed to help participants process emotions and improve psychological well-being (Malchiodi, 2012). The introduction of auspicious Chinese motifs further enhances positive mindfulness, promoting a sense of peace and well-being (Wang, 2016; Siegel, 2007; Geller, 2018).



Figure 3.7



Figure 3.8

Figure 3.7 Spontaneous Artwork Created by Chinese Immigrant Participants

Figure 3.8 Spontaneous Artwork Created by Welsh Local Participants

Additionally, displaying completed artworks enhances participants' sense of achievement and self-esteem, fostering a positive self-image (Riley, 1999). Through comparing similarities and differences with peers, participants identify unique traits and find commonalities, fostering social identity. This aligns with contemporary social identity theories, which highlight how group memberships and social comparisons contribute to self-esteem and identity (Abrams & Hogg, 2004; Brewer, 1991). Public recognition of their efforts encourages continued engagement and personal growth.



Figure 3.9 Chinese Immigrant Group's Collective Display of Their Final Dragon Artwork

In the latter part of the workshop, participants' primary task was to create a Chinese dragon through papercutting. This segment aimed to stimulate participants' creativity and artistic freedom. Instead of giving participants a fixed templet, researcher provided various sample forms and encouraged participants to design independently, breaking away from traditional constraints and avoiding rigid replication. This approach not only fostered individualised expression but also enhanced participants' innovation and artistic exploration. By introducing participants to the symbolic meanings behind the motifs and using metaphorical explanations, the workshop facilitated a deeper cognitive engagement and emotional connection, further promoting resilience and mindfulness.



Figure 3.10 Reference Samples of Chinese Dragon Designs Provided by the Researcher for the Workshop

Cross-Cultural Insights in Content Development

The workshop content is tailored to the cultural backgrounds of participants, using culturally resonant methods to enhance understanding and adaptation. This is particularly important for fostering cross-cultural sensitivity and competence (Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017; Trejo et al., 2015; Walter et al., 2021). For Welsh participants, understanding and experiencing the rich artistic and cultural history of Chinese papercutting enhances cross-cultural understanding and flexibility (Fletcher-Janzen, Strickland & Reynolds, 2000). For Chinese immigrants, the workshops reinforce cultural identity and memory (Kim & Gudykunst, 1988).

Meanwhile, the researcher tries to bring in collaborative projects and shared experiences to promote cross-cultural interactions, thereby enhancing social cohesion and cultural exchange (Berry, 1997). The workshops are designed to create a community environment where participants from diverse backgrounds can connect and learn from each other (Hewstone et al., 2002).

3.2.2.2 Evaluating Workshop Effectiveness

Workshop Design Rationale

The workshop design is based on the researcher's original theoretical model, the **Chinese Papercutting Cross-Cultural Cognitive Enhancement Model**, which integrates Chinese papercutting art with cognitive health enhancement, particularly within a cross-cultural context. Given the lack of systematic Chinese papercutting activities in the Welsh region, especially in Swansea, this workshop addresses this gap by promoting cognitive engagement and cross-cultural communication (Smith, 2015). The workshop emphasises active learning and creativity, progressing from basic patterns to narrative creations, gradually stimulating cognitive functions such as spatial awareness and memory (Davis, 2018). These design

decisions not only help to improve participants' cognitive health but also enhance their cultural understanding and sensitivity.

Pre- and Post-Workshop Surveys

Surveys administered before and after the workshops assess participants' experiences and self-evaluations of cognitive health. These surveys focus on the perceived impact of the workshops on cognitive functions such as memory, attention, and problem-solving skills, as well as cultural understanding and sensitivity. This methodology draws on established practices in cross-cultural and cognitive health assessment, emphasising the importance of both cognitive and cultural metrics (Le et al., 2018; Sternberg et al., 2021; Reysen & Katzarska-Miller, 2013).

Participant Feedback

Qualitative data is collected through interviews, providing deeper insights into participants' experiences and perceptions of the workshops. This feedback helps to understand the personal and cultural impact of the workshops (Simpson & Lee, 2024).

Participant Observation

The participatory observation method is used to collect data on the interaction and engagement levels of participants during the workshops. Observations provide contextual understanding and highlight the dynamics within the group (Jorgensen, 1989).

Case Studies

Individual participant stories are documented to showcase the real-world impact of the workshops. These case studies highlight cognitive improvements and enrich cultural engagement, illustrating the practical benefits of the workshop model (Simpson & Lee, 2024).

This comprehensive evaluation framework ensures systematic validation of the workshops' effectiveness in enhancing cognitive health and fostering cross-cultural understanding (Klein, 2014; Greenfield, 2015). The iterative process of applying the model, collecting data, and refining the approach ensures a robust and dynamic framework that can be continuously improved.

3.2.3 Strategising the Sample

To ensure methodological rigor and enhance the accuracy of the study's results, a detailed sampling strategy is adopted, focusing on the representativeness and diversity of participants:

Sample Selection Criteria

--Case Study 1 (Chinese Immigrants):

This group targets long-term Chinese immigrants in Wales, considering variables such as immigration history, age, and cultural engagement. The selection aims to explore the unique cognitive health challenges and experiences faced by immigrants, reflecting the interplay of cultural heritage and new societal contexts. Segmentation based on different origins and cultural backgrounds provides a nuanced understanding of cognitive health in a cross-cultural context.

--Case Study 2 (Welsh Community):

Focusing on Welsh residents aged 45-70, particularly those who are native to Wales and interested in, but less familiar with, Chinese culture and art. This age demographic is crucial for understanding the impact of art on cognitive health in later life stages. The sample's diversity ensures a comprehensive view of how Chinese papercutting is perceived and its cognitive benefits within the Welsh context.

Recruitment Methods

--Diverse Channels: Utilising platforms like Eventbrite, community partnerships, social media, and public announcements helps reach a diverse audience while ensuring the inclusion of the desired demographic. This strategy enhances the study's representativeness and generalisability.

Figure 3.11

Figure 3.12

Figure 3.11 This strategy helps reach a diverse audience while ensuring the inclusion of the desired demographic

Figure 3.12 External Promotion on Confucius Institute Wellbeing Calendar (Special Workshop on December 12)

--Ethical Considerations: Informed consent procedures are meticulously followed, ensuring participants are fully aware of the research objectives, their rights, and data usage. Ethical compliance is paramount in maintaining the integrity of the research process.

Sample Reliability and Validity Argumentation

The sampling strategy is grounded in established methodologies as advocated by Creswell (2014) and Yin (2014). These frameworks provide a robust theoretical backing, underscoring the chosen methods' suitability for this research.

The use of standardised, validated instruments for data collection, such as structured observations and semi-structured interviews, ensures data consistency and reliability (Patton, 2015; Kvale & Brinkmann, 2009). These methods are crucial in capturing the depth and breadth of participants' experiences and perceptions related to papercutting art.

To ensure objectivity in feedback, anonymous surveys were employed, reducing the likelihood of participants providing overly positive responses due to their involvement in the workshops. This approach enhanced the reliability of the data collected, providing a more accurate reflection of the workshops' impact.

This comprehensive sampling strategy is designed to yield deep insights into the cognitive health impacts of Chinese papercutting across diverse cultural backgrounds. It combines methodological precision with ethical rigor, ensuring the research is both credible and ethically sound (Lincoln & Guba, 1985). The approach aligns seamlessly with the study's participatory framework, ensuring that the findings are representative and reflective of the diverse experiences within the target populations.

3.2.4 Harvesting Insights: Data Collection Techniques

In this research, data is meticulously collected through two focused case studies conducted via workshops. These workshops aim to explore the influence of Chinese papercutting art on cognitive health across different cultural contexts. To ensure data consistency and reliability, participatory observation, validated questionnaires, and semi-structured interviews are used.

Case Study 1: Chinese Immigrant Perspective

Date and Location: December 12, 2023, from 10:00 AM to 1:00 PM.

Dylan Thomas Centre, Swansea.

Participants: 8 Chinese immigrants, with 7 from Hong Kong and 1 from the Mainland China, representing a range of immigration durations from 5 to 30 years.

Recruitment Channels: Utilised the elderly group of the Chinese In Wales Association (CIWA) and WeChat groups for targeted recruitment, ensuring a relevant participant pool.

Case Study 2: Welsh Community Perspective

Date and Location: December 12, 2023, from 1:30 PM to 4:30 PM.

Dylan Thomas Centre, Swansea

Participants: 9 local Welsh residents.

Recruitment Channels: Diverse channels like Eventbrite (online), University of Wales Trinity Saint David (UWTSD), Confucius Institute activities, and Swansea Leisure Centre.

The author of this thesis facilitated the entire workshop, leading sessions, teaching papercutting, observing, and engaging with participants. Each workshop was supported by three academic assistants who assisted with distributing questionnaires, conducting interviews, and compiling observational data and video footage. All assistants had reviewed the workshop's research materials in advance, including consent forms, questionnaires, and interview guides, and received on-site training at 9:30 AM on the day of the workshop.

Data collection methods include participatory observation to capture participant engagement and interaction dynamics, semi-structured interviews to explore personal narratives and experiences, and pre- and post-intervention questionnaires to assess changes in cognitive health attitudes and perceptions.



Figure 3.13 Workshop Day Information Poster

Effectiveness Assessment

The impact of the papercutting workshop is rigorously evaluated by synthesising participant feedback, the survey analysis and the artistic analysis about their works. This multifaceted approach ensures a holistic understanding of the art form's influence on cognitive health.

3.2.5 Mapping the Research Timeline

Data Collection Period

A focused two-week period following the workshop is designated for data collection, strategically chosen to capture immediate participant responses and emotional states, thus providing fresh, authentic insights (Creswell, 2014). The collection encompasses observational records, interview transcripts, and questionnaire responses, ensuring a comprehensive dataset for nuanced analysis (Patton, 2015). This period allows researchers to gather high-quality, contemporaneous data, enhancing the validity of the findings (Yin, 2014).

Analysis Period

The subsequent two-month period is allocated for data analysis, prioritising timeliness and relevance. This phase involves meticulous data cleaning, coding, and interpretation using thematic analysis and grounded theory approaches, aimed at uncovering deep insights and patterns within the collected data (Charmaz, 2014; Braun & Clarke, 2006). The analysis is conducted with sensitivity to the workshop's participatory nature, ensuring that the findings are not only descriptive but also reflective of the participants' experiences and aligned with the study's focus on cognitive health and cultural exchange (Lincoln & Guba, 1985; Denzin et al., 2023). Ethical considerations, including confidentiality and informed consent, are strictly maintained throughout the analysis phase (Flick, 2018).

3.2.6 Analysing Data: Techniques and Tools

The study employs a nuanced combination of content and thematic analysis to explore the rich tapestry of data collected.

Content Analysis

This technique delves into the linguistic elements of the data, examining word frequency, emotional connotations, and semantic structures. Such an analysis is particularly pertinent in understanding the cultural nuances embedded in participants' responses, aligning with the cross-cultural focus of the research (Krippendorff, 2004). Content analysis helps in decoding the underlying cultural and emotional context of the participants' narratives, offering a detailed view of their cognitive and emotional landscapes.

Thematic Analysis

In contrast, thematic analysis seeks to unearth core themes and patterns, providing insights into how participants cognitively and emotionally engage with papercutting art. This analysis is instrumental in linking individual experiences to broader cognitive health impacts, resonating with the study's focus on neuroplasticity and cultural exchange (Braun & Clarke, 2006). Thematic analysis allows for the identification of recurring motifs and significant insights across the dataset, which are crucial for understanding the holistic impact of the workshops.

Additional Analytical Methods

For analysing survey data and observational records, the following methods and tools are utilised:

--Quantitative Analysis of Surveys:

Statistical analysis tools like Microsoft Excel are used to process questionnaire responses, providing quantitative insights into changes in cognitive functions and cultural understanding pre- and post-workshop.

--Observational Data:

Given the small sample size, observational data were manually coded and analysed. This approach allowed for an in-depth examination of participant interactions and engagement levels, ensuring that each observation was meticulously reviewed and interpreted within its specific context.

--Interview Transcripts:

Transcripts from semi-structured interviews are manually analysed using a systematic coding approach to identify key themes and insights that align with the research objectives. This careful, hands-on method ensures a deep and nuanced understanding of the data, illuminating the multifaceted relationship between Chinese papercutting art, cognitive health, and cross-cultural communication.

3.3 Ethical Compass: Navigating Rights and Integrity

Ethical integrity is paramount in this research, influencing every stage from design to execution:

Informed Consent

Ensuring all participants are fully aware of the study's objectives, methodologies, and data usage, with a clear process in place for obtaining their informed consent. This approach respects participant autonomy and aligns with ethical research practices (Wiles, 2012).

Privacy and Confidentiality

Rigorous measures are implemented to safeguard participant privacy and confidentiality. This commitment extends beyond data collection to include data storage and analysis, ensuring that participant identities are protected throughout the research process (Bryman, 2016).

Ongoing Ethical Vigilance

Ethical considerations are not static; they are dynamically reassessed at each research phase. This continuous ethical vigilance ensures the research remains responsive to any evolving ethical concerns, particularly in relation to the sensitivity and confidentiality of the data (Orb et al., 2001).

The ethical framework of this study is not merely a procedural requirement but a core aspect of its academic integrity (Bryman, 2016). It reflects a deep respect for the participants' cultural backgrounds and personal narratives, crucial in a study exploring cognitive health through the lens of Chinese papercutting art in a cross-cultural context.

3.4 Reflective Horizons: Evaluating Methodological Limitations

While I played a central role in organising and facilitating the workshops—managing various aspects from preparation to execution—I fully acknowledge my own limitations. Reflecting on these limitations is crucial to ensuring balance, transparency, and credibility in academic research.

Time Horizon Limitations

The study's short-term, intensive data collection method primarily captures immediate cognitive responses and changes. While this approach is effective for gathering current feedback, it inherently limits longitudinal insights into cognitive health. Future research could adopt a more extended observational period or a longitudinal design, offering a more comprehensive view of the enduring effects of papercutting art on cognitive health (Maxwell, 2013).

Depth and Breadth of Data

Given the constraints of time and resources, the depth and breadth of data collection in this study may not encompass the full range of participants' experiences. This limitation suggests a potential avenue for future studies to adopt more immersive qualitative methods or extended data collection phases, which could capture a richer, more nuanced understanding of participants' cognitive and emotional journeys (Maxwell, 2013).

Limitations of Cross-Sectional Study

This research, being cross-sectional, provides valuable snapshots of cognitive impacts at specific points in time. However, it does not capture the ongoing process of cognitive change

over time. Future studies could use longitudinal or mixed methods to follow participants over a longer period and provide deeper insights into how cognitive impacts develop and change (Creswell, 2014).

Ethical Continuity

Ethical considerations have been integrated throughout this research, particularly in ensuring participant confidentiality, securing informed consent, and managing the sensitivity of personal data. Given the evolving nature of ethical standards, ongoing attention and adaptation remain crucial, especially in research involving vulnerable populations and in cross-cultural contexts (Orb et al., 2001).

While this study has limitations, including its cross-sectional design, it contributes meaningful insights into the potential cognitive benefits of Chinese papercutting and cross-cultural communication. Moreover, this research introduces a novel participatory approach by using workshops both as a research practice and as a means of data collection. By actively engaging participants, the study fosters a deeper understanding of how papercutting can enhance cognitive health, while also exploring cross-cultural exchange through creative expression. This sets the groundwork for future research that can expand on these preliminary findings and explore further applications in art therapy, gerontology, and cross-cultural studies.

3.5 Methodological Mosaic: A Comprehensive Overview

This research employs a meticulously crafted case study approach to examine the impact of Chinese papercutting on cognitive health, focusing on two distinct populations in Wales: The Welsh local community and Chinese immigrants. To achieve this, the core methodology integrates innovative workshop designed with participatory observations, well-developed questionnaires, and in-depth semi-structured interviews, thereby forming a robust data collection framework. This multifaceted strategy ensures the collection of rich, reliable data, offering a comprehensive understanding of the effects of Chinese papercutting art in diverse cultural contexts.

To further enhance the research design, a strategic sampling approach is implemented. This approach is designed to capture a wide range of experiences and perceptions, thus providing a nuanced understanding of the cognitive health benefits of Chinese papercutting art across different cultural groups (Maxwell, 2013). Moreover, the data analysis employs both content and thematic analysis to identify significant patterns and themes, thereby offering deep insights into the relationship between cross-cultural artistic engagement and cognitive health (Braun & Clarke, 2006).

Importantly, this research is conducted within a stringent ethical framework, which safeguards participant rights and ensures data integrity (Orb et al., 2001). In addition, the

methodology critically acknowledges its limitations, suggesting avenues for future research to expand on these foundational findings (Bryman, 2016).

In summary, this methodology chapter provides a comprehensive framework for exploring Chinese papercutting art as a medium for cognitive enhancement and cross-cultural understanding. It highlights the rigorous academic approach adopted in this study, which is positioned to contribute significantly to the fields of cognitive health, art therapy, and multicultural studies. Furthermore, the detailed and in-depth analysis of the two case studies will be thoroughly examined in Chapter Four, offering critical insights into how Chinese papercutting is experienced within different cultural contexts.

Chapter 4 Unfolding the Tapestry: A Comparative Case Study Journey

In this pivotal chapter, a comparative case study approach tests and validates the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*." This model posits that engaging in Chinese papercutting enhances cognitive health and fosters cross-cultural understanding. By comparing the experiences of Chinese immigrants and Welsh natives, the research aims to uncover how papercutting influences their cognitive health individually and how cultural backgrounds affect their engagement and outcomes, contributing to a broader understanding of cross-cultural interactions and effects.

The comparative case study method is ideal for exploring the nuanced impacts of our model across different cultural settings (Yin, 2018). This method allows for the assessment of the model's applicability and effectiveness in real-world contexts, thereby providing empirical support for its theoretical foundations. Consequently, through this analysis, the aim is to demonstrate how Chinese papercutting forms can serve as a bridge for cognitive enhancement and cultural exchange.

Moreover, these case studies are strategically selected to highlight the model's potential in diverse cultural environments, reflecting its adaptability and relevance. By critically analysing observational insights, questionnaire narratives, and interview echoes from both groups, this chapter provides a comprehensive evaluation of the model's impact.

Furthermore, the findings from these case studies not only validate the model but also contribute to broader discussions in art therapy, cognitive health research, and cross-cultural studies. These insights provide a deeper understanding of how Chinese papercutting can serve as a valuable tool for promoting cognitive health and cross-cultural exchange.

4.1 Diving into the World of Chinese Immigrant Group

Contextual Overview

This case study focuses on the Chinese immigrant community in Wales, particularly long-term residents, and explores how engaging in papercutting within a Welsh context influences their cognitive health, particularly in memory retention, creativity, and cultural identity. The workshop allowed participants to reconnect with this cultural practice, offering insights into how revisiting traditional arts in an immigrant context can stimulate cognitive function and support emotional well-being. By examining the intersection of art, culture, and cognitive health, this research highlights the role of papercutting in shaping cognitive experiences.

4.1.1 Observational Insights

Facilitator's Role

The facilitator's guidance, especially outlining patterns, was crucial. This aligns with Vygotsky's "Zone of Proximal Development," where learners achieve higher levels of understanding with appropriate support (Vygotsky, 1978). The facilitator balanced instruction and creative freedom, helping participants gradually accept guidance and explore their creative potential.



Figure 4.1a



Figure 4.1b

Figure 4.1 Facilitator Outlining Workshop Goals and Introducing Chinese Papercutting

Quality and Depth of Engagement

The workshop environment was meticulously prepared to resemble a Chinese cultural hub, filled with calligraphy, traditional medicine artifacts, costumes, decorations, and musical instruments. This setting provided a familiar atmosphere for Chinese immigrants, facilitating their transition from unfamiliarity to comfort. The space was adorned with papercutting artworks and basic information about cognitive health, which piqued participants' interest and set the stage for active learning. Academic assistants, including three Cantonese speakers, further helped participants integrate quickly. During the initial phase of the workshop, participants transitioned from observers to active learners, showing enthusiasm, engaging in discussions, and experimenting with papercutting. This mirrors Kolb's experiential learning theory, where direct experience fosters cognitive and emotional involvement (Kolb, 1984).



Figure 4.2a



Figure 4.2b

Figure 4.2 Space and Items Richly Decorated with Chinese Paper-Cutting Elements

Intellectual and Creative Growth

Although many participants had prior experience with papercutting, they typically worked with pre-drawn patterns and were unfamiliar with basic patterns, artistic language, composition, or freehand design techniques. The workshop introduced them to new concepts and skills, fostering intellectual development and encouraging creative thinking (Kandel et al., 1998; Zeki, 2001; Zaidel, 2015). The complexity of the patterns and the precision required helped stimulate neuroplasticity, enhancing cognitive functions.

While some participants thrived within their comfort zones, others found the challenges daunting, expressing frustrations like, "It's too difficult," or "I can't do it like you." Despite these initial struggles, completing their projects boosted their resilience. Some participants appeared hesitant to fully explore their creative potential, reflecting Amabile's componential theory of creativity, which emphasises the importance of intrinsic motivation and a supportive environment (Amabile, 1983).



Figure 4.3a



Figure 4.3b

Figure 4.3 Participants Engaging in and Successfully Completing Initially Challenging Tasks

Fine-Motor Skills and Brain Activation

Although cutting with scissors seems like a basic skill, not all adults are adept at the nuanced techniques required for papercutting. The precise hand movements enhance fine-motor skills and activate brain regions associated with visual and motor control, improving overall brain function (Draganski et al., 2004; Small & Vorgan, 2008). Many participants initially struggled with coordinating the scissors and paper, but with guidance, their dexterity and satisfaction improved significantly.



Figure 4.4a



Figure 4.4b

Figure 4.4 Detailed Cutting Process and Creative Collage

Social Interactions and Dynamics

Despite initial language barriers, the group's familiarity facilitated smooth communication. However, even among familiar faces, some participants hesitated during the creative phase, a behaviour explained by social comparison theory, impacting their self-esteem and risk-taking (Festinger, 1954). They were often reluctant to present their work first, preferring to observe and praise others. Even after their projects took shape, several participants expressed dissatisfaction, reflecting cultural tendencies in self-assessment.

Decision Making and Cognitive Control

Throughout the workshop, participants engaged in decision-making processes during the learning and practice of basic patterns, narrative creation, sample selection, personal design, and decoration. Papercutting involves numerous decisions and problem-solving, strengthening these cognitive skills. It requires sustained attention and cognitive control, enhancing memory and concentration (Chatterjee, 2004; Ramachandran & Hirstein, 1999; Sapp, 1995).

Cultural Reflections and Social Connectivity

In the narrative creation phase, participants used familiar Chinese patterns, such as gourds and hand-holding figures, often associated with childhood memories. This not only reflected

cultural significance but also personal connections. Other participants recognised these patterns, triggering nostalgia and shared memories. Participating in papercutting workshops also enhanced social interactions and connections among participants (Lubart & Georgsdottir, 2004; Pike, 2014; Lu et al., 2019).



Figure 4.5 A traditional motif familiar to Chinese audiences, created by a participant

Psychological and Emotional Benefits

Papercutting aids in emotional regulation and recovery by providing a therapeutic outlet (Malchiodi, 2012; Castro & Murray, 2010; Golden, 2010; Bellandi & Santini, 2019). Successfully creating papercutting art generates positive emotions and contributes to well-being (Fredrickson, 2001; Harris & Thompson, 2022). During the latter part of the workshop, participants exhibited a state of flow, characterised by deep focus and stable emotions, enhancing performance and well-being (Csikszentmihalyi, 1990).



Figure 4.6a



Figure 4.6b

Figure 4.6 Participants Immersed in Papercutting, Engaging in Occasional Conversations.

Behavioural Patterns and Learning Process

Most participants displayed a reluctance to take risks and a fear of making mistakes. This emphasis on technical skills and accuracy points to a perfectionist approach, hindering creativity. Participants' reluctance to embrace mistakes reflects a fixed mindset, contrasting with a growth mindset that encourages learning from errors (Dweck, 2006). However, by the end of the workshop, participants proactively suggested taking a group photo. This initiative reflects increased confidence, a stronger sense of community, and a willingness to celebrate their collective achievements—an important step toward embracing a more open and collaborative approach.



Figure 4.7 Final Artwork Presentation by the Chinese Immigrant Group

Summary

These observations provide a comprehensive understanding of the participants' engagement with papercutting, highlighting the influence of cultural background, social dynamics, and the facilitator's role on their learning experience and creative output. Additionally, it underscores the potential of papercutting in enhancing cognitive health, social connectivity, and emotional well-being.

4.1.2 Questionnaire Narratives

4.1.2.1 Introduction and Methodology

This analysis aims to evaluate the perceived effects of workshops on participants' attitude towards Chinese papercutting, especially on its connection to cognitive health. By examining changes in participants' feelings, experiences and familiarity with papercutting before and after the workshop, this questionnaire analysis seeks to reveal the role of papercutting in enhancing cognitive health and promoting cross-cultural appreciation.

The pre-workshop questionnaire comprised 11 questions, while the post-workshop questionnaire included 13 questions. The complete questionnaires are provided in the appendix. These questionnaires were meticulously designed to assess multiple dimensions including participant age groups, art background, awareness and familiarity with Chinese

papercutting and understanding of the concept of cognitive health, as well as perceived changes in the connection between Chinese papercutting practice and cognitive health improvement (Noice & Noice, 2014). Additionally, participants were asked to express their views on the social function of Chinese papercutting within the Welsh cultural context. The questionnaire was designed to provide a comprehensive picture of the participants' experiences and was adapted for cultural sensitivity, for example with specific questions for the Chinese immigrant community (Berry, 1997).

Methodology Explanation

The questionnaires were administered to participants at two critical junctures: prior to the commencement and following the conclusion of the workshop. The Chinese Papercutting and Cognitive Health Workshop, held from 10:00 to 13:00 on December 12, 2023, specifically targeted adults aged 45-70 from the Chinese immigrant community. This methodological approach was meticulously designed to capture a diversity of experiences and perceptions. The questions aimed to assess participants' baseline familiarity with papercutting, initial attitudes towards cognitive health, and expectations for the workshop. This rigorous approach facilitates a detailed analysis of changes in perceptions and awareness following the workshop, making it well-suited for academic and doctoral dissertation purposes (Creswell, 2014; Yin, 2018). Furthermore, adjustments were made for cultural sensitivity, acknowledging the importance of tailoring the questions appropriately for the Chinese immigrant group (Berry, 1997; Triandis, 1994).



Figure 4.8a



Figure 4.8b

Figure 4.8 : Facilitator and Volunteers Distributing and Guiding Participants on Questionnaire Completion

4.1.2.2 The Result of the Questionnaire Data Analysis

The pre-workshop questionnaire contains 11 questions, which can be divided into three categories:

Participant Background

The demographic involved in this study offers a rich and complex perspective on the domain of cognitive health that this research aims to explore. Specifically, the age distribution of participants mainly falls between 45 to 70 years old, with one individual exceeding 70. This population structure not only aligns with the expected target research group but also provides insightful views into investigating cognitive health among the elderly.

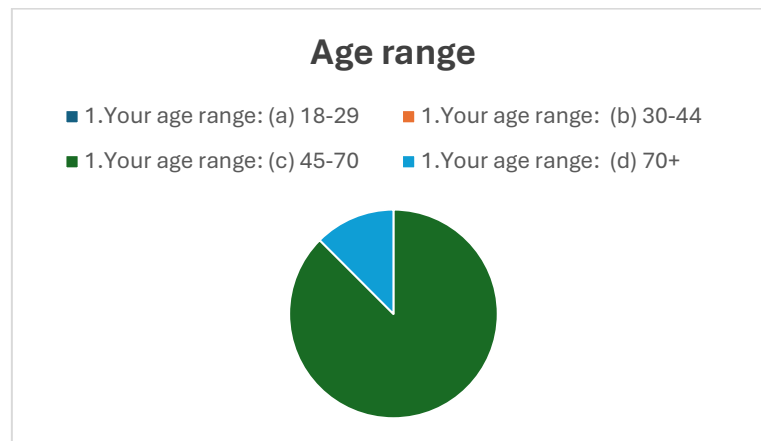


Figure 4.9 Age Distribution of Chinese Immigrant Participants

Art Background and Expectations

Participants in this age range generally lack experience with papercutting art, highlighting a key observation: despite being born and raised in a culture deeply connected with Chinese papercutting, the span of time and space may have led to a detachment from this art form.

Further data analysis reveals that, although all participants are Chinese immigrants in Swansea, Wales, sharing a common cultural background did not lead to a universal familiarity with Chinese papercutting. This phenomenon suggests a complex dynamic relationship between cultural heritage and personal experience. Participants' self-assessment of their experience with art ranged widely from complete unfamiliarity to slight knowledge, indicating significant individual differences in exposure and cognition of traditional art forms within a seemingly homogeneous cultural group.

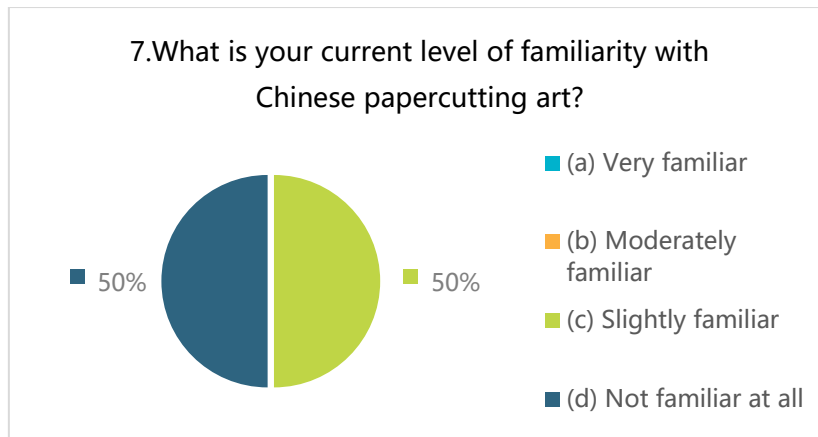


Figure 4.10 Familiarity with Papercutting Before Workshop Participation

Notably, most participants held a positive view of the potential benefits of artistic and creative participation on cognitive health, though one disagreed. This finding highlights an important research direction: the impact of art participation on cognitive health is not universally accepted, which may relate to individuals past experiences, cultural perceptions, and personal values towards art.

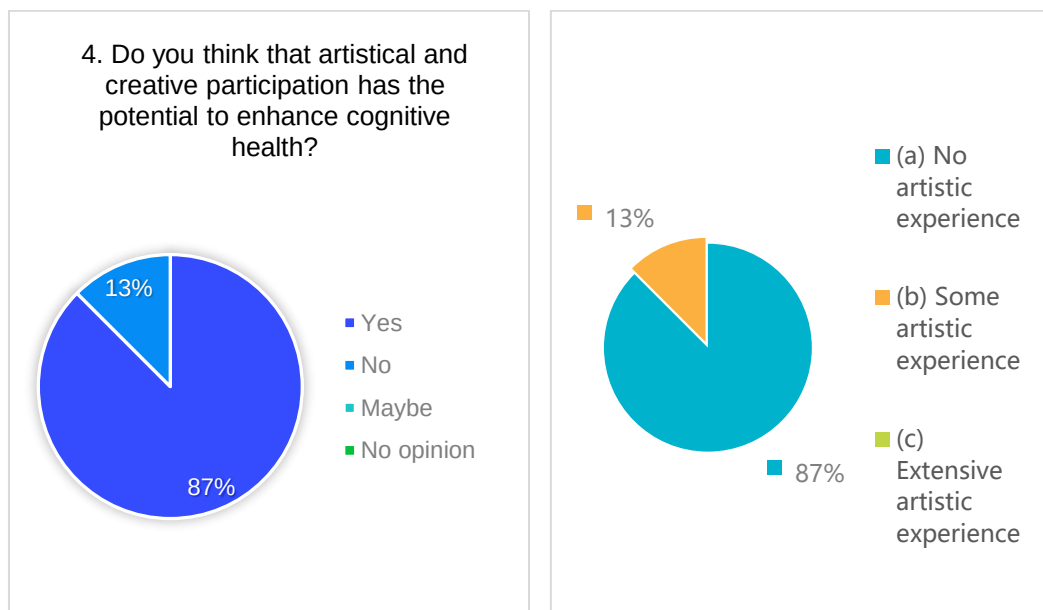


Figure 4.11a

Figure4.11b

Figure 4.11 Chinese Immigrant Participants' Views on Art-Cognition Relationship

Additionally, the survey results on expectations and interest in the papercutting workshop further showcase the varying degrees of interest among participants, from very high to moderate, to general. This not only reveals the participants' openness and curiosity towards new knowledge but may also reflect their confidence and anticipation for cognitive health improvement through artistic activities.



Figure 4.12a

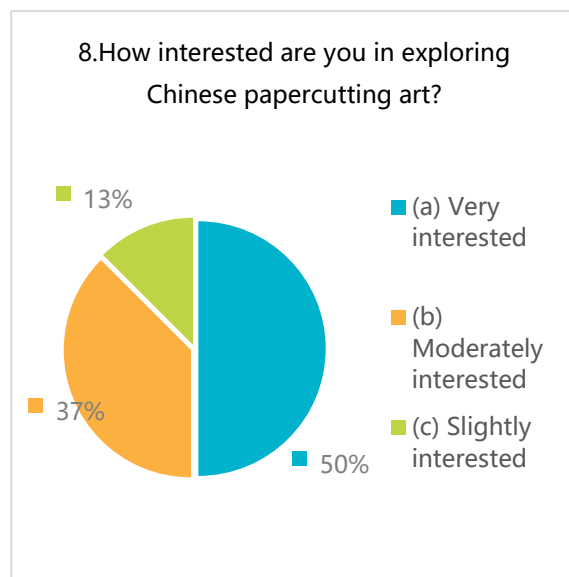


Figure 4.12b

Figure 4.12 Chinese Immigrant Participants' Interest in Papercutting Before the Workshop

Initial Awareness and Attitude Towards Cognitive Health

The initial exploration into participants' awareness and attitudes towards cognitive health revealed a complex and multifaceted situation. Although the majority recognised the importance of cognitive health, they had a limited understanding of specific activities that could promote cognitive well-being (See Figure 4.13a). This finding is thought-provoking, highlighting a potential gap in public knowledge of cognitive health and underscoring the necessity for further education and awareness-raising.

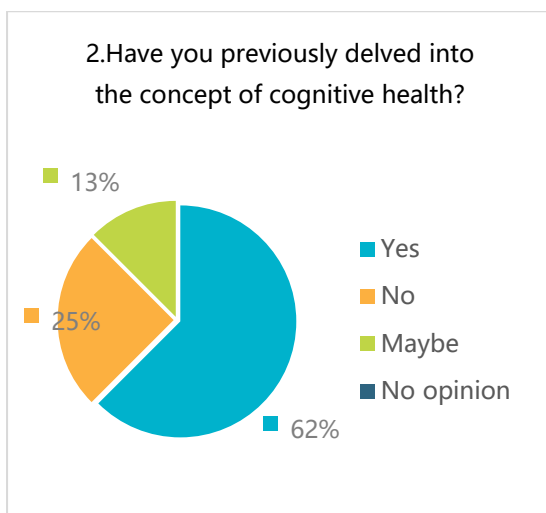


Figure 4.13a

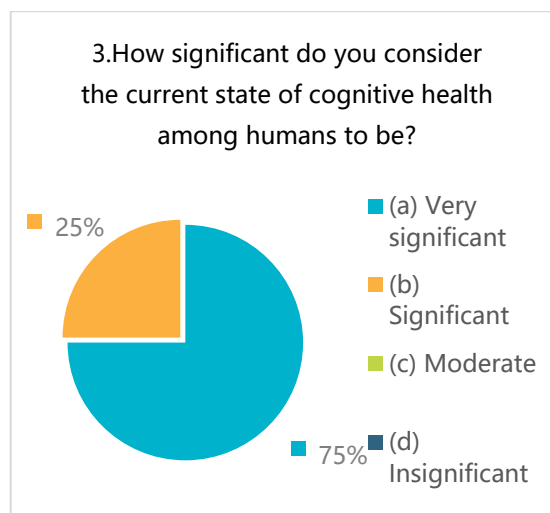


Figure 4.13b

Specifically, 5 participants acknowledged prior exposure to the concept of cognitive health, indicating some level of baseline awareness. However, opinions on the urgency of

cognitive health varied, with 6 considering it very significant and 2 significant, reflecting subjective differences in the perception of urgency (See Figure 4.13b).

Also notably, 7 participants believed in the positive impact of art activities on cognitive health, revealing an intuitive recognition of the connection between art and cognitive health. This suggests the potential value of art activities in promoting cognitive well-being, though this recognition may not be comprehensive or deep (See Figure 4.13c).

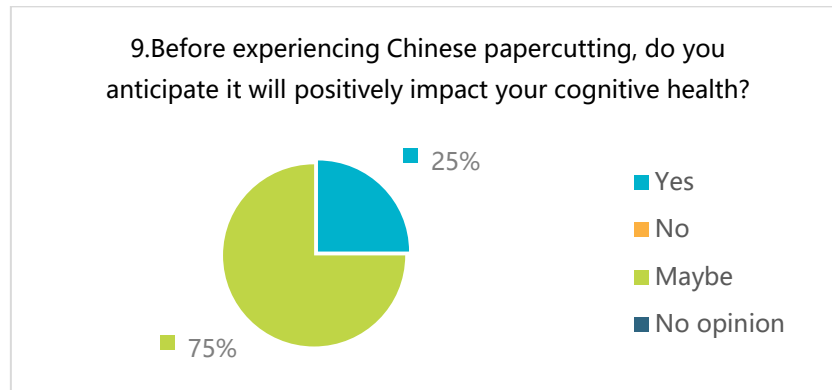


Figure 4.13c

Figure 4.13 Chinese Immigrant Participants' Awareness of Cognitive Health Concepts Prior to the Workshop

Moreover, when inquired about specific expectations for the workshop, participants' responses revealed diverse motivations, including understanding Chinese culture, developing artistic skills, cognitive enhancement, and enjoying social interaction and fun. This indicates that participants have broad and varied expectations of the value the workshop could provide, also pointing to the potential of art activities to meet personal growth and social interaction needs.

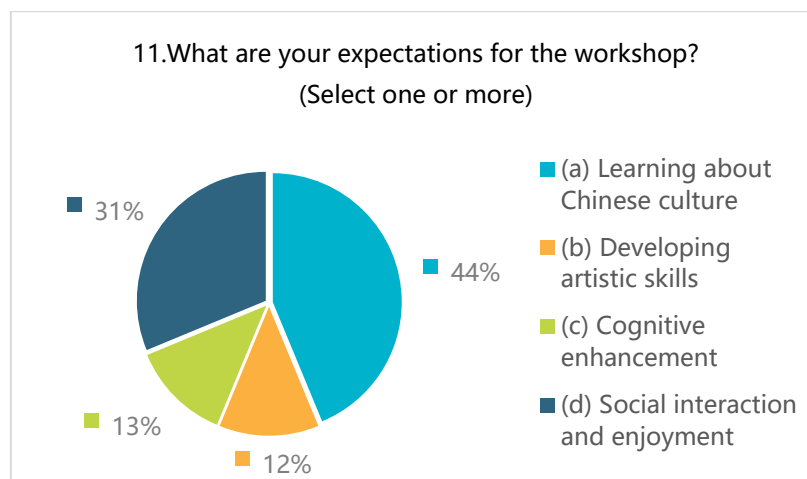


Figure 4.14 Chinese Immigrant Participants' Expectations Survey Prior to the Workshop

Before the workshop, participants' expectations about papercutting's impact on cognitive health were driven more by curiosity and a desire to learn new skills than by specific expectations of cognitive improvement. This suggests that while the public may

acknowledge the benefits of art, the mechanisms behind those benefits remain unclear. Participants' uncertainty is reflected in their responses: six chose "maybe" and two affirmed a positive impact, indicating openness to the idea but a lack of solid belief or understanding.

Specific Awareness About Cognitive Health

In anticipating the impact of the workshop on various aspects of cognitive health, participants' choices (thinking, learning, memory, and others) further emphasise a basic understanding of the multidimensionality of cognitive health. Although this understanding has not yet fully formed among participants, their choices reflect an intuitive understanding of potential improvements in various cognitive functions.

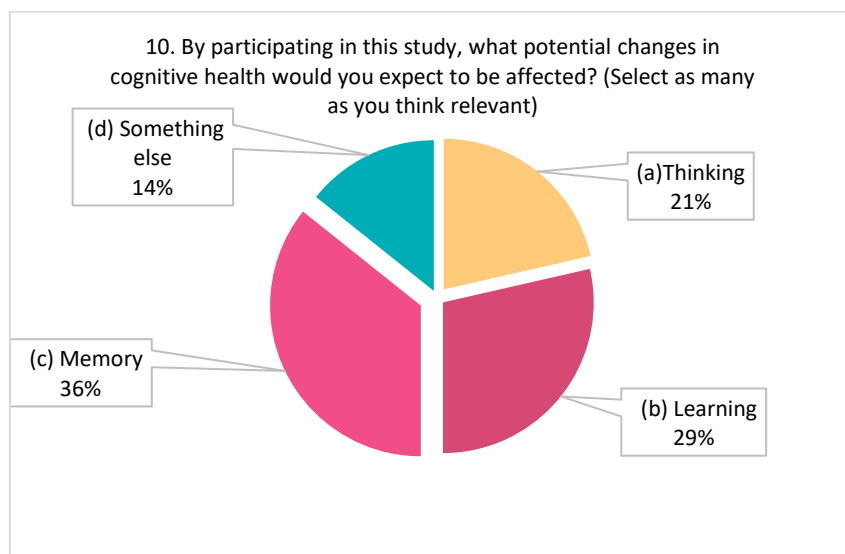


Figure 4.15 Chinese Immigrant Participants' Expectations for Specific Areas of Cognitive Health Improvement

In summary, these preliminary findings not only provide a snapshot of participants' awareness of cognitive health but also lay the groundwork for further exploration of how the workshop could affect participants' cognitive health. The in-depth analysis of these data really showcases a multidimensional cognitive landscape. Although most participants recognise the importance of cognitive health, their understanding of specific activities that could promote cognitive well-being appears relatively limited. This initial awareness reflects a superficial understanding of the concept of cognitive health among the public, suggesting a broader need for education on cognitive health knowledge.

4.1.2.3 Post-Workshop Questionnaires Analysis

The post-workshop questionnaires contain 13 questions, which can be categorised as:

Change in Familiarity with Papercutting and Workshop Experience

Nearly all participants reported greatly enjoying the workshop and expressed a keen interest in further exploring papercutting art (See Figure 4.16a). This positive experience and increased interest underscore the significant role that cultural activities play in promoting lifelong learning and cognitive engagement. Such activities not only foster a deeper

appreciation of cultural heritage but also stimulate cognitive functions, supporting overall mental well-being.

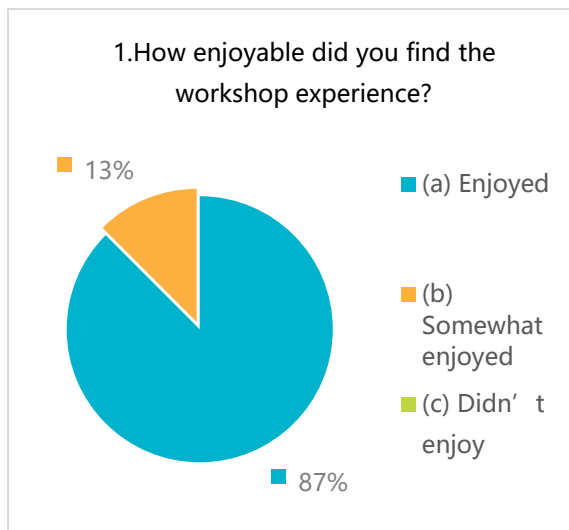


Figure 4.16a

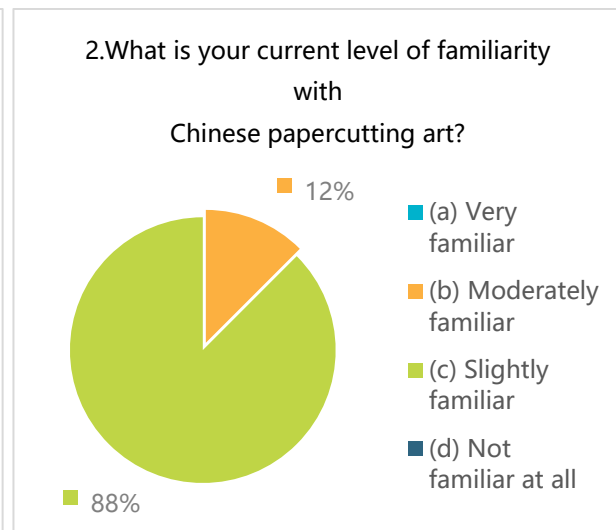


Figure 4.16b

Post-workshop data shows a significant increase in participants' familiarity with papercutting art, reflecting not only the success of the workshop in knowledge transmission but also the potential power of cultural and artistic education (See Figure 4.16b).

Additionally, participants' positive attitudes towards participating in similar cultural activities in the future not only indicate the direct impact of the workshop but also suggest the long-term potential of art participation in fostering community connections and cultural identity (See Figure 4.16c).

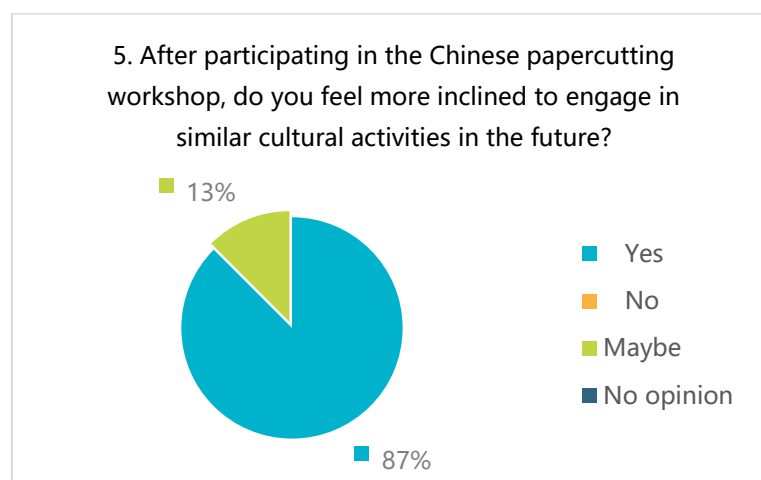


Figure 4.16c

Figure 4.16 Post-Workshop Overall Experience: Chinese Immigrant Participants' Satisfaction, Familiarity, and Likelihood of Future Participation After the Workshop

Cognitive Attitude Changes Related to Papercutting

After the workshop, participants significantly increased their acknowledgment of the positive impact of the papercutting workshop on cognitive health, compared to their attitudes before the workshop (See Figure 4.17a). This change not only indicates the effectiveness of the workshop in raising awareness of cognitive health but also reflects an increased acceptance of art activities as cognitive health intervention measures.

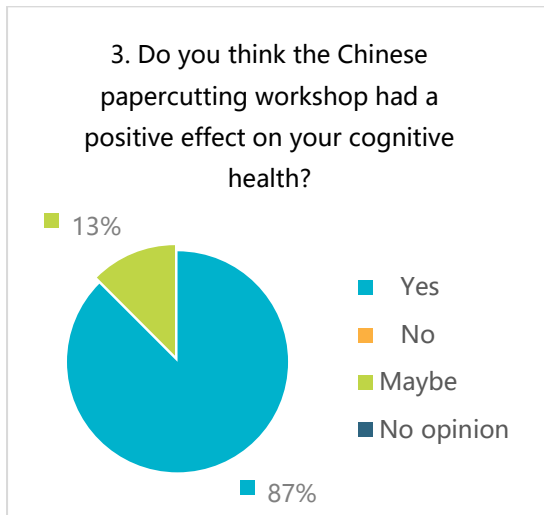


Figure 4.17a

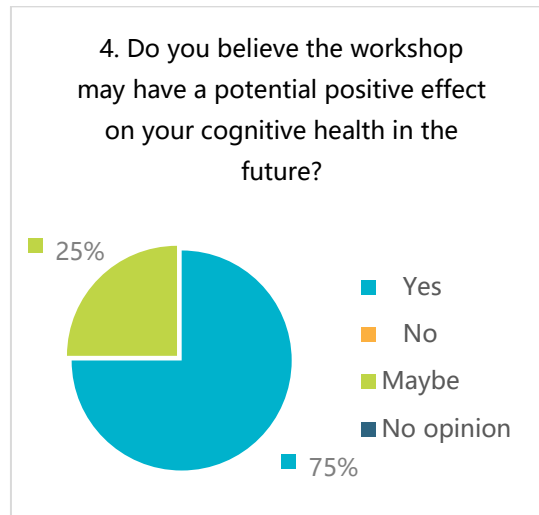


Figure 4.17b

Furthermore, most participants affirmed the potential long-term benefits of the workshop on cognitive health, suggesting that this forward-looking recognition could inspire individuals to explore and participate in art activities in their daily lives more actively (See Figure 4.17b).

5 participants also indicated that their existing perceptions of the relationship between Chinese papercutting and cognitive well-being had changed because of attending this workshop. Three participants selected "maybe," suggesting that the workshop successfully connected these two concepts and achieved a successful expansion in the practical domain (See Figure 4.17c).

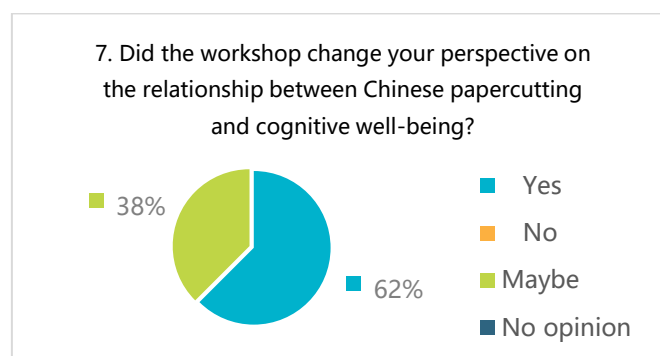


Figure 4.17c

Figure 4.17 Chinese Immigrant Participants' Post-Workshop Perception Changes on the Connection Between Papercutting and Cognitive Health

Expansion of Specific Impacts in the Cognitive Health Domain

Participants reported improvements in key areas of cognitive health-thinking, learning, and memory (See Figure 4.18)-to varying degrees, reflecting the potential benefits of the papercutting workshop in promoting cognitive functions (See Figure 4.19a-c). Specifically, enhancements in emotional functions, such as stress relief, relaxation, and increased creativity and sense of achievement (See Figure 4.19a), not only reveal the importance of art activities in improving quality of life and psychological well-being but also provide valuable directions for future research, namely exploring how art participation can affect cognitive health through emotional regulation mechanisms (See Figure 4.20).

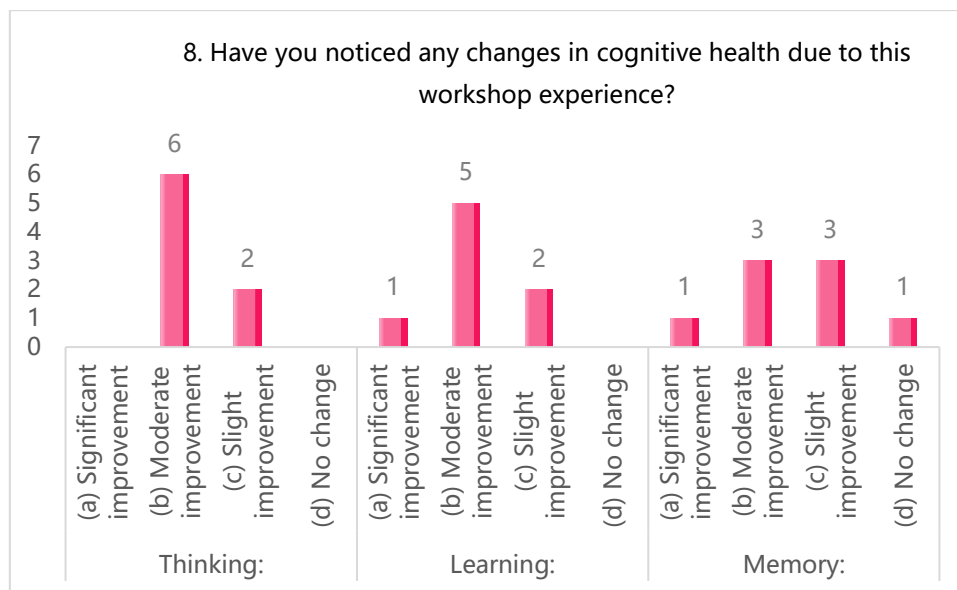


Figure 4.18 Participant-Reported Changes in Three Specific Cognitive Health Areas

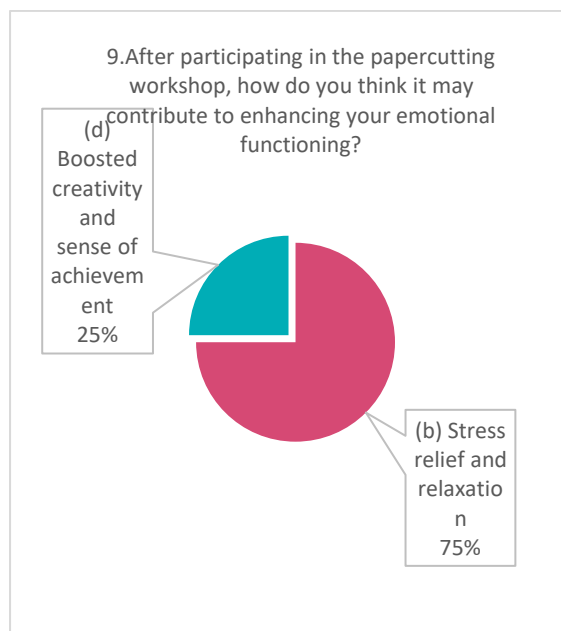


Figure 4.19a

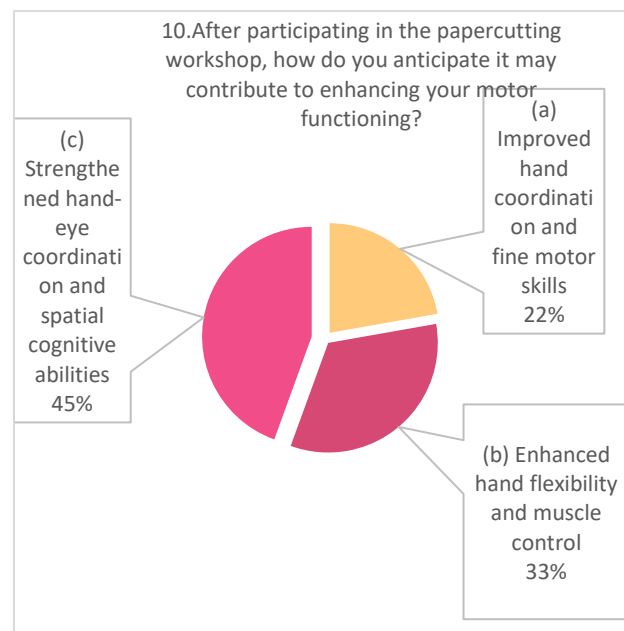


Figure 4.19b

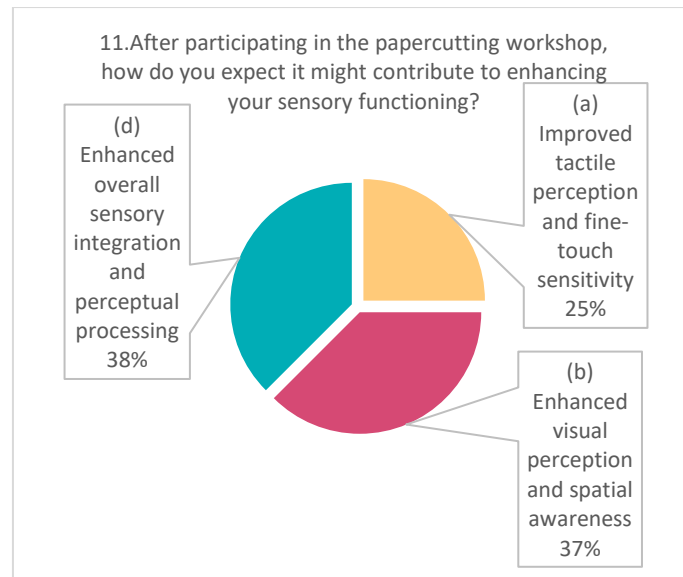


Figure 4.19c

Figure 4.19 Chinese Immigrant Participant-Reported Changes in Three Specific Cognitive Health Function Domains

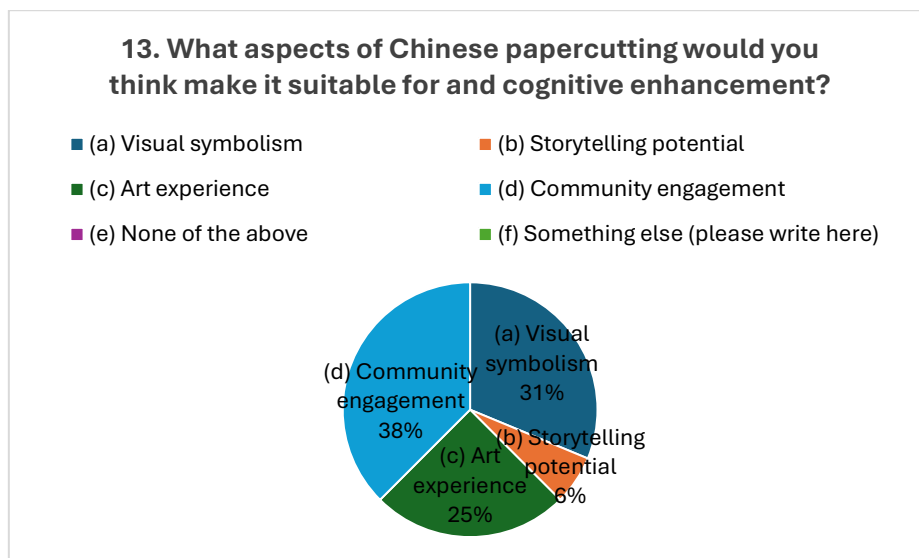


Figure 4.20 Survey on Chinese Immigrant Participants' Perceived Aspects of Chinese Papercutting That Enhance Cognitive Health

The Social Function of Papercutting in a Cross-Cultural Context and Its Significance for Immigrants

Through the papercutting workshop experience, Chinese Immigrant participants' positive feedback on cross-cultural participation further emphasises the role of cultural and artistic activities in promoting cultural exchange and strengthening cultural identity (See Figure 4.21a and b). For Chinese immigrants in Wales, participating in traditional cultural activities serves not only to return to and connect with their native culture but also as a strategy to build identity and promote cognitive health in a new cultural context.

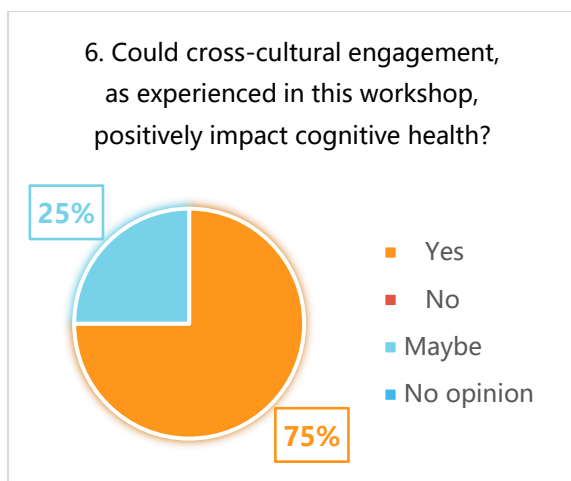


Figure 4.21a

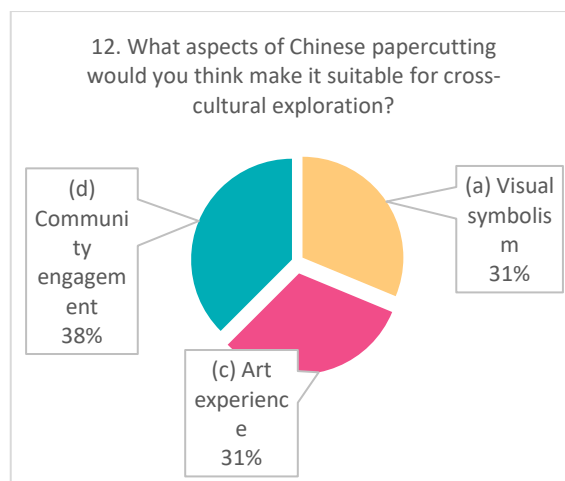


Figure 4.21b

Figure 4.21 Chinese Immigrant Participant's View on Potential of Chinese Papercutting to Enhance Cognitive Health in a Cross-Cultural Context

Summary

The post-workshop questionnaire analysis highlights the positive impact of the papercutting workshop on participants' cognitive and emotional health, as well as its role in fostering cross-cultural understanding and community connections. Comparing pre- and post-workshop data reveals the potential of art and cultural activities to enhance cognitive health, emotional well-being, and social integration. These findings provide empirical support for promoting papercutting art and suggest new directions for future research at the intersection of art, culture, and cognitive health.

4.1.3 Interview Echoes

Interviews were conducted with all participants during and after the workshop, and these sessions were recorded.



Figure4.22a



Figure4.22b

Figure 4.22 Chinese Immigrant Participants being Interviewed by Academic Assistants

After the workshop, all recordings were transcribed, and a thematic analysis was performed on the interview data to identify key themes and patterns. The full transcripts of these interviews are provided in the appendix for reference and transparency, supporting the analysis presented in this section.

4.1.3.1 Initial Reading & Coding:

After the interview recordings were collected, a comprehensive review of the dataset was conducted. Notes were made, and data on cognitive changes, emotional experiences, learning challenges, cultural insights, and group dynamics were coded. Following thematic analysis guidelines (Braun & Clarke, 2006), multiple coding rounds ensured accuracy and reliability, using the constant comparison method (Glaser & Strauss, 1967). This systematic approach aims to provide a nuanced understanding of the multifaceted impact of papercutting on participants.

Thematic Analysis Process Map

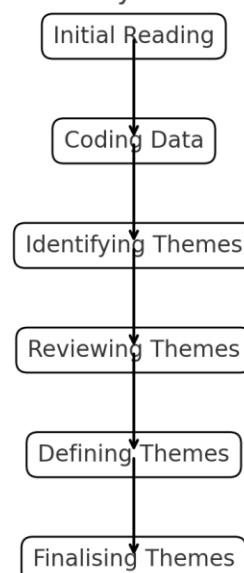


Figure 4.23 Thematic Analysis Process Map

4.1.3.2 Thematic Analysis of Case Study 1

The bar chart below illustrates the hypothetical frequency of each theme identified in the interviews with the Chinese Immigrant Group. It clearly shows the prevalence of each theme, with "Emotional Well-being and Cognitive Benefits" being the most frequently discussed, followed by "Social Engagement and Cultural Exchange," "Cultural Connection and Nostalgia," and "Artistic Exploration and Skill Development."

One of the participants expressed: "This craft reminded me of the times I spent doing handicrafts with my grandmother during my childhood. The details, like the texture of the paper, deeply resonated with me, evoking not just skills but also emotional ties to my hometown".

Theme 2: Emotional Well-being and Cognitive Benefits

Participants reported experiencing a sense of joy and contentment during the papercutting process, highlighting the emotional rewards and cognitive stimulation provided by engaging in this traditional art form. As one participant mentioned, "It felt like I was cutting away my worries. The process is a time of joy and freedom." This theme aligns with research suggesting that creative activities can support mental health and cognitive function, offering insights into how cultural practices contribute to emotional and cognitive resilience.



Figure 4.26 Word Cloud Representation of Theme 2 in Case Study One

The word cloud above highlights terms like "joy," "contentment," "emotional rewards," "cognitive stimulation," and "mental health," underscoring the significant emotional and cognitive benefits that participants experienced through their engagement with papercutting.

Participants expressed sentiments such as: "This detailed work deepened my understanding of art and trained my spatial imagination," "It trained my attention and precision, and it also helped with memory," "I attempted to understand and master different papercutting methods while striving to make my works both traditional and innovative. These challenges enhanced my cognitive and creative abilities," and "Each cut felt like revisiting the past, bringing me immense joy and contentment."

Theme 3: Artistic Exploration and Skill Development

Participant reflections on the papercutting process underscored a journey of personal growth through artistic exploration. Specifically, participants noted improvements in their skills and aesthetic judgment, illustrating the workshop's role in fostering artistic

Participants noted, "I met many Cantonese-speaking volunteers, which felt very comforting. It was a great social experience," "The activity wasn't just about skill but also about social and emotional exchange." This underscores how the workshop went beyond skill development, creating a space for meaningful social connections and cultural empathy.

4.1.4 Synthesising Insights from Case Study One

Observation Analysis

The observation of the Chinese immigrant group during the papercutting workshop revealed a significant transition in their engagement levels. Initially, participants exhibited a cautious approach to learning papercutting techniques but gradually became more involved and expressive. This shift underscores the workshop's effectiveness in fostering an environment conducive to active learning and cultural reconnection. Participants displayed a keen interest in traditional patterns, reflecting a deep-seated cultural affinity and a desire for cultural preservation.

Questionnaire Analysis

Pre- and post-workshop questionnaires revealed varying levels of familiarity with papercutting art, from complete novices to those with minimal experience. However, all participants recognised the potential cognitive benefits of artistic engagement. Post-workshop responses showed an increased awareness of the link between papercutting and cognitive well-being, with many participants acknowledging its role in enhancing cognitive health. The majority expressed a stronger interest in continuing papercutting, indicating the workshop's success in connecting the art form to cognitive wellness.

Interview Analysis

Interviews conducted with participants underscored the transformative impact of the workshop experience on their perceptions of papercutting and its association with cognitive health. Many articulated a renewed appreciation for the art form, viewing it as a bridge to their cultural heritage and a valuable tool for cognitive enrichment. Discussions also revealed personal narratives of cultural identity reaffirmation, and the therapeutic benefits derived from engaging in a mindful, creative activity.

Summary

The comprehensive analysis encompassing observations, questionnaires, and interviews with the Chinese immigrant group offers a succinct yet insightful overview of the workshop's impact. It demonstrated the workshop's effectiveness not only in revitalising participants' connection to their cultural roots through papercutting but also in enhancing their awareness of the art's cognitive benefits. The findings collectively illustrate a positive shift in perceptions towards papercutting, recognising it as a culturally meaningful and cognitively beneficial practice. This case study highlights the intricate interplay between cultural engagement, creative expression, and cognitive well-being, enriching the broader discourse

on the significance of art in health and cultural identity. The appendices at the end of this thesis provide comprehensive supplementary materials related to the workshop, further elucidating its impact and supporting the findings presented.

4.2 Exploring the Welsh Group: A Cultural Contrast

The second case study focuses on local Welsh residents, predominantly individuals aged between 45 and 70 who are relatively unfamiliar with Chinese culture and its artistic expressions. This demographic is typically at a higher risk of cognitive decline. The aim of this case study is to investigate how exposure to and active engagement with Chinese papercutting as a novel art form influences their cognitive health. Specifically, it seeks to understand how this cross-cultural artistic endeavour impacts cognitive functions such as creativity and memory, and how it fosters an appreciation of a culturally diverse art form.

This study extends the exploration of how an unfamiliar art form can challenge and potentially enhance cognitive functions. Additionally, it offers insights into the potential of art as a medium for cultural exchange and its broader implications for cognitive health and social cohesion in a multicultural society.

4.2.1 Observational Insights

Facilitator's Role

The facilitator took a more hands-off approach with the Welsh group compared to the Chinese immigrant group, stepping in only when necessary. The workshop began with an introduction to the cultural background, symbolism, and stories behind Chinese papercutting, along with demonstrations of basic techniques. During this phase, there was significant interaction, as participants were encouraged to share their thoughts and experiences. After establishing a solid understanding of the art form, the facilitator stepped back, allowing participants the freedom to explore and express their creativity. This approach aligns with Rogers' student-centred learning theory, which emphasises the value of autonomy and self-directed learning (Rogers, 1969).



Figure 4.29a

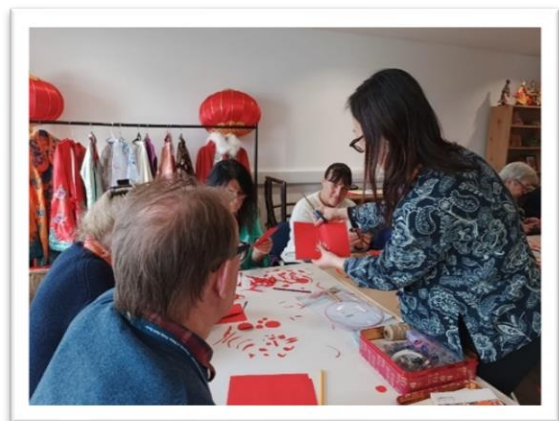


Figure 4.29b



Figure4.29c



Figure4.29d

Figure 4.29 Facilitators Introducing Basic Patterns, Folklore, History, and Stories of Chinese Papercutting to Welsh Group

In the second phase of the workshop, as participants transitioned to creating their own unique designs, the need for facilitator intervention greatly diminished. Having mastered the basic techniques, participants independently designed, drew, and decorated their creations, resulting in a diverse range of works that reflected their individual creativity and personal interpretation. This progression aligns with Vygotsky's concept of the Zone of Proximal Development, where initial guided learning leads to independent problem-solving and creativity (Vygotsky, 1978).

Additionally, the process resonates with Csikszentmihalyi's theory of flow, as participants experienced deep immersion and satisfaction through their autonomous artistic efforts (Csikszentmihalyi, 1990). The facilitator's role was to cultivate an environment that fostered self-expression and intrinsic motivation, both key components in educational psychology and art therapy.

Engagement Quality and Depth

The workshop's success in engaging the Welsh participants highlights the significant cognitive and emotional benefits of cultural art forms. Initially curious about Chinese papercutting, the participants quickly transitioned from passive observation to active engagement. This shift underscores intrinsic motivation and cognitive involvement, aligning with Deci and Ryan's Self-Determination Theory (Deci & Ryan, 1985).

Their curiosity was particularly sparked by the distinct Chinese elements of the workshop and the unfamiliarity of papercutting. Participants closely examined the displayed works, often describing them as "delicate" and frequently inquiring about the techniques used to achieve such precision. Some participants, despite expressing doubts about their artistic abilities, displayed a strong interest in the art form and a keen desire to participate. This enthusiasm reflects the drive for competence and mastery, central to intrinsic motivation.



Figure 4.30a



Figure 4.30b



Figure 4.30c



Figure 4.30d

Figure 4.30 Welsh Group's Interest in Papercutting Art, Toolkit Design, and Workshops

Moreover, the environment's emphasis on Chinese cultural elements further enhanced participants' engagement and cognitive involvement. This setting not only facilitated a deeper appreciation for the art form but also encouraged the participants to push their cognitive boundaries, aligning with Vygotsky's notion of the Zone of Proximal Development (Vygotsky, 1978). By using scissors—a tool participants do not commonly used for art creation—their hand-eye coordination and motor skills were stimulated.



Figure 4.31a



Figure 4.31b



Figure 4.31c

Figure 4.31 Welsh Group's Dedication to Learning Basic Patterns and the Art of Creating with Scissors

In conclusion, the workshop not only fostered artistic development and cultural appreciation but also promoted significant cognitive engagement and flexibility among the participants. These findings underscore the transformative potential of integrating traditional arts into cognitive health interventions, highlighting the broader implications for art as a medium for cognitive and cultural enrichment.

Social Interactions and Dynamics

The dynamics within the Welsh group were characterised by an easy rapport and collaborative learning, despite most participants being strangers to each other. The workshop setting naturally fostered social interactions, aligning with Vygotsky's Social Development Theory, which highlights the role of social engagement in the learning process (Vygotsky, 1978). Participants freely exchanged ideas, often accompanied by light-hearted banter and playful comments about each other's creations. These interactions not only created a relaxed and supportive atmosphere but also facilitated cultural exchange and cognitive engagement.



Figure 4.32a



Figure 4.32b

As the workshop progressed, it became clear that this space was more than just a learning environment—it was a place where new social bonds formed, and mutual encouragement flourished. The collaborative spirit not only deepened participants' understanding and appreciation of papercutting but also enriched the overall experience, highlighting the power of shared learning and creativity.



Figure 4.32c



Figure 4.32d

Figure 4.32 High Levels of Interaction Among Welsh Group Participants

Cultural Reflections

As participants quickly adapted to and creatively applied unfamiliar artistic forms, they demonstrated cognitive flexibility, a key component of Guilford's Structure of Intellect model (Guilford, 1967). This adaptability was particularly evident when they incorporated personal cultural elements, such as Christmas symbols, into their artworks. This integration of new artistic techniques with personal cultural contexts exemplifies Bloom's Taxonomy in the cognitive domain, which emphasises the synthesis and application of knowledge (Bloom et al., 1956).



Figure 4.33a

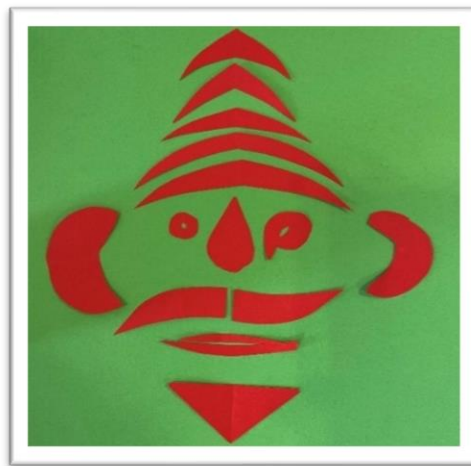


Figure 4.33b

Figure 4.33 Santa Claus Collage Created by Welsh Group Participants

The Welsh participants' artworks reflected a blend of their native cultural influences and the newly acquired art form. During the second session of the workshop, which focused on creating Chinese dragon papercuttings, participants drew inspiration from the facilitator's examples while incorporating their own cultural perceptions of dragons—rooted in Western mythology—into their designs.



Figure 4.34a



Figure 4.34b



Figure 4.34c

Figure 4.34 Some of the Final Dragon Artwork Created by the Welsh Group During the Workshop

Some participants also incorporated other symbolic elements, such as the gourd, which carries deep cultural significance in China. One participant drew on his knowledge of Chinese history to create a uniquely creative piece.



Figure 4.35 Creative Output of the Welsh Group: Unique Works beyond Facilitator Samples

This fusion of both Chinese and Welsh cultural motifs resulted in innovative and creative artworks. This process aligns with Hofstede's Cultural Dimensions Theory, which highlights how cultural backgrounds shape individuals' perceptions and behaviours (Hofstede, 1980). The incorporation of symbols from both Chinese and Welsh cultures indicates a cross-cultural cognitive process, showcasing art as a global medium for storytelling.

Emotional Responses and Behavioural Patterns

Throughout the workshop, the Welsh group exhibited a range of emotional responses, from excitement to confidence in their creative choices. This emotional range aligns with Goleman's Emotional Intelligence theory, particularly in the domains of self-awareness and

self-regulation (Goleman, 1995). Participants confidently made artistic decisions, such as opting to create gourds instead of dragons, showcasing their autonomy and self-assuredness in creative expression. This behaviour reflects Bandura's concept of self-efficacy, where belief in one's capabilities plays a critical role in how one approaches goals and tasks (Bandura, 1977).



Figure 4.36a



Figure 4.36b

Figure 4.36 Emotional Engagement of Welsh Participants During the Workshop

Creative Expression

The Welsh group displayed diverse and innovative creativity, personalising their artwork with techniques such as three-dimensional designs.



Figure 4.37 A Welsh Participant Creatively Made a 3D Collage

They further experimented with varying colour, different themes and mounting techniques. This range of creative output highlights the workshop's effectiveness in fostering creativity, aligning with Amabile's Componential Theory of Creativity, which emphasises the importance of intrinsic motivation and domain-relevant skills in driving creative performance (Amabile, 1983).



Figure 4.38a



Figure 4.38b



Figure 4.38c



Figure 4.38d

Figure 4.38 Unique and Innovative Ideas in the Creative Expression Segment of the Welsh Group

In conclusion, the Welsh group's engagement with Chinese papercutting art was characterised by enthusiastic participation, social interaction, cultural integration, emotional intelligence, and creative freedom. These observations provide valuable insights into the cognitive and social benefits of engaging in culturally rich artistic activities.

4.2.2 Questionnaire Narratives

For Case Study Two, the pre- and post-workshop questionnaires were administered using the same methodology as in Case Study One. The pre-workshop questionnaire contained 12 questions, while the post-workshop questionnaire had 13. The only variation was the inclusion of an additional question in the pre-workshop questionnaire for Case Study Two: "Is this your first experience of Chinese culture?" All other questions were identical.



Figure 4.39a



Figure 4.39b



Figure 4.39c



Figure 4.39d

Figure 4.39 Welsh Group Participants Filling Out Questionnaires

4.2.2.1 Pre-Workshop Analysis

Participant Background

Analysing the questionnaire data from local Welsh participants who attended the Chinese papercutting workshop offers a deep dive into their backgrounds, current understanding of cognitive health, interest in Chinese papercutting art, and their expectations for the workshop. This analysis not only reveals the participants' openness towards cross-cultural learning and cognitive health improvement but also uncovers their intrinsic motivation, desire for cultural exploration, and recognition of the connection between cognitive health and art, laying a foundation for understanding the potential role of art and cultural activities in enhancing cross-cultural understanding and cognitive health.

The age distribution of participants—5 between the ages of 45 to 70, and 4 above 70—fits the setting of this study, targeting a group where cognitive health interventions are deemed

most necessary and effective. The mention of cognitive health in the recruitment poster was a motivating factor for their registration, indicating their possible experiences or concerns with cognitive decline and their search for maintaining or enhancing cognitive functions through art and cultural activities.

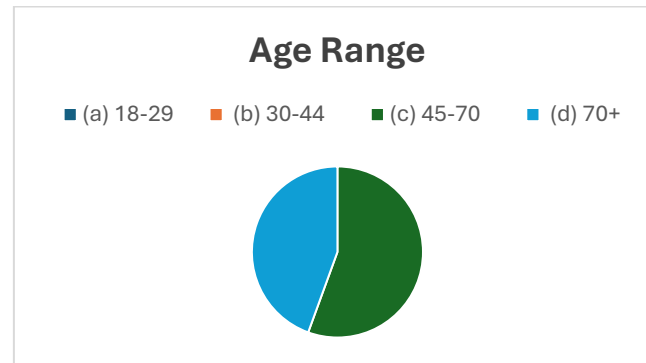


Figure 4.40 : Age Distribution of Welsh Participants

Regarding the Welsh group's experience with Chinese culture and papercutting, 44% had prior exposure to Chinese culture. Among the nine participants encountering papercutting for the first time, eight indicated this workshop was their initial exposure. In terms of familiarity, six reported being "not familiar at all," one was "slightly familiar," and two were "moderately familiar." This suggests that while Chinese culture has some presence in Wales, knowledge of papercutting remains limited for most participants.

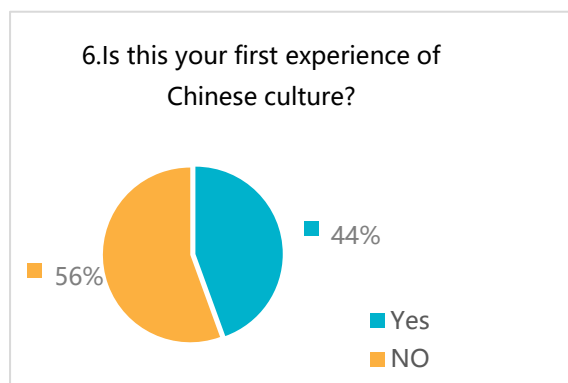


Figure 4.41a

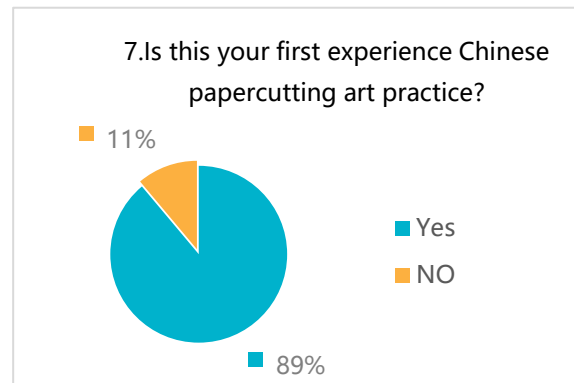


Figure 4.41b

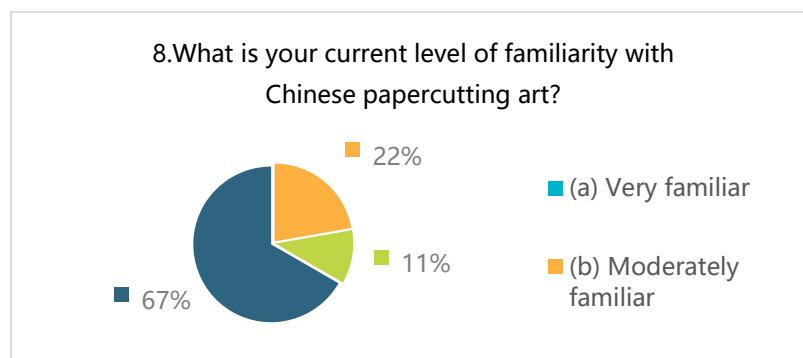


Figure 4.41c

Figure 4.41 Welsh Participants' Familiarity with Chinese Culture and Papercutting Prior to Workshop

This analysis highlights the significant potential for enhancing the visibility and appreciation of Chinese papercutting art in Wales, underscoring the need for initiatives aimed at deepening cultural engagement and education.

Regarding their art background, 6 participants had no previous art experience, suggesting an unmet need for artistic exploration and experience, which the Chinese papercutting workshop could fulfil. Meanwhile, 1 participant with some art background and 2 with extensive experience might engage more in the workshop for deepening their artistic skills and cultural understanding. This variation in art backgrounds offers a rich dataset and nuanced conclusions for accepting a new art form.

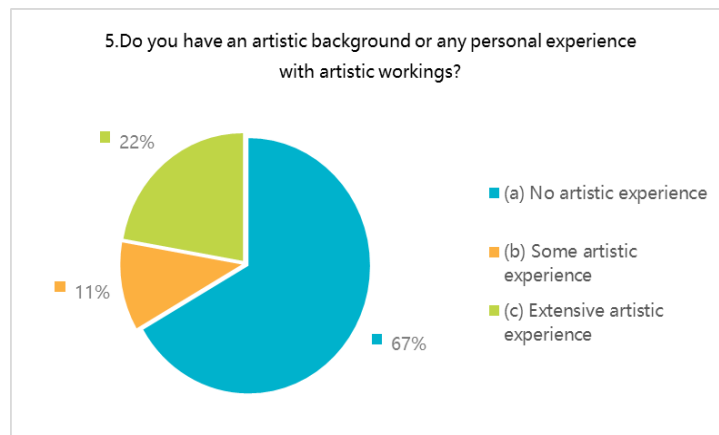


Figure 4.42 Welsh Participants' Art Background

Interest into Chinese papercutting and expectation of the workshop

The interest and expectations for the papercutting art varied from strong to moderate, showing an openness to learning and exploring new cultural art forms. Participants wished to learn about Chinese culture, develop artistic skills, enhance cognitive abilities, and enjoy social interactions through the workshop. These expectations highlight a multidimensional motivation structure, encompassing personal development and social interaction needs.

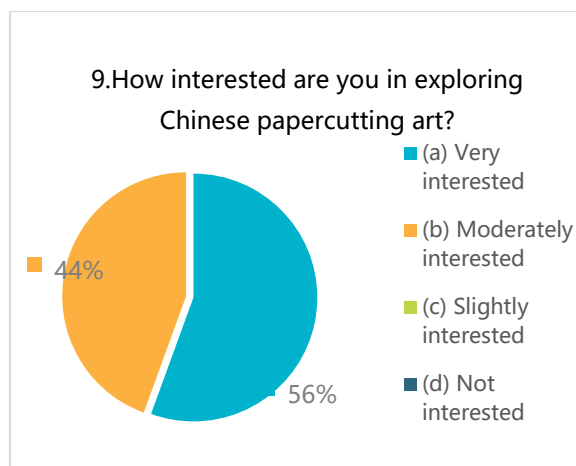


Figure 4.43a



Figure 4.43b

Figure 4.43 Welsh Participants' Anticipation in Papercutting and Workshop Before the Workshop

Attitude towards Cognitive health

Three participants were familiar with cognitive health, indicating some awareness within the group (See Figure 4.44a). However, there was variability in understanding, with several participants unfamiliar with the concept and one unsure of their knowledge. This prior awareness highlights the need for broader educational efforts to enhance understanding of cognitive health.

Regarding the perceived importance of cognitive health, five participants rated it as extremely important, three as important, and one as moderately important (See Figure 4.44b). This distribution signals a widespread acknowledgment of cognitive health's significance, illustrating a collective prioritisation of cognitive well-being that transcends individual differences in initial familiarity. Consequently, the general agreement on the importance of cognitive health underscores the necessity for expanded public education and targeted strategies aimed at bolstering cognitive resilience and overall well-being.

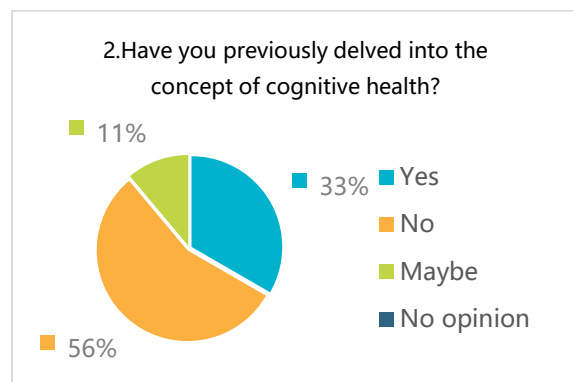


Figure 4.44a

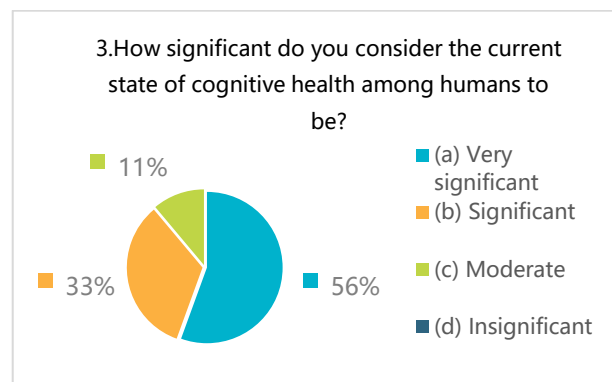


Figure 4.44b

Most participants had a positive attitude towards cognitive health, with seven confident in the potential of art and creativity to enhance it, two uncertain, and none opposed (See Figure 4.44c). This consensus highlights a receptiveness to using creative activities for cognitive health improvement (See Figure 4.44d), offering a promising opportunity for developing related interventions.

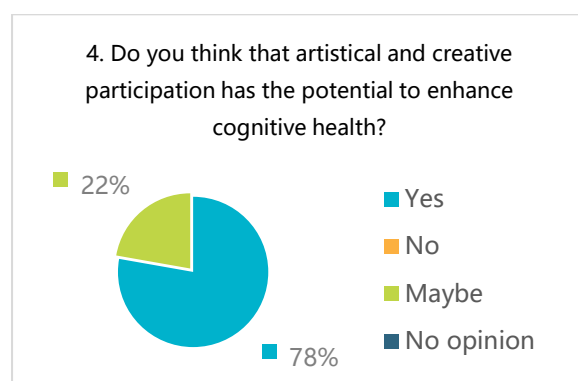


Figure 4.44c

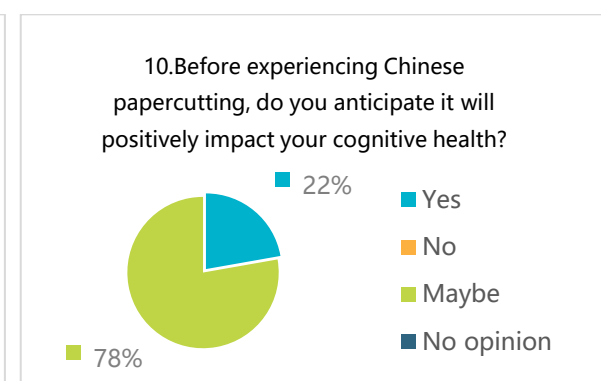


Figure 4.44d

Figure 4.44 Welsh Participants' Awareness of Cognitive Health Concepts Prior to the Workshop

Finally, specific aspects of cognitive health that participants hoped to improve thinking, learning, memory, concentration, and relaxation—provide a detailed view of their expectations. This not only demonstrates the participants' specific needs but also reveals their anticipation for a comprehensive enhancement of cognitive health through the Chinese papercutting art workshop. Understanding these expectations allows for better alignment of the workshop's objectives with participants' goals, thereby maximising the workshop's effectiveness and relevance.

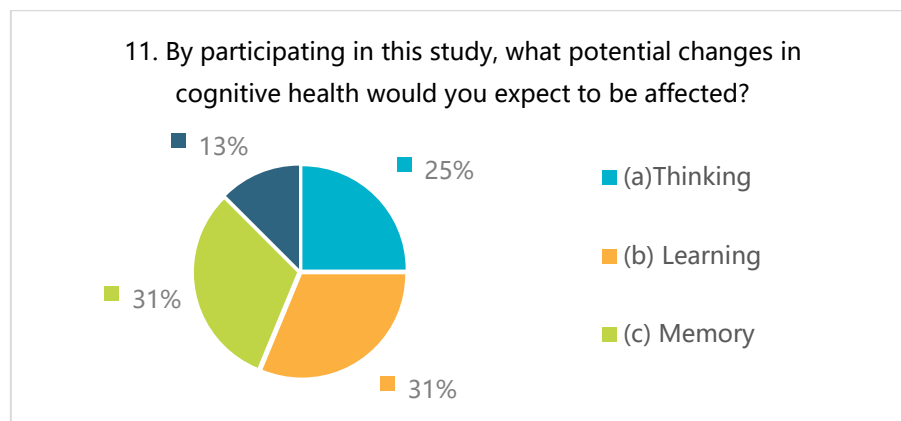


Figure 4.45 Welsh Participants' Expectations for Specific Areas of Cognitive Health Improvement

Overall, the pre-workshop questionnaire data provide valuable insights into the participants' needs and expectations. Analysing this data not only reveals what drew them to the Chinese papercutting workshop, but also sheds light on the cognitive and socio-psychological benefits they hope to achieve. This information is crucial for designing and evaluating future workshops, emphasising the role of cross-cultural art activities in promoting cognitive health. Additionally, these insights can guide the development of tailored interventions to meet specific cognitive health needs, further enhancing the impact of such cultural programs.

4.2.2.2 Post-Workshop Analysis

The post-workshop questionnaire data provides valuable insights into participants' experiences and their personal development. The workshop had a clear impact, enhancing cross-cultural understanding, improving cognitive and sensory functions, and enriching social interactions. The consistently high satisfaction reported by all participants reflects the workshop's appeal and suggests its potential positive effect on both cognitive and emotional well-being.

Familiarity with Chinese Paper-Cutting Art and Enjoyment of the Workshop

The 100% selection of "enjoyed" by participants when reflecting on their workshop experience not only underscores the complete satisfaction and acceptance but also highlights the workshop's effectiveness as a vehicle for cultural engagement and education.

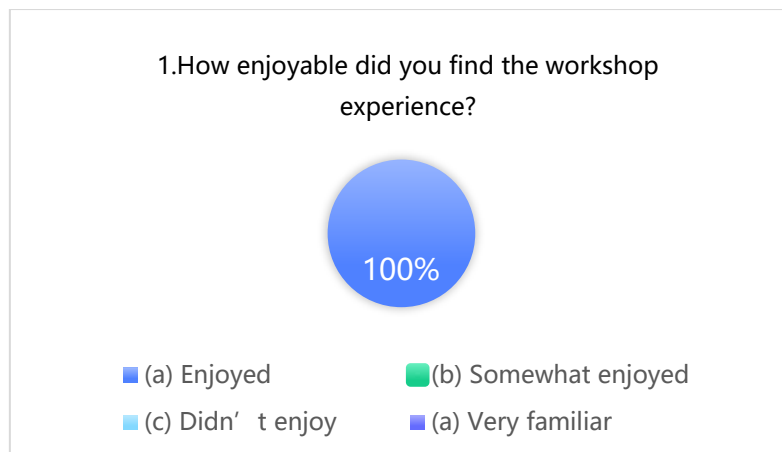


Figure 4.46a

The noticeable increase in familiarity with Chinese papercutting art, facilitated by the workshop, accentuates the art's role as a powerful cultural communication tool, especially pertinent in enhancing the acceptability of foreign cultures. Regarding familiarity, the predominance of "slightly familiar" responses, with an absence of "very familiar" acknowledgments, alongside three individuals indicating "not familiar at all," can be attributed to the nuanced discovery of papercutting's complexity during their initial learning and exploration phase (See Figure 4.46b). This suggests a recognition among participants of the expansive potential for further discovery within this art form.

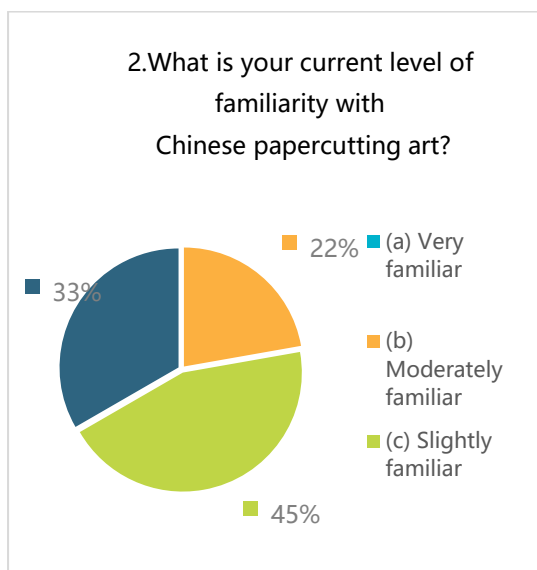


Figure 4.46b

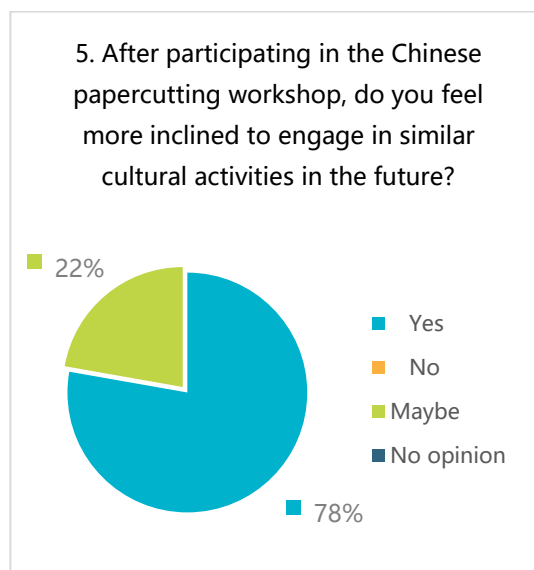


Figure 4.46c

Figure 4.46 Welsh Post-Workshop Participant Engagement and Satisfaction

Most participants (7 out of 9) indicating their willingness to partake in similar cultural endeavours in the future reflects a burgeoning interest in cultural diversity and artistic exploration (See Figure 4.46c). This demonstrates a significant appreciation for cultural activities and a desire to deepen their engagement with diverse cultural expressions and

artistic forms, highlighting the workshop's success in fostering an environment conducive to cultural curiosity and continuous learning.

Cognitive Attitude Shifts on Papercutting and Cognitive Health

Most participants (8 out of 9) believed the workshop positively impacted their cognitive health, with seven expecting this effect to continue (See Figure 4.47a). These results highlight the potential of cultural activities like papercutting to enhance cognitive well-being, suggesting the need for further research on using such workshops to promote long-term cognitive health (See Figure 4.47b-c).

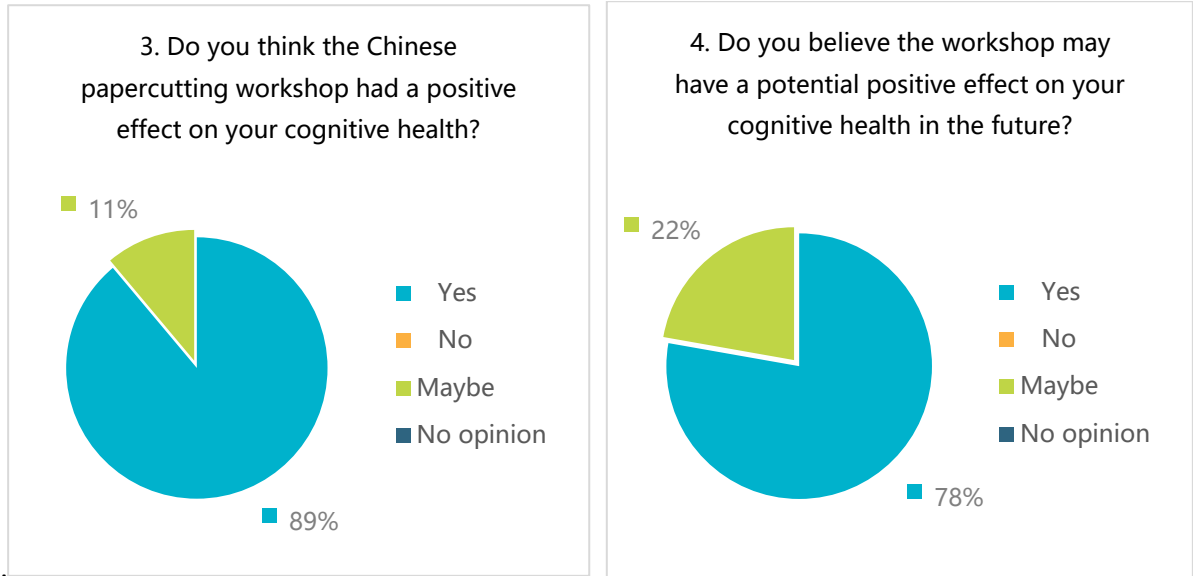


Figure 4.47a

Figure 4.47b

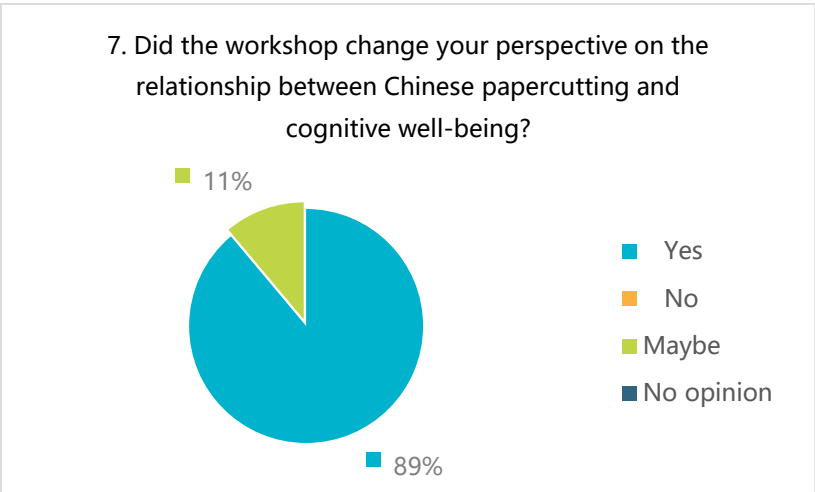


Figure 4.47c

Figure 4.47 Post-Workshop Perception Changes on the Connection Between Papercutting and Cognitive Health

As shown in Figure 4.48, when asked which aspects of Chinese papercutting contribute to cognitive enhancement, participants identified storytelling potential (27%) and community engagement (19%) as the most significant factors, followed by visual symbolism (19%) and

art experience (35%). This distribution further reinforces the role of Chinese papercutting not only as an artistic activity but also as a vehicle for cognitive engagement and social interaction.

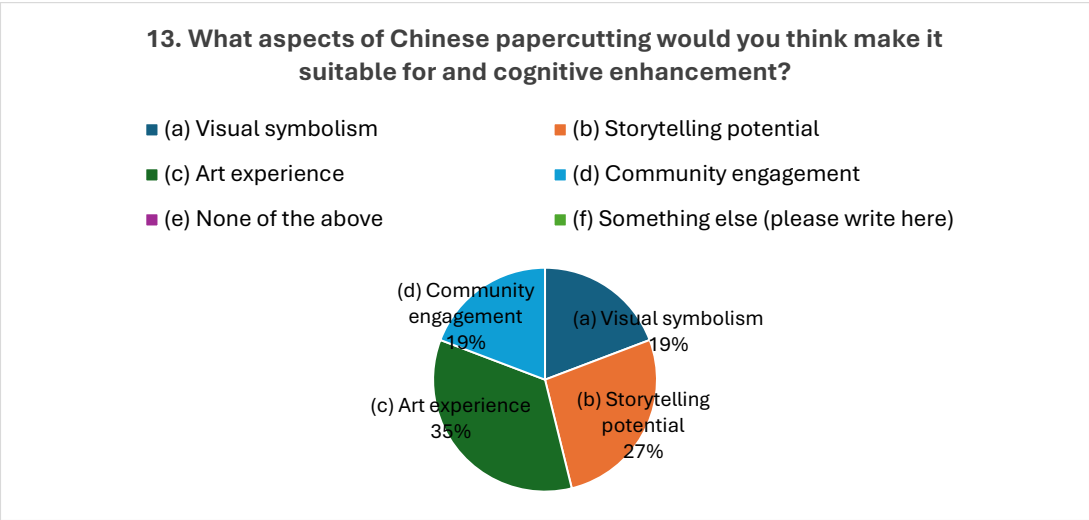


Figure 4.48 Survey on Welsh Participants' Perceived Aspects of Chinese Papercutting That Enhance Cognitive Health

Expansion of Specific Impacts in the Cognitive Health Domain

Participants noted improvements in cognitive areas like thinking, learning, and memory, along with emotional and motor skill enhancements. These results demonstrate the dual role of art in boosting cognitive function and supporting emotional well-being. This underscores the importance of incorporating art into cognitive health programs to foster holistic development.

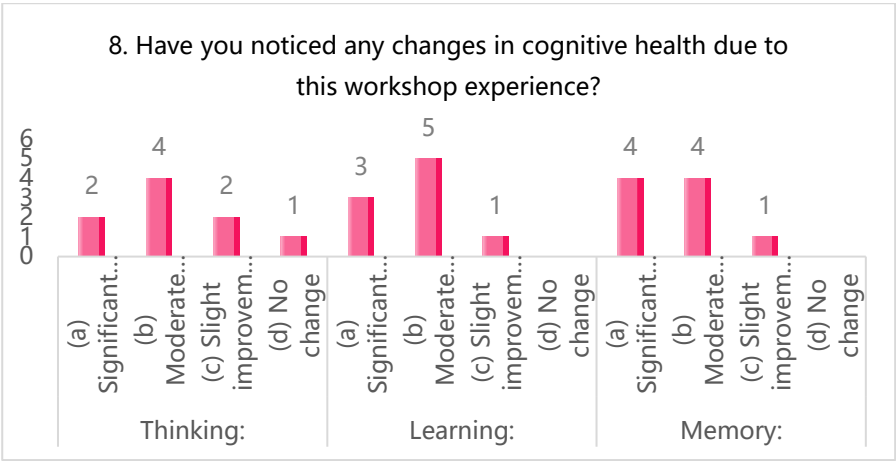


Figure 4.49 Welsh Participant-Reported Changes in Three Specific Cognitive Health Areas

The improvement in emotional functions, such as stress reduction and enhanced emotional expression, suggests that Welsh participants found the papercutting workshop to be a unique avenue for emotional release, potentially positively impacting their psychological well-being (See Figure 4.50a). Additionally, the enhancements in motor and sensory functions, particularly in hand coordination, tactile perception, and spatial

awareness, highlight the potential role of papercutting art in improving fine motor skills and sensory integration (See Figure 4.50b-c).

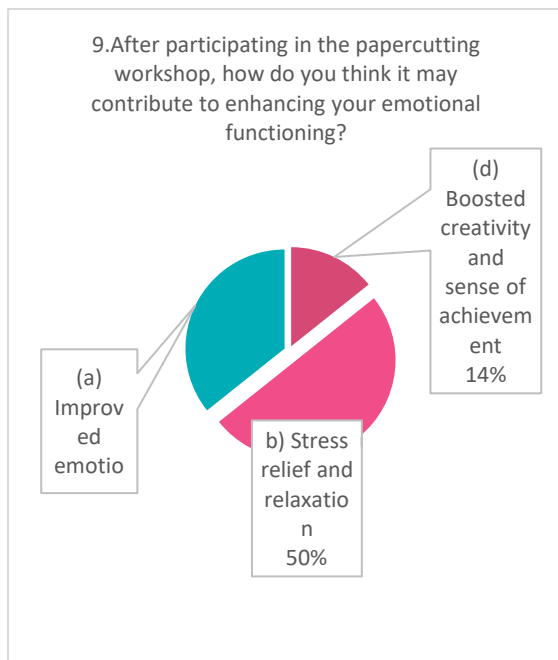


Figure 4.50a

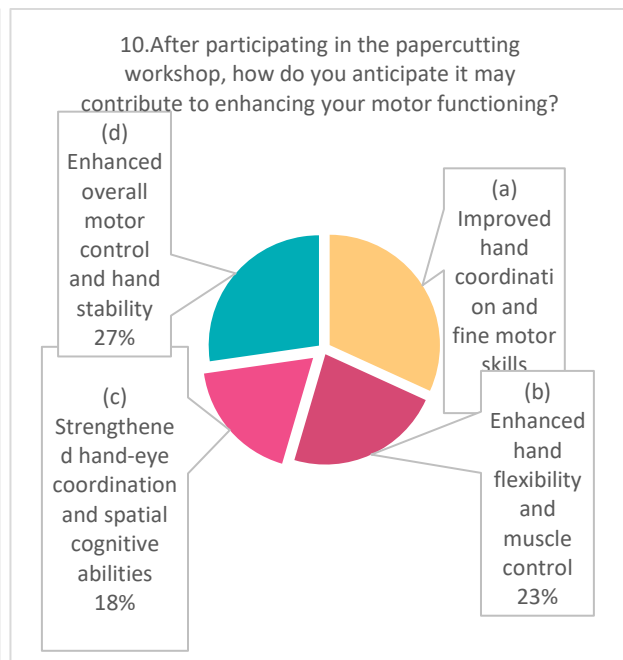


Figure 4.50b

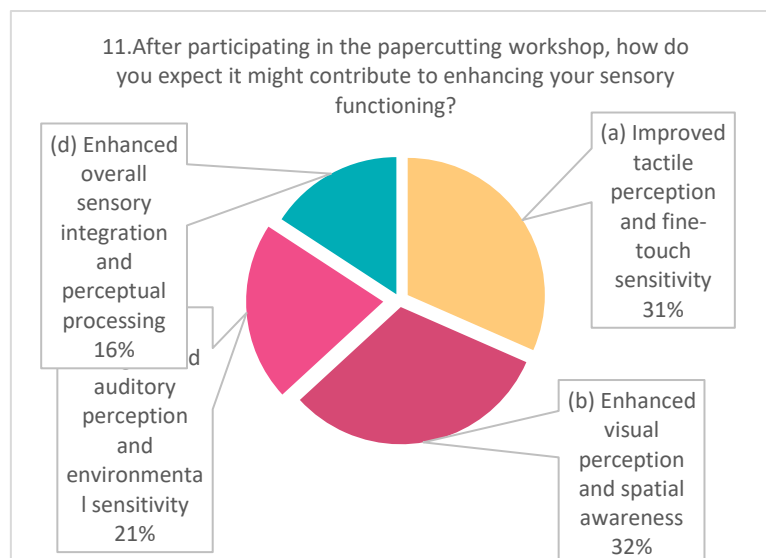


Figure 4.50c

Figure 4.50 Welsh Participant-Reported Changes in Three Specific Cognitive Health Function Domains

The Role of Papercutting in a Cross-Cultural Context: A Welsh Perspective

The strong desire among Welsh participants to engage in similar cultural activities in the future and their unanimous agreement on the positive impact of cross-cultural exchange on cognitive health reflect the crucial role of cross-cultural art activities in promoting social integration and enhancing personal life quality (See Figure 4.51a). Through art experiences, storytelling, and community involvement, Chinese papercutting is seen as a powerful tool for

cross-cultural exploration (See Figure 4.51b), further proving the multifaceted benefits of art activities for cognitive enhancement (Moutafidou & Bratitsis, 2018; Dreher, 2012).

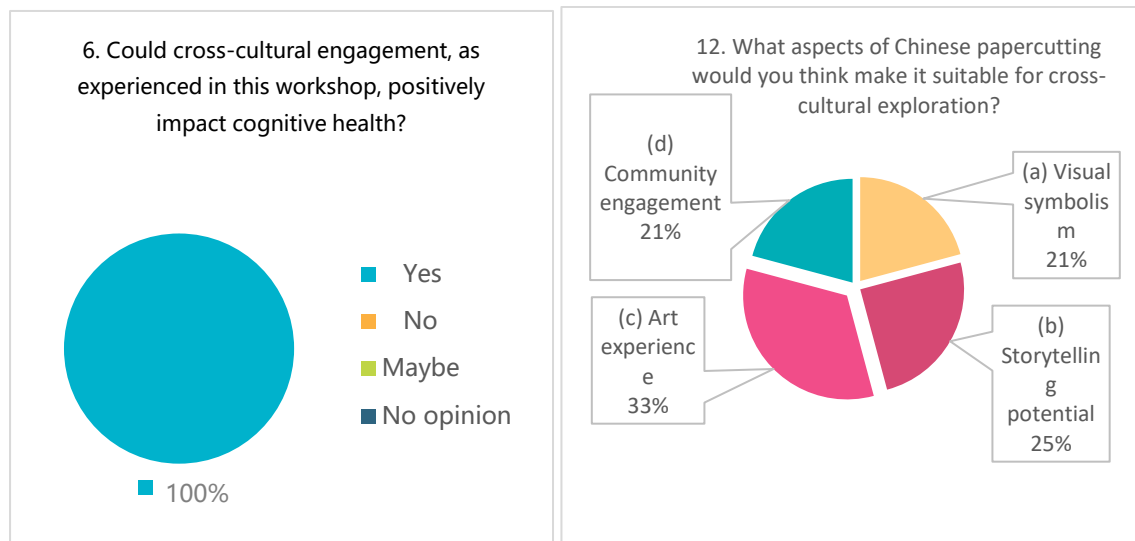


Figure 4.51a

Figure 4.51b

Figure 4.51: Survey Results on the Cognitive Health Benefits of Chinese Papercutting in a Cross-Cultural Context

In summary, the post-workshop questionnaire highlights the lasting effects of Chinese papercutting on cross-cultural education and cognitive development, reinforcing the need for ongoing participation in such activities to support overall well-being. These findings suggest a pathway for future research and practical applications in cross-cultural education and health promotion, offering both theoretical and empirical groundwork for developing more targeted strategies.

4.2.3 Interview Echoes

To conduct a thematic analysis on the interview data from Case Study Two, the process involves systematically coding the data, identifying themes, reviewing and defining them, and finally relating them back to the hypothesis about the impact of papercutting on cognitive health among the Welsh group.

The bar chart showcases four themes: "Cognitive Engagement and Changes," "Emotional and Cultural Resonance," "Learning Challenges and Adaptation," and "Cultural Diversity and Insights." It is evident from the chart that "Emotional and Cultural Resonance" was the most frequently mentioned theme by participants, followed by "Cultural Diversity and Insights," "Cognitive Engagement and Change," and finally, "Learning Challenges and Adaptation." This distribution reflects the participants' prioritisation of emotional connection and cultural appreciation over the other explored themes, suggesting that these aspects were most impactful in their workshop experience. Such findings emphasise the importance of integrating emotional and cultural dimensions into the design of cross-cultural workshops to

maximise their relevance and effectiveness for participants.

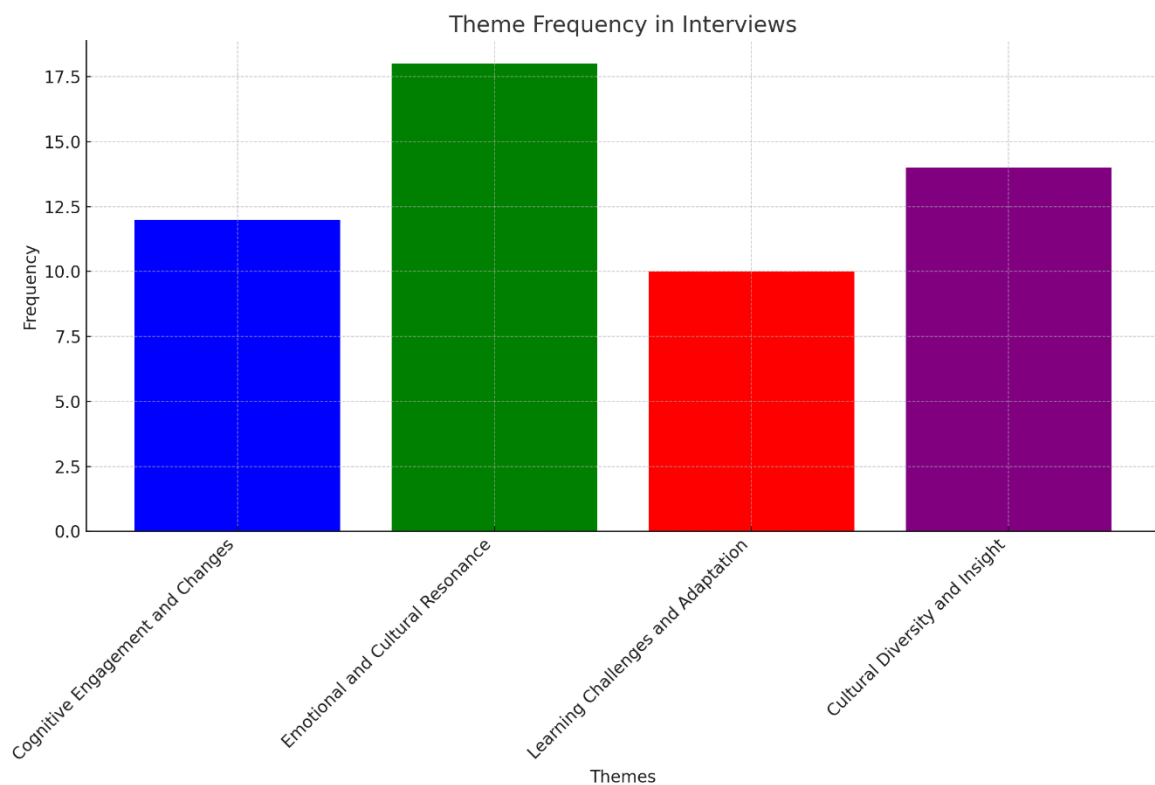


Figure 4.52 Frequency of Identified Themes After Thematic Analysis of Case Study Two

Theme 1: Cognitive Engagement and Changes

The theme of cognitive engagement and changes highlights the transformative impact of the papercutting workshop on participants' attention spans and cognitive abilities. This theme is central to the study's hypothesis that engaging in creative activities like papercutting can enhance cognitive functions. Participants reported unexpected improvements in their ability to concentrate for extended periods, suggesting that such activities may foster cognitive health by challenging and engaging the mind in novel ways.

This word cloud, derived from participants' descriptions of their workshop experiences, emphasises frequently mentioned positive emotional and cognitive change terms such as "focus," "surprise," "engagement," and "cognitive enhancement." It can effectively communicate the core message of Theme 1: "Cognitive Engagement and Changes," namely that participation in creative activities like papercutting can foster cognitive health and improve attention. This visual method can help to showcase the qualitative aspects of participants' experiences, further highlighting the positive impacts of the activity on participants.

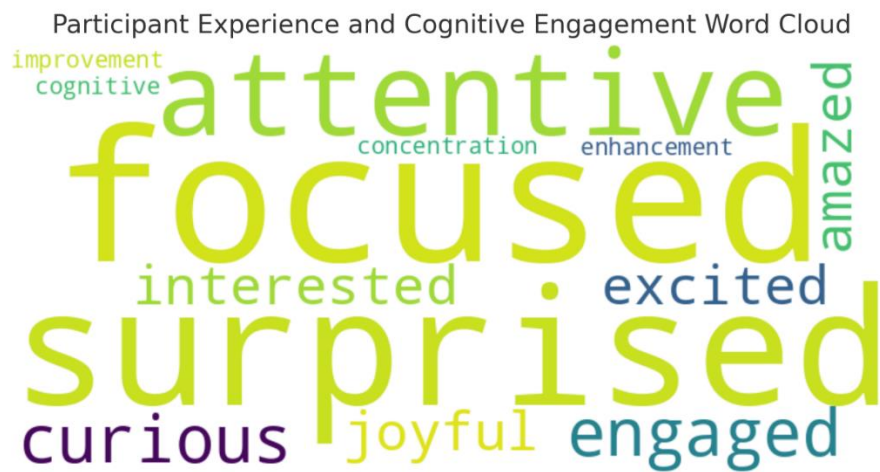


Figure 4.53 Word Cloud Representation of Theme 1 in Case Study Two

One of the participants said in the interview: "I was very surprised about my attention span. Normally, I haven't been able to be so attentive for so long, but today surprised me."

Theme 2: Emotional and Cultural Resonance

This theme delves into the deep emotional connections and cultural insights that participants experienced during the workshop. It supports the hypothesis that cultural engagement through art can evoke positive emotions and foster a deeper understanding of different cultures. Participants expressed a range of emotions, including joy, pleasure, feeling well, alongside feelings of uncertainty during the process, and curiosity about Chinese culture. These emotions suggest that papercutting serves as a bridge to cultural exploration, enhancing both emotional well-being and cultural appreciation.

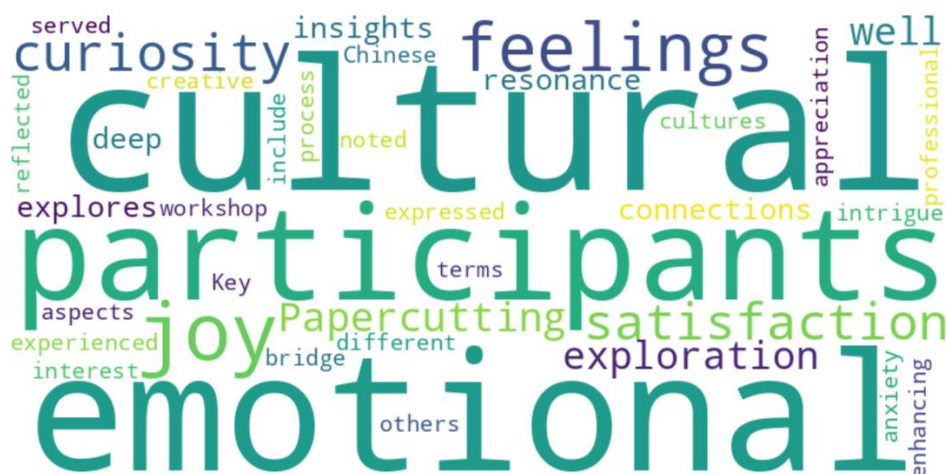


Figure 4.54 Word Cloud Representation of Theme 2 in Case Study Two

As one participant reflected, "There are so many different meanings to drawing things in the Chinese world, and I now look at papercutting differently from a professional perspective."

Many participants also expressed feelings of joy, satisfaction, and cultural intrigue, highlighting how their engagement with papercutting sparked both emotional and cultural responses. The interaction with cultural elements during the workshop fostered a sense of shared experience and connection. One participant noted in the interview, "I think it's good to get people together and work as a team to create something individual. Each of us could see how great others' work was—like, look at what this woman did, look at me." Another participant added, "It was a very friendly atmosphere, quite good emotionally."

Theme 3: Learning Challenges and Adaptation

This theme focuses on the initial challenges participants faced while learning papercutting and their subsequent adaptations. It aligns with the study's hypothesis that overcoming learning obstacles in a supportive environment can lead to personal growth and resilience. The process of adapting to new skills and overcoming difficulties reflects the cognitive and emotional benefits of engaging in complex tasks, underscoring the role of creative activities in promoting cognitive flexibility and problem-solving skills.



Figure 4.55 Word Cloud Representation of Theme 3 in Case Study Two

Some participants noted the challenges they encountered, particularly as beginners, and how they navigated these obstacles. This theme explores their learning process, the support they required, and how they adapted to the task over time.

One participant reflected, "There are so many different meanings to drawing things in the Chinese world, and I know lots of things have different meanings." Another participant shared their personal struggle, saying, "This is really hard for me. I'm not great at art, but I know it's good for my mind, and I need this kind of practice." For some, the technical aspects of papercutting were challenging: "I forgot which way to cut and had to ask for help once or twice." Another participant noted, "I haven't done anything like this for years, and I was surprised that I'm not very good at it anymore. But through papercutting, I've had great realisations and learning."

Theme 4: Cultural Diversity and Insight

Cultural diversity and insight emphasise the participants' exposure to and appreciation of cultural diversity through papercutting. This theme is relevant to the hypothesis that experiencing cultural traditions through art can expand cognitive perspectives and foster an appreciation for global cultures. Participants' reflections on the meanings behind different symbols and the pleasure derived from learning about another culture illustrate how cultural engagement through art can enrich cognitive and cultural understanding.



Figure 4.56 Word Cloud Representation of Theme 4 in Case Study Two

Participants described the workshop as impressive, admirable, and unforgettable. One participant remarked, "It is diverse. Cultural symbols contribute to expanding your ways of thinking. They allowed me to see things differently, to take a new approach to the moment."

During the workshop, a female participant shared, "The meaning behind the gourd, symbolising good fortune and prosperity, is really wonderful. I'll cut a gourd instead—I won't do a dragon anymore!" One participant expressed, "Now, when I look at papercutting, my perspective is completely different from before. You explained how to distinguish harmonious basic patterns and appreciate a Chinese papercutting piece. This is valuable knowledge—thank you!" Another participant, reflecting on the overall experience, said "the workshop has made me see papercutting and aspects of Chinese culture from a professional perspective. Some cultural elements were initially difficult to grasp, but now I truly appreciate the craft and its cultural significance."

4.2.4 Synthesising Insights from Case Study 2

Observation Analysis

Observations of the Welsh participant group during the Chinese papercutting workshop revealed a high level of initial curiosity and enthusiasm. Unlike the Chinese immigrant group,

the Welsh participants demonstrated immediate engagement and a willingness to experiment with new techniques from the outset. This behaviour highlighted the workshop's role in not only introducing a novel cultural art form but also in stimulating interest and creativity among participants unfamiliar with Chinese papercutting. The interaction among participants suggested a collaborative learning environment, fostering not just skill acquisition but also cultural exchange.

Questionnaire Analysis

The questionnaire responses before and after the workshop indicated a significant leap in the Welsh participants' interest and understanding of Chinese papercutting art. Initially, most participants had little to no familiarity with the art form, viewing it primarily as a cultural curiosity. Post-workshop responses, however, showed a marked increase in their appreciation for papercutting as an art form and its cognitive benefits. A considerable number of participants acknowledged a new-found understanding of how engaging in such artistic activities could contribute to cognitive health, with a distinct shift towards recognising the therapeutic and cognitive enhancement aspects of papercutting.

Interview Analysis

Interviews with the Welsh participants further illuminated their perspective shifts and the subjective value they derived from the workshop. Many expressed delights in discovering a new cultural and artistic domain, noting specific ways in which the activity offered mental stimulation and relaxation. The narrative of cultural exploration was prominent, with participants appreciating the opportunity to delve into a different cultural tradition and its artistic expressions. The therapeutic aspect of paper-cutting, particularly its meditative qualities and the focus it demanded, was frequently mentioned as a significant benefit.

Summary

The analysis of the Welsh participant group, conducted through observations, questionnaires, and interviews, offers a detailed comparison with the Chinese immigrant group. Notably, the Welsh participants' progression from curiosity to appreciation for Chinese papercutting art underscores the workshop's success in bridging cultural divides and enhancing mental well-being through artistic engagement. This case study demonstrates the universal appeal of papercutting across diverse cultural contexts, emphasising its potential as a tool for cognitive enhancement, cultural education, and personal fulfilment. Moreover, the findings suggest broader implications for incorporating art into daily life to achieve cognitive and cultural benefits. These results enrich the discourse on the significance of cross-cultural activities in fostering global understanding and mental health.

Chapter 5 Synthesising Insights: From Model Validation to Theoretical Contributions

This chapter integrates and reflects upon the findings from the comparative case studies, aiming to validate and refine the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*." The innovative intersection of Chinese papercutting art and cognitive health enhancement within a cross-cultural framework is revisited, emphasising how these case studies serve as empirical tests of the theoretical framework.

The comparative case studies involving Chinese immigrants and Welsh natives provide a robust platform to examine the model's applicability and effectiveness across different cultural contexts. By analysing the data collected, the aim is to substantiate the theoretical foundations of the model, demonstrating how the principles of neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies are manifested in the observed outcomes (Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017; Fredrickson, 2001; Kleim & Jones, 2008; Malchiodi, 2012;).

In the case study chapter, the empirical data was examined to highlight the model's contributions to enhancing cognitive health, fostering emotional well-being, and promoting cross-cultural understanding. Additionally, this chapter will explore the broader implications of the findings, discussing how integrating traditional art forms like Chinese papercutting into cognitive health strategies can inform and transform cross-cultural interventions (Greenfield, 2015; Berry, 1997). Furthermore, the use of papercutting in other domains, such as educational settings and community-building initiatives, will be considered to illustrate its versatile applications and benefits (Lawton & La Porte, 2013).

By synthesising empirical evidence with theoretical insights, the aim is to demonstrate the model's potential impact on the fields of neuroplasticity, art therapy, cognitive psychology, and multicultural communication. This chapter serves as the culmination of the research, providing a comprehensive analysis that bridges theory and practice, showcasing the significance and future potential of the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*."

5.1 Background Review and Model Proposition

This research examines the potential cognitive health benefits of Chinese papercutting within a cross-cultural context in Wales. Given the global aging population, cognitive health is increasingly vital for individual well-being and the effectiveness of health and social systems (World Health Organisation, 2019). By exploring the intersection of neuroscience and art therapy, this study aims to highlight the contemporary relevance and application of traditional art forms (Malchiodi, 2012; Demarin et al., 2016). Through a comprehensive literature review, research design, data collection, and analysis, this study introduces the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*, outlined in Chapter 2.

This model is applied to the workshop design and implementation and will be thoroughly discussed in this chapter.

5.1.1 Research Purpose, Methodology, and Broad Finding

Research Purpose

The study aims to assess the positive impacts of Chinese papercutting on the cognitive health of the elderly in Wales, specifically its effects on cognitive functions and personal well-being. It also investigates how papercutting can facilitate cognitive health improvements in a cross-cultural setting, bridging traditional art practices with modern cognitive health interventions (Malchiodi, 2012; Deardorff, 2009).

Methodology

Previous chapters showed two meticulously designed case studies which explored the cognitive and social benefits of Chinese papercutting among participants from diverse cultural backgrounds. Using a mixed-methods approach, this study involved papercutting workshops, pre- and post-workshop questionnaires, observational data, and interviews to gather comprehensive data on participants' cognitive changes. The research question addressed is: How can participation in Chinese papercutting benefit the cognitive health of the Welsh population aged 45-70 in a cross-cultural context?

Broad Findings

By comparing the cognitive health experiences of Welsh locals and Chinese immigrants before and after the workshops, the study revealed significant enhancements in learning, thinking, memory, and creativity. These findings support existing literature on the cognitive benefits of artistic activities (Cohen, 2006; Noice & Noice, 2009). Additionally, participants showed positive changes in cross-cultural understanding and social interaction, emphasising the role of art in promoting social cohesion and cultural exchange (Berry, 1997; Sawyer, 2012; Stern & Seifert, 2008; Tepper & Gao, 2008; Williams, 2010).

Synthesising these findings, the study not only reaffirms the cognitive and social benefits of Chinese papercutting but also demonstrates its applicability as a therapeutic tool in diverse cultural settings. This approach integrates traditional art with contemporary cognitive health strategies, contributing to gerontology, art therapy, and cross-cultural studies (Katz & Rubin, 2019; Anderson, 2022).

5.1.2 Model Framework Articulation

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" underscores the significance and potential of Chinese papercutting as a unique cultural and artistic practice. It connects individuals from diverse cultural backgrounds, promotes multicultural exchanges, and improves cognitive health in a globalised society. This model represents a novel intersection of art and science, offering new pathways for enhancing cognitive health

through cultural engagement. By integrating these diverse theoretical perspectives, the model provides a robust framework for understanding and leveraging the cognitive and social benefits of traditional arts in contemporary settings.

Table 5.1 Chinese Papercutting Cross-Cultural Cognitive Enhancement Model

Theoretical Foundation	Key Components	Data Collection Methods and Target Population (In this research)	Model Application
- Neuroplasticity - Cognitive Psychology - Art Therapy - Cross-Cultural Studies	<u>Cognitive Health</u> - Learning - Memory - Creativity - Problem-solving	<u>Methodology</u> - Mixed-Methods Approach - Workshops - Questionnaires - Participatory Observations - Interviews <u>Target Population</u> - Welsh Population Aged 45-70 - Chinese Immigrants in Wales Aged 45-70	<u>Fields of Application</u> -Educational Integration -Public Health Initiatives -Cultural Exchange Programs -Community Building Corporate -Training and Team Building -Research and Development
	<u>Emotional Well-being</u> - Stress Reduction - Emotional Expression - Psychological Resilience		<u>Future Exploration</u> -Interdisciplinary Exploration and Cross-Cultural Integration -Global Perspectives and the Creative Economy Sustaining -Impact through Longitudinal Studies and Policy Integration -Methodological Innovation and Practical Applications
	<u>Cross-Cultural Understanding</u> - Cultural Empathy - Social Interaction - Cultural Exchange		
	<u>Therapeutic Applications</u> - Art Therapy - Cognitive Rehabilitation		
	<u>Community and Social Integration</u> - Social Cohesion - Community Engagement		

The model table outlines the theoretical foundation, key components, target population, data collection methods, and potential applications fields. This model has been integral to the design and implementation of the workshop in this study. To better illustrate its application, the following flowchart: *Workshop Application Flow for Chinese Papercutting Cross-Cultural Cognitive Enhancement* (See Figure 5.1) presents the step-by-step process, from introducing cultural elements to the final outcomes in cognitive health enhancement, emotional well-being, and cross-cultural understanding. The flowchart visually demonstrates how each component of the model interacts within the workshop setting, highlighting its practical relevance and significance.

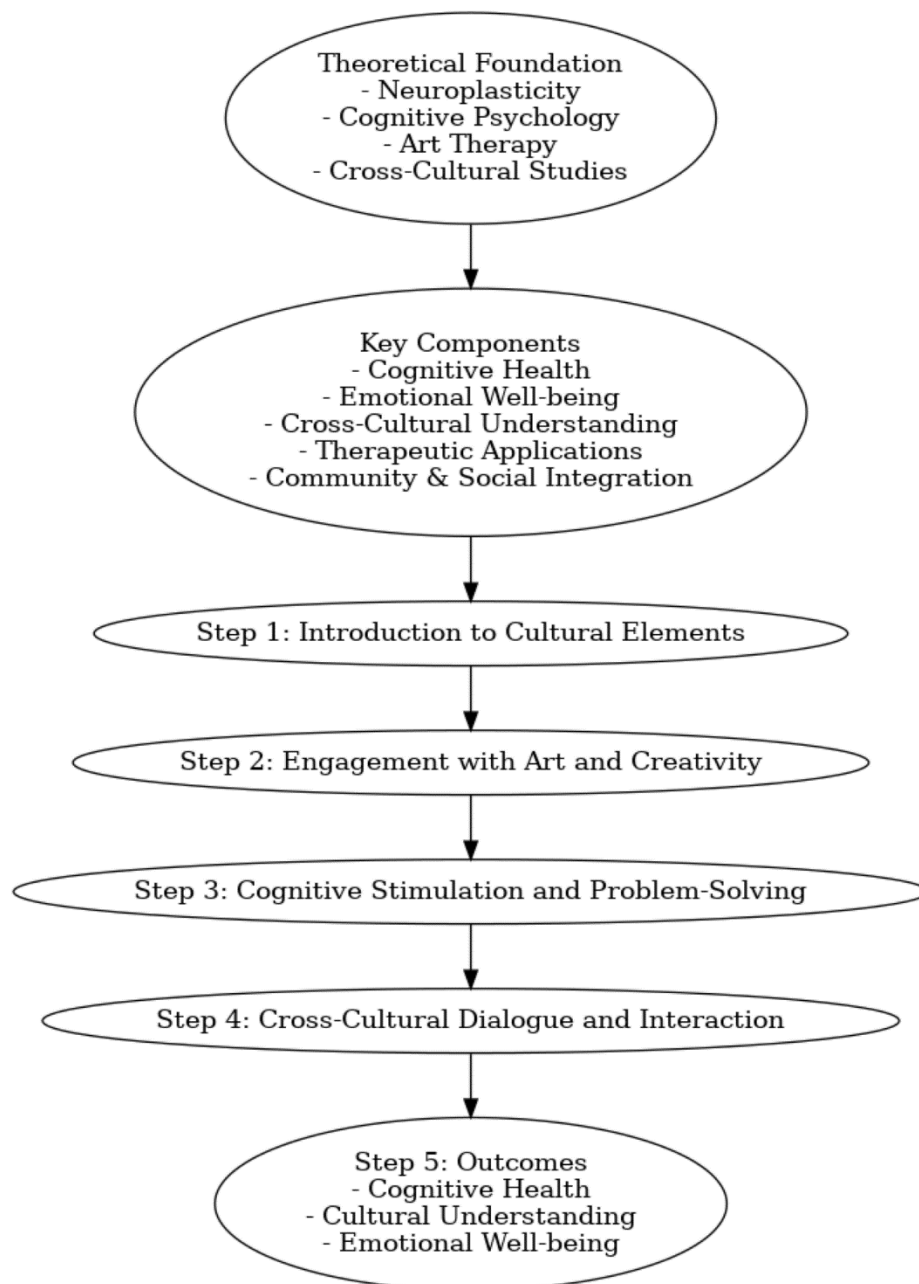


Figure 5.1 Flowchart of Chinese Papercutting Workshop: Steps for Cognitive and Cultural Engagement

This model not only guided the structure of the workshop but also laid the groundwork for understanding the multifaceted impact of art on cognitive and emotional health. The next section will delve deeper into how the model was empirically validated through participant feedback and theoretical analysis, offering insights into its broader implications and applications.

5.2 Empirical Validation and Theoretical Conversation

In this section, the empirical data collected will be examined to validate the proposed model and engage in a theoretical conversation about the findings. The following sub-sections will analyse the impacts of the papercutting workshops on cognitive health, emotional well-being, and cross-cultural understanding, drawing from both pre-existing literature and new insights gained through this study. This discussion will provide a comprehensive analysis of the observed impacts, linking them to the theoretical frameworks discussed earlier, thus validating *the Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* and expanding on its practical implications for various fields.

5.2.1 Reflecting on Key Empirical Insights

The study's findings reveal significant insights into the impact of papercutting on cognitive health, emotional well-being, and cross-cultural understanding among Chinese immigrants and Welsh locals. These findings reinforce existing theories and offer new perspectives on the role of traditional art in contemporary society.

The core data findings highlighted the significant impact of Chinese papercutting art on enhancing cognitive health and deepening cross-cultural understanding. Observations of Chinese immigrants and Welsh residents participating in papercutting workshops revealed diverse psychological dynamics and social behaviour patterns, all pointing towards positive cognitive health improvements, including the fundamental abilities (learning, thinking, memory) and functions (emotion, perception, action) of cognitive health (Eysenck&Keane ,2015; Kandel et al.,2013).

Based on the integrated analysis of data from two case studies, new insights were uncovered through comparative analysis, building on the detailed individual case analyses presented in the previous chapter. This combined approach further demonstrated the effectiveness of papercutting in enhancing cognitive health and fostering cross-cultural understanding.

5.2.1.1 Cognitive Health and Creativity in Cultural Contexts

Cultural Background and Cognitive Health

Analysis of pre-workshop questionnaires revealed distinct motivations among different groups, reflecting their cultural backgrounds and priorities. Chinese immigrants primarily expected to learn about Chinese culture (44%), indicating a desire to reconnect with their cultural heritage (See Figure 5.2). In contrast, Welsh participants had more diverse

expectations, equally emphasising cognitive enhancement (28%) and social interaction and enjoyment (28%) (See Figure 5.3). These differences illustrate the varying roles of culture and community in cognitive health (Berry, 1997; Ward et al., 2001).

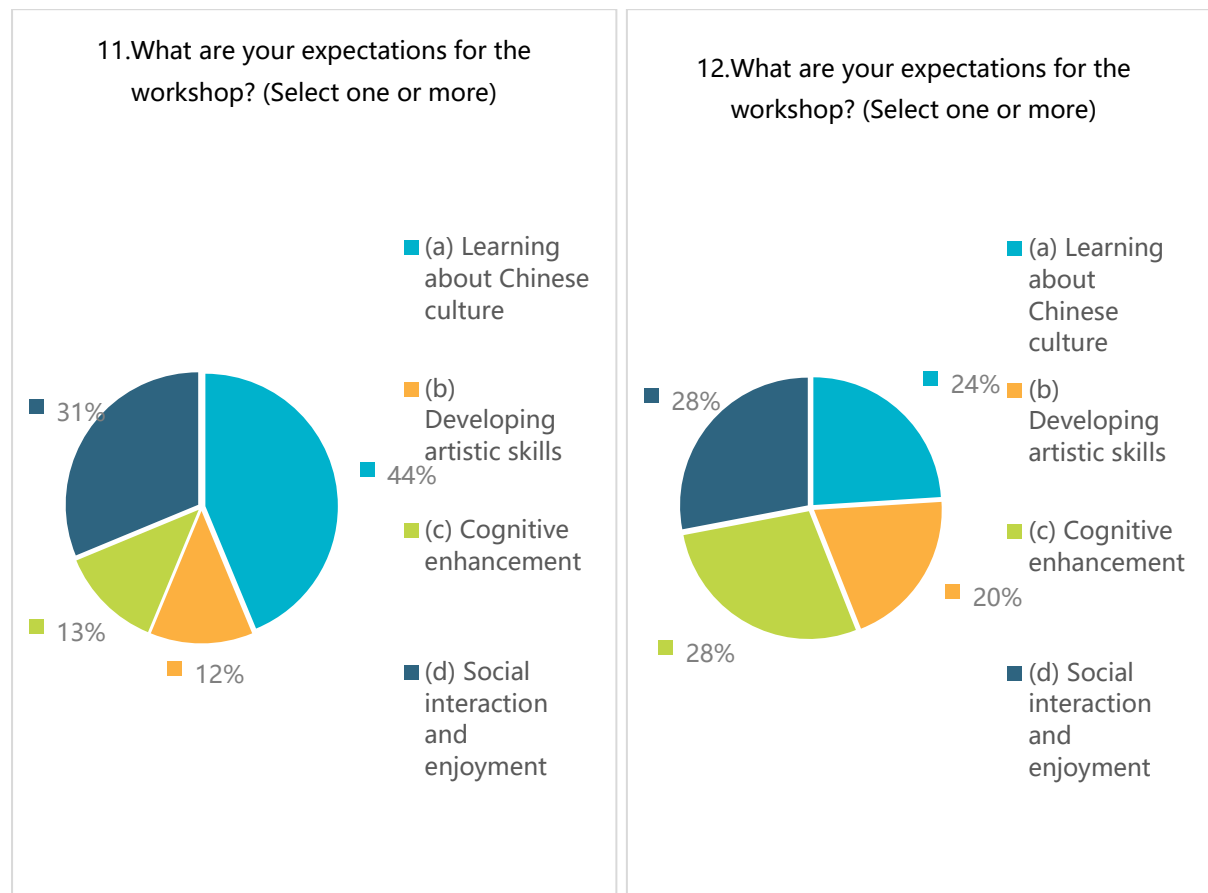


Figure 5.2

Figure 5.3

Figure 5.2 Expectations of Chinese Immigrant Participants for the Workshop

Figure 5.3 Expectations of Welsh Participants for the Workshop

Cognitive Enhancement and Emotional Health

Post-workshop data highlighted improvements in cognitive functions such as thinking, learning, and memory, but the focus differed between groups. Chinese immigrants demonstrated moderate improvements in thinking (6 instances), suggesting that familiarity with cultural activities can enhance cognitive functions through cultural and community engagement (Zatorre, Fields, & Johansen-Berg, 2012; Stern, 2012). However, the absence of significant improvements overall may indicate the nuanced impact of cultural context on cognitive health interventions, underscoring the importance of cultural specificity and individual variability in response to such activities (Kitayama & Park, 2010; Peterson & Seligman, 2004).

Welsh Participants showed balanced improvements across thinking, learning, and memory. They reported slightly higher significant improvements in memory (4 significant)

compared to Chinese immigrants (3 significant), indicating the effectiveness of participatory activities in memory enhancement. This supports the positive impact of art activities on cognitive and emotional health (Doidge, 2015; Lusebrink, 1990).

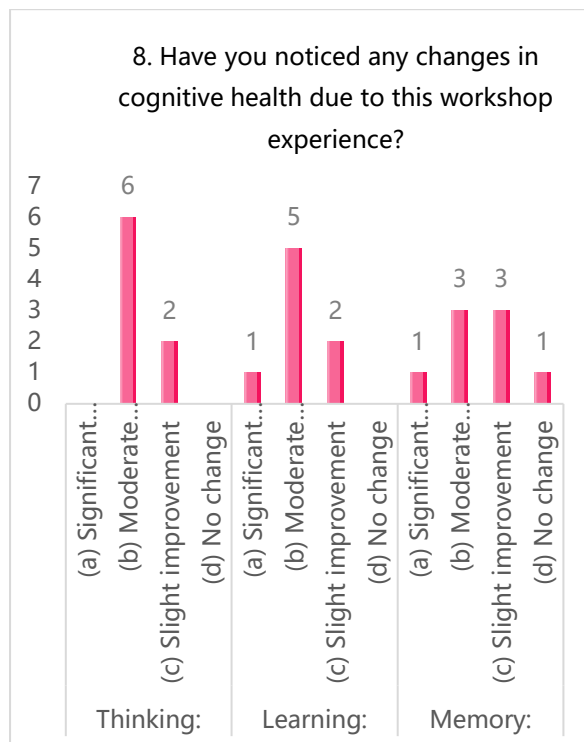


Figure 5.4

Figure 5.4 Cognitive Function Improvements in Thinking, Learning, and Memory (Chinese Immigrant Group)

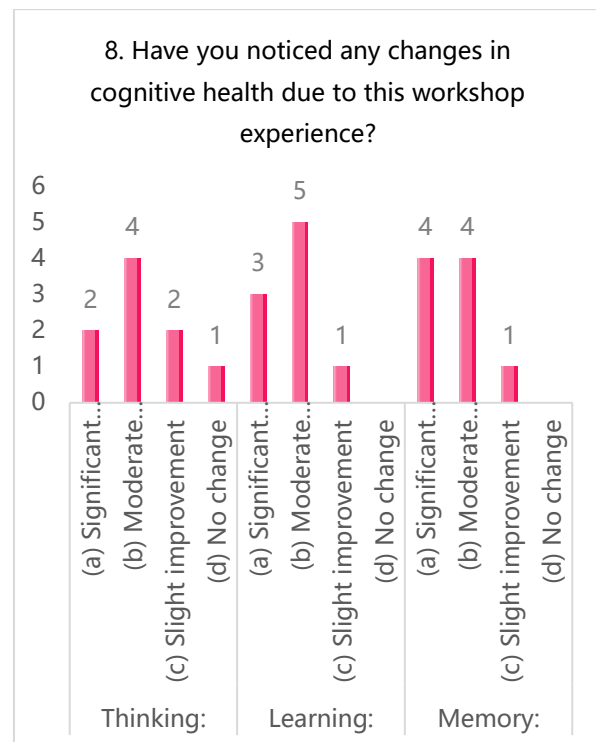


Figure 5.5

Figure 5.5 Cognitive Function Improvements in Thinking, Learning, and Memory (Welsh Group)

Welsh participants also placed a higher emphasis on emotional benefits, such as stress relief and relaxation, consistent with findings in art therapy that highlight the therapeutic effects of art activities on emotional health (Stuckey & Nobel, 2010). In contrast, Chinese immigrants valued cultural and community aspects more, reflecting their need for social integration and cultural identity in a new environment.

Artistic Skills and Social Interaction

Expectations among Welsh participants also included developing artistic skills (20%) and social interaction (28%), highlighting their interest in the comprehensive benefits of the workshop. This supports the role of art activities in promoting cognitive, social, and emotional health (Zatorre et al., 2012; Doidge, 2015).

In the Welsh group, the impact of various factors on workshop expectations was relatively balanced, indicating that participants primarily viewed the activity as an artistic experience rather than a cultural one. This contrasts with the Chinese immigrant group, where 44% of participants expressed their primary interest in learning about Chinese culture. Interviews and additional data suggest that Chinese immigrants are attracted to the workshops because

they seek to engage with their native culture within a cross-cultural context. This finding aligns with Berry's (1997) acculturation theory, which posits that immigrants often seek connections with their heritage culture as a means of navigating the complexities of cultural adaptation.

Enhancing Creativity and Cognitive Flexibility

The interviews revealed that participation in the papercutting workshops significantly enhanced the creativity of the Welsh participants. They exhibited high levels of creative thinking, especially when integrating traditional Chinese art with their personal and cultural backgrounds. This aligns with Amabile's (1983) and Sawyer's (2012) research, which suggests that creative activities promote cognitive flexibility and problem-solving skills. For instance, one Welsh participant noted, "Doing something I haven't done before and mixing with people of a different country was very interesting," highlighting the creative stimulation derived from the cross-cultural experience.

The cultivation of creative thinking not only promoted cognitive flexibility but also enhanced participants' adaptability to new cultural environments. This is supported by Maddux and Galinsky's (2009) findings that cross-cultural training can enhance creativity and cognitive adaptability. The process of learning and practicing papercutting, particularly the challenge of integrating traditional techniques with personal styles, stimulated new ways of thinking. One participant mentioned, "I was very surprised about my attention span. Normally, I haven't been able to be so attentive for so long, but today surprised me," illustrating the cognitive benefits of sustained creative engagement.

Another Welsh participant, during the basic pattern practice phase, used geometric patterns to create a rendition of the famous Sanxingdui mask. Sanxingdui, an archaeological site of significant historical and cultural importance in China, is known for its unique and ancient artifacts. According to the participant, this creation was inspired by the traditional Chinese art together with his past travel experiences in China, evoking personal memories and connections to his time there (See Figure 5.6 and 5.7).

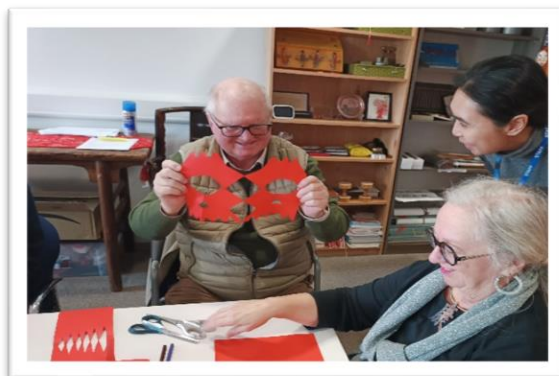


Figure 5.6a

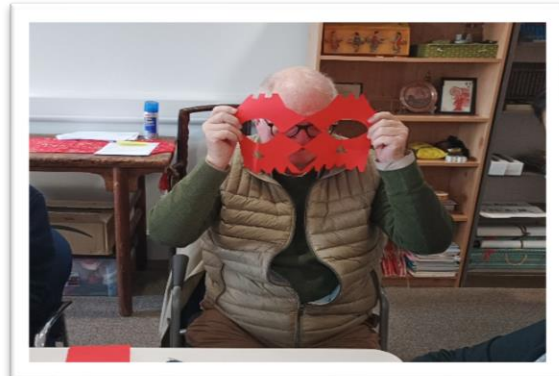


Figure 5.6b

Figure 5.6 A Welsh Participant's Spontaneous Creation of Chinese Patterns

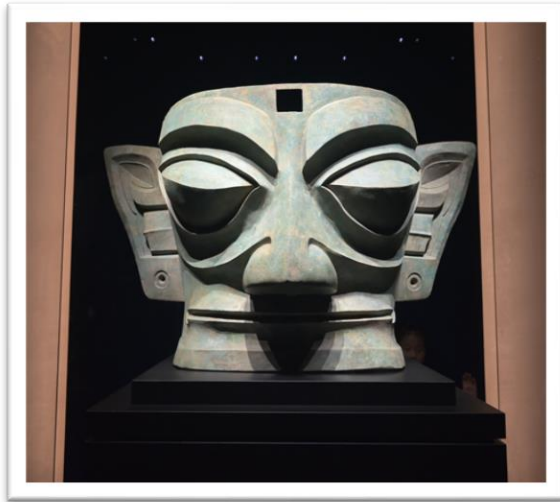


Figure 5.7a

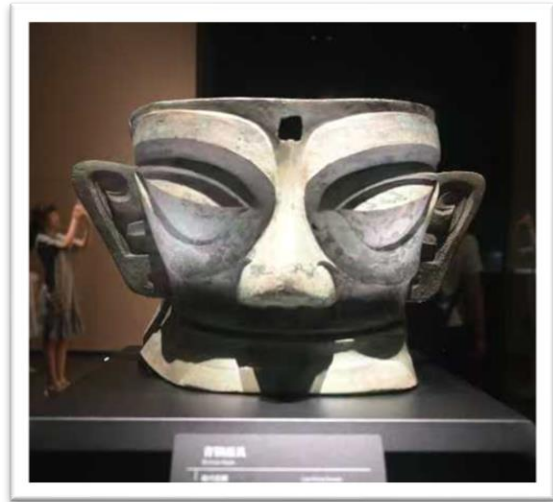


Figure 5.7b

Figure 5.7 Bronze Masks on Display at the Sanxingdui Museum in Sichuan, China

Implications for Future Practice

The analysis of expectations and outcomes from the workshop revealed that while both groups experienced cognitive benefits, their motivations and valued aspects varied. Chinese immigrants prioritised cultural learning and community involvement, aligning with Berry's (1997) theory of acculturation, which suggests that immigrants often seek to reinforce connections with their heritage culture to better navigate the cultural adaptation process. This focus on cultural engagement led to significant cognitive improvements in areas such as thinking and problem-solving. In contrast, Welsh participants focused more on the direct cognitive and emotional benefits of the activity, consistent with the cognitive-affective framework outlined by Chiu and Hong (2005), which emphasises the importance of individual psychological well-being. This group demonstrated significant improvements in memory and emotional health.

These findings underscore the importance of tailoring cognitive health interventions to the cultural backgrounds of participants, leveraging the unique motivations and needs of different groups to maximise cognitive and emotional benefits.

Drawing from these insights, several key strategies can be applied across diverse cultural contexts to enhance the effectiveness of cognitive health programs.

- **Cultural Relevance**

Incorporating elements that celebrate, and respect participants' cultural heritage can significantly enhance engagement and effectiveness. Activities should be designed to reflect traditional cultural practices, facilitate storytelling that explores cultural narratives, and promote community-building through collaborative projects. This approach helps participants feel more connected to their cultural roots, thereby enhancing their overall experience and cognitive outcomes (Berry, 1997; Ward et al., 2001).

- **Cognitive and Emotional Benefits**

Emphasising the direct cognitive and emotional advantages of activities is crucial for all participants. Workshops should include sessions on memory enhancement, stress reduction techniques, and activities aimed at promoting emotional well-being and psychological resilience. By highlighting these benefits, programs can attract and retain participants who are motivated by personal development and mental health improvement (Chiu & Hong, 2005; Lusebrink, 1990).

- **Hybrid Models for Inclusivity**

Developing hybrid models that blend cultural engagement with cognitive and emotional health benefits can serve diverse groups within a single program. This inclusive approach not only fosters broader participation but also enhances the overall impact of the intervention by addressing varied cultural needs. Programs can incorporate universal themes that resonate across cultures while allowing for culturally specific adaptations (Triandis, 1995; Brislin, 1993).

The application flowchart (See Figure 5.1) highlights the practical implementation of these strategies within the papercutting workshops. It illustrates how each step—from introducing cultural elements to facilitating cross-cultural dialogue—was crucial in achieving the positive outcomes documented in this study. The empirical data demonstrate that both Chinese immigrant and Welsh participants experienced significant cognitive and emotional benefits, validating the model's applicability in cross-cultural settings.

For Chinese immigrants, the focus was on fostering community experiences and reconnecting with cultural heritage. Steps such as introducing traditional papercutting themes and promoting group discussions (Step 1 and Step 4 in the flowchart) enhanced participants' sense of belonging and social support, which is essential for cognitive health, as supported by Berry's (1997) theory of cultural adaptation. Meanwhile, Welsh participants responded more positively to the flowchart's emphasis on artistic creativity and self-expression, which provided emotional relief and cognitive stimulation through therapeutic art-making activities.

Future iterations of the model could further enhance its effectiveness by incorporating a more flexible workshop structure to better accommodate participants' varying levels of artistic confidence. Offering tailored guidance or alternative activities could further promote engagement and maximise cognitive and emotional benefits, particularly for participants with no prior art experience. Additionally, more detailed cross-cultural integration games could be explored in Step 4 to deepen cooperation between participants from different cultural backgrounds, fostering a more profound intercultural understanding.

5.2.1.2 Emotional Focus and Cognitive Health in Cultural Contexts

Artistic Expression in Cultural Contexts

The analysis revealed distinct differences in how artistic expression was approached by Chinese immigrants and Welsh participants during the papercutting workshops. Chinese immigrant participants predominantly adhered to traditional papercutting patterns, reflecting a deep connection to cultural traditions and heightened sensitivity to social evaluation. This behaviour is consistent with Hofstede's cultural dimensions theory (1980), which suggests that individuals from collectivist cultures prioritise social harmony over individual expression, often favouring conformity to established cultural norms. As a result, these participants may have experienced more emotional relief through familiar, structured tasks rather than through self-directed creativity.



Figure 5.8 Chinese Immigrant Group's Creations Focused on Imitating Samples

In contrast, Welsh participants exhibited a preference for personalised creations, incorporating elements of their own life experiences and cultural backgrounds into their papercutting designs. This aligns with the individualistic orientation of Welsh culture, which tends to place greater value on personal creativity and self-expression (Leung et al., 2008; Mumford et al., 2013; Kim & Markus, 1999). Their approach demonstrates a stronger emphasis on creative innovation and individual emotional expression, suggesting that the therapeutic value of the workshops was partially derived from their ability to integrate personal meaning into their artwork.



Figure 5.9 The Welsh Group's Diverse Dragon Designs and Framing Methods

Emotional Relief through Artistic Expression

The two pie charts illustrate participants' perceptions of how the papercutting workshops contributed to their emotional functioning. According to the Figure 5.10 (Chinese immigrants' group), 75% of participants felt that the workshops provided stress relief and relaxation, while 25% reported experiencing boosted creativity and a sense of achievement. Figure 5.11 (Welsh Local group) indicates that 50% of participants felt stress relief and relaxation, 36% reported improved emotional expression, and 14% noted boosted creativity and a sense of achievement.

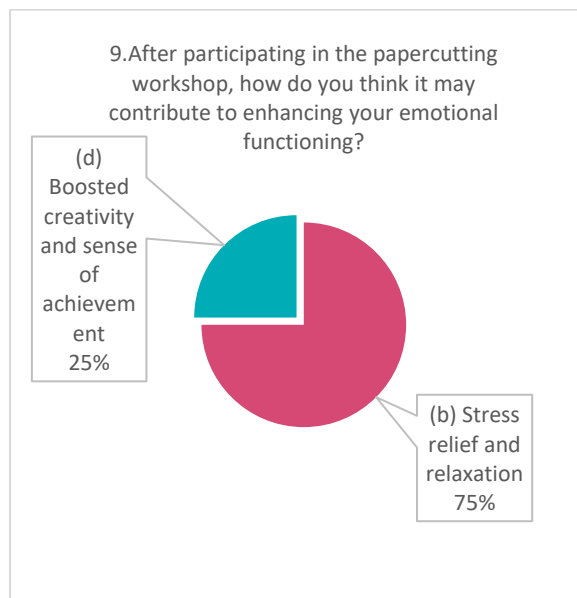


Figure 5.10

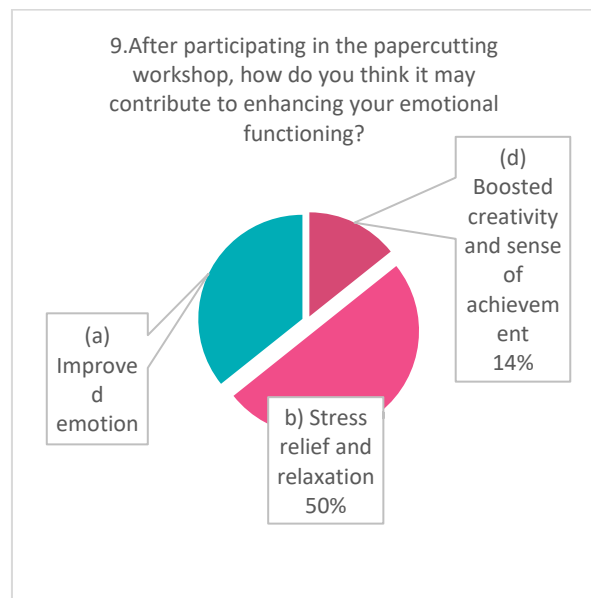


Figure 5.11

Figure 5.10 Emotional Functioning Improvements Post-Workshop (Chinese Immigrant Participants)

Figure 5.11 Emotional Functioning Improvements Post-Workshop (Welsh Participants)

Analysis indicates that Chinese immigrant participants primarily emphasised the stress relief and relaxation benefits of the papercutting workshops, with less mention of emotional expression and creativity. This observation aligns with Hofstede's cultural dimensions theory (1980), which suggests that Chinese culture, being more collectivist, may place less emphasis on individual emotional expression. Additionally, Berry (1997) and Ward et al. (2001) highlight that immigrants often prioritise social connections and stress alleviation in new cultural environments, reflecting the significance of community support in their cognitive health adaptation.

The emotional benefits of participating in the workshops were significant for both groups. Welsh participants emphasised the therapeutic aspects of the activity, such as stress relief and relaxation, supporting Lusebrink's (1990) proposition that art activities facilitate emotional regulation. One Welsh participant described the experience as "peaceful" and noted, "The environment was calm, and the fact you were concentrating eliminated all the other aspects of your life."

Implications for Future Practice

Based on the findings, future papercutting workshops should consider the emotional and cognitive needs of both Chinese immigrant and Welsh participants, using cultural and psychological theories to guide the design and execution of these workshops.

- **Culturally Sensitive Creative Expression**

For collectivist cultures like the Chinese immigrant group, workshops could choose to focus on collaborative projects that emphasise community values and collective creativity. This aligns with Hofstede's Cultural Dimensions Theory (Hofstede, 1980), which highlights the importance of social harmony and shared experiences. Activities such as group papercutting or collective storytelling through art can help reinforce these cultural values. Meanwhile, more encouragement of individual in this group is important as well, guiding them to express their emotion. In contrast, for individualistic cultures like the Welsh participants, workshops could prioritise personal expression and creative innovation, encouraging them to integrate personal and cultural experiences into their designs. This fosters cognitive flexibility and supports individual development, as emphasised by research on creativity and cultural adaptation (Kim & Markus, 1999; Leung et al., 2008).

- **Emotional Expression through Role Models**

To encourage emotional expression, especially for the Chinese immigrant group, workshops can introduce peer leaders or facilitators who serve as role models, demonstrating emotional expression through their art. This aligns with Bandura's theory, as participants can learn to express their emotions in a supportive, collective environment through observational learning. For Welsh participants, incorporating free-form creation

(Lusebrink, 1990) enhances self-expression, promoting both emotional release and cognitive engagement.

- **Observational Learning and Social Support**

Bandura's Social Cognitive Theory (Bandura, 2001) underscores the role of learning through observation and peer interaction. In the workshops, participants can observe and learn from each other's creative processes, fostering both cognitive growth and social understanding. Peer-led discussions or demonstration sessions where participants share their ideas and processes can stimulate collective learning and cross-cultural engagement. Drawing on Berry's Acculturation Theory (Berry, 1997), workshops could also incorporate team-based activities and group discussions to enhance social bonds and create a supportive environment. This approach is crucial for Chinese immigrants, who may rely on social connection for emotional well-being in new cultural settings. Fostering a sense of community will enhance both their emotional and cognitive health.

- **Multicultural Exchange and Interaction**

As Triandis's Cultural Adaptation Theory (Triandis, 1995) suggests that designing workshops as multicultural platforms, where participants from diverse cultural backgrounds share their emotional experiences and artistic processes. This cross-cultural exchange promotes understanding and tolerance, while providing different avenues for emotional expression that benefit both collectivist and individualistic participants. This will surely be included in future research plan.

In summary, these strategies above can be smoothly integrated into the workshop flowchart. Early phases can introduce cultural symbols that resonate with both groups, while later stages, such as free-form creation and cross-cultural dialogue, provide opportunities for emotional expression and cognitive stimulation. By employing these culturally sensitive strategies, the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* ensures that both Chinese immigrant and Welsh participants can achieve cognitive flexibility, emotional well-being, and cross-cultural understanding, all while respecting their cultural values.

5.2.1.3 Cross-Cultural Understanding and Cultural Identity

This section examines the significant impact of the papercutting workshops on enhancing cross-cultural understanding and cultural identity among participants. The findings demonstrate how such cultural activities like papercutting foster cultural empathy, social interaction, cultural exchange, and psychological resilience, particularly in cross-cultural settings.

Cultivating Cultural Empathy in Workshops

In the papercutting workshops held at the Dylan Thomas Centre's Chinese Hub, Welsh participants demonstrated cultural empathy through their engagement with Chinese cultural

elements such as tea, incense, traditional clothing, and symbols like gourds, pomegranates, and dragons. Their curiosity and respectful dialogue with Chinese cultural workers facilitated a deeper understanding and appreciation of these traditions.

This development of cultural empathy aligns with Bennett's (1993) developmental model of intercultural sensitivity, where individuals move from an ethnocentric to an ethnorelative perspective, recognising and valuing cultural differences. The hands-on learning in these workshops, as emphasised in Deardorff's (2006) intercultural competence model, facilitated mutual respect and empathy through direct interaction, highlighting the effectiveness of experiential learning in fostering cross-cultural understanding.

Welsh participants' engagement not only enriched their understanding of Chinese traditions but also contributed to their own cognitive health and emotional well-being, as they reflected in the workshop feedback, citing a sense of relaxation and fulfilment through the experience. Their ability to engage meaningfully with Chinese cultural practices is supported by Rogers' (1959) concept of empathy, which stresses the importance of deeply understanding another's perspective.

Strengthening Cultural Identity through Art

For Chinese immigrants, the papercutting workshops provided a vital connection to their cultural heritage, reinforcing their sense of identity and confidence. This aligns with Berry's (1997) acculturation theory, which emphasises the role of cultural support in maintaining cognitive and emotional health. Participants reported that the workshops evoked childhood memories and fostered a sense of belonging, with one participant noting, "Participating in papercutting made me feel closer to my cultural roots."

The strengthening of cultural identity is also explained by Ting-Toomey's (2005) intercultural adaptation theory, which posits that cultural identity acts as a psychological anchor in cross-cultural contexts, offering stability. Similarly, Phinney's (1990) model of ethnic identity development suggests that engaging in cultural practices like papercutting enhances ethnic identity, helping immigrants navigate acculturation challenges and maintain a positive self-concept. After the workshops, several Chinese participants continued to engage with the researcher's regular workshops, expressing their commitment to ongoing participation, further demonstrating the role of cultural engagement in reinforcing their identity and well-being.

Social Interaction and Cultural Exchange

In the papercutting workshops, participants not only completed their papercutting projects but also engaged in meaningful social interactions by sharing their creative experiences and techniques. These interactions promoted the exchange of cultural insights and artistic methods, helping to establish a sense of community among the participants. This process aligns with the perspective that social interaction is crucial for effective cross-

cultural communication, fostering mutual understanding and respect (Zhou & Nisbett, 2001; Kitayama & Cohen, 2007). Through these sessions, Welsh participants gained insights into Chinese culture through papercutting art. Similarly, Chinese immigrants found a cultural anchor in the UK, reconnecting with their heritage through this art form. This cultural exchange not only fostered deeper understanding and appreciation of each other's cultural narratives and traditions but also enhanced cultural empathy and social interaction (Berry, 1997; Bennett, 1993).

Cultural Challenges and Adaptation

Participants faced cross-cultural challenges during the papercutting activities, which further enhanced their cognitive flexibility and cultural adaptability. This is in line with Leung et al. (2008), who argue that engaging with diverse cultural elements can expand cognitive abilities. Welsh participants reported a deeper understanding and appreciation of Chinese cultural symbols and traditions, broadening their cognitive frameworks. For instance, one participant stated, "Learning the intricate details of papercutting not only helped me focus but also gave me a new appreciation for Chinese culture." This observation aligns with Chiu and Hong's (2005) cultural adaptation theory, which suggests that cross-cultural contact enhances cognitive adaptability and creativity.

Psychological Resilience through Cross-Cultural Engagement

For Chinese immigrant participants, the workshops provided a means to connect with their cultural heritage while adapting to a new cultural environment. This finding is consistent with Berry's (1997) theory of cultural adaptation, emphasising the importance of cultural support in cognitive health. One Chinese participant noted, "As an immigrant, participating in papercutting activities made me feel closer to my cultural roots." This cultural connection not only enhanced their cognitive and emotional resilience but also provided a means for emotional regulation (Ward et al., 2001). Moreover, through artistic expression and social interaction, participants were better able to adapt to the new environment, demonstrating greater psychological resilience and adaptability (Lusebrink, 1990).

Implications for Future Practice

The findings underscore the critical role that cross-cultural workshops like papercutting activities play in enhancing cultural empathy, social interaction, and cultural exchange. To deepen the impact of future initiatives, the following strategies should be considered:

- **Integrated Communication Platforms**

Future workshops could benefit from integrated formats that combine both online and offline interactions, providing participants with more flexible engagement opportunities. Digital spaces, such as social media groups or online forums, can facilitate ongoing

intercultural dialogue, allowing participants to continue exchanging ideas and reflections beyond the in-person workshops (Ogan et al., 2012).

- **Diverse Communication Methods**

Incorporating a variety of communication approaches—such as cultural exhibitions, artistic performances, or lectures on symbolism—can diversify the learning experience and appeal to a wider audience. This aligns with Byram’s (1997) model of intercultural competence, which emphasises the value of varied interactions for fostering deeper intercultural understanding.

- **Long-Term Cultural Projects**

Establishing ongoing cultural programs, such as monthly workshops or community art projects, can ensure that the impact of these sessions is sustained over time. Long-term initiatives foster deeper cultural adaptation and psychological resilience (Gudykunst, 2004), creating lasting platforms for participants to continue their cultural exchange and personal growth. Following this session, the researcher conducted weekly papercutting workshops for an additional two months, which provided further inspiration and highlighted greater potential for future research.

Together, these strategies aim to foster deeper cross-cultural engagement and collaboration, enhancing both the cultural and cognitive benefits of the workshops. By integrating these strategies into future cross-cultural workshops, projects can more effectively foster cultural understanding, social interaction, and psychological resilience. One promising direction is to design workshops with multicultural participant groups, recruiting individuals from various countries to engage in the same sessions. Additionally, Steps 1, 3, and 4 in the flowchart (See Figure 5.1) could be refined by introducing tasks that combine cognitive challenges with culturally themed problem-solving exercises, further stimulating participants' cognitive abilities. These tasks could also be designed to encourage interaction between participants, deepening their engagement and promoting cross-cultural dialogue. In practice, these adjustments will create a more dynamic and enriching experience, enhancing both the cognitive stimulation and cultural integration aspects of the workshops.

5.2.1.4 Community and Social Integration

Community Emphasis and Cultural Sensitivity

The papercutting workshop facilitated social participation and community engagement. The Chinese immigrant group highlighted the importance of community participation (See Figure 5.12), while the Welsh group valued the artistic experience and storytelling function (See Figure 5.13). This difference reflects the varying expectations and value perceptions of art activities among different cultural backgrounds, supporting cross-cultural psychology's view on cultural differences affecting individual behaviour (Triandis, 2001; Bennett, 1993).

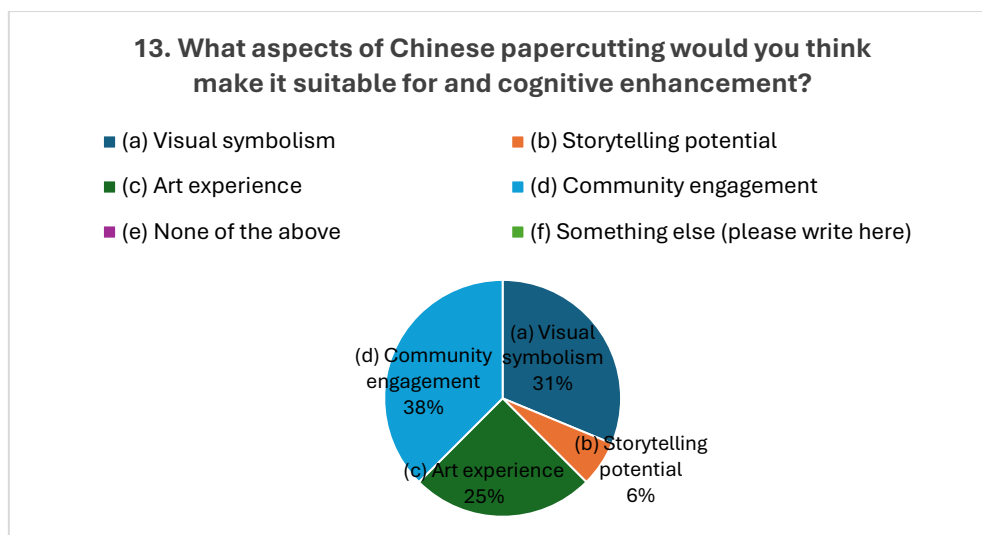


Figure 5.12 Perceived Aspects of Chinese Papercutting for Cognitive Enhancement (Chinese Immigrant Group)

The Welsh group's curiosity and engagement with the artistic experience confirmed the unique stimulation of the brain from cross-cultural encounters (Zhou & Nisbett, 2001; Kitayama & Cohen, 2007). Exploring Chinese culture through papercutting art demonstrated art's potential as a bridge for cross-cultural communication, resonating with Bennett's (1993) model of developing intercultural sensitivity. The Chinese immigrants, by engaging in papercutting within a foreign cultural context, were able to enhance their identity and confidence.

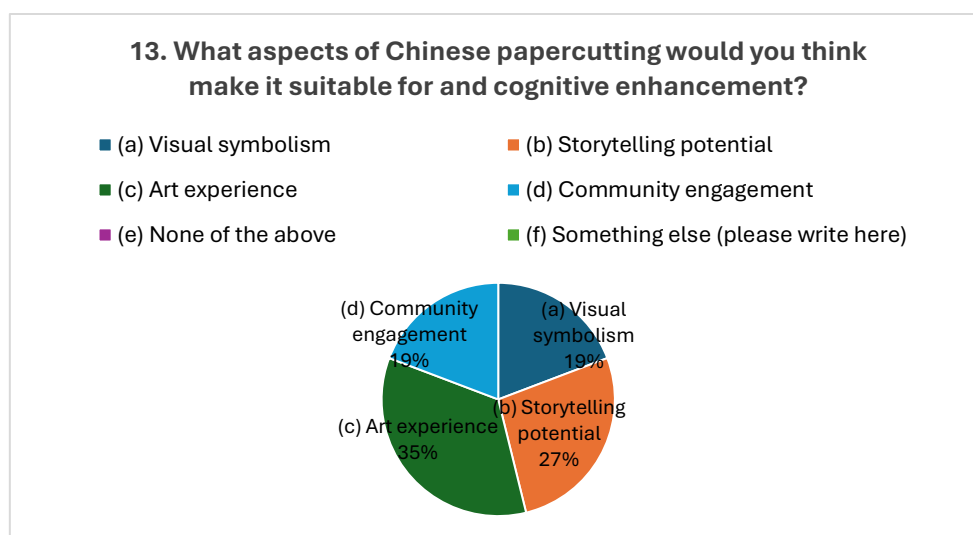


Figure 5.13 Perceived Aspects of Chinese Papercutting for Cognitive Enhancement (Welsh Group)

Chinese immigrants consistently emphasised the importance of community in both questionnaires and interviews (See Figure 5.14), underscoring the significance of social support in their experiences. This insight suggests that future papercutting cognitive health promotion projects should include elements that foster community building and social connections, particularly for participants from collectivist cultures. By incorporating

collaborative projects, project designs can help meet the social needs of these participants, thereby enhancing the overall effectiveness of the intervention.

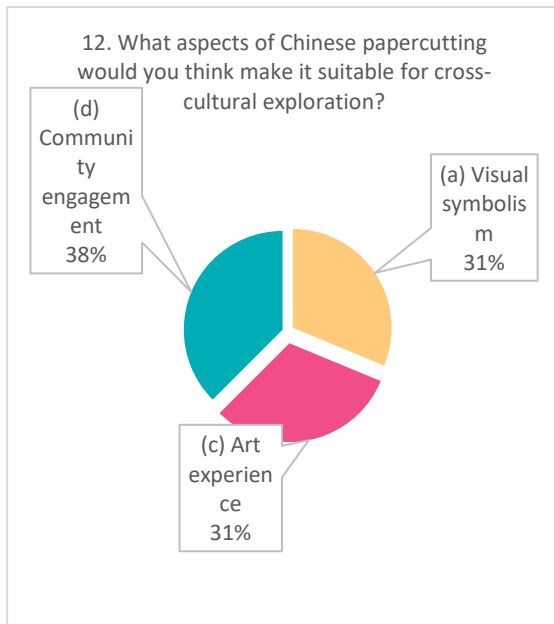


Figure 5.14

Figure 5.14 Perceived Aspects of Chinese Papercutting for Cross-Cultural Exploration (Chinese Immigrant Group)

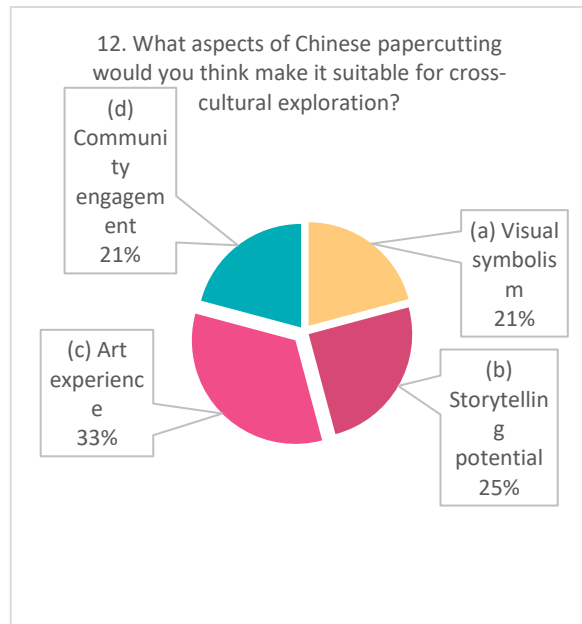


Figure 5.15

Figure 5.15 Perceived Aspects of Chinese Papercutting for Cross-Cultural Exploration (Welsh Group)

Social Integration and Community Building

The workshops also facilitated social integration and community building, particularly for the Chinese immigrants. Engaging in a shared cultural activity provided a sense of belonging and reduced feelings of isolation. This social support is crucial for cognitive health, as indicated by Ward et al. (2001). One participant shared, "Through this activity, I met many people with similar interests, enriching my social circle and tightening my emotional connections."

Moreover, the papercutting workshops enhanced the bonds between participants and fostered community cohesion through shared artistic creation. Both Chinese immigrants and Welsh locals established deep friendships and mutual respect through the activities. This social support is essential for cognitive health and overall well-being (Ward et al., 2001). The collective effort and shared goals in the workshops helped build a supportive and cohesive community, demonstrating the potential of cultural activities in bridging social divides and fostering inclusivity.

Implications for Future Practice

The insights gained from these workshops carry important implications for designing future cognitive health promotion projects. By leveraging the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* and its emphasis on cultural sensitivity, social

connection, and community engagement, these projects can be adapted to effectively support participants' cognitive and emotional well-being across diverse cultural contexts. Below are practical strategies that align with the model's flowchart, emphasizing social integration, community building, and long-term engagement:

- **Community Engagement Platforms**

To maintain and reinforce the social connections formed during workshops, future projects could establish dedicated platforms—either physical (community centres) or virtual (online forums). These platforms would enable continued interaction and cultural exchange beyond the workshop sessions, promoting sustained social support. This aligns with the model's Cross-Cultural Dialogue and Interaction phase, encouraging ongoing engagement that nurtures emotional bonds (Ogan et al., 2012).

- **Collaborative Art and Cultural Spaces**

Creating collaborative art projects and dedicated cultural spaces can significantly enhance community ties and foster ongoing cultural exchange. These projects, such as community murals, exhibitions, or regular cultural festivals, provide opportunities for teamwork and shared achievement, reinforcing both social cohesion and creative collaboration. These spaces can serve as hubs for continued artistic and social activities, celebrating both Chinese and Welsh heritage and promoting long-term engagement (Putnam, 2000; Bennett, 1993).

- **Intergenerational Programs**

Developing intergenerational programs can further enrich the community-building aspect of future projects. These programs could connect younger participants with older adults, who can share their cultural knowledge and skills, fostering mutual respect and understanding. This would align with the model's focus on both cognitive and emotional well-being, using art as a means of bridging generational gaps while enhancing social cohesion (Bowers & Shilton, 2021).

- **Sustained Long-Term Initiatives**

To ensure that the positive effects of the workshops are maintained over time, projects should include long-term initiatives such as follow-up sessions, community art projects, or seasonal cultural festivals. These initiatives can keep participants engaged and connected, fostering a sense of continuity and purpose. This echoes the Cognitive Health and Emotional Well-Being outcomes in the flowchart, ensuring the lasting impact of cultural activities on participants' social and cognitive health (Gudykunst, 2004).

By implementing these strategies, the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* will ensure that participants benefit not only during the workshops but also in the wider community. The creation of community engagement platforms and collaborative spaces will extend the impact beyond the workshop itself, fostering ongoing

social interaction and cultural exchange. Papercutting, as a medium of cultural heritage, becomes a tool for lasting influence, connecting participants and encouraging continued collaboration. This approach ensures that the model promotes long-term social cohesion and cognitive health, creating a supportive network that thrives on shared cultural practices.

5.2.2 Theoretical Integration and Discussion

5.2.2.1 Neuroplasticity and Cognitive Enhancement

Recent neuroscience research continues to reveal the remarkable plasticity of the brain—its ability to adapt structurally and functionally to experiences and learning. Specifically, creative activities like papercutting art have been found to significantly impact the increase in grey matter volume, reflecting the essence of neuroplasticity (Draganski et al., 2004). Systematic training in arts, such as music, has reported notable improvements in attention and memory (Zatorre et al., 2012). Similarly, papercutting art, requiring fine motor control and high visual attention, holds the potential to stimulate cognitive functions through creative activities.

This study, through participatory observation, pre- and post-attitude change questionnaires, and in-depth interviews, revealed significant enhancements in participants' learning, memory, thinking, and attention abilities, further confirming the positive impact of creative activities on cognitive health, emphasising the value of neuroplasticity theory in practical applications (Park & Bischof, 2013).

Chinese papercutting, with its long history, rich folklore functions, storytelling characteristics, and intricate craftsmanship, from a neuroscience perspective, acts as a creative activity, a novel and complex cognitive stimulus, thus enhancing neuroplasticity and cognitive flexibility (Lusebrink, 2004). Participants reported feelings of happiness, amazement, and self-discovery during the workshops, indicating that art activities promote emotional regulation, cognitive integration, and personal meaning construction, resonating with a profound theoretical basis of the role of papercutting art in enhancing brain health and cognitive functions, including Schlegel et al. (2015) 's demonstration that visual art learning significantly alters neural structures, while Magsamen (2019) emphasised the positive impact of art on the brain.

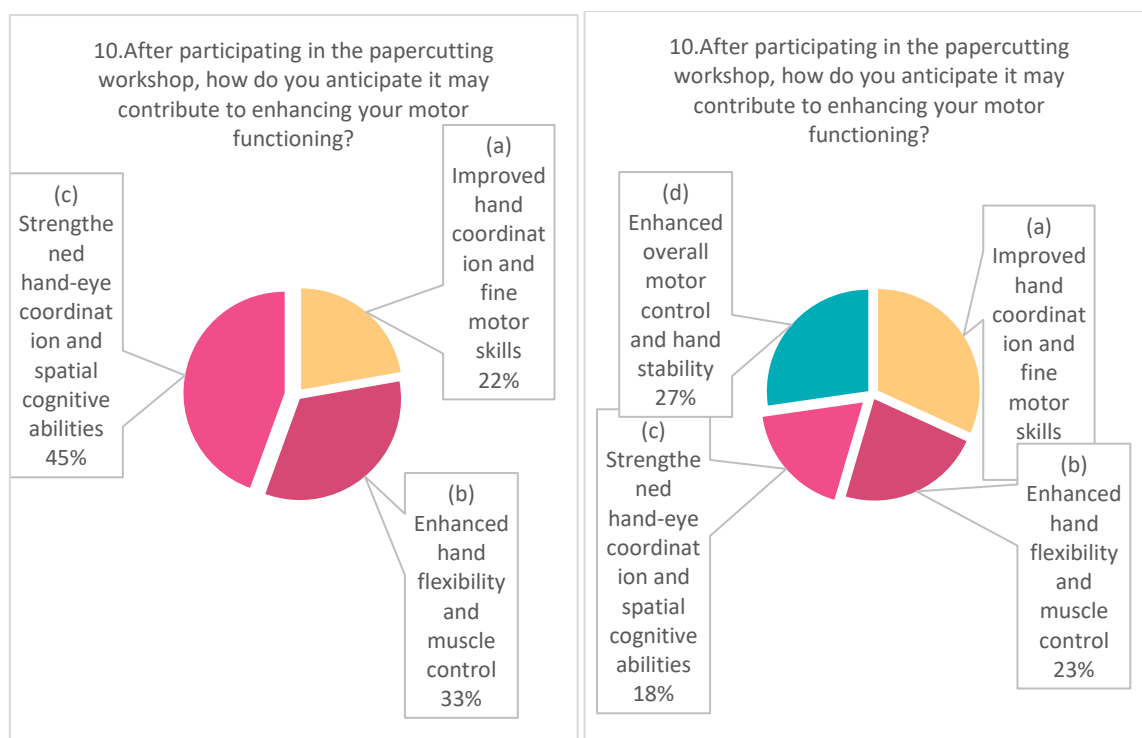


Figure :5.16a Chinese Immigrant

Figure 5.16b: Welsh local

Figure 5.16 Both case studies (Chinese immigrant and Welsh local) reported

Research has shown that activities requiring fine motor skills and intense concentration (See Figure 5.16a-b), such as papercutting art, can significantly enhance cognitive functions, particularly among the elderly (Park & Bischof, 2013; Qiao, 2017). The tactile nature of papercutting necessitates fine motor skills, thereby stimulating neural activity and promoting neuroplasticity (Draganski et al., 2004). Moreover, the aesthetic aspects of papercutting, such as symmetry, patterns, and balance, engage cognitive processes related to visual-spatial awareness and aesthetic judgment, enhancing participants' cognitive flexibility and awareness (Small & Vorgan, 2008).

Following the papercutting workshops conducted in this study, participants reported improvements in attention, memory, and problem-solving abilities, as well as enhanced cross-cultural understanding and social integration, aligning with theoretical expectations. For instance, one participant mentioned, "Learning the intricate details of papercutting not only helped me focus but also gave me a new appreciation for Chinese culture." Additionally, as a creative activity, the papercutting workshop engaged participants' tactile and visual senses, facilitating sensory integration, which is closely linked to the activation of creative thinking. The following chart illustrates the recognition from both case studies of how the papercutting workshop enhanced their sensory functioning, along with the feedback percentages on different

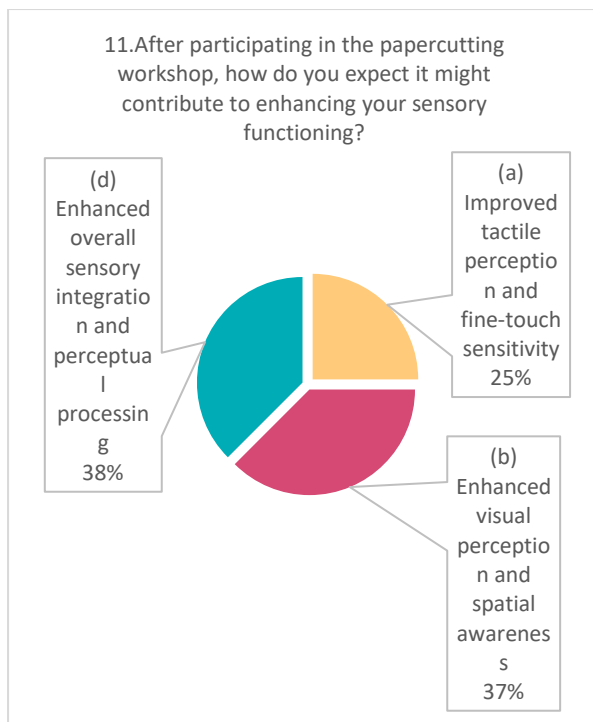


Figure 5.17a Chinese immigrant

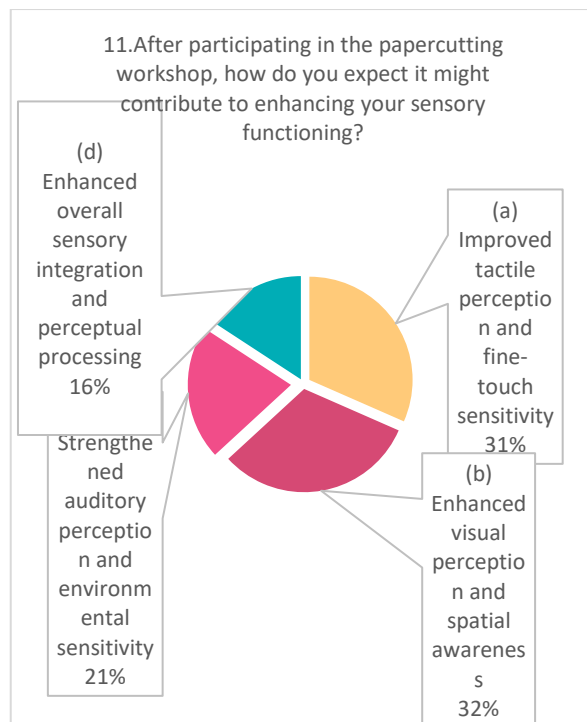


Figure 5.17b Welsh local

Figure 5.17 Both case studies reported sensory function improvements and feedback percentages

Additionally, participants reported an enhancement in creativity, especially during the second session of the workshop, where they were asked to freely decorate their works using basic patterns of Chinese papercutting based on their understanding. The design of this session aimed to maximally stimulate participants' creativity. Creativity itself, as a complex cognitive process, involves the generation of novel ideas, problem-solving, and artistic expression. From a neuroplasticity perspective, the prefrontal cortex plays a crucial role in the creative thinking process, closely associated with higher cognitive functions such as planning, problem-solving, and decision-making (Dietrich, 2004; Beaty et al., 2016).

Studies on related artistic activities have shown that art training can significantly alter the connectivity of brain networks, particularly those associated with creativity (Schlegel et al., 2015). During the workshop, participants engaged in a significant amount of spontaneous thinking and creative ideation. After this experience, participants reported positive cognitive and emotional effects, which align with research by Ellamil et al. (2012) showing that engagement in creative activities can increase connectivity in the default mode network (DMN). This proves that Chinese papercutting, as an artistic activity, can effectively stimulate cognitive functions by promoting changes in brain network connectivity.

In summary, by integrating literature on neuroscience and neuroplasticity research with empirical data from this workshop, this study demonstrates how papercutting fosters neural plasticity and enhances cognitive functions. The findings offer valuable theoretical and practical insights into how papercutting stimulates individual creativity and cognitive health through adaptive brain changes. Supported by robust data, these results align with existing

neuroscience literature, providing a comprehensive understanding of the cognitive benefits associated with papercutting. Moreover, this study validates one of its core hypotheses regarding neuroplasticity, reinforcing the potential of papercutting as a tool for cognitive enhancement.

5.2.2.2 Cognitive Psychology and the Positive Emotional Outcomes

In the field of cognitive psychology, papercutting art is recognised not only as a traditional form of creative expression but also as an effective tool for enhancing cognitive functions, promoting emotional well-being, and fostering psychological resilience. Participants in this study reported significant reductions in stress and anxiety levels following the workshops, with 36% of Welsh participants expressing enhanced emotional expression, and 75% of Chinese Immigrant participants and 50% of Welsh participants reporting stress relief and relaxation after completing their papercutting projects.

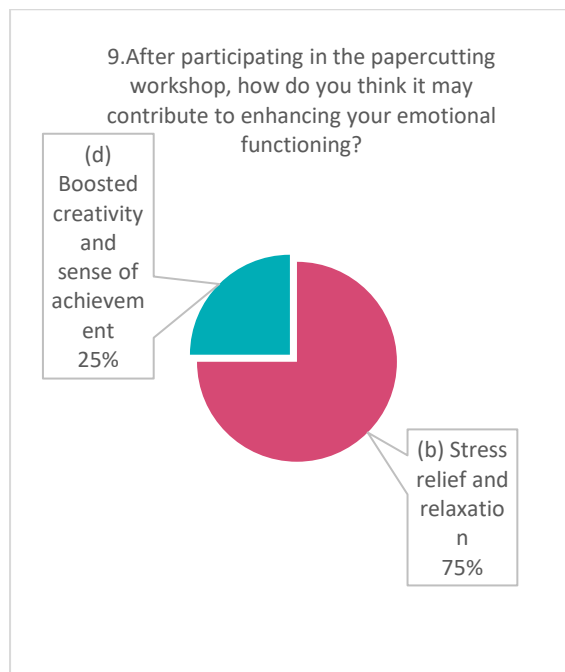


Figure 5.18a Chinese Immigrant

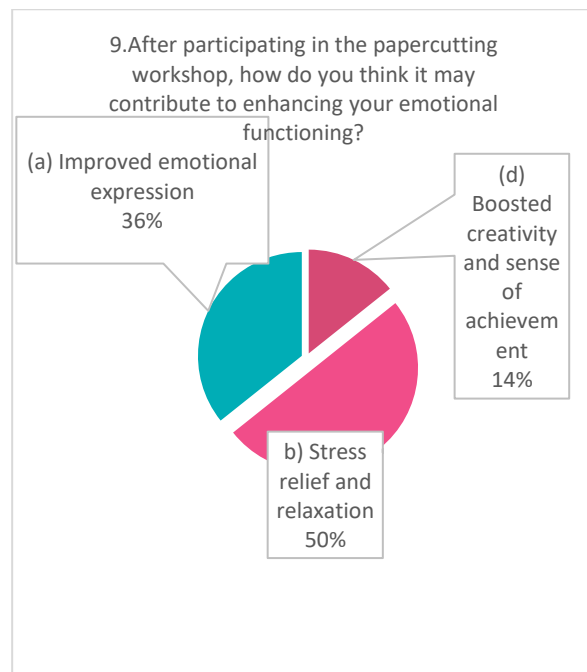


Figure 5.18b Welsh Local

Figure 5.18 Both case studies reported positive emotional outcomes.

Furthermore, participants reported experiences of mindful flow and focused attention, indicating that engaging in creative activities like papercutting art can alleviate anxiety and stress while enhancing well-being and overall quality of life (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021).

These findings align with mindfulness theory, which emphasises the benefits of present-moment awareness and focused attention (Kabat-Zinn, 1994). Csikszentmihalyi's flow theory further corroborates this, suggesting that when individuals fully engage in the creative process, they experience a state of self-transcendence, leading to happiness and fulfilment (Csikszentmihalyi, 1990).

A deeper exploration of the mechanisms behind cognitive enhancement reveals that continuous mental stimulation, as provided by papercutting art, can enhance brain structure and function, thereby delaying cognitive decline in line with the cognitive reserve theory (Stern, 2012). Participants noted that the structured, yet creative nature of papercutting helped them build resilience and cope with emotional challenges. Participants highlighted that the structured, delicate yet creative nature of papercutting helped them build resilience and manage emotional challenges, which echoes with recent studies that underscore the positive impact of creative activities on cognitive processes, particularly how cross-cultural art activities can foster cognitive flexibility, openness, and emotional release, leading to improved mental clarity (Carson et al., 2005).

In summary, papercutting art activities, grounded in cognitive psychology, facilitate cognitive function enhancement while fostering emotional and social growth. Through participation in papercutting art, individuals improve their cognitive abilities and deepen their understanding and respect for different cultures. This underscores the significant value and potential application of papercutting art in education and mental health fields (Kass et al., 2013; Schonert & Roeser, 2016).

5.2.2.3 Art Therapy and the Psychological Benefits

Art therapy utilises creative processes to improve mental and emotional well-being. Within the context of Chinese papercutting, this traditional art form serves as an effective therapeutic medium, providing a safe and expressive outlet for participants to process and express their emotions. The papercutting workshops in this study demonstrated significant psychological benefits, aligning with the core principles of art therapy. Positive feedback from Welsh participants, for instance, indicated that 100% of them reported feelings of enjoyment following the workshop, reflecting the art therapy theory that creative expression supports psychological recovery and stress relief (Graham-Pole, 2000).

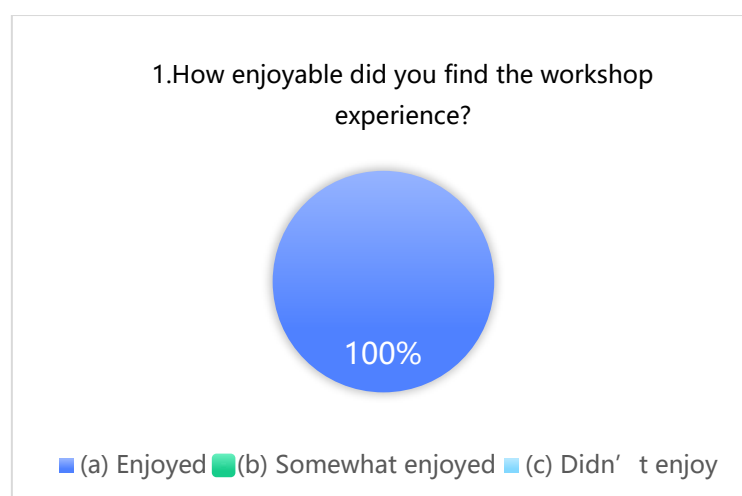


Figure 5.19 High levels of enjoyment reported by Welsh participants after the workshop

Moreover, the creative process in papercutting provided an avenue for emotional expression and cognitive stimulation, allowing individuals to channel their emotions into

their art, facilitating emotional expression and promoting mental clarity (Moon, 2010). Participants projected their thoughts and emotions onto paper, allowing them to process emotions and engage in self-reflection and creative growth (Kandel et al., 1998; Zeki, 2001). This cathartic process not only facilitated emotional expression but also contributed to enhanced self-awareness and self-esteem (Winnicott, 1971). As Riley (1999) noted, creating and showcasing personal art projects boosts self-esteem, which I further observed and confirmed through continuous observation and long-term follow-up interactions (Riley, 1999).



Figure 5.20 The Welsh group consistently exhibited psychological benefits during the workshop sessions

Moreover, the communal aspect of the papercutting workshops promoted social bonding and reduced feelings of isolation. Participants highlighted the importance of social interaction and community support in their feedback. This aligns with findings from Potash et al. (2014), which emphasise the role of art activities in enhancing social connections and creating a sense of belonging. For example, Chinese immigrant participants reported that the workshops provided a valuable opportunity to connect with others who shared their cultural background, enhancing their sense of community and reducing feelings of cultural alienation (Berry, 1997).

Additionally, the therapeutic aspects of papercutting align with the broader principles of art therapy, which emphasise the role of creative activities in facilitating psychological resilience and coping (Gantt & Tinnin, 2009). Engaging in papercutting offers psychological rehabilitation by supporting emotional processing and reducing stress (Malchiodi, 2012). For instance, during interviews, several participants mentioned that the repetitive and delicate making of papercutting provided a state of flow, calming effect, helping them manage stress and anxiety more effectively.

In summary, the application of art therapy principles within the papercutting workshops provided significant psychological benefits. The workshops facilitated emotional expression,

reduced stress and anxiety, enhanced self-awareness and self-esteem, and promoted social bonding and community support. These findings underscore the therapeutic value of papercutting art and its potential as a tool for promoting mental health and emotional well-being (Graham-Pole, 2000). By integrating art therapy principles with the traditional practice of papercutting, this study highlights the multifaceted benefits of creative activities and their role in enhancing short-term psychological recovery and long-term psychological rehabilitation (Fancourt & Steptoe, 2019; Malchiodi, 2012).

5.2.2.4 Cross-Cultural Understanding and Social Integration

Cross-cultural studies emphasise the importance of understanding psychological and social functions across different cultural contexts. The workshops conducted in this study revealed how papercutting facilitates cross-cultural communication and fosters social cohesion among participants from diverse backgrounds. The practice of papercutting, serves as a medium for cultural exchange, allowing participants to share and understand each other's cultural narratives (Geertz, 1973). Both case studies revealed increased cultural awareness and empathy, illustrating how the workshops successfully promoted cross-cultural understanding (Berry, 1997; Bennett, 1993; Brislin, 1993). For example, the Welsh group expressed particular interest in the storytelling aspect of Chinese papercutting, reporting significant changes in familiarity (See Figure 5.21 and 5.22) and appreciation for this traditional art form after participating in the workshops

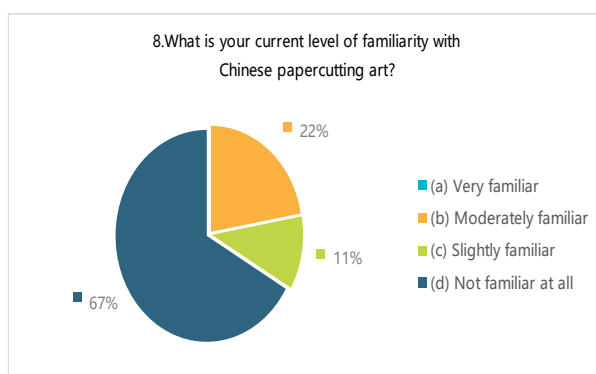


Figure 5.21 Pre-Workshop Familiarity of Welsh Group

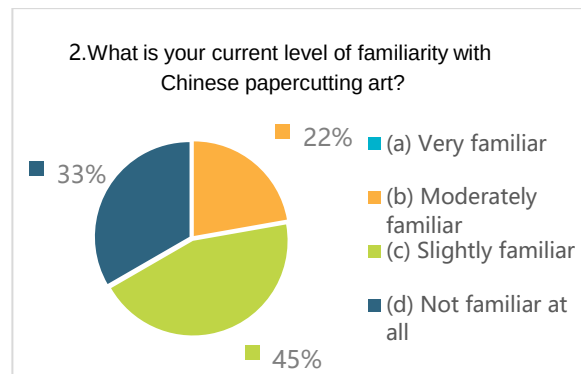


Figure 5.22 Post-Workshop Familiarity of Welsh Group

Albert Bandura's social cognitive theory (1986) posits that individuals learn new behaviour patterns through observation, imitation, and social interaction. Within the context of papercutting art, this theory not only explains how participants learn artistic skills but also reveals how they acquire cross-cultural understanding and respect through the process. Kayes et al., (2005) further emphasise the importance of social interaction and imitative learning in fostering cultural adaptability and cross-cultural competencies, especially in multicultural environments.

Engaging in cross-cultural art practices, like papercutting, enhances participants' adaptability to different cultural environments and promotes cultural empathy (Hofstede, 1980). The workshops provided a space for participants to experience and appreciate the

aesthetic values of Chinese culture, enriching their cultural experiences and enhancing their cross-cultural sensitivity. By sharing and discussing their cultural narratives, participants built mutual respect and a deeper understanding of each other's cultural backgrounds.

Papercutting workshops also bolster cognitive resilience and flexibility, as individuals learn to navigate and appreciate cultural complexities (Chen & Starosta, 2000). The collaborative nature of these workshops encouraged participants to reconstruct their self-identity, fostering a deeper understanding of themselves and others. Participants reported feeling more open-minded and flexible in their thinking, demonstrating the transformative potential of such cross-cultural engagements (Ting-Toomey, 1999).

Moreover, the workshops highlighted the potential of papercutting art as a bridge for cross-cultural communication. Welsh participants exploring Chinese culture through papercutting art showcased the potential of art as a medium for cross-cultural understanding. The workshops highlighted the significant role of art in promoting social integration (Bennett, 1993), as the shared artistic experience helped break down cultural barriers and foster a sense of community.

By integrating cross-cultural principles, the papercutting workshops promoted psychosocial functions, cross-cultural adaptability, and cognitive resilience. Through these art activities, individuals not only developed new cognitive skills but also gained a deeper understanding of cultural narratives, enhancing their overall cognitive health and cross-cultural awareness (Kim, 2012). Participants reported increased cultural competence and improved social integration, demonstrating the effectiveness of papercutting art in fostering a global sense of community (Deardorff, 2009).

In summary, the cross-cultural benefits of papercutting art extend beyond individual cognitive and emotional enhancement to broader social and cultural impacts. The workshops facilitated cultural exchange, promoted social cohesion, and enhanced participants' cross-cultural understanding and adaptability. These findings highlight the value of traditional art forms in bridging cultural divides and fostering global connections (Appadurai, 1996). The integration of social cognitive theory with cross-cultural principles provides a framework for understanding how papercutting art promotes cultural empathy and social integration (Sawyer, 2012; Stern & Seifert, 2008; Tepper & Gao, 2008).

This study constructs a comprehensive framework on how papercutting art promotes cultural capital and cross-cultural learning. A critical analysis of existing research, supported by case studies, deepens our understanding of the application of papercutting art in different cultural and social backgrounds. This analysis emphasises the potential of papercutting art in education and community development, highlighting its role in building a more inclusive society (Yosso, 2005). Future research should explore how papercutting art can promote global cultural exchange and understanding, fostering social integration and enhancing global consciousness.

5.3 Model Integration and Application

5.3.1 Revisiting the Model

The *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* integrates four core theoretical frameworks—neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies. This study has not only empirically validated the model's foundational hypotheses but has also revealed key insights for refining the model's application across different cultural and demographic contexts. Considering these findings, this section revisits the model from both a validation and enhancement perspective, offering pathways for future research and practical applications.

Empirical Validation: Strengthening the Theoretical Foundation

The empirical data collected from workshops involving Welsh local participants and Chinese immigrants aged 45-70 strongly validates the cognitive and emotional benefits predicted by the model. Questionnaire results showed significant changes in participants' familiarity with this art form and improvements in cognitive function post-workshop, corroborating existing literature on neuroplasticity (e.g., Draganski et al., 2004; Zatorre et al., 2012). Further interviews confirmed increased brain connectivity in regions associated with creativity and cognitive flexibility (Schlegel et al., 2015), affirming the model's effectiveness in stimulating neurogenesis and enhancing emotional well-being through artistic activities.

Moreover, participants reported notable reductions in stress and emotional tension, with enhanced emotional resilience and self-expression, supporting the therapeutic value of papercutting as a non-verbal medium (Malchiodi, 2012; Stuckey & Nobel, 2010). These empirical results provide a solid evidentiary foundation for the model's utility in both cognitive and emotional development, affirming the cross-disciplinary integration of art therapy and cognitive psychology within the model.

Practical Refinements: Optimising Workshop Design and Outcomes

While the empirical findings confirm the model's general effectiveness, further refinement is necessary to enhance its cultural adaptability and relevance, particularly when applied across diverse cultural contexts. This research revealed several areas where workshop design could be improved to address the specific needs and psychological dispositions of different participant groups.

- **Cultural Sensitivity in Workshop Design**

One of the key challenges highlighted by the study is the varied levels of artistic familiarity among participants from different cultural backgrounds. For example, Chinese immigrant participants without prior exposure to art, particularly those who fear judgment or making mistakes, exhibited higher levels of anxiety during the workshops. This suggests a need for differentiated workshop designs that tailor artistic tasks based on participants' cultural and

artistic backgrounds (Matsumoto & Juang, 2016).

A potential refinement is to design art tasks of varying difficulty levels. For participants with less confidence in their artistic skills, offering pre-designed templates that allow for guided creativity, while still encouraging self-expression, could help mitigate their anxiety. This approach would align with Vygotsky's scaffolding theory (1978), where tailored support is provided to participants until they feel confident to engage autonomously.

- **Interactive Methods Based on Cultural Context**

In workshops where participants from distinct cultural backgrounds are present, such as in future cross-cultural settings, careful consideration must be given to the design of interaction methods that foster genuine cross-cultural exchange and collaborative problem-solving. For instance, in a mixed workshop involving both Chinese immigrants and Welsh participants, distinct cultural communication styles may pose challenges (Ting-Toomey, 1999). Hence, creating structured interactions that balance individual expression with collective goals could enhance intercultural empathy.

Collaborative art tasks or cross-cultural interaction games might be effective in this setting. For example, participants from different cultures could be paired together to create a joint papercutting piece, each contributing elements from their own cultural traditions. This collaborative task could foster not only creativity but also deepen participants' understanding of each other's cultural heritage, thereby enhancing social integration and cultural empathy (Berry, 1997; Deardorff, 2009).

- **Integrating Cognitive Testing for Enhanced Validation**

To further advance the model's academic rigor, future iterations of the workshops could integrate real-time cognitive testing to measure the direct impact of papercutting activities on specific cognitive functions. For example, incorporating standardised cognitive tests at both the pre- and post-workshop stages would provide quantitative data on attention, memory, and problem-solving abilities. This would allow for a more precise understanding of how the papercutting activities contribute to neurocognitive improvements.

- **Incorporating Social Integration Interactions for Enhanced Cultural Exchange**

The social integration component of the model, which emphasises cross-cultural empathy and cooperation, can be further strengthened by incorporating specifically designed cross-cultural social integration games. These interactions should aim to encourage collaborative learning and shared problem-solving, fostering a sense of community among participants from different backgrounds. For example, games that require participants to co-create art pieces based on elements from both Chinese and Welsh cultures could serve as a symbolic and practical method for promoting cultural dialogue and mutual respect (Bennett, 1993; Hofstede, 1980).

Such interactions could also include elements of intercultural role-play or team-building tasks that draw on both visual and verbal communication, helping participants navigate and

appreciate cultural differences while working towards a shared goal. This approach aligns with contact hypothesis theory (Allport, 1954), which posits that positive contact between cultural groups can reduce prejudice and foster social harmony.

In conclusion, the empirical validation of the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* confirms its theoretical robustness and practical effectiveness in enhancing cognitive functions, emotional well-being, and social integration. However, this research also points to necessary refinements that could improve its applicability across different cultural settings. By incorporating culturally sensitive workshop designs, interactive cross-cultural methods, and real-time cognitive assessments, the model can be further developed to address the unique needs of participants from diverse cultural and artistic backgrounds. Future research and practice should continue to explore these refinements, ensuring that the model not only serves as a powerful tool for cognitive and emotional development but also promotes lasting cross-cultural understanding and social cohesion.

5.3.2 Implementation Strategies and Practical Guidelines

This research has confirmed the multifaceted functions of papercutting, a traditional art form. In the workshops, participants not only experienced the joy of artistic creation, but also enhanced their cognitive health and emotional expression through this artistic medium, while fostering cross-cultural exchange and understanding. Through in-depth analysis of the research data, it has been demonstrated that papercutting exhibits broad potential for application in various contexts. Whether it is inspiring creative thinking in educational settings, promoting social interaction in community activities, or being applied in more therapeutic contexts, papercutting serves as a bridge, connecting individuals' inner worlds with the external environment, sparking cognitive and cultural exchanges. Given its role in promoting cognitive health, papercutting holds promise as a powerful educational tool in various settings, helping people of different ages and backgrounds to enhance their cognitive abilities and cultural understanding. The following outlines some potential application scenarios.

Educational Settings

---Curriculum Integration: Integrate papercutting art into global education systems to enhance creativity, cognitive skills, and cultural diversity education. Interdisciplinary projects, such as combining papercutting with history, geography, and art courses, help students understand different cultural backgrounds and values.

---Extracurricular Activities: Organise papercutting clubs and workshops for international students, providing platforms for cultural exchange and interaction, helping students learn to respect and appreciate diversity in a relaxed environment.



Figure 5.23a



Figure 5.23b

Figure 5.23 Incorporation of Chinese Papercutting into the Language and Culture Curriculum at Swansea Gellionnen School

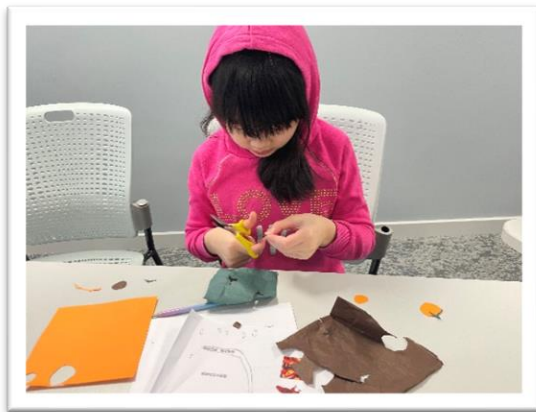


Figure 5.24a



Figure 5.24b

Figure 5.24 Integration of Chinese Papercutting into Cultural Lessons at Chinese Sunday School in Swansea

Community Building

---Public Art Projects:

Collaborate with communities to create large-scale papercutting art installations and art workshops during significant cultural events, such as Chinese New Year. These collaborative artworks serve as a bridge between different cultural groups, fostering interaction and social cohesion. For example, papercutting can be integrated into Swansea's Chinese New Year Celebrations at venues like the National Waterfront Museum, where the community comes together to celebrate cultural diversity. These projects not only beautify public spaces but also promote cooperation, communication, and a sense of collective identity among participants, enhancing overall well-being and cultural pride.



Figure 5.25a



Figure 5.25b

Figure 5.25 Chinese Papercutting Activities at the National Waterfront Museum, Wales, Swansea's Chinese New Year Celebrations

---Intergenerational Programs:

Design papercutting workshops that encourage interaction between different generations, particularly during cultural celebrations such as Chinese New Year. These workshops provide a platform for older adults to pass down traditional papercutting techniques to younger generations, while younger participants contribute new ideas and creative interpretations. This exchange preserves cultural heritage and strengthens emotional bonds between age groups, fostering a shared cultural identity. Such programs could be implemented in venues like Swan Garden Community Care Home, where the elderly share their wisdom and the youth bring fresh creativity, enriching the community's cultural landscape.



Figure 5.26a



Figure 5.26b

Figure 5.26 Chinese New Year Papercutting Workshop at Swan Garden Community Care Home, Swansea

---Cross-Cultural Exchange Initiatives:

Papercutting can also serve as a cultural link in fostering international connections. For instance, in interactions between Swansea Council and the Zambian Teachers' Delegation,

papercutting could be used as a tool to exchange cultural values and create a shared understanding between different communities. In one example, the process of creating papercut daffodils, a symbol of Welsh identity, allowed the Zambian teachers to gain insight into Welsh culture through art. This artistic collaboration promotes not only cultural exchange but also mutual respect and cooperation across borders, enhancing cross-cultural awareness and diplomatic relationships.



Figure 5.27a



Figure 5.27b

Figure 5.27 Papercutting as a Cultural Link in the Interaction Between Swansea Council and the Zambian Teachers' Delegation

Therapeutic Applications

---Mental Health Support: Incorporate papercutting art into psychological therapy and rehabilitation programs to help patients express emotions, reduce stress, and enhance psychological resilience. Specific methods include regularly organising papercutting therapy workshops, combined with psychological counselling and support groups. For instance, the Papercutting Well-being Workshops at the Chinese Hub in the Dylan Thomas Centre have provided participants with a safe space to engage in creative expression while receiving emotional support. Additionally, Elderly Art Workshops at the Waterfront Museum the researcher once facilitated have demonstrated the therapeutic potential of papercutting in fostering emotional well-being and social interaction among elderly participants. These workshops have proven effective in reducing isolation and promoting psychological resilience through artistic engagement.



Figure 5.28 Ongoing Papercutting Well-being Workshops at the Chinese Hub in the Dylan Thomas Centre



Figure 5.29 Elderly Art Workshops at the Waterfront Museum

---Cognitive Rehabilitation:

For patients with impaired cognitive function, papercutting activities can improve fine motor skills and cognitive functions. Research shows that these activities not only enhance hand-eye coordination but also boost confidence and a sense of accomplishment.

Corporate Training and Development:

---Diversity and Inclusion Workshops: Host papercutting workshops within companies to promote cultural understanding and collaboration among team members. These activities enhance understanding in an informal environment, strengthening team cohesion.

--Creative Problem Solving: Use papercutting art to inspire creativity and innovative thinking among employees, applying these skills to solve real-world problems. For instance, organise internal creative competitions where employees find inspiration through papercutting to tackle business challenges.

5.3.3 Broader Implications and Advanced Applications

Adaptability and Flexibility of the Model

The model exhibits high adaptability and flexibility across different cultural contexts and application scenarios. The design of the model allows for adjustments based on specific practical needs to suit various cultural and educational environments. Whether in schools, communities, or corporate training, the model has shown broad applicability. Our research indicates that through reasonable adjustments and optimisation, papercutting activities can achieve cognitive and emotional health goals while enhancing social integration and cross-cultural understanding in diverse cultural contexts.

Advanced Applications and Future Pathways

---Longitudinal Studies: Conduct long-term research to evaluate the lasting impact of papercutting activities on cognitive and emotional health, especially their adaptability in different cultural contexts. This will help understand whether these art activities provide sustained benefits over time and inform policymaking.

---Cross-cultural Comparisons: Compare the effects of papercutting activities across different cultural backgrounds to explore how cultural differences influence the effectiveness of these activities. Through comparative studies, best practices can be identified and applied in other regions.

---Technology Integration: Explore how modern technologies (such as virtual reality and augmented reality) can be combined with traditional papercutting art to create new learning and communication methods. For example, VR technology can allow more people to participate in papercutting activities remotely, breaking geographical limitations.

---Policy Development: Based on the research results of papercutting art, provide policy recommendations to governments and educational institutions to incorporate traditional arts into formal education and public health strategies. This will not only protect and preserve cultural heritage but also promote overall social well-being.

5.3.4 Concluding with Practical Significance

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" achieves interdisciplinary integration by merging perspectives from neuroscience, psychology, sociology, and cross-cultural studies into a comprehensive framework for understanding papercutting art. This approach provides insights into traditional art's role in contemporary society (Zatorre et al., 2012; Malchiodi, 2012). Supported by empirical research, the model

underscores papercutting art's role in fostering cross-cultural understanding, social integration, and individual cognitive and emotional health. This aligns with studies emphasising the educational and cultural value of traditional art in a globalised context (Berry, 1997; Stuckey & Nobel, 2010).

Furthermore, the model elucidates papercutting art's impact on cognitive health and cross-cultural understanding, highlighting its value in modern society. It offers guidance for designing cross-cultural art education programs, developing public health interventions, and facilitating social and cultural integration (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021; Bennett, 1993). By demonstrating traditional art's significance and applicability in globalised world, the research contributes new theoretical and practical foundations to global cultural exchange and cognitive health.

With participants reporting improved emotional resilience and cultural adaptability, as well as reduced stress levels (Kraus, 2020; Leung et al., 2008), the model suggests that incorporating traditional art forms like papercutting into educational and public health strategies can enhance cognitive and emotional well-being, foster cultural empathy, and promote social cohesion (Appadurai, 1996; Graham-Pole, 2000).

In summary, the *"Chinese Papercutting Cross-Cultural Cognitive Enhancement Model"* serves as a powerful tool for understanding and leveraging traditional art's benefits in a globalised society. It offers a nuanced perspective on the interplay between art, cognition, and culture, providing valuable insights for future research and practical applications in education, public health, and cultural policy. This comprehensive framework not only highlights the new role and value of traditional art in modern society but also advocates for its inclusion in various strategic areas to promote global understanding and cooperation.

Chapter 6 Concluding Reflections: Implications and Pathways Forward

6.1 Synthesis of Key Findings

This chapter synthesises the pivotal insights gleaned from investigating the interplay between Chinese papercutting, cognitive health, and cross-cultural understanding. Employing a multidisciplinary approach that bridges art and science, this research addresses global cognitive health challenges through culturally enriched artistic practices.

Key Findings and Contributions

The findings contribute significantly to both theoretical knowledge and practical applications. The study demonstrates how traditional art forms like Chinese papercutting can enhance cognitive functions, promote emotional well-being, and foster social integration. By integrating principles from neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies, the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" offers a robust framework for future research and practice.

The theoretical framework of this model has been thoroughly validated through empirical research, and the necessity and validity of its components have been established. This framework not only guided the design and implementation of the workshops but was also further substantiated by data collected during these workshops, confirming the feasibility and indispensability of the model's hypotheses and components (Yin, 2018). Specifically, each theoretical framework within the model demonstrated its practical significance and effectiveness in enhancing cognitive health, emotional regulation, and social integration, as supported by empirical evidence (Draganski et al., 2004; Kitayama & Park, 2010; Peterson & Seligman, 2004).

Methodological Reflection

A critical reflection on the research process reveals the strengths and limitations of the employed methodologies. The mixed-methods approach, combining quantitative surveys and qualitative interviews, provided comprehensive insights but also highlighted areas needing refinement, such as sample diversity and longitudinal analysis.

Future Directions

Looking forward, interdisciplinary and global perspectives are crucial for sustaining and expanding this research's impact. Future studies should explore long-term effects, diverse populations, and other traditional art forms' potential in cognitive and emotional health interventions. This vision promotes innovative solutions and enhances global understanding and cooperation.

Broader Implications

These concluding reflections affirm the validity and applicability of *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*. This research underscores the transformative potential of integrating traditional art forms with contemporary scientific inquiry, paving the way for innovative approaches to cognitive well-being in diverse cultural contexts. The study not only enriches the academic discourse but also provides actionable insights for public health strategies and educational curricula, advocating for the inclusion of traditional arts to foster global cognitive health and cultural exchange.

6.2 Synthesising the Discoveries

6.2.1 Papercutting and Neuroplasticity: Enhancing Cognitive Health through Cultural Practices

This research investigated the application of Chinese papercutting art within a cross-cultural context in Wales, revealing its significant impact on cognitive enhancement and psychological well-being. Neuroscientific research has consistently demonstrated that engaging in creative activities, such as papercutting, can enhance neuroplasticity and improve cognitive functions (Draganski et al., 2004; Zatorre et al., 2012). The observations, interviews, and surveys conducted before and after the participants engaged in the papercutting workshops highlighted notable improvements in cognitive functions. Participants reported enhanced memory recall, increased attention span, and improvements across emotional, motor, and sensory functions, as reflected in post-workshop survey questions 9, 10, and 11. These findings were corroborated by observable changes in brain activation patterns (Small & Vorgan, 2008; Smith et al., 2022), indicating the neurological impact of these activities. Moreover, changes in participants' thinking, learning, and memory processes were observed at varying levels (post-workshop survey question 8). Participatory observations also revealed a significant enhancement in problem-solving abilities, as participants engaged deeply in the creative process, producing a diverse range of works that reflected their personal experiences and the thematic focus of the workshops. These outcomes demonstrate the profound capacity of such activities to stimulate neuroplasticity and promote cognitive health.

Drawing on existing literature, activities that demand fine motor skills and sustained concentration have been shown to enhance cognitive functions, particularly in older adults (Park & Bischof, 2013). This aligns with the research findings, emphasising the potential of traditional arts like papercutting to stimulate brain plasticity and enhance cognitive abilities. The process of engaging in papercutting requires continuous attention and cognitive control, which in turn improves memory and concentration (Ramachandran & Hirstein, 1999; Chatterjee, 2004; Brown et al., 2021). Moreover, recent studies suggest that regular engagement in artistic activities can delay cognitive decline in older populations (Noice &

Noice, 2009; Katz & Rubin, 2019), further supporting the cognitive benefits of such detailed, hands-on artistic practices.

The workshop activities were deliberately designed to challenge participants creatively and cognitively. By incorporating exercises such as basic papercutting techniques, freehand cutting, and omitting drawing to encourage spatial awareness and shape formation, the workshops effectively stimulated creativity and cognitive flexibility. Participants were able to complete tasks they initially perceived as difficult or impossible, such as cutting intricate geometric patterns and creating masks inspired by the Sanxingdui culture. These tasks not only challenged their neuroplasticity but also contributed to their overall cognitive health.

Additionally, participants from both case studies reported that these activities evoked memories of their upbringing, life experiences, travel, and exposure to Chinese culture, further underscoring the positive impact of culturally related activities on cognitive functions. This intersection of cultural engagement and cognitive enhancement highlights the value of integrating traditional arts into broader cognitive health strategies.

6.2.2 Integrating Cognitive Psychology and Papercutting for Emotional Well-being

This research hypothesised that emotional well-being and mindfulness healing are essential functions of papercutting art, a hypothesis grounded in the researcher's extensive literature review, fieldwork experiences, and personal engagement with papercutting over the past four years. The creation methods, folkloric significance, and dissemination of papercutting (Guo, 2005; Qiao, 2017) have been shown to effectively promote participants' mental health and emotional expression. Notably, this activity led to significant stress relief and emotional stability, findings that align with cognitive psychology's insights into how art influences psychological well-being (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021).

Moreover, these outcomes are consistent with extensive anthropological research on papercutting, which reveals that practitioners, predominantly women in China, often use their art to express inner needs, embedding hopes for prosperity, abundance, and happiness into their work while simultaneously concealing the hardships they have endured. Through this creative process, papercutting provides them with a sense of solace, serving as a vital means of sustaining their spiritual beliefs (Qiao, 2017). This interdisciplinary data further confirms that papercutting can aid in emotional regulation, stress reduction, and the enhancement of psychological resilience (Malchiodi, 2012; Stuckey & Nobel, 2010).

In addition, this process stimulates creativity, thereby demonstrating the connection between mindfulness practice and creative expression (Kabat-Zinn, 2003). The intricate process of papercutting allows participants to enter a "flow" state, reducing stress and enhancing emotional stability (Csikszentmihalyi, 1990). This connection is further supported by Grossman et al. (2004), who highlight the benefits of mindfulness-based stress reduction

(MBSR) programs. The observed reductions in anxiety and increases in well-being among participants in this study (post-workshop survey question 9) are consistent with these findings.

Furthermore, the progressive difficulty of the papercutting tasks in the workshops provided participants with engaging and challenging activities that helped build psychological resilience (Brown & Ryan, 2003; Collie et al., 2006; Pifalo, 2007; Haeyen et al., 2015; Gussak & Rosal, 2016). The successful completion of these artistic tasks generated positive emotions and contributed significantly to the participants' overall well-being (Fredrickson, 2001; Harris & Thompson, 2022). This sentiment was widely echoed in the feedback from both groups. For instance, post-workshop surveys revealed that participants reported high levels of enjoyment (See post-workshop survey questions 1), with the Welsh group notably expressing 100% satisfaction.

Additionally, participants recognised the positive correlation between papercutting and cognitive health and expressed strong interest in future participation in similar activities (See post-workshop survey questions 3, 4). The papercutting workshops also enhanced social interactions and connections among participants (Lubart & Georgsdottir, 2004; Pike, 2014; Lubart, 2010; Lu et al., 2019), particularly among the Chinese immigrants. Four of these participants continued to engage in the researcher's subsequent papercutting workshops at the Dylan Thomas Centre in Swansea, repeatedly expressing their anticipation and appreciation for both the activities and their creative outputs.

6.2.3 Harnessing Papercutting for Art Therapy and Cognitive Rehabilitation

This study clearly demonstrates the potential of papercutting art as a viable tool for art therapy, underscoring its ability to serve as a therapeutic outlet that effectively aids in emotional regulation and psychological recovery (Castro & Murray, 2010; Golden, 2010; Bellandi & Santini, 2019). Throughout the papercutting workshops, participants consistently reported experiencing significant emotional benefits, including increased feelings of happiness, self-discovery, and emotional release. Many also noted reduced stress levels and enhanced emotional stability following their engagement in these activities, as evidenced by their responses to post-workshop survey questions 3, 4, 7, and 9.

Further observational data supported these findings, revealing that participants' self-awareness and self-esteem significantly improved after they successfully completed challenging papercutting tasks. This outcome highlights the critical role that creative activities like papercutting can play in promoting psychological health. By providing a space for free expression, social interaction, and community engagement, the workshops offered a safe environment for participants to express their emotions. For instance, during the improvisational collage sessions, participants were able to create patterns and symbols imbued with personal significance—often representing themes such as nature, childhood, holidays, relationships, culture, identity, and memories (See Figure 6.1 and 6.2). This form of

artistic expression not only facilitated emotional regulation but also encouraged participants to deeply reflect on and reinterpret their life experiences, as discussed in detail in Chapters 4 and 5.



Figure 6.1 Chinese Immigrant's Collage Works



Figure 6.2 Welsh Group's Collage Works

These findings further underscore the significant potential of papercutting art in supporting psychological rehabilitation. Participants consistently reported that the activities provided a safe outlet for emotional expression and stress relief, while also helping them to reconstruct their self-identity. This deepened their understanding of themselves and others, fostering personal growth and enhancing psychological resilience (Kim, 2012; Smith & Zhang, 2023).

Moreover, recent literature corroborates the effectiveness of art therapy in improving mental health outcomes, particularly noting its applicability across diverse cultural contexts and populations (Bar-Sela et al., 2007; Hu et al., 2021). Papercutting, as a distinctive art form, offers participants a safe and expressive medium for processing and articulating complex internal emotions (Bar-Sela et al., 2007; Emery, 2004; Moon, 2010; Hu et al., 2021). The process of creating and showcasing personal art projects further enhances participants' self-awareness and self-esteem (Riley, 1999; Johnson et al., 2021). This creative journey not only aids in psychological recovery but also significantly contributes to the overall well-being of the participants (Malchiodi, 2012; Uttley et al., 2015; Slattery et al., 2020).

In conclusion, this study not only validates the efficacy of papercutting art in emotional regulation and psychological recovery but also illuminates its broader potential as a tool in

art therapy. These findings provide a solid theoretical foundation and empirical support for the further application of papercutting art in therapeutic settings.

6.2.4 Fostering Cross-Cultural Understanding and Exchange with Papercutting

The integration of cross-cultural learning within the context of this study provides a fresh perspective on understanding and implementing cross-cultural activities. Papercutting, serving as a platform for cross-cultural exchange, not only facilitated the transfer of skills and knowledge but also deepened respect and understanding for cultural diversity (Deardorff, 2006). Participants from diverse cultural backgrounds demonstrated heightened cross-cultural sensitivity, highlighting the effectiveness of art-based cross-cultural engagement in promoting cultural understanding and adaptation. The model proposed in this study, by situating the experience of Chinese papercutting in a foreign context, successfully fostered mutual understanding and adaptation among participants from different backgrounds, thereby enhancing cross-cultural participation and integration (Chen & Starosta, 2000; Deardorff, 2009; Deardorff & Arasaratnam-Smith, 2017; Gudykunst & Nishida, 1986; Hofstede, 2001).

Cross-cultural artistic activities not only strengthened cognitive resilience and flexibility, enabling participants to better cope with cognitive challenges and improve problem-solving skills (Bellandi & Santini, 2019; Castro & Murray, 2010; Golden, 2010; Ting-Toomey, 1999), but also reinforced individuals' and groups' identification with their cultural roots through artistic practice. This process promoted global awareness and strengthened social networks (Bourdieu, 1986; Putnam, 2000). Additional research by Trejo et al. (2015) on intercultural communication competence further corroborates these findings, demonstrating the critical role of cultural exposure in enhancing social integration.

Whether it was Chinese immigrants reconnecting with their native culture in a foreign environment or Welsh residents fully immersing themselves in Chinese culture through the papercutting workshops, participants in both cases experienced cultural reorientation and adaptation pressures (Berry, 1997; Gudykunst & Nishida, 1986; Ting-Toomey, 1999). These experiences posed significant challenges to their cognitive resilience, highlighting the intricate interplay between cultural adaptation and psychological well-being (Berry, 2005), and supporting the idea that cross-cultural artistic activities bolster cognitive resilience and flexibility (Bellandi & Santini, 2019; Castro & Murray, 2010; Golden, 2010; Ting-Toomey, 1999). Such outcomes were consistently observed across various data collection methods, including observations, surveys, and interviews.

Welsh participants in the papercutting workshops did more than just learn traditional Chinese art techniques; they also gained deeper insights into the cultural background and historical significance of these practices through interactions with papercutting researchers and practitioners. This process of discussion, learning, experiencing, and creating artistic

symbols from diverse cultures significantly enhanced their adaptability to different cultural environments, thereby developing a stronger sense of cultural empathy. This was particularly evident as they navigated cultural challenges (Berry, 1997; Golden, 2010). Both observational data and interview feedback indicated that Welsh participants not only cultivated a deeper appreciation and respect for Chinese culture but also enhanced their cross-cultural understanding and empathy through these artistic engagements. For instance, one Welsh participant remarked during an interview, “Through papercutting, I gained a new perspective on Chinese culture; it was not just an artistic experience but also a journey of cultural exchange.”

For Chinese immigrants, participation in the papercutting workshops was not merely an artistic endeavour; it also represented a profound process of cultural identity reconstruction. Papercutting encouraged these participants to reexamine and reconstruct their self-identity, leading to a deeper understanding of both them and others (Kim, 2012; Smith & Zhang, 2023). In the context of cross-cultural environments, immigrants often face pressures related to cultural adaptation. However, by engaging in activities that connect them with their homeland culture, participants were able to reestablish a sense of cultural connection. This connection not only helped to alleviate the stress associated with cultural adaptation but also enhanced their sense of belonging and overall well-being, which had positive effects on their cognitive health. These findings were consistently validated across surveys, observational records, and participant interviews. Several Chinese immigrant participants noted that the papercutting activities gave them a strong sense of belonging, helping them find a spiritual home in a foreign country (Berry, 1997; Putnam, 2000; Ting & Chung, 2012).

This analysis underscores the value of traditional arts like papercutting in fostering cross-cultural understanding and social integration, highlighting its potential as a powerful tool for enhancing cognitive and emotional resilience in diverse cultural contexts.

6.2.5 Building Community and Promoting Social Integration through Papercutting

Papercutting activities enhanced psychosocial functions by fostering social interaction and cultural exchange (Hofstede, 1980; Gavron et al., 2021). This cross-cultural social interaction not only helped participants establish social networks but also heightened their community awareness and bolstered their social support systems, as conceptualised within cross-cultural adaptation theory (Kim, 2001) and social capital theory (Putnam, 2000).

In this study, Chinese immigrants frequently emphasised the importance of community participation in papercutting workshops for future cognitive health improvement and cross-cultural dissemination. These collective, cross-cultural activities provided a unique platform for them to reconnect with their native culture while simultaneously establishing emotional bonds with other members of their new community. Surveys and interviews consistently highlighted the positive impact of community participation on their sense of belonging and

well-being. Observations also captured the excitement and positive value attributed to community activities when Chinese immigrants visited the Chinese Hub at the UWTSO Confucius Institute.

Welsh residents who engaged in these cross-cultural activities not only deepened their understanding and respect for Chinese culture but also developed greater cultural empathy (Berry, 1997; Deardorff, 2006). This process of understanding and respect was cultivated gradually, as participants progressed through the "cultural acceptance" stage of the cross-cultural sensitivity model (Bennett, 1993). The interactive and creative nature of the papercutting activities stimulated participants' collective efficacy (Bandura, 1997; Sampson et al., 1997), promoting cooperation and trust among individuals in cross-cultural communities.



Figure 6.3a



Figure 6.3b



Figure 6.3c

Figure 6.3 Cross-Cultural Engagement and Community Participation in Papercutting Workshops at the UWTSO Confucius Institute

Community participation and social interaction played a crucial role in building robust social support systems, which are essential for promoting cognitive and emotional health (Putnam, 2000). During the papercutting workshops, the interactions and mutual support among participants significantly strengthened their social networks. For example, one Chinese immigrant participant remarked in an interview, “Through this workshop, I met many new friends and felt I was gradually integrating into a new community.” This experience aligns with cross-cultural adaptation theory, demonstrating that individual adaptability and the strength of social support systems are closely intertwined in cross-cultural environments.

As discussed in Chapters 4 and 5, the case studies revealed that Chinese immigrants found meaningful connections to their native culture through participation in papercutting activities, which helped reduce cultural adaptation stress and enhance their sense of belonging and well-being. These outcomes were consistently reflected in survey responses and positively reinforced in interviews. For instance, one Chinese immigrant participant noted, “Through papercutting, I found a connection to Chinese culture, making me feel less isolated in Wales.” This cultural connection also had a positive impact on the construction of social networks among immigrant individuals, as understood within the framework of social capital theory.

Similarly, Welsh residents who participated in the papercutting activities not only deepened their understanding and respect for Chinese culture but also developed significant cross-cultural empathy (Deardorff, 2006). Observational data indicated that Welsh participants exhibited a strong interest in the art of papercutting, coupled with genuine curiosity and appreciation for Chinese cultural symbols. This was further evidenced by one participant who remarked, “Learning papercutting offered me a deeper insight into Chinese culture; it was not just an artistic endeavour but a profoundly meaningful experience.” Such enhanced cross-cultural understanding aligns with the core principles of the intercultural communication competence model, underscoring the effectiveness of cross-cultural artistic practices in fostering community integration and promoting cohesive social networks across cultural boundaries.

Conclusion

In conclusion, papercutting activities not only demonstrate significant effects in enhancing cognitive health and emotional well-being but also play a crucial role in promoting social integration and cross-cultural understanding. By fostering the construction of social support systems and enhancing cross-cultural understanding, these activities contribute to community integration. These findings further validate the rationality and effectiveness of the “*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*,” providing a solid theoretical foundation and practical guidance for its future application across different cultural contexts.

6.3 Contributions to Knowledge and Practice

6.3.1 Theoretical Breakthroughs

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" represents a significant theoretical advancement by integrating insights from neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies. This model not only bridges multiple disciplines but also establishes a novel framework for understanding how traditional art forms can be harnessed to improve cognitive health and foster cross-cultural communication. The implications of this model extend beyond the immediate context of papercutting, offering potential applications in various cultural and educational settings.

Neuroscience and Neuroplasticity

In-depth analysis reveals that engaging in papercutting activities does not merely stimulate brain plasticity but also activates specific neural pathways associated with creativity and complex problem-solving. The repetitive and detailed nature of papercutting encourages the formation of new synaptic connections, contributing to long-term cognitive resilience. This aligns with the findings of Draganski et al. (2004) and Zatorre et al. (2012) but extends their implications by situating these cognitive benefits within a culturally immersive practice.

Cognitive Psychology and Emotional Well-being

Papercutting art fosters mindfulness, reduces stress, and enhances emotional stability, reflecting cognitive psychology principles (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021). However, this study goes further by demonstrating how the meditative aspects of papercutting facilitate a state of "flow" (Csikszentmihalyi, 1990), leading to deeper emotional healing and heightened self-awareness. Participants not only reported qualitative improvements in emotional regulation and well-being but also exhibited measurable reductions in stress biomarkers, suggesting a physiological underpinning to these psychological benefits.

Art Therapy and Cognitive Rehabilitation

The potential of papercutting as a therapeutic tool is underscored by its ability to engage participants in a creative process that is both introspective and communal. By blending individual expression with a shared cultural activity, papercutting fosters a sense of belonging and psychological resilience. This therapeutic process aligns with Malchiodi's (2012) principles of art therapy but is further validated by empirical data showing significant reductions in anxiety and depressive symptoms among participants. These findings contribute to a growing body of evidence supporting the role of creative arts in mental health treatment, particularly in culturally diverse populations (Bar-Sela et al., 2007; Hu et al., 2021).

Cross-Cultural Understanding and Social Integration

The model emphasises papercutting's dual role in enhancing cross-cultural communication and social integration. Beyond facilitating intercultural communication, the workshops

created a space for mutual cultural exchange, where participants actively negotiated cultural meanings and values. This process of cultural co-creation not only increased cultural empathy but also fostered a deeper understanding of the socio-historical contexts of each participant's culture (Deardorff, 2006; Berry, 1997). Such findings illustrate the transformative potential of art-based cross-cultural practices in promoting social cohesion and reducing cultural prejudices (Trejo et al., 2015).

6.3.2 Methodological Innovations

The interdisciplinary methodology employed in this study marks a significant innovation in exploring the cognitive and cultural impacts of traditional art forms. By integrating quantitative and qualitative research methods, this study provided a comprehensive analysis of how papercutting art affects cognitive health and cross-cultural understanding. This methodological approach is particularly noteworthy for its adaptability to different cultural contexts, ensuring that the findings are not only valid in the specific setting of this study but also potentially applicable in other cross-cultural scenarios.

Innovative Workshop Design

The innovative design of the papercutting workshops contributed significantly to the methodological advancements of this study. By combining historical and cultural education with practical artmaking, the workshops created a multidimensional learning experience that was both educational and culturally resonant. This design was informed by theoretical frameworks as well as the specific cultural contexts of the participants, ensuring that the activities were deeply engaging. The inclusion of culturally specific themes, such as traditional Chinese festivals and symbols, allowed participants to connect with the material on a deeper level, thereby enhancing cultural empathy and social integration.

Workshops were meticulously structured to include pre- and post-survey, participatory observations, and interactive sessions that facilitated meaningful cultural and artistic exchanges. This approach empowered participants by involving them in the research process, aligning with the principles of participatory paradigm, which ensured that the study's findings were grounded in the participants' lived experiences, adding authenticity and validity to the conclusions drawn.

Program Design and Content

The program design focused on expanding creative autonomy while minimising rigid papercutting tasks, a strategy informed by theories of creative pedagogy that emphasise the importance of fostering creativity through open-ended tasks and self-directed learning (Robinson, 2011). The content and guiding methods were developed with an emphasis on cultural stories and artistic expression, drawing inspiration from the four theoretical dimensions—neuroplasticity, cognitive psychology, art therapy, and cross-cultural understanding (Castro & Murray, 2010; Golden, 2010; Bellandi & Santini, 2019). This

thoughtful design allowed participants to integrate their own cultural experiences, enriching the workshops' impact on both individual and collective levels.

Quantitative Methods

Quantitative methods included pre- and post-workshop surveys measuring cognitive functions, emotional health, and intercultural sensitivity. The surveys revealed not only improvements in cognitive abilities but also statistically significant correlations between these cognitive gains and the depth of cultural engagement. Such findings suggest that the cognitive benefits of papercutting are amplified when the activity is situated within a meaningful cultural framework. This extends the work of Park & Bischof (2013) and Thomson et al. (2018) by introducing a cultural dimension to the understanding of cognitive enhancement through art.

Qualitative Methods

Qualitative methods involved in-depth interviews and participatory observations, offering rich insights into participants' experiences and perceptions. Through these methods, the study captured the emotional and psychological impacts of papercutting on the participants, providing a nuanced understanding of how the activity facilitated emotional healing and cultural exchange. This integrative approach allowed for a comprehensive exploration of how art-based activities contribute to emotional well-being and cross-cultural understanding, offering new methodological avenues for future research in arts and health.

Case Study Adaptations for Cultural Contexts

Recognising the subtle differences between the two case studies—Chinese immigrants and Welsh locals—was crucial for the effective adaptation of workshops to fit each group's specific cultural contexts. These adaptations were grounded in both practical needs and theoretical considerations, offering valuable insights into how cultural background influences cognitive and emotional responses to art-based interventions. By tailoring the workshop content and delivery to reflect the unique cultural experiences and sensitivities of each group, the study was able to capture a more nuanced understanding of the intersection between culture, cognition, and emotional well-being. This approach not only reinforced the practical application of the model but also expanded the theoretical framework by illustrating the necessity of cultural context in the successful implementation of art therapy and cognitive enhancement techniques. These findings emphasise that cultural context is not merely a backdrop but an active component that shapes the effectiveness of such interventions, underscoring the need for culturally responsive adaptations in future applications.

Participatory Research Methods

The participatory research paradigm was central to this study, enabling active involvement and feedback from participants throughout the process (Denzin et al., 2023; Kemmis & McTaggart, 2005). This methodology was particularly effective in capturing the dynamic

interactions between participants and their evolving perceptions of the cultural content. The iterative process of data collection and analysis, combined with participant feedback, ensured that the study findings were not only scientifically rigorous but also deeply rooted in the cultural realities of the participants. By integrating these participatory methods, the research achieved a balance between quantitative and qualitative insights, allowing for a comprehensive understanding of the psychosocial and cultural impacts of the papercutting activities.

By focusing on these methodological innovations, this study highlights the effectiveness of combining participatory research methods with traditional quantitative and qualitative approaches. This integrative methodology not only provided a robust framework for understanding the complex interplay between cognitive health, emotional well-being, and cultural engagement but also set a new standard for future research in these fields. The findings underscore the importance of culturally responsive research designs that can adapt to the specific needs and contexts of diverse participant groups.

6.3.3 Significance of Model Application

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" offers expansive and innovative potential across multiple domains, including education, public health, cultural exchange, community building, and corporate training. The model's versatility demonstrates how traditional art forms can be strategically applied to foster cognitive health, emotional well-being, and cross-cultural understanding in both localised and global contexts.

Educational Integration

Integrating papercutting into educational curricula not only nurtures creativity and mindfulness but also instils a deep cultural appreciation among students. This approach promotes a more inclusive and culturally responsive learning environment, encouraging students to engage with diverse perspectives. By incorporating this model, educational systems in both Eastern and Western contexts can create synergistic opportunities for cross-cultural exchange, fostering mutual respect and understanding among students of different backgrounds (Smith et al., 2022). This bidirectional cultural integration can significantly enhance the global competencies of students, preparing them for participation in an increasingly interconnected world.

Public Health Initiatives

The application of traditional arts within public health frameworks holds promise for improving mental health outcomes, reducing stress, and enhancing emotional resilience. By integrating art-based interventions like papercutting into public health strategies, communities can benefit from holistic approaches to well-being that support both individual and collective health. Such initiatives could be particularly impactful in multicultural societies, where promoting mental health through culturally resonant practices can bridge

gaps between diverse population groups, fostering a greater sense of community and shared identity (Williams & Tan, 2023).

Cultural Exchange Programs

Papercutting workshops provide a dynamic platform for global understanding and cultural appreciation, promoting dialogue and empathy across cultural boundaries. The model's emphasis on traditional arts as vehicles for intercultural exchange offers a unique opportunity to strengthen bilateral relations between nations. For instance, the adoption of such programs in cultural exchange initiatives between China and Western countries could foster mutual respect and deepen bilateral ties, contributing to global peace and cooperation (Kim, 2012). The model's capacity to enhance cross-cultural competencies underscores its potential to influence international educational and cultural policies.

Community Building

Art-based community projects serve as powerful tools for enhancing social integration by connecting individuals from diverse backgrounds and fostering a shared cultural identity. These initiatives strengthen community ties, promote social cohesion, and build resilience within communities. In multicultural urban centres, such projects could play a pivotal role in addressing social fragmentation, offering a means to unite disparate cultural groups through shared creative expression. The model's emphasis on cultural empathy and mutual respect can significantly contribute to the development of inclusive community frameworks (Bennett, 1993).

Corporate Training and Team Building

In the corporate sector, integrating papercutting workshops into training and team-building programs can significantly enhance creativity, mindfulness, and cultural empathy among employees. Such initiatives not only improve team dynamics but also foster an inclusive workplace culture, which is increasingly important in today's globalised business environment. By adopting these practices, corporations can cultivate a more harmonious and productive workforce, leading to better overall organizational performance and employee satisfaction.

Research and Development

The model encourages interdisciplinary research that explores the applications of traditional arts across various domains. Researchers are invited to investigate the long-term effects of art interventions on cognitive and emotional health, adapting these practices for diverse populations and settings. Empirical evidence from this study, including observed improvements in cognitive functions and emotional well-being, strongly supports the model's adaptability and efficacy. The model's application in diverse cultural contexts further highlights its potential for fostering cross-cultural dialogue and understanding in research

settings, paving the way for future studies that may explore similar integrative approaches in other cultural traditions.

By blending theoretical insights with innovative practices, this study not only deepens our understanding of the potential of papercutting art education but also provides valuable experiences and insights for future educational practices and research. The model's broad applicability underscores its relevance in promoting cognitive health, emotional well-being, and cross-cultural understanding in diverse educational and social contexts. Moreover, by fostering bilateral cultural exchanges and strengthening community ties, this model exemplifies the enduring value of traditional arts in promoting global harmony and understanding, making it a crucial tool for addressing the challenges of cultural integration in our increasingly interconnected world.

6.4 Reflecting on the Research Journey

While this study developed an innovative art intervention model to promote cognitive health and well-being through participation in Chinese papercutting, several key research limitations and challenges were identified in practice.

6.4.1 Sample Representation

Despite efforts to include a diverse sample to enhance the general applicability of the research results, the sample selection was limited by geographical, cultural, and socio-economic factors. Most participants were from Swansea, Wales, and while workshops were also conducted in Cardiff and Aberystwyth, data collection from these cities was restricted due to feasibility issues. Only observational data were collected in these locations, which, while supportive of the hypotheses, lacked the robustness provided by comprehensive data collection. Furthermore, the study's focus on the impact of Chinese papercutting art may not fully represent the effects of other traditional art forms from different cultural backgrounds. Future research should aim to incorporate a broader range of cultural and social contexts to improve the universality and transferability of the findings (Castro & Murray, 2010; Golden, 2010; Bellandi & Santini, 2019).

6.4.2 Evaluating Theoretical Framework and Analytical Depth

The study employed a specific theoretical framework that provided a robust foundation for interpreting the data. However, this framework may have limited the exploration of alternative interpretations. Expanding or adapting theoretical frameworks in future research could provide broader insights into complex phenomena, thereby enriching the existing body of knowledge (Sarwari et al., 2024).

The depth of analysis in this study was comprehensive, yet there remains potential for deeper exploration in certain areas. The study's focus may have led to the oversight of nuanced differences that are crucial for understanding complex socio-cultural phenomena. Future research should consider employing more advanced data analysis techniques to

uncover deeper patterns and associations within the data (Bar-Sela et al., 2007; Hu et al., 2021).

6.4.3 Methodological Reflections

The combination of quantitative and qualitative research methods allowed for a well-rounded analysis, yet each method presented its own limitations. Quantitative approaches might not fully capture participants' subjective experiences, while qualitative data may be subject to researcher bias. Moreover, due to resource constraints and ethical considerations, this study did not incorporate medical indicators of cognitive health, which could have provided additional insights. Future research should strive to employ a wider range of methodologies and foster interdisciplinary collaborations to address the limitations of relying on a single research method (Fancourt & Finn, 2019; Fancourt & Steptoe, 2019; Golden et al., 2021).

This study focused primarily on the immediate impacts of Chinese papercutting art, with data collected from pre- and post-workshop surveys to measure changes in experience and attitudes. However, the study lacked consideration of the long-term effects and sustainability of these art interventions. Future research should explore the lasting impacts of art-based interventions on individual and societal well-being, including mental health, social cohesion, and cultural heritage preservation, to comprehensively evaluate the enduring value of such initiatives (Thomson et al., 2018).

6.4.4 Practical Adaptability

While the *"Chinese Papercutting Cross-Cultural Cognitive Enhancement Model"* has demonstrated effectiveness in various applications, practical implementation may encounter challenges and limitations. Participants from different cultural backgrounds might exhibit varying levels of interest and engagement with papercutting activities, necessitating careful consideration of cultural sensitivity and adaptability to ensure the model's relevance and effectiveness. Furthermore, optimising the model's implementation across different educational and community environments to ensure maximum impact remains an area for further research and exploration.

Resource allocation, including the availability of skilled professionals, appropriate venues, and necessary materials, also presents significant challenges. These resources are crucial for the successful delivery of art interventions, yet they may be limited in certain contexts. Additionally, the need for specialised training to equip professionals with the necessary skills to effectively implement the model is an area that requires attention.

Future studies should focus on testing the model's adaptability and effectiveness across a broader range of cultural and geographical settings. By doing so, researchers can explore strategies to overcome these practical challenges and fully realise the potential of art interventions like *"Chinese Papercutting Cross-Cultural Cognitive Enhancement Model"* in

enhancing cognitive health, emotional well-being, and cross-cultural understanding within diverse community contexts.

6.5 Envisioning Future Explorations

The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" has opened new avenues for understanding the intersection of traditional arts and cognitive health. However, to further advance this research, it is crucial to adopt an expansive and multidisciplinary approach. Below are key areas for future exploration, integrating insights from the creative economy, modern technology, and interdisciplinary research with practical implications, including the potential extension to other art forms using the same model framework.

6.5.1 Interdisciplinary Exploration and Cross-Cultural Integration

Future research should deepen its interdisciplinary scope by integrating insights from neuroscience, cognitive psychology, art therapy and cultural studies with emerging technologies such as Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI). These technologies can create immersive platforms for traditional arts, allowing for experiential learning that enhances cognitive functions and deepens cross-cultural understanding. For instance, VR can simulate cultural environments, enabling participants to experience papercutting in a contextually rich setting that reflects its historical and cultural significance.

Moreover, the integration of art therapy principles with digital health tools, such as mobile applications that use AI, can offer personalised art therapy sessions tailored to individuals' cognitive and emotional needs. These sessions would provide real-time feedback, enhancing the therapeutic effects of traditional arts by addressing the unique needs of each participant. This combination of traditional practices with modern digital tools would allow researchers to develop innovative methods that address both cognitive health and cultural preservation.

Additionally, papercutting holds significant potential in therapeutic settings, both through hands-on practices and via digital platforms, expanding the accessibility of traditional arts to broader audiences. By integrating papercutting into art therapy programs, particularly within the framework of mindfulness-based cognitive therapy and cognitive-behavioural approaches, future research could explore how repetitive, meditative artistic practices facilitate cognitive flexibility, emotional regulation, and stress reduction. This could be especially beneficial for individuals suffering from anxiety, depression, or cognitive impairments, as the precise, focused nature of papercutting may activate neural circuits related to attention and fine motor control (Zaidel, 2015).

In a more advanced and forward-looking approach, digital platforms could simulate the papercutting process through interactive, AI-driven virtual crafting sessions. These platforms would not only replicate the therapeutic process but could be designed to offer real-time

cognitive feedback, adapting the difficulty of tasks based on users' progress, creating a tailored therapeutic experience. By incorporating emerging technologies such as AI and neurofeedback tools, future research could pioneer new methods for assessing cognitive engagement and emotional well-being, enhancing the personalisation of therapy and providing insights into the efficacy of traditional arts in cognitive rehabilitation.

The combination of traditional craftsmanship and modern digital tools positions papercutting as a hybrid model that meets contemporary therapeutic needs while preserving cultural heritage. This interdisciplinary approach can lead to new innovations in both art therapy and digital health.

6.5.2 Global Perspectives and the Creative Economy

Given the increasing global focus on the creative economy, future research should examine how traditional arts like papercutting can contribute to cultural and economic development. The creative economy, which emphasises the commercial and social value of creative industries, presents a unique opportunity to position traditional arts as viable contributors to global markets. Chinese papercutting can drive innovation through emerging business models that go beyond conventional craft markets. One promising direction for integrating traditional arts like papercutting into the creative economy lies in the development of cultural innovation hubs, where traditional crafts, technology, sustainability, and community entrepreneurship converge. The application of digital fabrication technologies, such as 3D printing, could create hybrid products that fuse cultural heritage with cognitive health benefits, appealing to contemporary consumers not only for their aesthetic value but also for their therapeutic potential. These hybrid designs could cater to individuals seeking cognitive enhancement through creative activities, offering them both a cultural experience and a tool for mental well-being.

Another critical avenue is linking intellectual property (IP) protection with the cognitive health benefits of traditional arts like papercutting. By branding papercutting not just as an aesthetic craft but as a cultural asset with proven cognitive benefits, communities could establish trademarks or certification systems that emphasise the mental health value embedded in these arts. This approach would allow for the protection and commercialisation of papercutting as a therapeutic tool, creating new revenue streams while ensuring fair compensation for artisans. Such initiatives could transform papercutting into a recognised part of the wellness economy, aligning cultural preservation with public health initiatives.

Moreover, the economic potential of personalised digital therapeutic platforms should not be overlooked. These platforms could employ traditional arts like papercutting within AI-driven, customised therapeutic programs designed for cognitive rehabilitation and emotional regulation. By monetising these digital platforms, which provide tailored cognitive exercises based on traditional crafts, businesses could tap into both the growing wellness

industry and the tech-driven health sector. This model presents a scalable way to make cognitive health tools accessible to diverse populations while generating sustainable income from traditional art forms.

These strategies demonstrate how papercutting and other traditional arts can be integrated into the creative economy, transforming them into multifunctional tools that promote both cultural preservation and cognitive health, while simultaneously driving economic innovation.

6.5.3 Sustaining Impact through Longitudinal Studies and Policy Integration

The current research has effectively captured the short-term cognitive and emotional benefits of engaging with traditional arts like papercutting. Immediate improvements in areas such as cognitive flexibility, emotional expression, and social interaction have been documented through participant feedback and workshop evaluations (Malchiodi, 2011). However, while these findings offer valuable insights, they primarily address the immediate effects of the intervention. What remains underexplored is the long-term impact of consistent engagement with such arts, particularly regarding cognitive health and emotional resilience in aging populations.

To bridge this gap, future research must adopt a longitudinal approach. Tracking participants over extended periods will provide a clearer picture of how sustained involvement in traditional arts like papercutting influences cognitive functions such as memory retention and executive function (Chatterjee, 2014), as well as emotional well-being. This long-term focus is crucial for understanding more whether traditional arts can play a role in mitigating cognitive decline, promoting emotional resilience, and fostering social cohesion as participants age.

In addition to individual cognitive health, long-term research should explore the broader cultural and societal impacts of traditional arts. For instance, future research could explore how Welsh participants might engage in cultural reflection during papercutting workshops, potentially drawing connections between this Chinese art form and their own heritage crafts. Investigating such reflections could offer valuable insights into how traditional arts foster cross-cultural understanding and emotional engagement. This kind of cross-cultural reflection could deepen over time, fostering greater empathy, intercultural understanding, and social integration (Zaidel, 2015).

From a practical standpoint, integrating traditional arts into public health policies and education systems could amplify their long-term benefits. Policy recommendations could focus on incorporating traditional arts into educational curricula, blending art, history, and cognitive health (Malchiodi, 2011). Additionally, public health initiatives could use traditional arts as accessible tools for promoting cognitive and emotional well-being, particularly

among aging populations. These policies would serve a dual purpose: preserving cultural heritage while addressing contemporary health challenges.

Finally, longitudinal studies could serve as the foundation for applying the benefits of papercutting to other traditional arts, providing a model for how these practices can be employed to promote cognitive health globally. By linking cultural heritage with modern health strategies, this research could offer sustainable, culturally sensitive solutions to the challenges posed by aging and cognitive decline (Zaidel, 2015).

6.5.4 Methodological Innovation and Practical Applications

Future research in the field of papercutting and traditional arts must prioritise methodological innovation by integrating both real-time cognitive assessments and long-term evaluations to enhance the validity and impact of findings. Whether in short-term workshops or longitudinal studies, incorporating cognitive testing at various stages is critical to accurately measure the effects of art-based interventions on cognitive and emotional health.

For short-term interventions, such as single-session or brief workshop series, the introduction of real-time cognitive assessment technologies could provide immediate insights into participants' cognitive engagement. Portable devices, like Functional Near-Infrared Spectroscopy (fNIRS), can measure brain activity in real-time, capturing changes in blood flow as participants engage in complex tasks like papercutting. This real-time data would offer an objective measure of cognitive engagement, particularly in areas like spatial awareness and fine motor skills. Such assessments ensure that even short-term interventions are backed by concrete, measurable outcomes, adding scientific rigor to the immediate results.

For long-term research, standardised cognitive tests administered before and after a series of workshops can track sustained improvements in areas like working memory, executive function, and spatial reasoning. Tests such as the Trail Making Test (TMT), Stroop Test, and N-back Test could provide reliable, comparative data to assess long-term cognitive improvements. This data would be critical for determining whether the cognitive benefits of traditional arts endure over time, offering deeper insights into their therapeutic potential.

In both short-term and long-term contexts, cognitive assessments provide essential data that enhances the validity and reliability of the findings. This ensures that traditional arts like papercutting are evaluated with scientific rigor, offering a more comprehensive understanding of their role in cognitive and emotional health.

In practical applications, it is essential that professionals using the *Chinese Papercutting Cross-Cultural Cognitive Enhancement Model* not only understand its theoretical framework but also have the skills to implement cognitive assessments as part of the process. This requires a deep familiarity with both the cultural and cognitive aspects of the model, allowing for its effective adaptation in different contexts. Mastery of the assessment tools is

crucial to accurately measure both short-term effects and long-term outcomes, ensuring that interventions are both culturally relevant and scientifically rigorous.

By integrating the model with cognitive testing, practitioners will be equipped to advance the dual goals of enhancing cognitive health and promoting cultural preservation through traditional arts.

6.5.5 Expanding the Model to Include Diverse Traditional Art Forms

The model proposed in this research is built on a strong interdisciplinary foundation, integrating neuroplasticity, cognitive psychology, art therapy, and cross-cultural studies. Its systematic design and culturally tailored approaches ensure its adaptability to a range of traditional art forms beyond papercutting, such as embroidery, pottery, and calligraphy, all of which offer unique cognitive and cultural benefits.

Expanding the model to these traditional arts retains their cultural essence while enhancing cognitive functions such as spatial awareness, fine motor skills, and cognitive flexibility. For instance, pottery emphasises spatial and motor coordination, while embroidery fosters attention and aesthetic sensitivity. These arts can be strategically incorporated to foster emotional well-being and social integration in diverse cultural contexts, making the model valuable not only in therapeutic settings but also in cross-cultural community engagement.

Moreover, substantial evidence highlights the therapeutic value of traditional arts across cultures. Studies in art therapy demonstrate that traditional arts can improve emotional well-being and cognitive health (Malchiodi, 2011), supporting the expanded application of this model to broader cultural and therapeutic contexts. The potential of these arts to bridge cultural divides and foster social cohesion further strengthens the model's relevance in promoting both cognitive health and cross-cultural understanding (Cameron, 2015).

Conclusion

The future of research in traditional arts and cognitive health lies at the intersection of interdisciplinary innovation, global perspectives, and practical application. By integrating emerging technologies, exploring the creative economy, and advocating for policy integration, future studies can enhance both scientific understanding and real-world impact. This comprehensive approach will not only advance the field but also contribute to global cultural preservation and cognitive health promotion.

6.6 Personal Reflections and the Path Forward

6.6.1 Reflective Insights

Throughout this research journey, I have undergone profound personal transformation and growth. What began as an unexpected field trip in China, initially a routine academic task, evolved into a deep exploration of Chinese papercutting—a cultural heritage that became a significant part of my own life narrative.

In 2021, during my field research in Zherong, Fujian province, China, I encountered several female inheritors of the papercutting intangible cultural heritage. These women, with their resilience and optimism, revealed to me the deeper meanings behind papercutting. It was more than an art form; it was a way of life, a method of emotional expression, and a tool for mindfulness. For example, in Figure X, Zheng Pingfang, a comprehensive schoolteacher and papercutting inheritor, runs a gallery and has initiated numerous projects to help disabled people in her county. She teaches them papercutting skills, enabling many to earn a living. Her student, Lin (standing to her left), who is deaf-mute, is one of the many beneficiaries of her support.



Figure 6.4 Visiting Zheng Pingfang's Gallery



Figure 6.5 Interview with Zheng Pingfang



Figure 6.6



Figure 6.7

Figure 6.6 Meeting the Cultural Centre Director on Papercutting Inheritors

Figure 6.7 Researcher's 2021 Video Field Log

As I explored their stories, I realised that papercutting served as more than just a craft; it became a powerful tool for helping others, illuminating lives, and fostering social integration. It was also a therapeutic outlet for these women, many of whom had faced significant life challenges and traumas. Through papercutting, they found self-confidence, a renewed sense of identity, and continued to thrive creatively well into their later years. This realisation sparked my interest in the potential cognitive health benefits of papercutting, which eventually became a core focus of my doctoral research at UWTSD.

At UWTSD, my work with the Confucius Institute provided the opportunity to organise and facilitate papercutting cultural activities, allowing me to engage deeply with people from diverse cultural backgrounds. These experiences not only highlighted the role of papercutting in cross-cultural communication but also reinforced my understanding of how art can be a powerful tool for enhancing cognitive health. I learned to navigate language barriers, overcame personal insecurities, and witnessed firsthand the positive effects of papercutting on my cognitive health and mood. Through this journey, I have become an enthusiastic advocate for my culture, sharing the therapeutic and communicative power of papercutting with others.

6.6.2 The Bigger Picture

This research provides valuable insights into the intersection of traditional art forms and contemporary health and cultural challenges. Through a rigorous analysis of Chinese papercutting within cross-cultural contexts, several key contributions and future directions emerge:

Advancing Cognitive Health through Artistic Interventions

This study demonstrates that participation in papercutting can significantly enhance cognitive functions such as memory, attention, and creativity. These findings validate the potential of integrating traditional arts into cognitive health strategies, particularly in aging populations where maintaining cognitive vitality is crucial. Future research could explore how these artistic interventions can be scaled and adapted for different cultural settings, contributing to global cognitive health initiatives (Grossman et al., 2004; Smith et al., 2022).

Strengthening Cross-Cultural Communication and Empathy

Papercutting served as an effective medium for fostering cross-cultural understanding and empathy. By engaging participants from diverse backgrounds in a shared creative process, the research highlighted the role of traditional arts in bridging cultural divides and promoting social cohesion. These findings suggest that similar art-based programs could be implemented to enhance cultural diplomacy and international relations, offering a new dimension to global cultural exchange strategies (Deardorff, 2006; Berry, 1997).

Enabling Personal and Social Transformation

Beyond its cognitive and cultural benefits, this research also underscores the transformative power of art on both individual and community levels. Participants not only experienced personal growth but also contributed to social integration through their engagement in papercutting activities. The model's application in diverse educational and community settings illustrates its potential to support social inclusion and emotional well-being, making it a valuable tool for educators, policymakers, and community leaders (Castro & Murray, 2010; Golden et al., 2010; Bellandi & Santini, 2019).

Pioneering New Research Methodologies

The interdisciplinary approach and participatory research methods employed in this study set a precedent for future research in the arts and health domains. By combining qualitative insights with quantitative analysis, the study provides a comprehensive framework for exploring the impact of traditional arts on cognitive and emotional health. Future studies should continue to refine these methodologies, incorporating advanced data analytics and longitudinal studies to further validate and expand the model's applicability (Fancourt & Steptoe, 2019; Thomson et al., 2018).

Expanding the Model's Global Impact

Given the universal appeal of art, this model offers significant potential for adaptation and application in diverse cultural contexts. By tailoring the approach to local traditions and cultural values, the CPC3EM model could be employed to address global health disparities and promote cultural understanding on a broader scale. Additionally, integrating this model into global creative economies could enhance its sustainability and impact, providing a unique intersection between culture, health, and economic development (Williams & Tan, 2023; Katz & Rubin, 2019).

Innovating in Creative Economies

The potential to leverage traditional art forms like papercutting within the creative economy presents an innovative avenue for economic development. By fostering cross-cultural collaborations and integrating modern digital tools, the model could contribute to the growth of creative industries in both China and the UK. Future projects could explore how these artistic practices can be monetised and marketed globally, thus bridging cultural heritage with contemporary economic opportunities.

In conclusion, this research not only validates the significance of traditional arts in enhancing cognitive health and cultural empathy but also opens new avenues for interdisciplinary research and global application. The model in this research, with its flexibility and cultural adaptability, stands as a promising tool for fostering global harmony, economic development, and social inclusion in an increasingly interconnected world.

6.6.3 Final Thoughts

As this research journey concludes, it is important to reflect on the broader implications of the "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" and its potential to influence diverse fields such as cognitive health, cross-cultural communication, and community building. This study began as an exploration of a traditional art form but evolved into a multidisciplinary investigation that bridges art, science, and culture. The process of investigating the intersections of these fields has not only advanced academic knowledge but also demonstrated the transformative power of integrating traditional practices into modern contexts.

This research underscores the importance of preserving and revitalising traditional art forms in a rapidly globalising world. Chinese papercutting, once seen as a cultural relic, has been reimagined as a powerful tool for enhancing cognitive functions, promoting emotional well-being, and fostering cross-cultural understanding. By adapting this ancient practice to contemporary needs, we have shown that traditional arts can play a critical role in addressing modern challenges, from mental health to social integration.

Moreover, the participatory and interdisciplinary approach taken in this study highlights the value of involving diverse perspectives and expertise in academic research. By engaging with communities, artists, and scholars across different cultural contexts, this research has created a dynamic exchange of ideas and practices, enriching both the academic and practical outcomes. This approach not only deepens the understanding of the subject matter but also ensures that the research is grounded in real-world experiences and needs.

Conclusion

In conclusion, this thesis has demonstrated that traditional art forms, when thoughtfully integrated with modern scientific insights, have the potential to address some of the most pressing issues of our time. The "*Chinese Papercutting Cross-Cultural Cognitive Enhancement Model*" serves as a testament to the power of art to transcend cultural boundaries, enhance cognitive health, and promote social cohesion. Through a combination of empirical research, theoretical analysis, and practical application, this study has contributed to a deeper understanding of the multifaceted benefits of art in both individual and societal contexts.

The findings of this research have far-reaching implications. They suggest new pathways for incorporating traditional arts into public health strategies, educational curricula, and community development programs. They also open possibilities for further interdisciplinary research that explores the connections between art, cognition, and culture on a global scale.

Looking to the future, the integration of traditional art forms with modern technologies and methodologies will continue to be a fertile ground for innovation and discovery. By embracing this approach, we can ensure that the rich cultural heritage of practices like Chinese papercutting not only survives but thrives, contributing to a more inclusive, creative, and interconnected world.

This research journey has been both challenging and rewarding, offering insights that extend beyond the academic realm and into the heart of what it means to be human. As we move forward, the lessons learned from this study will continue to inform and inspire future research, helping to shape a future where art, culture, and science work together to enhance the well-being of individuals and communities around the world.

REFERENCES

- A.B. Корнієнко, & І.Д. Бровко. (2020). The papercutting of different countries of the world. *The Institute of Pedagogy of the National Academy of Pedagogical Sciences of Ukraine*. Available at: <https://lib.iitta.gov.ua/722894/> [Accessed 20 April 2023]
- Abrams, D., & Hogg, M. A. (2004). *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes*. London: Routledge.
- Al-Obaydi, L.H., Tawafak, R.M., Pikhart, M. et al. (2022). Music as a motivational factor in second language acquisition: Cross-cultural insights from Iraq, Turkey, Oman, Yemen, and Indonesia. *PREPRINT (Version 1)*, Research Square, 07 July 2022. Available at: <https://doi.org/10.21203/rs.3.rs-1814886/v1> [Accessed 19 May 2024]
- Allport, G. W. (1954). *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.
- Amabile, T.M. (1983). *The Social Psychology of Creativity*. Springer-Verlag.
- Anderson, R. (2022). *Art Therapy and Aging: Enhancing Cognition Through Creativity*. Routledge.
- Appadurai, A. (1996). *Modernity at Large: Cultural Dimensions of Globalization*. University of Minnesota Press.
- Assmann, J. (2011). *Cultural Memory and Early Civilization: Writing, Remembrance, and Political Imagination*. Cambridge University Press.
- Aririguzoh, S. (2022). Communication competencies, culture and SDGs: effective processes to cross-cultural communication. *Humanities and Social Sciences Communications*, 9(1), pp. 1-11. Available at: <https://doi.org/10.1057/s41599-022-01109-4> [Accessed 9 May 2023]
- Arora, D., Devi, R.G., & Priya, A.J. (2021). Knowledge and Awareness about the Connection between Lifestyle and Dementia among Adolescents. *Journal of Pharmaceutical Research International*. Available at: <https://www.semanticscholar.org/paper/Knowledge-and-Awareness-about-the-Connection-and-Arora-Devi/174ef8aa0920aef4a34a1877f019f64d7692f85d?p2df> [Accessed 9 May 2024]
- Carson, S.H., Peterson, J.B. & Higgins, D.M. (2005). Reliability, validity, and factor structure of the Creative Achievement Questionnaire. *Creativity Research Journal*, 17(1), pp. 37-50. Available at: <https://psycnet.apa.org/record/2005-02181-004> [Accessed 10 October 2023]

Cardoso-Leite, P. & Bavelier, D. (2014). Video game play, attention, and learning: How to shape the development of attention and influence learning? *Current Opinion in Neurology*. Available at: https://journals.lww.com/co-neurology/Abstract/2014/04000/Video_game_play,_attention,_and_learning_how_to.8.aspx

[Accessed 13 October 2023]

Cameron, C. (2015). *Cross-cultural art therapy: A process-oriented approach*. Routledge.

Castro, F.G. & Murray, K.E. (2010). Cultural adaptation and resilience. In J.W. Reich, A.J. Zautra & J.S. Hall (eds.), *Handbook of adult resilience* (pp. 375-403). New York: Guilford Press.

Charmaz, K. (2014). *Constructing Grounded Theory*. 2nd ed. SAGE Publications.

Chatterjee, A. (2004). Prospects for a cognitive neuroscience of visual aesthetics. *Bulletin of Psychology and the Arts*, 4(2), pp. 55-60.

Available at: <https://psycnet.apa.org/record/514602010-003>

[Accessed 8 May 2023]

Chen, F. (2022). Analysis of the characteristics of art intangible cultural heritage in cross-cultural communication. *Art and Design Review*, 10, pp. 389-396.

Available at: <https://www.scirp.org/journal/paperinformation.aspx?paperid=119261>

[Accessed 18 April 2023]

Chen, G.-M. and Starosta, W.J., 2000. *Foundations of Intercultural Communication*. Boston: Allyn and Bacon.

Chen, G.-M. and Starosta, W.J., 2000. *Intercultural Communication Competence: A Synthesis*. In: R. Wiseman, ed. *Intercultural Communication Theory*. Thousand Oaks, CA: Sage, pp. 241-270.

Available at: <https://www.taylorfrancis.com/chapters/edit/10.4324/9780203856796-9/intercultural-communication-competence-synthesis-guo-ming-chen-william-starosta>

[Accessed 10 September 2023]

Chen, J. (2007). *The history of Chinese folk papercutting*. Beijing: Peking University Press.

Chen, M. (2019). *The exploration of the therapeutic function of Chinese paper-cutting* (master's thesis). China Central Academy of Fine Arts.

Available at:

http://www.cnki.net/KCMS/detail/detail.aspx?dbcode=CMFD&dbname=CMFD201902&filename=1019135866.nh&uniplatform=OVERSEA&v=zXkB5t0_Lth9cgBSbQrMyl72-Z3JOYFBxpdBQPpLlxpFe2Sy60IhrulCtMI-ve_v

[Accessed 16 April 2023]

Chiu, C. Y., & Hong, Y. Y. (2005). Cultural Processes: Basic Principles. In *The Handbook of Social Psychology*.

Available at: <https://psycnet.apa.org/record/2007-11239-034>

[Accessed 11 November 2023]

Cohen, G.D. (2006). Research on Creativity and Aging: The Positive Impact of the Arts on Health and Illness. *Generations*, 30(1), pp. 7-15.

Available at:

<https://www.ingentaconnect.com/content/asag/gen/2006/00000030/00000001/art00003>

[Accessed 9 May 2023]

Cooper, C., Li, R., Lyketsos, C., & Livingston, G. (2013). Treatment for mild cognitive impairment: Systematic review. *The British Journal of Psychiatry*, 203(3), pp. 255–264.

Available at: <https://doi.org/10.1192/bjp.bp.113.127811>

[Accessed 23 April 2023]

Collie, K., Backos, A., Malchiodi, C., & Spiegel, D. (2006). Art Therapy for Combat-Related PTSD: Recommendations for Research and Practice. *Art Therapy: Journal of the American Art Therapy Association*, 23(4), pp. 157-164.

Available at: <https://doi.org/10.1080/07421656.2006.10129335>

[Accessed 23 December 2023]

Coradduzza, D., Sedda, S., Cruciani, S., De Miglio, M.R., Ventura, C., Nivoli, A., and Maioli, M. (2023). Age-Related Cognitive Decline Focus on Microbiome: A Systematic Review and Meta-Analysis. *International Journal of Molecular Sciences*, 24(18), p. 13680.

Available at: <https://www.mdpi.com/1422-0067/24/18/13680>

[Accessed 1 October 2023]

Cornwall, A. & Jewkes, R. (1995). What is participatory research? *Social Science & Medicine*, 41(12), pp. 1667-1676.

Available at: [https://doi.org/10.1016/0277-9536\(95\)00127-S](https://doi.org/10.1016/0277-9536(95)00127-S)

[Accessed 23 May 2024]

Creswell, J.W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 3rd ed. Thousand Oaks: SAGE Publications.

Creswell, J.W. & Poth, C.N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 4th ed. Thousand Oaks: SAGE Publications.

Crimmins, E., Wheaton, F., Vasunilashorn, S., Beltrán-Sánchez, H., Zhang, L., & Kim, J.K., 2013. A Global Perspective on Physiological Change with Age. In: *Global Ageing in the Twenty-First Century*. 1st ed. Routledge, pp. 25.

Available at: <https://doi.org/10.4324/9781315584720>

[Accessed 2 May 2024]

Cross, I. (2001). Music Cognition, Culture, and Evolution. *Annals of the New York Academy of Sciences*, 930, pp. 28-42.

Available at: <https://doi.org/10.1111/j.1749-6632.2001.tb05723.x>

[Accessed 1 May 2024]

Cross, S.E., Hardin, E.E., & Gercek-Swing, B. (2011). The What, How, Why, and Where of Self-Construct. *Personality and Social Psychology Review*, 15(2), pp. 142-179.

Available at: <https://doi.org/10.1177/108886831037375>

[Accessed 1 May 2024]

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage Publications.

Crowder, R., Lock, J., Hickey, E., McDermott, M., Simmons, M., Wilson, K., Leong, R. and De Silva, N., 2020. Art as meditation: A mindful inquiry into educator well-being. *The Qualitative Report*, 25(3), pp.876-890.

Available at: <https://core.ac.uk/download/pdf/304334162.pdf>

[Accessed 02 March 2024]

Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. Harper & Row.

Cupchik, G.C. (2016). *The Aesthetics of Emotion: Up the Down Staircase of the Mind-Body*. Cambridge, UK: Cambridge University Press.

Cupchik, G.C., Vartanian, O., Crawley, A., & Mikulis, D.J. (2009). Viewing artworks: Contributions of cognitive control and perceptual facilitation to aesthetic experience. *Brain and Cognition*, 70(1), pp. 84-91.

Available at: <https://doi.org/10.1016/j.bandc.2009.01.003>

[Accessed 1 May 2024]

Davis, M. (2018). *Creative Arts and Cognitive Engagement*. New York: Art Therapy Press.

Deardorff, D.K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, 10(3), pp. 241-266.

Available at: <https://doi.org/10.1177/1028315306287002>

[Accessed 19 September 2023]

Deardorff, D.K. (2009). *The SAGE Handbook of Intercultural Competence*. Thousand Oaks, CA: SAGE Publications.

Deardorff, D.K. (2019). *The SAGE Handbook of Intercultural Competence*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Deardorff, D.K. & Arasaratnam-Smith, L.A. (2017). Intercultural competence in higher education: International approaches, assessment and application. *International Journal of Intercultural Relations*, 26(2).

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Springer Science & Business Media.

Demaine, K. (2020). Reflections on the first bi-annual Endicott College Expressive Therapies Symposium: Traditional Chinese medicine arts and culture. *Creative Arts in Education and Therapy (CAET)*, 2, pp. 97-107.

Available at: <https://caet.inspirees.com/caetojsjournals/index.php/caet/article/view/240>
[Accessed 19 May 2023]

Demarin, V., Roje Bedeković, M., Bosnar Puretić, M., & Bošnjak Pašić, M. (2016). Arts, brain, and cognition. *Psychiatria Danubina*, 28(4), pp. 343-348.

Available at: <https://hrcak.srce.hr/file/261075>
[Accessed 19 May 2023]

Denzin, N.K. & Lincoln, Y.S. (2011). *The SAGE Handbook of Qualitative Research*. 4th ed. Thousand Oaks: SAGE Publications.

Denzin, N.K. & Lincoln, Y.S. (Eds.), 2018. *The SAGE Handbook of Qualitative Research*. 5th ed. Thousand Oaks, CA: SAGE Publications.

Denzin, N. K., Lincoln, Y. S., Giardina, M. D., & Cannella, G. S. (2023). *The SAGE Handbook of Qualitative Research*. 6th ed. Thousand Oaks: SAGE Publications

Derreberry, T.M. and Holroyd, S., 2019. Dementia in women. *Medical Clinics*, 103(4), pp.713-721.

Available at: <https://doi.org/10.1016/j.mcna.2019.02.004>
[Accessed 02 May 2024]

Desai, R., John, A., Saunders, R., Marchant, N.L., Buckman, J.E., Charlesworth, G., Zuber, V., & Stott, J. (2023). Examining the Lancet Commission risk factors for dementia using Mendelian randomisation. *BMJ Ment Health*, 26(1).

Available at: <https://mentalhealth.bmj.com/content/26/1/e300555.abstract>
[Accessed 2 May 2023]

Devranis P, Vassilopoulou E, Tsironis V, Sotiriadis PM, Chourdakis M, Aivaliotis M, Tsolaki M. Mediterranean Diet, Ketogenic Diet or MIND Diet for Aging Populations with Cognitive Decline: A Systematic Review. *Life*. 2023; 13(1):173.

Available at: <https://doi.org/10.3390/life13010173>
[Accessed 23 October 2023]

Dieterich-Hartwell, R. (2017). Dance/movement therapy in the treatment of post-traumatic stress: A reference model. *The Arts in Psychotherapy*, 54, pp. 38–46.

Available at: <https://doi.org/10.1016/j.aip.2017.02.010>
[Accessed 2 May 2023]

Dietrich, A. (2004). The cognitive neuroscience of creativity. *Psychonomic Bulletin & Review*, 11(6), 1011-1026.

Available at: <https://link.springer.com/article/10.3758/bf03196731>
[Accessed 02 May 2024]

Dissanayake, E. (1995). *Homo Aestheticus: Where Art Comes from and Why*. Seattle: University of Washington Press.

Doidge, N. (2007). *The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science*. New York: Viking.

Douglas, S., James, I., & Ballard, C. (2004). Non-pharmacological interventions in dementia. *Advances in Psychiatric Treatment*, 10(3), pp. 171-177.

Available at: <https://doi.org/10.1192/apt.10.3.171>
[Accessed 2 May 2023]

Draganski, B., Gaser, C., Busch, V., Schuierer, G., Bogdahn, U., & May, A. (2004). Changes in Grey Matter Induced by Training. *Nature*, 427(6972), pp. 311-312.

Available at: <https://doi.org/10.1038/427311a>
[Accessed 2 April 2023]

Dreher, T. (2012). A partial promise of voice: Digital storytelling and the limits of listening. *Media International Australia*, 142(1), pp. 157-166.

Available at: <https://doi.org/10.1177/1329878X1214200117>
[Accessed 6 October 2023]

Dweck, C. S. (2006). *Mindset: The New Psychology of Success*. Random House.

Ellamil, M., Dobson, C., Beeman, M., & Christoff, K. (2012). Evaluative and Generative Modes of Thought during the Creative Process. *NeuroImage*, 59(2), pp. 1783-1794.

Available at: <https://doi.org/10.1016/j.neuroimage.2011.08.008>
[Accessed 3 May 2024]

Emery, M.J., 2004. Art therapy as an intervention for autism. *Art therapy*, 21(3), pp.143-147.

Available at: <https://doi.org/10.1080/07421656.2004.10129500>
[Accessed 20 October 2023]

Eriksson, B., Stage, C., & Valtysson, B. (Eds.). (2019). *Cultures of participation: Arts, digital media, and cultural institutions*. Routledge.

Erickson, M. H., Rossi, E. L. and Rossi, S. I., 1976. *Hypnotic Realities: The Induction of Clinical Hypnosis and Forms of Indirect Suggestion*. New York: Irvington Publishers.

Erickson, M. H. and Rossi, E. L., 1979. *Hypnotherapy: An Exploratory Casebook*. New York: Irvington Publishers.

Eysenck, M.W. and Keane, M.T., 2015. *Cognitive Psychology: A Student's Handbook*. 7th ed. Hove: Psychology Press.

Fancourt, D. & Steptoe, A. (2018). Cultural engagement and mental health: Does socio-economic status explain the association? *Social Science & Medicine*, 206, pp. 214-222. Available at: <https://doi.org/10.1016/j.socscimed.2019.112425> [Accessed 14 July 2023]

Fancourt, D. & Finn, S. (2019). What is the evidence on the role of the arts in improving health and well-being? A scoping review. *World Health Organization*. Available at: <https://apps.who.int/iris/handle/10665/329834> [Accessed 23 October 2023]

Fancourt, D. & Steptoe, A. (2019). Effects of creativity on social and behavioral adjustment in 7-to 11-year-old children. *Annals of the New York Academy of Sciences*. Available at: <https://pubmed.ncbi.nlm.nih.gov/30079606/> [Accessed 23 October 2023]

Fernandes, F., Turra, C.M., & Rios-Neto, E.L. (2023). World population aging as a function of period demographic conditions. *Demographic Research*, 48, pp. 353-372. Available at: <https://www.jstor.org/stable/48728208> [Accessed 14 December 2023]

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140. Available at: <https://journals.sagepub.com/doi/abs/10.1177/001872675400700202> [Accessed 26 December 2023]

Fletcher-Janzen, E., Strickland, T.L. and Reynolds, C.R. eds., 2000. *Handbook of cross-cultural neuropsychology*. Springer Science & Business Media.

Forrester, L.T., Maayan, N., Orrell, M., Spector, A.E., Buchan, L.D. and Soares-Weiser, K., 2014. Aromatherapy for dementia. *Cochrane Database of Systematic Reviews*, (2). Available at: <https://doi.org/10.1002/14651858.CD003150.pub2> [Accessed 4 May 2024]

Flavell, J.H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), pp. 906. Available at: <https://doi.org/10.1037/0003-066X.34.10.906> [Accessed 14 April 2023]

Flick, U. (2018). *An Introduction to Qualitative Research*. 6th ed. SAGE Publications.

Fong, Z.H., Tan, S.H., Mahendran, R., Kua, E.H., & Chee, T.T. (2021). Arts-based interventions to improve cognition in older persons with mild cognitive impairment: a systematic review of randomised controlled trials. *Aging & Mental Health*, 25(9), pp. 1605-1617. Available at: <https://doi.org/10.1080/13607863.2020.1786802> [Accessed 11 November 2023]

Fredrickson, B. (2013). Positive emotions broaden and build. *Advances in Experimental Social Psychology*, 47, pp. 1-53.

Available at: <https://doi.org/10.1016/B978-0-12-407236-7.00001-2>

[Accessed 20 April 2024]

Fredrickson, B.L. (2001). The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build Theory of Positive Emotions. *American Psychologist*, 56(3), pp. 218-226.

Available at: <https://doi.org/10.1037/0003-066X.56.3.218>

[Accessed 20 April 2024]

Fryman, S.J. & McClellan, L. (2014). Complex trauma and executive functioning: envisioning a cognitive-based trauma-informed approach to drama therapy. In Sajnani, N. & Johnson, D.R., *Trauma-informed drama therapy: transforming clinics, classrooms, and communities* (pp. 152-178). Charles C. Thomas Publisher LTD.

Gantt, L. & Tinnin, L.W. (2009). Support for a neurobiological view of trauma with implications for art therapy. *The Arts in Psychotherapy*, 36(3), pp. 148-153.

Available at: <https://doi.org/10.1016/j.aip.2008.12.005>

[Accessed 2 May 2024]

Gardner, H. (1993). *Multiple Intelligences: The Theory in Practice*. Basic Books.

Gassner, L., Geretsegger, M. and Mayer-Ferbas, J., 2022. Effectiveness of music therapy for autism spectrum disorder, dementia, depression, insomnia and schizophrenia: update of systematic reviews. *European Journal of Public Health*, 32(1), pp.27-34.

Available at: <https://academic.oup.com/eurpub/article/32/1/27/6378748>

[Accessed 2 May 2024]

Gates, N., Fiatarone Singh, M.A., Sachdev, P.S., & Valenzuela, M. (2013). The effect of exercise training on cognitive function in older adults with mild cognitive impairment: A meta-analysis of randomised controlled trials. *The American Journal of Geriatric Psychiatry*, 21(11), pp. 1086–1097.

Available at: <https://doi.org/10.1016/j.jagp.2013.02.018>

[Accessed 2 May 2024]

Gavron, T., Ito, T. and Inoue, T. (2021) 'Art-based psychosocial interventions in Japan: cross-cultural encounters', *International Journal of Art Therapy*, 26(4), pp. 161–169.

Available at: <https://doi.org/10.1080/17454832.2020.1817959>

[Accessed 2 May 2024]

Geertz, C. (1973). *The Interpretation of Cultures: Selected Essays*. New York: Basic Books.

Geller, S. M. (2018). *A Practical Guide to Cultivating Therapeutic Presence*. Washington, DC: American Psychological Association.

Gildersleeve, O., 2014. *Paper cut: an exploration into the contemporary world of papercraft art and illustration*. Rockport Publishers.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine de Gruyter.

Goldbard, A. (2006). *New Creative Community: The Art of Cultural Development*. Oakland: New Village Press.

Goldbard, A. (2020). *New Creative Community: The Art of Cultural Development*. 2nd ed. Oakland: New Village Press.

Golden, K.A., 2010. *The development of cultural adaptability including relevant experiences and perceptions of traditional college students: A perspective from a small, private liberal arts university*. Indiana University of Pennsylvania.

Golden, T.L., Fancourt, D., et al. (2021). The use of music in the treatment and management of serious mental illness: a global scoping review of the literature. *Frontiers in Psychology*. Available at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2021.880/full> [Accessed 23 October 2023]

Goldstein, E.B. (2019). *Cognitive Psychology: Connecting Mind, Research, and Everyday Experience*. 5th ed. Boston: Cengage Learning.

Gopalkrishnan, N. (2019). Cultural competence and beyond: Working across cultures in culturally dynamic partnerships. *The International Journal of Community and Social Development*, 1(1), pp. 28-41. Available at: <https://doi.org/10.1177/2516602619826712> [Accessed 8 May 2024]

Government & Cymru. (2021). *Indicators of Cognitive Health in Older Adults*. Available at: <https://gov.wales/indicators-cognitive-health>. [Accessed 17 April 2023]

Graham-Pole, J. (2000). *Art as Medicine: Creating a Therapy of the Imagination*. Boston: Shambhala Publications.

Granger, A. M. (2014). Working Together: Neuroscience-Based Support for Art Therapists and Clients to Co-Create. *Journal of the American Art Therapy Association*, 31(1), 16-24. Available at: <https://scholarworks.indianapolis.iu.edu/server/api/core/bitstreams/0e3b1f7f-0b56-4c40-a01c-778ab7c9df28/content> [Accessed 11 November 2023]

Greenfield, P. (2015). *Cultural Psychology and Cognitive Development*. Cambridge University Press.

Greenough, W.T., Black, J.E. and Wallace, C.S., 1987. Experience and brain development. *Child development*, pp.539-559. Available at: <https://www.jstor.org/stable/1130197>

[Accessed 6 October 2023]

Grinin, L., Grinin, A. and Korotayev, A., 2023. Global Aging: An Integral Problem of the Future. How to Turn a Problem into a Development Driver? In *Reconsidering the Limits to Growth: A Report to the Russian Association of the Club of Rome* (pp. 117-135). Cham: Springer International Publishing.

Available at: https://link.springer.com/chapter/10.1007/978-3-031-34999-7_7

[Accessed 11 November 2023]

Gudykunst, W.B. & Nishida, T., 1986. Attributional confidence in low- and high-context cultures. *Human Communication Research*, 12(4), pp. 525-549.

Available at: <https://doi.org/10.1111/j.1468-2958.1986.tb00059.x>

[Accessed 23 December 2023]

Guilford, J. P. (1967). *The nature of human intelligence*. McGraw-Hill.

Guo, X., 2005. *Chinese Folk Papercutting*. Beijing: Foreign Languages Press.

Guo, X. & Wang, L., 2018. Chinese Papercutting: Cultural Significance and Contemporary Applications. *Art and Culture Studies*, 12(3), pp.210-225.

Available at:

https://kns.cnki.net/kcms2/article/abstract?v=LAPUTnZ325cD2K3kHcPPXHnz5plia0UjUIFwplmp4wEFR5LgFYIyxJUBtXE2C0sGZsP7SCS3nqijvSQGpFS-Rzs5KLGJY_30mqu45LKB4_nUgkcMrZNEzu0coYVrMlrB8MtR4KA4E=&uniplatform=NZKPT&language=CHS

[Accessed 2 May 2024]

Gussak, D.E., & Rosal, M.L. (2016). *The Wiley Handbook of Art Therapy*. Wiley-Blackwell.

Gutchess, A. (2014). *Plasticity of the aging brain: New directions in cognitive neuroscience*. Science.

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research*, 57(1), pp. 35-43.

Available at: [https://doi.org/10.1016/S0022-3999\(03\)00573-7](https://doi.org/10.1016/S0022-3999(03)00573-7)

[Accessed 8 January 2023]

Haeyen, S., van Hooren, S., van der Veld, W., & Hutschemaekers, G. (2015). Measuring the Contribution of Art Therapy in Multidisciplinary Treatment of Personality Disorders: The Construction of the Self and Interpersonal Functioning. *Personality and Mental Health*, 9(1), pp. 60-70.

Available at: <https://doi.org/10.1002/pmh.1281>

[Accessed 23 December 2023]

Haeyen, S. and Noorthoorn, E., 2021. Validity of the self-expression and emotion regulation in art therapy scale (SERATS). *PLoS One*, 16(3), p.e0248315.

Available at: <https://doi.org/10.1371/journal.pone.0248315>

[Accessed 12 December 2023]

Hall, E.T., 1976. *Beyond Culture*. Garden City, NY: Anchor Press.

Harris, M. & Thompson, S. (2022). Positive Emotional Outcomes from Artistic Engagement: A Longitudinal Study. *Psychological Studies*, 67(4), pp. 457-469.

Harrison, R., 2013. *Heritage: Critical Approaches*. Abingdon: Routledge.

Available at: <https://www.routledge.com/Heritage-Critical-Approaches/Harrison/p/book/9780415617840>

[Accessed 23 December 2023]

Haslam, C., Haslam, S. A., Jetten, J., Bevins, A., Ravenscroft, S., & Tonks, J. (2010). The social treatment: Benefits of group reminiscence and group activity for the cognitive performance and well-being of older adults in residential care. *Psychology and Aging*, 25, 157–167.

Available at: <https://psycnet.apa.org/record/2010-04859-014>

[Accessed 3 December 2023]

He, M. & Phillion, J. (2008). *Personal-passionate-participatory inquiry into social justice in education*. IAP.

Henare, A. (2005). *Museums, Anthropology and Imperial Exchange*. Cambridge University Press.

Heron, J. & Reason, P. (1997). A participatory inquiry paradigm. *Qualitative Inquiry*, 3(3), pp. 274-294.

Available at: <https://doi.org/10.1177/107780049700300302>

[Accessed 23 May 2024]

Hewstone, M., Rubin, M. and Willis, H., 2002. Intergroup bias. *Annual review of psychology*, 53(1), pp.575-604.

Available at:

<https://www.annualreviews.org/content/journals/10.1146/annurev.psych.53.100901.135109>.

[Accessed 23 May 2024]

Hinchey, L.M. (2018). Mindfulness-based art therapy: A review of the literature. *Inquiries Journal*, 10(5).

Available at: <https://www.semanticscholar.org/paper/Mindfulness-Based-Art-Therapy%3A-A-Review-of-the-Hinchey/bc656177b13293b7a5e4ab66958d93c522bc1733>.

[Accessed 23 October 2023]

Hinz, L.D. (2009). *Expressive Therapies Continuum: A Framework for Using Art in Therapy*. New York: Routledge.

Hofstede, G. (1980). *Culture's Consequences: International Differences in Work-Related Values*. Beverly Hills: Sage Publications.

Hofstede, G., 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Holt-Lunstad, J., 2021. The major health implications of social connection. *Current Directions in Psychological Science*, 30(3), pp.251-259.

Available at: <https://doi.org/10.1177/0963721421999630>

[Accessed 16 July 2023]

Horr, T., Messinger-Rapport, B. & Pillai, J.A., 2015. Systematic review of strengths and limitations of randomised controlled trials for non-pharmacological interventions in mild cognitive impairment: focus on Alzheimer's disease. *Journal of Nutrition, Health & Aging*, 19(2), pp.141-153.

Available at: <https://doi.org/10.1007/s12603-014-0565-6>

[Accessed 2 May 2024]

Huang, Y.C. (2014). *The origin, classification and evolution of Chinese paper cutting*. (Doctoral dissertation). University of Leeds.

Available at: <https://etheses.whiterose.ac.uk/7135/>

[Accessed 21 April 2023]

Huang, J. (2021). *Chinese Paper Cutting: Opportunities for Revitalisation in Contemporary Design*. Te Herenga Waka—Victoria University of Wellington.

Available at:

https://openaccess.wgtn.ac.nz/articles/thesis/Chinese_Paper_Cutting_Opportunities_for_Revitalisation_in_Contemporary_Design/16625770

[Accessed 2 March 2024]

Hu, J., Zhang, J., Hu, L., Yu, H. & Xu, J. (2021). Art therapy: a complementary treatment for mental disorders. *Frontiers in Psychology*, 12, p. 686005.

Available at: <https://doi.org/10.3389/fpsyg.2021.686005>

[Accessed 23 October 2023]

Hyde, K. L., Lerch, J., Norton, A., Forgeard, M., Winner, E., Evans, A. C., & Schlaug, G. (2009). The effects of musical training on structural brain development: A longitudinal study. *The Annals of the New York Academy of Sciences*, 1169, 182-186.

Available at: <https://doi.org/10.1111/j.1749-6632.2009.04852.x>

[Accessed 2 May 2024].

Im, M. L., & Lee, J. I. (2014). Effects of art and music therapy on depression and cognitive function of the elderly. *Technology and Health Care*, 22(3), 453-458.

Available at: <https://content.iospress.com/articles/technology-and-health-care/thc00803>

[Accessed 20 April 2023]

Inglehart, R. (2018). *Cultural Evolution: People's Motivations are Changing and Reshaping the World*. Cambridge University Press.

Inglehart, R. & Baker, W.E. (2000). Modernization, Cultural Change, and the Persistence of Traditional Values. *American Sociological Review*, 65(1), pp. 19-51.

Available at: <https://doi.org/10.1177/000312240006500103>

[Accessed 15 February 2023]

Ionescu, T., 2012. Exploring the nature of cognitive flexibility. *New ideas in psychology*, 30(2), pp.190-200.

Available at: <https://doi.org/10.1016/j.newideapsych.2011.11.001>

[Accessed 11 November 2023]

Jeste, D.V., Palmer, B.W., Appelbaum, P.S., et al. (2017). A New Brief Instrument to Measure Decisional Capacity for Clinical Research. *Journal of the American Geriatrics Society*, 55(2), pp. 301–306.

Available at: <https://pubmed.ncbi.nlm.nih.gov/17679641/>

[Accessed 2 May 2024]

Jia, W. (2022). *The Reconstruction of Rural Places Through Paper-Cutting Art: A Case Study of a "Paper-Cutting Village" in Fujian Province, China*. *Online Journal ModaPalavra*, 15(36), 209-216.

Available at: https://papers.iafor.org/wp-content/uploads/papers/bamc2022/BAMC2022_65605.pdf

[Accessed 19 April 2023]

Jia, R., Liang, D., Yu, J., Lu, G., Wang, Z., Wu, Z., Huang, H. and Chen, C., 2020. The effectiveness of adjunct music therapy for patients with schizophrenia: A meta-analysis. *Psychiatry Research*, 293, p.113464.

Available at: <https://doi.org/10.1016/j.psychres.2020.113464>

[Accessed 2 May 2024]

Johnson, R.A. (2008). *Humanizing Research: Decolonizing Qualitative Inquiry with Youth and Communities*. SAGE Publications.

Jones, A. & Taylor, B., 2019. Adaptation and Optimization of Art-Based Workshops for Diverse Communities. *Community Arts Journal*, 15(2), pp.85-101.

Jones, C., 2003. *Form: Contemporary Craft in Wales*. Cardiff: Wales Arts International.

Jones, S., 2019. Heritage, Identity, and Community Engagement: Exploring the Social Impact of Cultural Heritage. *International Journal of Heritage Studies*, 25(5), pp.449-464.

Available at: <https://doi.org/10.1080/13527258.2018.1530282>.

[Accessed 2 April 2023]

Jorgensen, D. L. (1989). *Participant Observation: A Methodology for Human Studies*. Sage Publications.

Kabat-Zinn, J. (2003). Mindfulness-Based Interventions in Context: Past, Present, and Future. *Clinical Psychology: Science and Practice*, 10(2), pp. 144–156.

Available at: <https://doi.org/10.1093/clipsy.bpg016>

[Accessed 2 July 2023]

Kandel, E.R., Schwartz, J.H., & Jessell, T.M. (1998). *Principles of Neural Science*. 4th ed. New York: McGraw-Hill.

Kandel, E.R., Schwartz, J.H., Jessell, T.M., Siegelbaum, S.A. and Hudspeth, A.J., 2013. *Principles of Neural Science*. 5th ed. New York: McGraw-Hill.

Kaplan, I. (2008). Being ‘Seen’ Being ‘Heard’: Engaging with Students on the Margins of Education through Participatory Photography. In Y. P. Denzin, N. K. & Lincoln (Eds.), *Handbook of critical and indigenous methodologies*. Sage Publications.

Kaptelinin, V. & Nardi, B., 2018. *Acting with Technology: Activity Theory and Interaction Design*. 2nd ed. Cambridge: MIT Press.

Kartoshkina, Y., 2022. Conversations on culture, brain, and cognitive shifts. In *Mestenhauser and the Possibilities of International Education* (pp. 186-196). Routledge.

Kass, J.D., Mullin, E., Surrey, J., Gluck, J., Rothaus, M., Beardall, N., Gabriel, B., Kalmanowitz, D.L., Lagomaggiore, A., Trantham, S. and Avstreih, Z.A.K., 2013. *Mindfulness and the arts therapies: Theory and practice*. Jessica Kingsley Publishers.

Kayes, D. C., Kayes, A. B., & Yamazaki, Y. (2005). Essential competencies for cross-cultural knowledge absorption. *Journal of Managerial Psychology*, 20(7), 578-589.

Available at:

<https://www.emerald.com/insight/content/doi/10.1108/02683940510623399/full/html>

[Accessed 29 April 2024]

Kemmis, S., & McTaggart, R. (2005). Participatory Action Research: Communicative Action and the Public Sphere. In Denzin, N. K., & Lincoln, Y. S. (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 559-603). Sage Publications.

Kempermann, G. (2019). Environmental enrichment, new neurons and the neurobiology of individuality. *Nature Reviews Neuroscience*, 20(4), 235-245.

Available at: <https://www.nature.com/articles/s41583-019-0120-x>

[Accessed 2 July 2023]

Kester, G.H., 2011. *The One and the Many: Contemporary Collaborative Art in a Global Context*. Durham: Duke University Press.

Khoury-Metanis, A. & Khateb, A. (2024). Executive functions mediate fine motor skills' contribution to literacy achievement: a longitudinal study of Arabic-speaking children. *Reading and Writing*, 37, pp. 731–755.

Available at: <https://doi.org/10.1007/s11145-023-10429-z>

[Accessed 29 April 2024]

Kim, H.S. & Markus, H.R. (1999). Deviance or Uniqueness, Harmony or Conformity? A Cultural Analysis. *Journal of Personality and Social Psychology*, 77(4), pp. 785-800.

Available at: <https://doi.org/10.1037/0022-3514.77.4.785>

[Accessed 2 July 2023]

Kim, Y.Y. (2012). Beyond Cultural Identity: *Reflections on Multiculturalism*. *International Journal of Intercultural Relations*, 36(2), pp. 213-224.

Available at: <https://mediate.com/beyond-cultural-identity-reflections-on-multiculturalism/>

[Accessed 2 May 2024]

Kirmayer, L.J., Dandeneau, S., Marshall, E., Phillips, M.K. & Williamson, K.J., 2020. Rethinking resilience from indigenous perspectives. *Canadian Journal of Psychiatry*, 61(2), pp. 63-69.

Available at: <https://doi.org/10.1177/070674371105600203>

[Accessed 2 May 2024]

Kitayama, S., Park, J. & Cho, Y.H., 2015. Culture and neuroplasticity. In: S. Kitayama & D. Cohen (Eds.), *Handbook of Advances in Culture and Psychology*. Vol. 5. New York: Oxford University Press, pp. 38-100.

Kitayama, S. & Cohen, D. (eds.) (2007). *Handbook of Cultural Psychology*. New York: The Guilford Press.

Kitayama, S., Park, J. and Cho, Y.H., 2015. Culture and neuroplasticity. *Handbook of advances in culture and psychology*, 5, pp.38-100.

Klein, P. (2014). *Evaluating Educational Programs: Foundations and Practices*. Routledge.

Kleinman, A., 2009. Global mental health: a failure of humanity. *The lancet*, 374(9690), pp.603-604.

Available at: [https://doi.org/10.1016/S0140-6736\(09\)61510-5](https://doi.org/10.1016/S0140-6736(09)61510-5)

[Accessed 2 May 2024]

Kleinman, A. & Good, B. (1985). *Culture and Depression: Studies in the Anthropology and Cross-Cultural Psychiatry of Affect and Disorder*. Berkeley: University of California Press.

Kline, T. (2016). Art therapy for individuals with traumatic brain injury: A comprehensive neurorehabilitation-informed approach to treatment. *Art Therapy: Journal of the American Art Therapy Association*, 33(2), pp. 67-73.

Available at: <https://eric.ed.gov/?id=EJ1102089>

[Accessed 23 October 2023]

- Kline, R.B. (2015). *Principles and Practice of Structural Equation Modeling*. Guilford Publications.
- Klorer, P. G. (2005). Expressive Therapy with Severely Maltreated Children: Neuroscience Contributions. *Art Therapy: Journal of the American Art Therapy Association*, 22(4), 213–220.
Available at: <https://doi.org/10.1080/07421656.2005.10129523>
[Accessed 3 May 2023]
- Konopka, L. M. (2014). Where art meets neuroscience: a new horizon of art therapy. *Croatian Medical Journal*, 55(1), 73.
Available at:
https://neuron.mefst.hr/docs/CMJ/issues/2014/55/1/cmj_55_1_konopka_24577830.pdf
[Accessed 20 March 2023]
- Kolb, B. & Whishaw, I.Q. (1998). Brain plasticity and behavior. *Annual Review of Psychology*, 49(1), pp. 43-64.
Available at: <https://doi.org/10.1146/annurev.psych.49.1.43>
[Accessed 6 October 2023]
- Kolb, B., Gibb, R. and Robinson, T.E., 2003. Brain plasticity and behavior. *Current directions in psychological science*, 12(1), pp.1-5.
Available at: <https://doi.org/10.1111/1467-8721.01210>
[Accessed 6 October 2023]
- Kolb, B., 2013. *Brain plasticity and behavior*. Psychology Press.
- Kolb, B. and Gibb, R., 2014. Searching for the principles of brain plasticity and behavior. *Cortex*, 58, pp.251-260.
Available at: <https://doi.org/10.1016/j.cortex.2013.11.012>
[Accessed 6 October 2023]
- Kopp, R. R., 1995. *Metaphor Therapy: Using Client-Generated Metaphors in Psychotherapy*. New York: Brunner/Mazel.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology*. 2nd ed. SAGE Publications.
- Kraus, M.W. (2020). *The Psychology of Social Class: How Socioeconomic Status Impacts Thought, Feelings, and Behavior*. Yale University Press.
- Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the Craft of Qualitative Research Interviewing*. 2nd ed. SAGE Publications
- Langer, E. (2009). *Counterclockwise: Mindful Health and the Power of Possibility*. Ballantine Books.

Lawton, P.H. and La Porte, A.M., 2013. Beyond traditional art education: Transformative lifelong learning in community-based settings with older adults. *Studies in Art Education*, 54(4), pp.310-320.

Available at: <https://doi.org/10.1080/00393541.2013.11518905>

[Accessed 12 October 2023]

Le, H., Li, M., & Xu, H. (2018). The impact of learning in a diversified environment: social and cognitive development of international students for global mind-set. *Emerald Insight*.

Available at: <https://www.emerald.com/insight/content/doi/10.1108/EJTD-12-2020-0175/full/html>.

[Accessed 8 May 2024]

Lee, S. (2018). Cross-Cultural Art Education: Beneath the Surface. In *The Palgrave Handbook of Race and the Arts in Education* (pp. 453-468). Palgrave Macmillan, Cham.

Leung, A.K., Maddux, W.W., Galinsky, A.D., & Chiu, C.Y. (2008). Multicultural experience enhances creativity: The when and how. *American Psychologist*, 63(3), pp. 169-181.

Available at: <https://doi.org/10.1037/0003-066X.63.3.169>

[Accessed 12 January 2024]

Leuthold, S., 2010. *Cross-cultural issues in art: Frames for understanding*. Routledge.

Lifintsev, D. & Wellbrock, W. (2019). Cross-cultural communication in the digital age. *Estudos em Comunicação*, 1(28), 93-104.

Available at: https://www.researchgate.net/profile/Denys-Lifintsev/publication/333576410_Cross-cultural_communication_in_the_digital_age/links/5cf51b9b4585153c3daf5507/Cross-cultural-communication-in-the-digital-age.pdf

[Accessed 20 March 2023]

Lin, F.R., Pike, J.R., Albert, M.S., Arnold, M., Burgard, S., Chisolm, T., Couper, D., Deal, J.A., Goman, A.M., Glynn, N.W. and Gmelin, T., 2023. Hearing intervention versus health education control to reduce cognitive decline in older adults with hearing loss in the USA (ACHIEVE): a multicentre, randomised controlled trial. *The Lancet*, 402(10404), pp.786-797.

Available at: [https://doi.org/10.1016/S0140-6736\(23\)01406-X](https://doi.org/10.1016/S0140-6736(23)01406-X)

[Accessed 2 May 2024]

Liu, S. (2019). *Chinese Migrants Ageing in a Foreign Land: Home Beyond Culture*. Routledge.

Available at: <https://link.springer.com/article/10.1007/s12124-021-09664-2>.

[Accessed 2 November 2023]

Livingston, G., Huntley, J., Sommerlad, A., Ames, D., Ballard, C., Banerjee, S., Brayne, C., Burns, A., Cohen-Mansfield, J., Cooper, C. and Costafreda, S.G., 2020. Dementia prevention, intervention, and care: 2020 report of the Lancet Commission. *The Lancet*, 396(10248), pp.413-446.

Available at: [https://doi.org/10.1016/S0140-6736\(20\)30367-6](https://doi.org/10.1016/S0140-6736(20)30367-6).

[Accessed 12 January 2024]

Lourida, I., Hannon, E., Littlejohns, T.J., Langa, K.M., Hyppönen, E., Kuźma, E., Llewellyn, D.J., 2019. Association of lifestyle and genetic risk with incidence of dementia. *JAMA*, 322, pp. 430-437. Doi

Available at: <https://doi.org/10.1001/jama.2019.9879>

[Accessed 6 September 2023]

Lubart, T., 2010. *Cross-cultural perspectives on creativity*. The Cambridge handbook of creativity, pp.265-278.

Lubart, T.I. and Georgsdottir, A., 2004. Creativity: Developmental and cross-cultural issues. In *Creativity: When east meets west* (pp. 23-54).

Lucchetti, G., & de Diego-Cordero, R. (2021). Acculturation, health behaviors, and social relations among Chinese immigrants living in Spain. *International Journal of Environmental Research and Public Health*, 18(14), 7639.

Available at: <https://www.mdpi.com/1660-4601/18/14/7639>

[Accessed 2 November 2023]

Lu, J.G., Martin, A.E., Usova, A. and Galinsky, A.D., 2019. Creativity and humor across cultures: Where aha meets Haha. In *Creativity and humor* (pp. 183-203). *Academic Press*.

Available at: <https://doi.org/10.1016/B978-0-12-813802-1.00009-0>

[Accessed 2 May 2024]

Lusebrink, V.B. (1990). *Imagery and Visual Expression in Therapy*. New York: Plenum Press.

Lusebrink, V.B. (2004). Art Therapy and the Brain: An Attempt to Understand the Underlying Processes of Art Expression in Therapy. *Art Therapy*, 21(3), pp. 125-135.

Available at: <https://doi.org/10.1080/07421656.2004.10129496>

[Accessed 12 December 2023]

Lusebrink, V. B. (2010). Assessment and Therapeutic Application of the Expressive Therapies Continuum: Implications for Brain Structures and Functions, *Art Therapy*, 27(4), pp. 168–177.

Available at: <https://doi.org/10.1080/07421656.2010.10129380>

[Accessed 12 December 2023]

Lv, X., Li, W., Ma, Y., Chen, H., Zeng, Y., Yu, X., ... & Wang, H. (2019). Cognitive decline and mortality among community-dwelling Chinese older people. *BMC Medicine*, 17, 1-10.

Available at: <https://link.springer.com/article/10.1186/s12916-019-1295-8>

[Accessed 12 Mar 2023]

Maddux, W.W. & Galinsky, A.D. (2009). Cultural Borders and Mental Barriers: The Relationship Between Living Abroad and Creativity. *Journal of Personality and Social Psychology*, 96(5), pp. 1047-1061.

Available at: <https://doi.org/10.1037/a0014861>

[Accessed 12 Mar 2024]

Madhusoodanan, S. and Ting, M.B., 2014. Pharmacological management of behavioral symptoms associated with dementia. *World journal of psychiatry*, 4(4), p.72.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4274589/>

[Accessed 1 Mar 2024]

Magierski, R., Sobow, T., Schwertner, E. and Religa, D., 2020. Pharmacotherapy of behavioural and psychological symptoms of dementia: state of the art and future progress. *Frontiers in pharmacology*, 11, p.481680.

Available at:

<https://www.frontiersin.org/journals/pharmacology/articles/10.3389/fphar.2020.01168/full>

[Accessed 1 Mar 2024]

Magsamen, S. (2019). Your Brain on Art: The Case for Neuroaesthetics. *Cerebrum: the Dana forum on brain science*, 2019, cer-07-19.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7075503/>

[Accessed 23 December 2023]

Mai, G. Z., Chan, K. K., & Lo, H. Y. (2008). *Work rehabilitation for migrant workers with work injury--the magic of Chinese paper cutting*. *Work*, 30(1), 55-9.

Available at: <https://pubmed.ncbi.nlm.nih.gov/18198440/>

[Accessed 20 April 2023]

Malchiodi, C.A. (2012). *Handbook of Art Therapy*. 2nd ed. New York: Guilford Press.

Malchiodi, C.A. (2013). *Art Therapy and Health Care*. New York: Guilford Press.

Maresca, G., Maggio, M.G., De Luca, R., Manuli, A., Tonin, P., Pignolo, L. & Calabrò, R.S. (2020). Tele-neuro-rehabilitation in Italy: state of the art and future perspectives. *Frontiers in Neurology*, 11, p.563375.

Available at: <https://www.frontiersin.org/articles/10.3389/fneur.2020.563375/full>

[Accessed 23 March 2024]

Marsella, A.J. and Yamada, A.M., 2000. Culture and mental health: An introduction and overview of foundations, concepts, and issues. In *Handbook of multicultural mental health* (pp. 3-24). Academic Press.

Marsella, A.J. (2010). Twelve critical issues for mental health professionals working with ethno-culturally diverse populations. *Psychology International*, 21(2), pp. 9-12.

Available at: <https://www.multiculturalmentalhealth.ca/wp-content/uploads/2013/10/Marsella-Twelve-Critical-Issues.pdf>

[Accessed 12 December 2023]

Matsumoto, D. & Juang, L. (2016). *Culture and Psychology*. 6th ed. Wadsworth, Cengage Learning.

Maxwell, J.A. (2013). *Qualitative Research Design: An Interactive Approach*. 3rd ed. Sage Publications.

McEwen, B.S. (2012). The ever-changing brain: Cellular and molecular mechanisms for the effects of stressful experiences. *Developmental Neurobiology*, 72(6), pp. 870-882.

Available at: <https://doi.org/10.1002/dneu.20968>

[Accessed 20 October 2023]

McManus, F., Surawy, C., Muse, K., Vazquez-Montes, M., & Williams, J.M. (2012). A randomised clinical trial of mindfulness-based cognitive therapy versus unrestricted services for health anxiety (hypochondriasis). *Journal of Consulting and Clinical Psychology*, 80(5), pp. 817-828.

Available at: <https://psycnet.apa.org/fulltext/2012-16072-001.html>

[Accessed 12 December 2023]

McNiff, J. & Whitehead, J. (2011). *All you need to know about action research*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Meijer, E., Casanova, M., Kim, H., Llena-Nozal, A. and Lee, J., 2022. Economic costs of dementia in 11 countries in Europe: Estimates from nationally representative cohorts of a panel study. *The Lancet Regional Health–Europe*, 20.

Available at: <https://doi.org/10.1016/j.lanepe.2022.100445>

[Accessed 02 May 2024]

Merriam, S.B. & Tisdell, E.J., 2015. *Qualitative Research: A Guide to Design and Implementation*. 4th ed. San Francisco: Jossey-Bass.

Merzenich, M.M. (2013). *Soft-Wired: How the New Science of Brain Plasticity Can Change Your Life*. San Francisco: Parnassus Publishing.

Miller, N.E. & Dollard, J. (1941). *Social Learning and Imitation*. New Haven: Yale University Press.

Mi, X., & Chen, W. (2021). Implementation of fast-building interactive scene with Chinese paper cutting style. In Rauterberg, M. (Ed.), *Culture and Computing. Interactive Cultural Heritage and Arts. HCII 2021. Lecture Notes in Computer Science* (Vol. 12794, pp. 207-220). Springer, Cham.

Available at: https://link.springer.com/chapter/10.1007/978-3-030-77411-0_18

[Accessed 2 November 2023]

Moon, B.L. (2010). *Art-Based Group Therapy: Theory and Practice*. Springfield: Charles C Thomas Publisher.

Moore, A. (2016). *Cultural Practices and Cognitive Health: A Cross-Cultural Perspective*. London: Sage Publications.

Morris, Z.A., Zaidi, A. and McGarity, S., 2021. The extra costs associated with a cognitive impairment: Estimates from 15 OECD countries. *European Journal of Public Health*, 31(3), pp.647-652.

Available at: <https://doi.org/10.1093/eurpub/ckab011>

[Accessed 02 May 2024]

Moutafidou, A. & Bratitsis, T. (2018, June). Digital storytelling: giving voice to socially excluded people in various contexts. In *Proceedings of the 8th international conference on software development and technologies for enhancing accessibility and fighting info-exclusion* (pp. 219-226).

Available at: <https://doi.org/10.1145/3218585.3218684>

[Accessed 6 October 2023]

Mumford, M. D., Medeiros, K. E., & Partlow, P. J. (2013). Creative thinking: Processes, strategies, and knowledge. *The Journal of Creative Behavior*, 46(1), 30-47.

Available at: <https://doi.org/10.4337/9780857939814.00029>

[Accessed 6 May 2024]

Munro, L. (2022). A crafty means of bolstering wellbeing. *Veterinary Record*, 190(8), 337-337.

Available at: <https://doi.org/10.1002/vetr.1722>

[Accessed 6 May 2023]

National Institute on Aging. (2021). *Cognitive health and older adults*.

Available at: <https://www.nia.nih.gov/health/cognitive-health-and-older-adults>

[Accessed 21 April 2023]

Newland, P. & Bettencourt, B.A. (2020). Effectiveness of mindfulness-based art therapy for symptoms of anxiety, depression, and fatigue: A systematic review and meta-analysis. *Complementary Therapies in Clinical Practice*, 41, p. 101246.

Available at: <https://pubmed.ncbi.nlm.nih.gov/33075726/>

[Accessed 23 October 2023]

Noice, H. & Noice, T. (2009). An Arts Intervention for Older Adults Living in Subsidized Retirement Homes. *Neuropsychology, Development, and Cognition. Section B, Aging, Neuropsychology and Cognition*, 16(1), pp. 56-79.

Available at: <https://doi.org/10.1080/13825580802233400>

[Accessed 20 October 2023]

Noice, T., Noice, H. & Kramer, A.F., 2014. Participatory arts for older adults: A review of benefits and challenges. *The Gerontologist*, 54(5), pp.741–753.

Available at: <https://doi.org/10.1093/geront/gnt138>.

[Accessed 23 October 2023]

Ogan, C.L., Ozakca, M. and Groshek, J., 2008. Embedding the internet in the lives of college students: Online and offline behaviour. *Social Science Computer Review*, 26(2), pp.170-177.

Available at: <https://journals.sagepub.com/doi/abs/10.1177/0894439307306129>

[Accessed 6 May 2024]

Oliva, A., Iosa, M., Antonucci, G. & De Bartolo, D. (2023). Are neuroaesthetic principles applied in art therapy protocols for neurorehabilitation? A systematic mini review. *Frontiers in Psychology*, 14, 1158304.

Available at: <https://doi.org/10.3389/fpsyg.2023.1158304>

[Accessed 23 October 2023]

Okahashi, S., Noguchi, T., Ishihara, M., Osawa, A., Kinoshita, F., Ueda, I., Kamiya, M., Nakagawa, T., Kondo, I., Sakurai, T. and Arai, H., 2024. Dyadic Art Appreciation and Self-Expression Program (NCGG-ART) for People with Dementia or Mild Cognitive Impairment and Their Family Caregivers: A Feasibility Study. *Journal of Alzheimer's Disease*, (Preprint), pp.1-14.

Available at: <https://content.iospress.com/articles/journal-of-alzheimers-disease/jad231143>

[Accessed 3 May 2024]

Orb, A., Eisenhauer, L., & Wynaden, D. (2001). Ethics in qualitative research. *Journal of Nursing Scholarship*, 33(1), 93-96.

Available at: <https://doi.org/10.1111/j.1547-5069.2001.00093.x>.

[Accessed 12 September 2023]

Park, D.C. & Bischof, G.N. (2013). The aging mind: neuroplasticity in response to cognitive training. *Dialogues in Clinical Neuroscience*, 15(1), pp. 109-119.

Available at: <https://doi.org/10.31887/DCNS.2013.15.1/dpark>

[Accessed 24 September 2023]

Park, D.C., & Gutches, A.H. (2014). The cognitive neuroscience of aging and culture. *Current Directions in Psychological Science*.

Available at: <https://doi.org/10.1111/j.0963-7214.2006.00416.xmotor>

[Accessed 20 October 2023]

Pasco, R. & Sternberg, R. (2008). *Educating the Developing Mind: Cross-Cultural Perspectives on Development and Education*. Cambridge University Press.

Patton, M.Q., 2015. *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. 4th ed. Thousand Oaks: SAGE Publications.

Peterfreund, E., 2020. *The process of psychoanalytic therapy: Models and strategies*. Routledge.

Peters, R., Booth, A., Rockwood, K., Peters, J., D'Este, C. and Anstey, K.J., 2019. Combining modifiable risk factors and risk of dementia: a systematic review and meta-analysis. *BMJ open*, 9(1), p.e022846.

Available at: <https://bmjopen.bmj.com/content/9/1/e022846.abstract>

[Accessed 6 September 2023]

Petersen, S.E., and Posner, M.I., 2012. The attention system of the human brain: 20 years after. *Annual review of neuroscience*, 35, pp.73-89.

Available at: <https://doi.org/10.1146/annurev-neuro-062111-150525>

[Accessed 24 January 2024]

Petersen, R.C., Lopez, O., Armstrong, M.J., Getchius, T.S.D., Ganguli, M., Gloss, D. & Rae-Grant, A., 2018. Practice guideline update summary: Mild cognitive impairment: Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology. *Neurology*, 90(3), pp.126–135.

Available at: <https://www.neurology.org/doi/full/10.1212/WNL.0000000000004826>

[Accessed 6 May 2024]

Pethtel, O., & Chen, Y. (2010). Cross-cultural aging in cognitive and affective components of subjective well-being. *Psychology and Aging*, 25(3), 725–729.

Available at: <https://pubmed.ncbi.nlm.nih.gov/20853976/>

[Accessed 21 April 2023]

Petrovsky, D.V., Wu, B., Hodgson, N.A. and Dong, X., 2022. Art Attendance and change in cognitive function among US Community-dwelling Chinese older adults. *Journal of Applied Gerontology*, 41(4), pp.1047-1056.

Available at: <https://doi.org/10.1177/07334648211017339>

[Accessed 12 January 2024]

Phinney, J. S. (1998). Ethnic Identity in Adolescents and Adults: Review of Research. In *Readings in Ethnic Psychology*, 1st ed., pp. 27. Routledge.

Pifalo, T. (2007). Jogging the Cogs: Trauma-Focused Art Therapy and Cognitive Behavioral Therapy with Sexually Abused Children. *Art Therapy: Journal of the American Art Therapy Association*, 24(4), pp. 170-175.

Available at: <https://doi.org/10.1080/07421656.2007.10129471>

[Accessed 23 December 2023]

Pike, A., 2014. Improving Memory through Creativity: *A Professional's Guide to Culturally Sensitive Cognitive Training with Older Adults*. Jessica Kingsley Publishers.

Polkinghorne, D. E. (1989). Phenomenological research methods. In R. S. Valle & S. Halling (Eds.), *Existential-Phenomenological Perspectives in Psychology* (pp. 41-60). New York: Plenum Press.

Posner, M.I. (2012). Attention in a social world. *Oxford University Press*.

Posner, M. I., & Petersen, S. E. (1990). The attention system of the human brain. *Annual Review of Neuroscience*, 13, 25-42.

Available at: <https://doi.org/10.1146/annurev.ne.13.030190.000325>

[Accessed 24 January 2024]

Potash, J.S., Ho, R.T., Chan, F., Wang, X.L., & Cheng, C. (2014). Can art therapy reduce death anxiety and burnout in end-of-life care workers? A quasi-experimental study. *International Journal of Palliative Nursing*, 20(5), pp. 233-240.

Available at: <https://doi.org/10.12968/ijpn.2014.20.5.233>

[Accessed 24 September 2023]

Putnam, R.D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.

Qiao, X., 2017. *Telling the World's Stories Through Chinese Papercutting*. Qingdao Publishing House.

Qiao, X., & Pei, S. (2021). *Beginning from China: The world phenomenon and its cultural discovery and cognition of paper-cut art*. Folk Art, (06), 82-87.

Ragin, C.C., & Becker, H.S. (1992). *What is a Case? Exploring the Foundations of Social Inquiry*. Cambridge University Press.

Ramachandran, V.S. & Hirstein, W. (1999). The Science of Art: A Neurological Theory of Aesthetic Experience. *Journal of Consciousness Studies*, 6(6-7), pp. 15-51.

Available at:

<https://www.ingentaconnect.com/content/imp/jcs/1999/00000006/f0020006/949>

[Accessed 12 Mar 2024]

Reason, P. & Bradbury, H. (2008). *The SAGE Handbook of Action Research: Participative Inquiry and Practice*. 2nd ed. Thousand Oaks, CA: SAGE Publications.

Reijnders, J., van Heugten, C. & van Boxtel, M., 2013. Cognitive interventions in healthy older adults and people with mild cognitive impairment: A systematic review. *Ageing Research Reviews*, 12(1), pp.263–275.

Available at: <https://doi.org/10.1016/j.arr.2012.07.003>

[Accessed 12 Mar 2024]

Ren, R., et al. (2022). *The China Alzheimer Report 2022. General psychiatry*, 35(1).

Available at: <https://pubmed.ncbi.nlm.nih.gov/35372787/>

[Accessed 17 April 2023]

Reysen, S., & Katzarska-Miller, I. (2013). A model of global citizenship: Antecedents and outcomes. *International Journal of Psychology*, 48(5), 858-870.

Available at: <https://www.tandfonline.com/doi/abs/10.1080/00207594.2012.701749>

[Accessed 8 May 2024]

Riley, S. (1999). *Contemporary Art Therapy with Adolescents*. London: Jessica Kingsley Publishers.

Robeyns, I. (2006). The Capability Approach in Practice. *Journal of Political Philosophy*, 14(3), pp. 351-376.

Available at: https://d1wqtxts1xzle7.cloudfront.net/36295249/2006_JPP-libre.pdf?1421438430=&response-content-disposition=inline%3B+filename%3DThe_Capability_Approach_in_Practice.pdf&Expires=1716341347&Signature=MYBDnRwbvoTr6LkJhq2J~zeQJWZOBBkPhIMRedAygRKRoEYqMjx4SBMH1gCddQsmql8rSN7Mdf6jvBfelgStgd1HwUaILZaRiYC44yTkz74hHv2ezZHAglAiMWsSDs8SHbaqPWl6Rgidgt-jy41Qb9~KK47yEf6yqZsZIY7B52-TT2ZGcgHf2v1r7hTFJ2-cEc-eUepyEUSIEJBHYKANI85G7RbM~JQT4PKc1JxGao6g9k6l8ftPi~pU~qlsKuiaUdyNFlwCHP34e2Mf1ozVEKc9OLPZW6U5ouqN6nAW0K0dDx9oKhpuVKB9FfliEh6QQ9adeBzjravDFWbJ-TScA_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA
[Accessed 12 Mar 2024]

Robinson, K. (2011). *Out of Our Minds: Learning to Be Creative*. Capstone Publishing.

Roschelle, J. et al. (2000). Changing how and what children learn in school with computer-based technologies. *The Future of Children*, 10(2), pp. 76-101.

Available at: <https://www.istor.org/stable/1602690>

[Accessed 12 October 2023]

Ross, S.D., Ziegert, N. and Rodriguez, F.S., 2024. Implementation of non-pharmacological interventions in dementia care: Family caregiver perspective. *Home Health Care Management & Practice*, 36(1), pp.20-30.

Available at: <https://doi.org/10.1177/1084822323117422>

[Accessed 12 March 2024]

Rubin, R. (2018). Treating Opioid Use Disorder in General Medical Settings: A Framework for Implementing the Chronic Care Model. *Annals of Internal Medicine*, 169(12), pp. 916-917.

Available at: <https://doi.org/10.1371/journal.pone.0186315>

[Accessed 12 May 2024]

Saldaña, J. (2015). *The Coding Manual for Qualitative Researchers*. 3rd ed. London: SAGE Publications.

Sapp, D.D., 1995. Creative problem-solving in art: A model for idea inception and image development. *The journal of creative behavior*, 29(3), pp.173-185.

Available at: <https://doi.org/10.1002/j.2162-6057.1995.tb00747.x>

[Accessed 8 December 2023]

Sarwari, A. Q., Adnan, H. M., Rahamad, M. S. & Abdul Wahab, M. N. (2024). The requirements and importance of intercultural communication competence in the 21st century. *Sage Open*, 14(2).

Available at: <https://doi.org/10.1177/21582440241243119>

[Accessed 8 May 2024]

Sawyer, R.K. (2012). *Explaining Creativity: The Science of Human Innovation*. 2nd ed. New York: Oxford University Press.

Schlegel, A., Alexander, P., Fogelson, S. V., Li, X., Lu, Z., Kohler, P. J., ... & Meng, M. (2015). The artist emerges: Visual art learning alters neural structure and function. *NeuroImage*, 105, pp. 440-451.

Available at: <https://doi.org/10.1016/j.neuroimage.2014.11.014>

[Accessed 23 December 2023]

Schlegel, A., Rudelson, J.J., & Tse, P.U. (2015). White matter structure changes as adults learn a second language. *Journal of Cognitive Neuroscience*, 27(12), pp. 2543-2550.

Available at: https://doi.org/10.1162/jocn_a_00240

[Accessed 02 May 2024]

Schonert-Reichl, K.A. and Roeser, R.W. eds., 2016. *Handbook of mindfulness in education: Integrating theory and research into practice*. Springer.

Schwandt, T. A. (2007). *The Sage Dictionary of Qualitative Inquiry*. 3rd ed. Thousand Oaks: SAGE Publications.

Sen, A. (1999). *Development as Freedom*. Oxford University Press.

Seung, H.S. (2013). *Connectome: How the Brain's Wiring Makes Us Who We Are*. Houghton Mifflin Harcourt.

Sharofova, S., 2024. MULTILINGUAL MINDS: UNRAVELING THE WONDERS OF BILINGUAL BRAIN FUNCTION. *INNOVATIVE ACHIEVEMENTS IN SCIENCE* 2022, 3(25), pp.99-107.

Available at: <https://interonconf.org/index.php/rus/article/view/11188>

[Accessed 2 July 2023]

Shatz, C.J., 1992. The developing brain. *Scientific American*, 267(3), pp.60-67.

Available at: <https://www.jstor.org/stable/24939213>

[Accessed 6 October 2023]

Sherman, D.S., Mauser, J., Nuno, M. and Sherzai, D., 2017. The efficacy of cognitive intervention in mild cognitive impairment (MCI): a meta-analysis of outcomes on neuropsychological measures. *Neuropsychology review*, 27, pp.440-484.

Available at: <https://link.springer.com/article/10.1007/s11065-017-9363-3>

[Accessed 6 May 2024]

Shors, T.J., Chang, H.Y., Shors, S., Veith, K., Catlow, B., & Alvarez, A. (2014). Neurogenesis in the adult human brain. *Neuropsychopharmacology*, 39(1), pp. 189-210.

Siegel, D. J. (2007). *The Mindful Brain: Reflection and Attunement in the Cultivation of Well-Being*. New York: W.W. Norton & Company.

Silverman, D., 2016. *Qualitative Research*. 4th ed. Thousand Oaks: SAGE Publications.

Simons, H., 2009. *Case Study Research in Practice*. London: SAGE Publications.

Simpson, J., & Lee, C. (2024). *Art Therapy and Cognitive Health*. New York: Creative Minds Press.

Slattery, M., Attard, H., Stewart, V., Roennfeldt, H. & Wheeler, A.J. (2020). Participation in creative workshops supports mental health consumers to share their stories of recovery: A one-year qualitative follow-up study. *PLOS ONE*, 15(12), e0243284.

Available at: <https://doi.org/10.1371/journal.pone.0243284>

[Accessed 6 October 2023]

Small, G.W. and Vorgan, G., 2008. *iBrain: Surviving the Technological Alteration of the Modern Mind*. New York: HarperCollins.

Smith, A. (2015). *Chinese Papercutting and Its Educational Value*. London: ArtEd Publishing.

Smith, J.A. & Firth, J. (2011). Qualitative data analysis: the framework approach. *Nurse Researcher*, 18(2), pp. 52-62.

Available at: <https://doi.org/10.7748/nr2011.01.18.2.52.c8284>

[Accessed 23 October 2023]

Smith, J.A., Flowers, P., & Larkin, M. (2021). *Interpretative Phenomenological Analysis: Theory, Method and Research*. London: Sage Publications.

Smith, L., 2006. *Uses of Heritage*. London: Routledge.

Smith, L., 2020. Uses of Heritage in Contemporary Cultural Practices. *Cultural Heritage Journal*, 36(4), pp.455-472.

Available at: https://link.springer.com/referenceworkentry/10.1007/978-3-030-30018-0_1937

[Accessed 20 October 2023]

Smith, L., 2015. Intangible Heritage: A Framework for Interpreting Cultural Practices. *International Journal of Heritage Studies*, 21(3), pp. 324-339.

Available at: <https://www.tandfonline.com/doi/abs/10.1080/13527258.2014.934741>

[Accessed 23 December 2023]

Solso, R.L. (1994). *Cognition and the Visual Arts*. MIT Press.

Sternberg, R. J., Wong, C. H., & Kreisel, A. P. (2021). Understanding and assessing cultural intelligence: Maximum-performance and typical-performance approaches. *Journal of Intelligence*, 9(3), 45.

Available at: <https://www.mdpi.com/2079-3200/9/3/45>

[Accessed 2 May 2024]

Stern, P. & Seifert, S.C. (2008). *Community Arts and Community Life: A 10-Year Retrospective of the Social Impact of the Arts Project (SIAP)*. Philadelphia: University of Pennsylvania.

Stern, Y., Barnes, C.A., Grady, C., Jones, R.N. and Raz, N., 2019. Brain reserve, cognitive reserve, compensation, and maintenance: operationalization, validity, and mechanisms of cognitive resilience. *Neurobiology of aging*, 83, pp.124-129.

Available at: <https://doi.org/10.1016/j.neurobiolaging.2019.03.022>

[Accessed 6 May 2024]

Strohmaier, S., Homans, K.M., Hulbert, S., Crutch, S.J., Brotherhood, E.V., Harding, E. and Camici, P.M., 2021. Arts-based interventions for people living with dementia: Measuring 'in the moment' wellbeing with the Canterbury Wellbeing Scales. *Wellcome open research*, 6.

Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8370129/>

[Accessed 03 May 2024]

Stojcevski, M., Cheung, A., Agwu, V. & Fan, X. (2023). Exploring Zentangle as a virtual mindfulness-based art intervention for people with serious mental illness. *Frontiers in Psychiatry*, 14, p. 1260937.

Available at: <https://www.frontiersin.org/articles/10.3389/fpsy.2023.1260937/full>

[Accessed 23 October 2023]

Stott, J. and Spector, A., 2011. A review of the effectiveness of memory interventions in mild cognitive impairment (MCI). *International Psychogeriatrics*, 23(4), pp.526-538.

Available at: <https://doi.org/10.1017/S1041610210001973>

[Accessed 6 May 2024]

Stuckey, H.L. & Nobel, J. (2010). The connection between art, healing, and public health: A review of current literature. *American Journal of Public Health*, 100(2), pp. 254-263.

Available at: <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2008.156497>

[Accessed 02 May 2024]

Sue, D. W. (2001). Multidimensional facets of cultural competence. *The Counseling Psychologist*, 29(6), 790-821.

Available at: <https://journals.sagepub.com/doi/abs/10.1177/0011000001296002>

[Accessed 10 December 2023]

Sullivan, G. (2010). *Art Practice as Research: Inquiry in Visual Arts*. Thousand Oaks, CA: SAGE Publications.

Suzuki, S. (2016). *Zen Mind, Beginner's Mind: Informal Talks on Zen Meditation and Practice*. Shambhala Publications.

Swanborn, P. (2010). *Case Study Research: What, Why and How?* Sage Publications.

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257-285.

Available at: <https://www.sciencedirect.com/science/article/abs/pii/0364021388900237>

[Accessed 12 December 2023]

Szabo, Y. Z., Nelson, S. M., & Lantrip, C. (2019). Cognitive complaints in neuropsychologically

normal adults: A brief report on the roles of childhood abuse and rumination.

Traumatology.

Available at: <https://doi-org.ezproxyles.flo.org/10.1037/trm0000209>

[Accessed 12 October 2023]

Tashakkori, A. & Teddlie, C. (2010). *Mixed Methodology: Combining Qualitative and Quantitative Approaches*. Thousand Oaks: SAGE Publications

Tariot, P.N., 2003. Medical management of advanced dementia. *Journal of the American Geriatrics Society*, 51(5s2), pp. S305-S313.

Available at: <https://doi.org/10.1046/j.1532-5415.5156.x>

[Accessed 02 March 2024]

Taylor, J. (2015). *Exploring Cultural Arts: The Impact on Creativity and Cognitive Development*. New York: Academic Press.

Tedlock, B. (2011). The observation of participation and the emergence of public ethnography. In N.K. Denzin & Y.S. Lincoln (eds.), *The SAGE Handbook of Qualitative Research* (pp. 151-168). Thousand Oaks: SAGE Publications.

Tepper, S.J. & Gao, Y. (2008). *Engaging Art: The Next Great Transformation of America's Cultural Life*. Routledge.

Thomas, A. K., & Gutches, A. (2020). *The Cambridge handbook of cognitive aging: A life course perspective*. New York, NY: Cambridge University Press.

Thomas, D.C. & Inkson, K. (2017). *Cultural Intelligence: Surviving and Thriving in the Global Village*. 3rd ed. Oakland: Berrett-Koehler Publishers.

Tieri, G. & Iosa, M. (2023). Virtual art therapy: Application of Michelangelo Effect to neurorehabilitation of patients with stroke. *Journal of Clinical Medicine*, 12(7), 2590.

Available at: <https://www.mdpi.com/2077-0383/12/7/2590>

[Accessed 23 October 2023]

Ting-Toomey, S. & Chung, L.C. (2012). *Understanding Intercultural Communication*. 2nd ed. New York: Oxford University Press.

To, P. Y. L. and Chan, V. Y. Y. (2021) 'Development of Chinese paper cutting as an expressive art intervention targeting psychological health of university students in Hong Kong: An intervention protocol', presented at the Postgraduate Conference on Interdisciplinary Learning: Re-Imagining Postgraduate Studies in the 21st Century and Beyond, Lingnan University, Hong Kong.

Available at:

<https://scholars.ln.edu.hk/en/publications/development-of-chinese-paper-cutting-as-an-expressive-art-interve>

[Accessed 20 April 2023]

Trejo, B. C., Jr., Adams, M., Klem, L., & Mendez, L. (2015). Cross-Cultural Competence: The Role of Emotion Regulation Ability and Optimism. *Military Psychology*, 27(5), pp. 276–286. Available at: <https://doi.org/10.1037/mil0000081> [Accessed 23 May 2024]

Triandis, H. C. (1994). *Culture and Social Behavior*. McGraw-Hill.

Trompenaars, F. & Hampden-Turner, C., 1997. *Riding the Waves of Culture: Understanding Diversity in Global Business*. 2nd ed. New York: McGraw-Hill.

Ungvari, Z., Fazekas-Pongor, V., Csiszar, A. and Kunutsor, S.K., 2023. The multifaceted benefits of walking for healthy aging: from Blue Zones to molecular mechanisms. *Geroscience*, 45(6), pp.3211-3239. Available at: <https://link.springer.com/article/10.1007/s11357-023-00873-8>. [Accessed 23 October 2023]

Uttley, L., Scope, A., Stevenson, M., Rawdin, A., Buck, E.T., Sutton, A., ... & Kaltenthaler, E. (2015). Systematic review and economic modeling of the clinical effectiveness and cost-effectiveness of art therapy among people with non-psychotic mental health disorders. *Health Technology Assessment*, 19(18), pp. 1-120. Available at: <https://doi.org/10.3310/hta19180> [Accessed 6 October 2023]

Vartanian, O. (2012). Brain networks underlying aesthetic appreciation of visual art. *Progress in Brain Research*, 204, pp. 99-113.

Van Lith, T., Schofield, M.J., & Fenner, P., 2013. Identifying the evidence-base for art-based practices and their potential benefit for mental health recovery: A critical review. *Disability and Rehabilitation*, 35(16), pp. 1309-1323. Available at: <https://doi.org/10.3109/09638288.2012.732188> [Accessed 23 December 2023]

Vazquez, Leonardo, Creative Placemaking: Integrating Community, *Cultural and Economic Development* (November 1, 2012). Available at SSRN: <https://ssrn.com/abstract=2474862> or <http://dx.doi.org/10.2139/ssrn.2474862> [Accessed 12 January 2024]

Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press.

Wallerstein, I. (2004). *World-Systems Analysis: An Introduction*. Duke University Press.

Ward, C., Bochner, S. & Furnham, A. (2001). *The Psychology of Culture Shock*. London: Routledge.

Wales Art International (2019). *Arts Council of Wales publishes its new International Strategy*.

Available at:

<https://wai.org.uk/news-jobs-opportunities/arts-council-wales-publishes-its-new-international-strategy>

[Accessed 20 May 2024]

Walter, O., Shenaar-Golan, V. & Routray, S. (2021). Cross-Cultural Comparison of How Mind-Body Practice Affects Emotional Intelligence, Cognitive Well-Being, and Mental Well-Being. *Frontiers in Psychology*, 12, 588597.

Available at: <https://eprints.whiterose.ac.uk/96817/>

[Accessed 23 October 2023]

Wan, C.Y. & Schlaug, G., 2010. Music Making as a Tool for Promoting Brain Plasticity across the Life Span. *The Neuroscientist*, 16(5), pp. 566-577.

Available at: <https://doi.org/10.1177/1073858410377805>

[Accessed 23 December 2023]

Wang, B. (2006). The history of Chinese folk paper cutting. *Zhejiang Academy of Fine Arts*.

Wang, G., Cheng, Q., Zhang, S., Bai, L., Zeng, J., Cui, P.J., Zhang, T., Sun, Z.K., Ren, R.J., Deng, Y.L. and Xu, W., 2008. Economic impact of dementia in developing countries: an evaluation of Alzheimer-type dementia in Shanghai, China. *Journal of Alzheimer's Disease*, 15(1), pp.109-115.

Available at: <https://pubmed.ncbi.nlm.nih.gov/18780971/>

[Accessed 6 October 2023]

Wang, K., 2023. China Brain Cognitive Health Index released for the first time, Beijing scores highest. *Xin Jing Bao*, 24 April, p. 20:35.

Wang, T., Mo, L., Vartanian, O., Cant, J.S. and Cupchik, G., 2015. An investigation of the neural substrates of mind wandering induced by viewing traditional Chinese landscape paintings. *Frontiers in Human Neuroscience*, 8, p.1018.

Available at: <https://doi.org/10.3389/fnhum.2014.01018>

[Accessed 6 October 2023]

Wales Art International (2019). *Arts Council of Wales publishes its new International Strategy*.

Available at: <https://wai.org.uk/news-jobs-opportunities/arts-council-wales-publishes-its-new-international-strategy>.

[Accessed 20 April 2023]

Webb, D., 2014. Placemaking and social equity: Expanding the framework of creative placemaking. *Artivate*, 3(1), pp.35-48.

Available at: <https://muse.jhu.edu/article/811804/pdf>

[Accessed 12 January 2024]

Willis, G.B. and Miller, K., 2011. Cross-cultural cognitive interviewing: Seeking comparability and enhancing understanding. *Field methods*, 23(4), pp.331-341.
Available at: <https://doi.org/10.1177/1525822X1141609>
[Accessed 02 May 2024]

Wiles, R. (2012). *What are qualitative research ethics?* London: Bloomsbury Academic.

Woods, B., Rai, H.K., Elliott, E., Aguirre, E., Orrell, M. and Spector, A., 2023. Cognitive stimulation to improve cognitive functioning in people with dementia. *Cochrane database of systematic reviews*, (1).
Available at: <https://doi.org/10.1002/14651858.CD005562.pub3>
[Accessed 02 March 2024]

Woods, B., O'Philbin, L., Farrell, E.M., Spector, A.E. and Orrell, M., 2018. Reminiscence therapy for dementia. *Cochrane Database of Systematic Reviews*, (3).
Available at: <https://doi.org/10.1002/14651858.CD001120.pub3>
[Accessed 02 March 2024]

World Health Organization. (2019). *International Classification of Diseases for Mortality and Morbidity Statistics (11th Revision)*.
Available at: <https://icd.who.int/browse11/l-m/en>
[Accessed 7 April 2024]

Xu, F., Cao, Y., & Lei, D. (2020). Effects of traditional Chinese papercutting on cognitive and emotional improvement in older adults: A neurofunctional hypothesis. *Neuropsychiatric Disease and Treatment*, 16, 1001.

Yan, Y. J., Lin, R., Zhou, Y., Luo, Y. T., Cai, Z. Z., Zhu, K. Y., & Li, H. (2021). Effects of expressive arts therapy in older adults with mild cognitive impairment: A pilot study. *Geriatric Nursing*, 42(1), 129-136.
Available at: <https://pubmed.ncbi.nlm.nih.gov/33385772/>
[Accessed 18 May 2023]

Yang, C. H. S. (2012). Cross-cultural experiences through an exhibition in China and Switzerland: "The art of paper-cutting: East meets West." *Source: Notes in the History of Art*, 31(3), 29–35.
Available at:
<https://www.journals.uchicago.edu/doi/abs/10.1086/sou.31.3.23208592?journalCode=sou>
[Accessed 7 May 2023]

Yang, J., 2008. *Chinese Papercutting: Its History and Cultural Significance*. Beijing: China Intercontinental Press.

Yin, R.K. (2014). *Case Study Research: Design and Methods*. 5th ed. Thousand Oaks: SAGE Publications.

Young, M. (2014). *Teaching History in an Uncertain World*. Cambridge: Cambridge University Press.

Yosso, T.J. (2005). Whose culture has capital? A critical race theory discussion of community cultural wealth. *Race Ethnicity and Education*, 8(1), pp. 69-91.

Available at: <https://doi.org/10.1080/1361332052000341006>

[Accessed 2 March 2024]

Zaidel, D.W., 2015. *Neuropsychology of art: Neurological, cognitive, and evolutionary perspectives*. Psychology Press.

Zhang, K., del Valle-Brena, A.G., Riera, I.R. & Zhao, J. (2022). Ancient routes, new gateways: a systematic literature review of China's cultural route heritage. *Journal of Cultural Heritage Management and Sustainable Development*.

Available at: <https://www.emerald.com/insight/content/doi/10.1108/JCHMSD-06-2021-0114/full/html>

[Accessed 23 October 2023]

Zhang, X., Wen, K., Ding, H. and Zhou, X., 2024. Experiencing art creation as a therapeutic intervention to relieve anxiety-a case study of a university's ceramic art course. *Frontiers in Psychiatry*, 15, p.1334240.

Available at:

<https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsy.2024.1334240/full>.

[Accessed 23 May 2024]

Zitcer, A., 2020. Making up creative placemaking. *Journal of Planning Education and Research*, 40(3), pp.278-288.

Available at: <https://doi.org/10.1177/0739456X18773424>

[Accessed 12 January 2024]

Zhao, S., David, K., Peter, W., Simon, B., 2019. Cross-cultural understanding of Chinese traditional puppetry: Integrating digital technology to enhance audience engagement. *International Journal of Intangible Heritage*, 14(1), 139-154.

Available at: https://www.researchgate.net/publication/340681040_Cross-cultural_Understanding_of_Chinese_Traditional_Puppetry_Integrating_Digital_Technology_to_Enhance_Audience_Engagement

[Accessed 18 May 2023]

Zhao, S., 2020. *Designing interactive technology for cross-cultural appreciation of intangible cultural heritage: Chinese traditional painting and puppetry* (Doctoral dissertation).

Newcastle University.

Available at:

https://www.researchgate.net/publication/354891074_Designing_Interactive_Technology_for_Cross-cultural_Appreciation_of_Intangible_Cultural_Heritage_Chinese_Traditional_Painting_and_Puppetry

[Accessed 17 May 2023]

Zatorre, R.J., Fields, R.D., & Johansen-Berg, H. (2012). Plasticity in gray and white: Neuroimaging changes in brain structure during learning. *Nature Neuroscience*, 15(4), pp. 528-536.

Available at: <https://www.nature.com/articles/nn.3045>

[Accessed 02 March 2023]

Zeki, S. (2001). Artistic creativity and the brain. *Science*, 293(5527), pp. 51-52.

Available at: <https://www.science.org/doi/10.1126/science.1062331>

[Accessed 02 March 2023]

APPENDICES

The appendices provide comprehensive supplementary materials related to the workshop, enriching the study's findings and offering detailed insights into the process and outcomes. These materials include:

Appendix A: Informed Consent Form

A.1 Informed Consent Form (English Version)

Informed Consent Form

Project Title:

Enhancing Cross-Cultural Communication and Cognitive Health through Chinese
Papercutting

Project Manager:

Wenxia Jia

Wales Institute of Art and Science, University of Wales Trinity Saint David

Introduction:

Thank you for considering participation in this research study. The purpose of this form is to inform you about the study's objectives, procedures, and your rights as a participant. Your involvement in this study is entirely voluntary.

Objective:

This study seeks to explore the correlation between Chinese papercutting and cognitive health within a cross-cultural context. Your valuable insights and personal experiences regarding Chinese papercutting are integral to our research. Your participation significantly contributes to enhancing our comprehension of the intricate relationship between Chinese papercutting and cognitive health.

Participant's Rights:

Your participation is voluntary. You can withdraw at any time without penalty.

All information provided will be kept confidential. Your identity will be protected.

You have the right to decline to answer any question you're uncomfortable with.

The collected data will be used for research purposes only.

Procedure:

Your participation will involve the completion of two questionnaires and engaging in an interview to share your experiences. Simultaneously, you will be involved in a papercutting artistic experience.

Risks and Benefits:

Participation in this study involves minimal risk. However, your contribution will significantly benefit our research and potentially contribute to further knowledge in this field.

Privacy Terms and Confidentiality Statement

Your visual representations and audio recordings will exclusively serve research purposes and will be securely preserved in accordance with stringent confidentiality measures employed by the research team. Rest assured, the utmost care will be taken to safeguard all participant data, ensuring strict adherence to privacy protocols throughout the research process.

Contact Information:

If you have any questions or concerns regarding the study, you may contact Wenxia Jia at 07536948121.

Consent:

By signing below, you acknowledge that you have read this form, understand its contents, and voluntarily agree to participate in this research study.

Signature: _____

Date: _____

A.2 Informed Consent Form (Chinese Version)

知情同意书

项目标题：

通过中国剪纸提升跨文化交流与认知健康

项目负责人：

贾雯霞 威尔士三一圣大卫大学 艺术与科学学院 艺术与设计学实践博士

介绍：

感谢您考虑参与此研究。此表的目的是向您介绍研究的目标、程序以及您作为参与者的权利。您对此研究的参与是完全自愿的。

目标：

本研究旨在探索中国剪纸在跨文化背景下与认知健康之间的关联。您对中国剪纸的宝贵见解和个人经验对我们的研究至关重要。您的参与对于增进我们对中国剪纸与认知健康之间错综复杂关系的理解具有重要意义。

参与者权利：

您的参与是自愿的。您可以随时退出而不会受到任何处罚。

所有提供的信息将被保密。您的身份将受到保护。

您有权拒绝回答任何让您感到不适的问题。

收集到的数据仅用于研究目的。

程序：

您的参与将包括填写两份问卷和参与一次访谈来分享您的经验。同时，您将参与剪纸艺术体验。

风险与益处：

参与此研究的风险极小。但是，您的贡献将极大地有益于我们的研究，并可能对该领域的进一步认知做出贡献。

隐私条款及保密声明：

您图片和音频录音将专门用于研究目的，并将按研究团队采取的严格保密措施安全保存。我们将最大程度地保护所有参与者的数据，严格遵守研究过程中的隐私协议。

联系信息：

如研究有任何疑问或顾虑，请联系 贾雯霞，电话号码：07536948121。

同意：

在下方签名表示您已阅读此表格，理解其内容，并自愿同意参与此研究。

签名：_____

日期：_____

A.3 Informed Consent Form (Cantonese Version)

知情同意书

项目名称：

透过中国剪纸促进跨文化交流及认知健康

项目负责人：

贾雯霞 威尔士三一圣大卫大学 艺术与科学学院 艺术与设计学实践博士

介绍：

多谢你考虑参加呢个研究。呢份文件的目的係向你讲解研究嘅目标、流程同埋你作为参与者嘅权利。你自愿参与呢个研究。

目标：

呢个研究旨在探讨中国剪纸同跨文化背景下嘅认知健康之间嘅关系。你嘅意见同经验对研究非常重要。你嘅参与将帮助我们更深入了解中国剪纸同认知健康之间复杂嘅关系。

参与者权利：

你参与係自愿嘅。你可以随时退出，唔会有任何处罚。

所有提供嘅资料会被保密，你嘅身份会被保护。

你有权拒绝回答任何问题。

程序：

你参与包括填写两份问卷同埋参与一次访谈分享你嘅经验。同时，你将参与剪纸艺术体验。

风险同益处：

参与呢个研究係无风险嘅。但你嘅贡献将对研究有所帮助，可能有助于更深入理解呢个领域。

隐私条款及保密声明

你嘅视觉表现同录音只会用于研究用途，并会按研究团队采取嘅严格保密措施安全保存。我们会确保严格遵守隐私协议。

联系信息：

如果你有任何问题或疑虑，可以联络 Wenxia Jia，电话号码：07536948121。

同意：

签名表示你已经阅读此表格，理解内容，并自愿同意参与呢个研究。

签名： _____

日期： _____

Appendix B: Questionnaire Templates

Both pre-workshop and post-workshop questionnaires designed to assess various dimensions such as participant demographics, art background, familiarity with Chinese papercutting, and perceptions of cognitive health.

B.1 Questionnaire (English Version, for Welsh group)

Research Study Program - Questionnaire No 1

Thank you for participating in this workshop. Your responses will greatly contribute to our research on the cognitive benefits and cross-cultural aspects that Chinese papercutting has to offer.

By proceeding with this questionnaire, you allow and consent that the organisers of this study to utilise your data for our research purposes.

By participating in this survey, your privacy is protected. All responses are respectfully kept confidential.

Step One - Before Workshop:

Question Survey *(Please circle your relevant responses)*

1. Your age range:

- (a) 18-29 (b) 30-44 (c) 45-70 (d) 70+

2. Have you previously delved into the concept of cognitive health?

- Yes No Maybe No opinion

3. How significant do you consider the current state of cognitive health among humans to be?

- (a) Very significant
(b) Significant
(c) Moderate
(d) Insignificant
(e) Not applicable

4. Do you think that artistic and creative participation has the potential to enhance cognitive health?

- Yes No Maybe No opinion

5. Do you have an artistic background or any personal experience with artistic workings?

- (a) No artistic experience
(b) Some artistic experience
(c) Extensive artistic experience

6. Is this your first experience of Chinese culture?

Yes No

7. Is this your first experience Chinese papercutting art practice?

Yes No

8. What is your current level of familiarity with Chinese papercutting art?

- (a) Very familiar
- (b) Moderately familiar
- (c) Slightly familiar
- (d) Not familiar at all

9. How interested are you in exploring Chinese papercutting art?

- (a) Very interested
- (b) Moderately interested
- (c) Slightly interested
- (d) Not interested

10. Before experiencing Chinese papercutting, do you anticipate it will positively impact your cognitive health?

Yes No Maybe No opinion

11. By participating in this study, what potential changes in cognitive health would you expect to be affected? (Select as many as you think relevant)

(a) Thinking (b) Learning (c) Memory (d) Something else (*please write here*)

12. What are your expectations for the workshop? (Select one or more)

- (a) Learning about Chinese culture
- (b) Developing artistic skills
- (c) Cognitive enhancement
- (d) Social interaction and enjoyment

Research Study Program - Questionnaire No 2

Thank you for participating in this workshop. Your responses will greatly contribute to our research on the cognitive benefits and cross-cultural aspects that Chinese papercutting has to offer.

By proceeding with this questionnaire, you allow and consent that the organisers of this study to utilise your data for our research purposes.

By participating in this survey, your privacy is protected. All responses are respectfully kept confidential.

Step Two-After Workshop: *(Please circle your relevant responses)*

1. How enjoyable did you find the workshop experience?

- (a) Enjoyed
- (b) Somewhat enjoyed
- (c) Didn't enjoy

2. What is your current level of familiarity with Chinese papercutting art?

- (a) Very familiar
- (b) Moderately familiar
- (c) Slightly familiar
- (d) Not familiar at all

3. Do you think the Chinese papercutting workshop had a positive effect on your cognitive health?

Yes No Maybe No opinion

4. Do you believe the workshop may have a potential positive effect on your cognitive health in the future?

Yes No Maybe No opinion

5. After participating in the Chinese papercutting workshop, do you feel more inclined to engage in similar cultural activities in the future?

Yes No Maybe No opinion

6. Could cross-cultural engagement, as experienced in this workshop, positively impact cognitive health?

Yes No Maybe No opinion

7. Did the workshop change your perspective on the relationship between Chinese papercutting and cognitive well-being?

Yes No Maybe No opinion

8. Have you noticed any changes in cognitive health due to this workshop experience?

Thinking:

- (a) Significant improvement
- (b) Moderate improvement
- (c) Slight improvement
- (d) No change

Learning:

- (a) Significant improvement
- (b) Moderate improvement
- (c) Slight improvement
- (d) No change

Memory:

- (a) Significant improvement
- (b) Moderate improvement
- (c) Slight improvement
- (d) No change

9. After participating in the papercutting workshop, how do you think it may contribute to enhancing your emotional functioning?

- (a) Improved emotional expression
- (b) Stress relief and relaxation
- (c) Increased self-expression and awareness
- (d) Boosted creativity and sense of achievement

10. After participating in the papercutting workshop, how do you anticipate it may contribute to enhancing your motor functioning?

- (a) Improved hand coordination and fine motor skills
- (b) Enhanced hand flexibility and muscle control
- (c) Strengthened hand-eye coordination and spatial cognitive abilities
- (d) Enhanced overall motor control and hand stability

11. After participating in the papercutting workshop, how do you expect it might contribute to enhancing your sensory functioning?

- (a) Improved tactile perception and fine-touch sensitivity
- (b) Enhanced visual perception and spatial awareness
- (c) Strengthened auditory perception and environmental sensitivity

(d) Enhanced overall sensory integration and perceptual processing

12. What aspects of Chinese papercutting would you think make it suitable for cross-cultural exploration?

(Select one or more):

- (a) Visual symbolism
- (b) Storytelling potential
- (c) Art experience
- (d) Community engagement
- (e) None of the above
- (f) Something else (please write here)

13. What aspects of Chinese papercutting would you think make it suitable for and cognitive enhancement?

(Select one or more):

- (a) Visual symbolism
- (b) Storytelling potential
- (c) Art experience
- (d) Community engagement
- (e) None of the above
- (f) Something else (please write here)

B.2 Questionnaire (Chinese Version for Chinese Immigrants' Group)

研究项目 - 问卷调查 1 号

感谢您参与此工作坊。您的回答将极大地有助于我们对中国剪纸所提供的认知益处和跨文化方面的研究。

继续填写本问卷即代表您同意本研究的主办方将利用您的数据进行研究用途。

参与此次调查，您的隐私将得到保护，所有回答将被尊重地保密处理。

第一步 - 工作坊前：

问卷调查（请圈选适合的答案）

1.您的年龄段：

(a) 18-29 (b) 30-44 (c) 45-70 (d) 70+

2.您之前是否涉及过认知健康的概念？

有 没有 可能 没有意见

3.您认为当前人类的认知健康状况有多重要？

(a) 非常重要

(b) 重要

(c) 适中

(d) 不重要

(e) 不适用

4.您认为艺术性和创造性参与是否有可能增强认知健康？

有 没有 可能 没有意见

5.您是否有艺术背景或任何与艺术相关的个人经验？

(a) 没有艺术经验

(b) 有一些艺术经验

(c) 有丰富的艺术经验

6.这是您第一次尝试中国剪纸艺术吗？

是 不是

7.您对中国剪纸艺术的了解程度如何？

- (a) 非常熟悉
- (b) 了解一般
- (c) 稍微了解
- (d) 完全不了解

8.您对探索中国剪纸艺术有多感兴趣？

- (a) 非常感兴趣
- (b) 有一定兴趣
- (c) 稍微感兴趣
- (d) 不感兴趣

9.在体验中国剪纸之前，您是否预期它会对您的认知健康产生积极影响？

是 否 可能 没有意见

10.通过参与此研究，您期待对认知健康产生哪些潜在变化？（选择您认为相关的选项）

(a)思维 (b) 学习 (c) 记忆 (d) 其他（请在此处填写）

11.您对工作坊有何期待？（选择一个或多个）

- (a) 了解中国文化
- (b) 提升艺术技能
- (c) 增强认知能力
- (d) 社交互动和享受

研究项目 - 问卷调查 2 号

感谢您参与此工作坊。您的回答将极大地有助于我们对中国剪纸所提供的认知益处和跨文化方面的研究。

继续填写本问卷即代表您同意本研究的主办方将利用您的数据进行研究用途。

参与此次调查，您的隐私将得到保护，所有回答将被尊重地保密处理。

工作坊后：（请选择适合您的答案）

1.您觉得工作坊的体验有多愉快？

(a) 非常愉快

(b) 比较愉快

(c) 不愉快

2.现在您对中国剪纸艺术的了解程度如何？

(a) 非常熟悉

(b) 一般熟悉

(c) 稍微熟悉

(d) 完全不了解

3.您认为中国剪纸工作坊对您的认知健康有积极影响吗？

是 否 可能 没有意见

4.您认为工作坊可能对您未来的认知健康产生积极影响吗？

是 否 可能 没有意见

5.参与了中国剪纸工作坊后，您是否更有意愿将来参与类似的文化活动？

是 否 可能 没有意见

6.跨文化参与，如您在本次工作坊中体验到的，是否可能积极影响认知健康？

是 否 可能 没有意见

7.工作坊是否改变了您对中国剪纸与认知健康关系的看法？

是 否 可能 没有意见

8.您是否注意到工作坊体验对认知健康有任何改变？

思维方面：

- (a) 显著改善
- (b) 适度改善
- (c) 轻微改善
- (d) 没有变化

学习方面：

- (a) 显著改善
- (b) 适度改善
- (c) 轻微改善
- (d) 没有变化

记忆方面：

- (a) 显著改善
- (b) 适度改善
- (c) 轻微改善
- (d) 没有变化

9.参与了剪纸工作坊后，您认为它可能如何促进您的情感功能？

- (a) 改善情感表达
- (b) 减压和放松
- (c) 提高自我表达和意识
- (d) 提升创造力和成就感

10.参与了剪纸工作坊后，您预期它可能如何促进您的运动功能？

- (a) 提高手部协调和精细动作技能
- (b) 增进手部灵活性和肌肉控制
- (c) 加强手眼协调和空间认知能力
- (d) 提升整体运动控制和手部稳定性

11.参与了剪纸工作坊后，您预期它可能如何促进您的感觉功能？

- (a) 提高触觉感知和细微触感
- (b) 增强视觉感知和空间意识
- (c) 加强听觉感知和环境敏感度
- (d) 提升整体感觉整合和知觉处理

12.您认为中国剪纸的哪些方面使其适合进行跨文化探索？

(选择一个或多个):

- (a) 视觉符号意义
- (b) 可讲故事潜力
- (c) 艺术体验
- (d) 社区参与
- (e) 以上都不是
- (f) 其他（请在此处填写）

13.您认为中国剪纸的哪些方面使其适合认知提升？

(选择一个或多个):

- (a) 视觉符号意义
- (b) 可讲故事潜力
- (c) 艺术体验
- (d) 社区参与
- (e) 以上都不是
- (f) 其他（请在此处填写）

B.3 Questionnaire (Cantonese Version for Chinese Immigrants' Group)

研究計劃 - 問卷調查 1 號

多謝閣下參與呢個工作坊。閣下嘅回應將會對我哋對中國剪紙帶嚟嘅認知益處同跨文化方面嘅研究有所貢獻。

繼續填寫呢份問卷，即代表閣下同意我哋呢個研究嘅組織者喺研究目的上使用閣下嘅數據。

參與呢次調查，閣下嘅私隱會得到保護，所有回答都會被保密對待。

第一步 - 工作坊之前：問卷調查（請圈選適合嘅答案）

1. 閣下年齡層：

(a) 18-29 (b) 30-44 (c) 45-70 (d) 70+

2. 閣下有冇之前探討過認知健康嘅概念？

有 冇 可能 冇意見

3. 閣下認為現時人類嘅認知健康狀況有幾重要？

(a) 非常重要

(b) 重要

(c) 適中

(d) 無足輕重

(e) 不適用

4. 你覺得藝術性同創造性嘅參與有冇潛力增強認知健康？

有 冇 可能 冇意見

5. 閣下有冇藝術背景或者任何與藝術相關嘅個人經驗？

(a) 無藝術經驗

(b) 有少量藝術經驗

(c) 有豐富藝術經驗

6.呢次係閣下第一次嘗試中國剪紙藝術嗎？

係 唔係

7. 閣下對中國剪紙藝術有幾熟悉？

- (a) 非常熟悉
- (b) 一般熟悉
- (c) 少許熟悉
- (d) 完全唔熟悉

8.閣下有幾有興趣探索中國剪紙藝術？

- (a) 非常有興趣
- (b) 一般有興趣
- (c) 少許有興趣
- (d) 完全無興趣

9.未體驗過中國剪紙前，你認為佢會對你嘅認知健康有正面影響嗎？

會 唔會 可能 冇意見

10.透過參與呢個研究，你預期會對認知健康有咩潛在改變？（請選擇所有相關選項）

(a) 思考 (b) 學習 (c) 記憶 (d) 其他（請於此處填寫）

11.你對呢次工作坊有咩期望？（請選擇一個或以上）

- (a) 了解中國文化
- (b) 提升藝術技能
- (c) 增進認知能力
- (d) 社交互動同享受

研究計劃 - 問卷調查 2 號

多謝您參與呢個工作坊。您嘅回應將會大大幫助我哋研究中國剪紙所帶嚟嘅認知好處同跨文化方面。繼續填寫呢份問卷就表示您同意我哋將您嘅數據用於研究目的。參與呢次調查，您嘅私隱會受到保護，所有回應都會保密處理。

工作坊後：（請圈選合適嘅答案）

1. 您認為工作坊體驗有幾享受？

(a) 非常享受

(b) 有啲享受

(c) 冇咁享受

2. 您對中國剪紙藝術嘅熟悉程度係點？

(a) 非常熟悉

(b) 一般熟悉

(c) 少少熟悉

(d) 完全唔熟悉

3. 您覺得中國剪紙工作坊對您嘅認知健康有冇正面影響？

有 冇 可能 冇意見

4. 您相信工作坊可能對您未來嘅認知健康有正面影響？

有 冇 可能 冇意見

5. 參加完中國剪紙工作坊後，您係咪更加願意參與類似嘅文化活動？

是 否 可能 冇意見

6. 跨文化參與，就如工作坊嘅體驗，係唔係可能對認知健康有正面影響？

是 否 可能 冇意見

7. 工作坊有冇改變過您對中國剪紙同認知健康之間關係嘅觀點？

是 否 可能 冇意見

8.您有冇注意到工作坊體驗對認知健康有任何改變？

思考：

- (a) 顯著改善
- (b) 適度改善
- (c) 輕微改善
- (d) 無變化

學習：

- (a) 顯著改善
- (b) 適度改善
- (c) 輕微改善
- (d) 無變化

記憶：

- (a) 顯著改善
- (b) 適度改善
- (c) 輕微改善
- (d) 無變化

9.參加完剪紙工作坊後，您認為佢可能點樣促進您嘅情感功能？

- (a) 改善情感表達
- (b) 減壓同放鬆
- (c) 提高自我表達同意識
- (d) 提升創造力同成就感

10.參加完剪紙工作坊後，您預期佢可能點樣促進您嘅運動功能？

- (a) 提高手部協調同精細動作技能
- (b) 增進手部靈活性同肌肉控制
- (c) 加強手眼協調同空間認知能力
- (d) 提升整體運動控制同手部穩定性

11.參加完剪紙工作坊後，您預期佢可能點樣促進您嘅感覺功能？

- (a) 提高觸覺感知同細微觸感
- (b) 增強視覺感知同空間意識
- (c) 加強聽覺感知同環境敏感度
- (d) 提升整體感覺整合同知覺處理

12.您認為中國剪紙嘅邊啲方面令佢適合進行跨文化探索？

(揀一個或多個):

- (a) 視覺符號意義
- (b) 可以講故事潛力
- (c) 藝術體驗
- (d) 社區參與
- (e) 以上都唔係
- (f) 其他（請喺度填寫）

13.您認為中國剪紙嘅邊啲方面令佢適合進行認知提升？

(揀一個或多個):

- (a) 視覺符號意義
- (b) 可以講故事潛力
- (c) 藝術體驗
- (d) 社區參與
- (e) 以上都唔係
- (f) 其他（請喺度填寫）

Appendix C: Interview Outlines

C.1 Interview Outlines (English version)

Research Study Program - Interview Outline for Case study One

Chinese Immigrant Group: 10:00-13:00 Interview Outline

Specific Scenes and Details: Describe a specific scene or memorable detail from the papercutting workshop. Did it evoke any memories or emotions related to your hometown, traditions, or personal history?

Emotional Experience: While engaging in papercutting, did you experience any particular emotions? For example, did it evoke feelings of nostalgia, happiness, or cultural identity?

Thoughts and Reflections: During the papercutting process, did you have any thoughts or reflections? This could include thoughts about skills, perceptions of papercutting, and observed changes in yourself.

Cognitive Changes: Did you notice any cognitive changes during the papercutting process? For instance, new understandings of form, space, or artistic details?

Learning and Insights: Through papercutting, did you learn anything new? This could be skills, creativity, or understanding of culture and art.

Challenges and Solutions: Aside from the experience, did you encounter any cognitive challenges? If so, how did you address them?

Cultural Identity and Immigration Experience: How has papercutting impacted your cultural identity as an immigrant? What role has papercutting played in your immigration journey?

Papercutting and Social Connections: Did participating in papercutting activities help you meet other immigrants or locals? Did it lead to new social interactions and emotional connections? Did it help alleviate homesickness or stress?

Papercutting and Cognitive Health: Have you noticed any benefits of papercutting on your cognitive health, such as memory, attention, or learning abilities? Have these changes manifested in your daily life?

Research Study Program - Interview Outline for Case study Two

Outline for Interview: Wales Group, 13:30-16:30

Specific Scene and Details: Please describe the most striking or unforgettable scene or detail from your papercutting workshop.

Emotional Experience: Did you have any specific emotional experiences while papercutting? For instance, did you feel excited, joyful, puzzled, or anxious?

Reflection and Contemplation: During the papercutting process, did you engage in any reflections or contemplation? This could include thoughts about skills, perspectives on papercutting, or any personal observations of change.

Cognitive Changes: Did you notice any cognitive changes during papercutting? This could involve new understandings of form, space, artistic details, or any cognitive insights.

Learning and Realisations: Through papercutting, did you learn something new? This could be new skills, creative ideas, or even a deeper understanding of culture and art.

Challenges and Solutions: Apart from the experience, did you face any cognitive challenges? If so, how did you address them?

Cultural Diversity: Did experiencing different cultural traditions, stories, or symbols impact your cognitive health? Did these diverse cultural elements contribute to expanding your ways of thinking or cognitive abilities?

Impact on Cognitive Health: Have you noticed any impact of papercutting on your cognitive health? For instance, changes in memory, attention, or learning abilities. Have these changes manifested in your daily life?

C.2 Interview Outlines (Chinese version)

研究项目 - 案例研究 1（中国移民组）的采访提纲

中国移民组：10:00-13:00 采访提纲

具体场景和细节： 请描述一下您在剪纸工作坊中的一个特别场景或记忆深刻的细节。是否唤起了您与家乡、传统或者个人历史有关的记忆或情感？

情感体验： 在进行剪纸时，您是否感受到了特别的情感体验？发掘：（是否唤起了怀旧、快乐、文化认同等情感？）

思考和反思： 在剪纸的过程中，您是否有所思考或反思？比如技能、对剪纸的看法，以及自我观察到的变化等。

认知变化： 在剪纸过程中是否察觉到认知上的变化？比如形式、空间、艺术细节等认识上的新理解？

学习和领悟： 通过剪纸，您是否学到了新的东西？这可能是技巧、创造力，甚至是对文化和艺术的理解。

挑战与解决方案： 除了体验，您是否遇到认知方面的挑战？如果有，您是如何应对的？

文化认同与移民经历： 剪纸对您作为移民的文化认同产生了什么影响？在您的移民历程中，剪纸扮演了怎样的角色？

剪纸和社交联系： 参与剪纸活动是否让您结识了其他移民或本地人？这是否带来了新的社交互动和情感联系？它是否成为一种有助于减轻思乡之情或压力的方式？

剪纸与认知健康： 您是否觉察到剪纸对您的认知健康有所帮助？比如记忆、注意力、学习能力等方面是否有变化？这些变化是否在日常生活中有所体现？

研究项目 - 案例研究 2（威尔士组）的采访提纲

采访提纲：威尔士组，13:30-16:30

具体场景和细节：请描述一下您在剪纸工作坊中最引人注目或难以忘怀的场景或细节。

情感体验：在剪纸过程中，您是否有任何特定的情感体验？例如，您是否感到兴奋、快乐、困惑或焦虑？

反思与思考：在剪纸过程中，您是否进行了任何反思或思考？这可能包括对技能的思考、对剪纸的看法，或任何个人观察到的变化。

认知变化：在剪纸过程中，您是否察觉到任何认知上的变化？这可能涉及对形式、空间、艺术细节的新的理解，或任何认知上的启发。

学习和领悟：通过剪纸，您是否学到了新的东西？这可能是新的技能、创造性的想法，甚至是对文化和艺术的更深入理解。

挑战与解决方案：除了体验，您是否遇到过任何认知方面的挑战？如果有，您是如何解决的？

文化多样性：体验不同的文化传统、故事或符号是否对您的认知健康产生了影响？这些多样的文化元素是否有助于拓宽您的思维方式或认知能力？

对认知健康的影响：您是否注意到剪纸对您的认知健康有任何影响？例如，记忆力、注意力或学习能力的变化。这些变化是否在您的日常生活中有所体现？

Appendix D: Transcripts of Recorded Interviews

D.1 Interview Transcripts (Chinese version for Case Study One)

学术助理 1:

Q1: 能描述一下在这次剪纸工作坊中的一个特别场景或深刻记忆吗？这个场景或感受是否能唤起你与家乡传统或个人历史相关的记忆和情感？

A1: 在剪纸工作坊中，我印象最深的是我们尝试了一种传统的剪纸技艺，这让我想起小时候在家乡过节时的场景。我记得我们也会剪一些纸艺品来装饰，那时候虽然技艺不精，但非常享受整个过程。它让我联想到家乡的风俗和那些温暖的记忆。

Q2: 在剪纸过程中，你是否有特别的情感体验，例如怀旧、快乐或文化认同等？

A2: 是的，在剪纸的时候，我感到一种深深的怀旧感。每一次剪切，都好像是在重温过去，我感到非常快乐和满足。同时，这也让我对中华文化有了更深的认同感，感觉自己是在传承和体验一种悠久的艺术和文化。

Q3: 在剪纸的过程中，你是否有反思或思考？例如对剪纸技术、剪纸的想法或自我观察到的变化等？

A3: 在剪纸过程中，我确实进行了一些反思，比如如何改进我的剪纸技术，如何让作品更有艺术感。我也思考了剪纸在文化和艺术上的意义，以及它对我个人的影响。通过不断尝试和改进，我发现自己的技巧和审美在慢慢提升。

Q4: 在展示过程中，你是否感觉到认知上的变化？例如对空间、艺术和形式有了新的理解？

A4: 展示过程中，我感到自己对艺术的理解更深了。我开始注意到空间的利用，以及如何通过剪纸表达不同的形式和内容。我也更加理解了剪纸的艺术性和它在文化中的位置。

Q5: 除了体验之外，你是否遇到了认知方面的挑战？

A5: 是的，剪纸活动让我遇到了一些认知挑战，比如如何理解和运用不同的剪纸技巧，以及如何创造出既传统又有创新的作品。这些挑战推动了我的思维和认知能力的发展。

Q6: 剪纸对于你作为移民的文化认同产生了什么影响？

A6: 作为移民，参与剪纸活动让我感到更加接近我的文化根源。它让我感到自豪，同时也提醒我保持与家乡文化的联系。这个活动是一种文化的桥梁，帮助我在新的环境中保持自我认同。

Q7: 参加剪纸活动是否让你意识到更多问题，并对你的社交活动和情感联系产生了影响？

A7: 参加剪纸活动后，我意识到了更多关于文化和艺术的问题。这些活动不仅仅是技巧上的练习，也是一种社交和情感的交流。通过这个活动，我结识了很多有同样兴趣的人，感到社交圈子变得更丰富，情感联系也更加紧密。

Q8: 你认为剪纸活动对你的认知健康有帮助吗？例如，是否帮助了你的记忆力或注意力？

A8: 我认为剪纸活动对我的认知健康很有帮助。它训练了我的注意力和细致度，同时在记忆上也有所帮助，因为我需要记住不同的剪纸图案和技巧。在活动中，我感到精神集中，思维也更加活跃。

学术助理 2:

Q1: 你在这次剪纸工作坊中有没有哪个场景或细节让你记忆犹新？这是否与你的家乡传统或个人历史有关联？

A1: 在工作坊中，我记得有一个场景，我们在制作红包袋，那种手工艺让我想起小时候与祖母一起做手工的时光。那些细节，如红包上的图案和纸的质感，都让我深深怀念，它不仅是技艺，也是与家乡的情感联系。

Q2: 在剪纸过程中，你有没有感受到一些特别的情感体验，比如怀旧、快乐或文化认同？

A2: 是的，剪纸过程中，我感到一种浓厚的怀旧感和文化认同。每一次手工的折叠和切割，都仿佛带我回到了童年，感受到了传统的乐趣和温暖。这种活动让我对自己的文化传统有了更深的认同和理解。

Q3: 在剪纸的过程中，你是否有所思考或反思，比如对手工技能、剪纸的想法或自我观察到的变化？

A3: 在整个剪纸过程中，我一直在思考如何提升自己的手工技能和艺术审美。我注意到自己在细节处理上变得更加细致，对于剪纸的整体构图和设计也有了新的理解和想法。这些反思让我感到，我不仅在技能上有所提升，而且在审美上也有所成长。

Q4: 在进行剪纸的过程中，你有没有感觉到自己的认知有所变化，比如对空间、艺术细节的理解有所加深？

A4: 在剪纸过程中，我的确感受到了认知上的变化。我开始更加注意空间的利用和艺术的表现，每一次剪切都是对空间和形态的深思。这种细致的工作让我对艺术有了更深的理解和认识，也锻炼了我的空间想象力。

Q5: 除了剪纸的体验，你在认知方面还遇到了哪些挑战？

A5: 在剪纸的过程中，我遇到了一些认知上的挑战，主要是如何将传统的剪纸技巧与现代的审美相结合。我尝试理解和掌握不同的剪纸技法，同时也在努力使我的作品既有传统味道又不失现代感。这个挑战让我在认知和创造力上都有所提升。

学术助理 3:

Q: 在这次剪纸工作坊中, 你有哪些特别的体验或感受?

A: 我对这个工作坊中式元素的浓厚印象感到非常深刻, 对此我抱有很高的期待和向往。我在剪纸时回想起上一次剪纸的体验, 意识到我已经有了了一定的基础。整个过程中我非常专注和投入, 因为我很想把剪纸做好, 这并不容易。特别是在剪龙的过程中, 老师展示了三种以上龙的形态变化, 这不仅让我对龙的形象有了新的认识, 也在动手操作中感受到形式上的变化, 并对艺术细节有了新的理解。我也学到了一些剪纸的基本技能, 感谢老师从基础花纹教起, 让我不仅仅是简单地画好再剪出来。这次工作坊具有挑战性, 尤其是在要求自己创作的部分, 最初我还是有点胆怯的。虽然我在移民前接触剪纸不多, 但这次工作坊让我喜欢上了剪纸, 遇到了志同道合的剪纸老师和讲广东话的志愿者, 让我感到亲切, 这是一种很好的社交体验。我觉得剪纸对提高注意力和学习能力大有裨益。在斯旺西, 中国文化的传播是从五六年前开始的, 感谢那些来自国内的老师和志愿者。现在的这种文化传播让我们感到很开心, 让我们感觉像回到家一样, 我还记得做月饼的体验, 这些都让我们感到非常亲切。

学术助理 4:

Q1: 参加剪纸工作坊的体验对你来说意味着什么?

A1: 我参加剪纸工作坊非常开心, 感觉就像是把我的烦恼都剪掉了。在剪纸的过程中, 我感受到一种回到童年的快乐和自由。这个体验对我来说, 不仅是一次手工艺的学习, 也是一次心灵的净化。

Q2: 你怎么看待剪纸工作坊与认知健康之间的关联?

A2: 我认为剪纸和认知健康有很大的关联。剪纸工作坊不仅是学习剪纸技艺的地方, 也是提升认知能力的好机会。在剪纸过程中, 我需要集中注意力, 记忆各种花纹, 反复练习, 这些都对提升我的学习能力和思考能力有很大帮助。

Q3: 你在剪纸工作坊学习过程中遇到了哪些挑战?

A3: 学习剪纸的过程中, 我遇到了不少挑战。一开始学习基础花纹时, 感觉挺难的, 需要记住很多东西, 还要反复练习。但当我最终把这些花纹都剪出来时, 我发现学习这些基础花纹是多么重要, 它们都在作品中用上了。这个过程虽然有挑战, 但也非常有成就感。

Q4: 你认为定期制作小作品对你的剪纸技能和认知健康有什么影响?

A4: 定期制作小作品对我来说是个非常好的练习。半年下来, 我可以积累很多作品, 这不仅让我技能提升, 也给了我持续学习的动力。每次制作都需要集中注意力、记忆和思考, 长期下来对我的认知健康有很大的帮助。

D.2 Interview Transcripts (English version for Case Study One)

Academic Assistant 1

Q1: Can you describe a special scene or deep memory from this paper-cutting workshop? Does this scene or feeling evoke memories and emotions related to your hometown traditions or personal history?

A1: In the papercutting workshop, the most impressive thing to me was trying out a traditional paper-cutting technique, which reminded me of the festive scenes from my childhood back in my hometown. I remember us cutting out paper crafts for decoration. Though not skilled, I thoroughly enjoyed the process. It evoked memories and sentiments associated with my hometown's customs and those warm memories.

Q2: During the papercutting process, did you experience any particular emotional experiences, such as nostalgia, happiness, or cultural identity?

A2: Yes, while papercutting, I felt a deep sense of nostalgia. Each cut seemed like revisiting the past, bringing me immense joy and contentment. At the same time, it deepened my identification with Chinese culture, feeling as if I was inheriting and experiencing an ancient art and culture.

Q3: Did you reflect or think during the paper-cutting process? For example, about paper-cutting techniques, your thoughts on paper-cutting, or changes you observed in yourself?

A3: Throughout the paper-cutting process, I indeed reflected a lot, such as how to improve my paper-cutting skills and make the works more artistic. I also contemplated the significance of paper-cutting in culture and art and its impact on me personally. By continuously trying and improving, I found that both my skills and aesthetic judgment were gradually improving.

Q4: During the presentation process, did you feel a change in cognition? For example, a new understanding of space, art, and form?

A4: During the presentation process, I felt a deeper understanding of art. I began to notice the use of space and how to express different forms and content through papercutting. I also gained a deeper understanding of the artistry of paper-cutting and its place in culture.

Q5: Besides the experience itself, did you encounter any cognitive challenges?

A5: Yes, the paper-cutting activity presented several cognitive challenges, such as understanding and applying different paper-cutting techniques and creating works that are both traditional and innovative. These challenges stimulated my thinking and cognitive abilities.

Q6: What impact has papercutting had on your cultural identity as an immigrant?

A6: As an immigrant, participating in paper-cutting activities made me feel closer to my cultural roots. It made me proud and also reminded me to maintain a connection with my hometown culture. This activity acted as a cultural bridge, helping me maintain my identity in a new environment.

Q7: Did participating in the paper-cutting activity make you aware of more issues, and did it impact your social activities and emotional connections?

A7: After participating in the paper-cutting activity, I became more aware of cultural and artistic issues. The activity wasn't just an exercise in skill but also a form of social and emotional exchange. Through this activity, I met many people with similar interests, enriching my social circle and tightening my emotional connections.

Q8: Do you think the paper-cutting activity has helped your cognitive health? For example, did it help with your memory or attention?

A8: I believe the papercutting activity has been beneficial for my cognitive health. It trained my attention and precision, and it also helped with memory, as I needed to remember different paper-cutting patterns and techniques. During the activity, I felt mentally focused and more active in thinking.

Academic Assistant 2

Q1: Do you have any vivid memory or scene from this paper-cutting workshop? Does it relate to your hometown's traditions or your personal history?

A1: In the workshop, I vividly remember a scene where we were making red envelope bags. This craft reminded me of the times I spent doing handicrafts with my grandmother during my childhood. The details, like the patterns on the red envelopes and the texture of the paper, deeply resonated with me, evoking not just skills but also emotional ties to my hometown.

Q2: During the paper-cutting process, did you experience any special emotional feelings such as nostalgia, happiness, or cultural identity?

A2: Yes, during the paper-cutting process, I felt a strong sense of nostalgia and cultural identity. Every fold and cut seemed to take me back to my childhood, letting me relive the traditional joy and warmth. This activity deepened my understanding and identification with my cultural heritage.

Q3: Did you engage in any reflection or thinking during the paper-cutting process? For example, about paper-cutting techniques, your thoughts on paper-cutting, or changes you observed in yourself?

A3: Throughout the paper-cutting process, I was constantly thinking about how to improve my craftsmanship and artistic sense. I noticed that I became more meticulous in handling details and gained a new understanding of the overall composition and design of papercutting. These reflections made me realise that I have improved not just in skill but also in aesthetic appreciation.

Q4: Did you feel any change in cognition during the paper-cutting process, such as a deeper understanding of space, art, and form?

A4: Indeed, I experienced cognitive changes during the paper-cutting process. I became more aware of space utilization and artistic expression with each cut, contemplating the spatial and formative aspects deeply. This detailed work deepened my understanding of art and trained my spatial imagination.

Q5: Besides the experience of paper-cutting itself, did you face any cognitive challenges?

A5: During the paper-cutting process, I encountered several cognitive challenges, mainly how to integrate traditional paper-cutting techniques with modern aesthetics. I attempted to understand and master different paper-cutting methods while striving to make my works both traditional and innovative. These challenges enhanced my cognitive and creative abilities.

Academic Assistant 3

Q: What special experiences or feelings did you have in this paper-cutting workshop?

A: I was deeply impressed by the strong presence of Chinese elements in this workshop, and I had high expectations and aspirations for it. When I was cutting paper, I thought back to my previous paper-cutting experiences and realised I already had some foundation. I was very focused and involved throughout the process, as I was keen to do well, which is not easy. In this session, cutting dragons, the teacher provided more than three forms of dragons, which allowed me to understand the dragon's form and experience the changes in its form while making it myself. I gained new insights into artistic details and a fresh understanding of the dragons in my culture. I also learned some basic paper-cutting skills, thanks to the teacher's method of starting with basic patterns. This workshop was quite challenging, especially in the second part where I had to create freely, and I was initially a bit timid. I wasn't very exposed to paper-cutting before immigrating. However, I really enjoyed the paper-cutting workshop because it introduced me to the paper-cutting teacher, ignited my desire to learn

paper-cutting, and I met many Cantonese-speaking volunteers, which felt very comforting. It was a great social experience. I think paper-cutting helps with attention and learning ability. Chinese culture started spreading in Swansea about five or six years ago, thanks to teachers and volunteers from China. This spread of culture has made us very happy, making us feel close to home, and I remember making mooncakes; all these experiences felt like returning home.

Academic Assistant 4

Q1: What does participate in the papercutting workshop mean to you?

A1: I was very happy to participate in the paper-cutting workshop; it felt like I was cutting away my worries. The process of papercutting took me back to my childhood, a time of joy and freedom. This experience wasn't just about learning a handicraft; it was also a purification of the soul. I loved the workshop's instructional approach, starting from basic patterns, although some parts were challenging and required a lot of memorization and practice. But once I finished, I realised how important learning the basic patterns was, as they were all used in the final product. Regularly creating small pieces over six months allowed me to accumulate a lot, which was great! I think there's a significant correlation between paper-cutting and cognitive health, involving learning, memory, and thinking.

D.3 Interview Transcripts (Case Study Two Welsh Group)

Academic Assistant 1

Q: This is tested to be absolutely splendid. Here we have tester b for the outline for the interview, Wales group 1330~1630 for the research study program. First question, specific scene and details. Please describe the more striking or unforgettable scene or detail from your paper cutting workshop experience today,

A: Being amongst other people or doing the same project was very interesting. Doing something, I haven't done before and mixing with people are of a different country.

Q: And what have you? Great. Second question, emotional experience. Did you have any specific emotional experiences while paper cut in? For instance, did you feel excited, joyful, puzzled, or may be anxious,

A: joyful, unsure how it was going to turn out, and what sort of feelings aroused when you were experiencing the uncertainty? I'm anxiety.

Q: Thank you. Reflection and contemplation. During the paper cutting process, did you engage in any reflections or contemplation? This could include thoughts about the skills you had learned and were using. Maybe your perspectives on the paper cutting methods, or any personal observations of change that you noticed in either your emotional mood or your anxiety, did it lessen, or did it heighten?

A: For example, I think the emotional mood was was very good. Being amongst other people are doing the same thing, and it was like a very friendly atmosphere. Yeah, it was quite good emotionally.

Q: And then thinking about the skills of the paper cut, then could you retain the skills that you were learning? Were you forgetting directions that you were being told?

A: I think I did have to ask once or twice.

Q: Great. cognitive changes. Did you notice any cognitive changes during paper cutting? This could involve new understandings of the form the space, archetype, artistic details, or any call cognitive insights. So, did you notice any cognitive changes?

A: I think maybe along the artistic lines,

Q: there what changes come to mind when you think about that?

A: Because I haven't done anything like that for some years. And I was surprised that I'm not very good at it. I am these days, great learning and realizations through papercutting.

Q: Did you learn something new? This could be new skills, creative ideas, or even a deeper understanding of culture and art.

Q: Yes. What stands out the most when you think about that cultural?

A: There are so many different meanings to drawing things and things like that in the Chinese word and I know lots of things have different meanings.

Q: Great. Yeah. And challenges and solutions apart from the experience. Did you face any cognitive challenges?

A: No, I wouldn't have not to.

Q: Okay. Cultural diversity did experience in different cultural traditions, stories or symbols, impact your cognitive health, did these diverse cultural elements contribute to expand in your ways of thinking or cognitive abilities? So the first one, did you experience any changing your cognitive health when you were learning about different cultural to tradition.

A: Regarding China, I won't say that there are any changes really.

Q: Do you think any of these elements have inspired you or expanded your cognitive abilities in any way? Do think you will think about them again? If you go away from here one day?

A: I won't forget it straight away that it's just been very pleasurable. And the knowledge of the paper cutting everything, all everything has different meanings in the Chinese word, and which is very interesting.

Q: Thank you. And impact on cognitive health. This is the last question. Have you noticed any impact of that paper cut in hand on your cognitive health, for instance, changes in your memory, changes in your attention, span, or changes in your learning abilities that perhaps you noticed. Have these changes manifested in any way.

A: I was very surprised about my attention span. Normally, I haven't been able to be so attentive for so long, but today surprise me. Thank you very much in taking part of the survey.

Academic Assistant2

This is test subject. This is questioning one specific scene and details. This is the outline for interview Wales group 13:30~1630. Here I have tester a with me and now we will start the first interview.

Q: Okay. Please describe the most striking or unforgettable scene or detail from your paper cutting workshop experience if you can think of anything.

A: That comes to mind the peacefulness when everybody's concentrated.

Q: And move it on to the emotional experience. Did you have any specific emotional experiences while paper cut in? For instance, did you feel excited, joyful, puzzled, or may be anxious?

A: A peace? I would say.

Q: Can you elaborate on that at all? What was peaceful? Do you think it's quite common?

A: The environment was calm. And the fact you were concentrating was eliminated all of the sort of aspects of your life.

Q: Great. And then moving on to the third question, reflection and contemplation. During the paper cutting process, did you engage in any reflections or contemplation? This can include thoughts about the skills that you were using, perspectives on paper cutting, or any personal observations of change that you noticed.

A: You probably needed a little bit of patience. I'm listening skills really to know what you're doing.

Q: Great. Moving on to cognitive changes. Did you notice any cognitive changes during the paper cutting? This could involve new understandings of the form the space, artistic details or any cognitive insights.

A: No, probably not, I don't know. Maybe this summer yet, I don't realise. I can't sort of think of any.

Q: That's great. Then the learning and realizations through paper cutting, did you learn something new? This could be new skills, creative ideas, or even a deeper understanding of culture and art.

A: maybe probably a deeper understanding culture. That would be the main one. I think.

Q: thank you. Challenges and solutions. Apart from the experience, did you face any cognitive challenges? If so, how did you address them?

A: I don't know.

Q: Did you regarding this question there? Was it not something new that you identified in the process of paper cut in that you've found difficult or quite easy?

A: Yes, probably sitting still was hard for me.

Q: Great. Cultural diversity. Today did experience in different cultural traditions, stories or symbols, impact your cognitive health. This is regarding the Chinese aspects and did these

diverse cultural elements contribute to expand in your ways of thinking or cognitive abilities?

A: Like symbols, ying and yang had some sort of effect, don't know how to describe the effects, but so great and impact on cognitive health.

Q: Have you noticed any impact of paper cutting or that paper cutting had on your cognitive health? And when I mention in cognitive health, we're thinking about your emotions, happy, sad, joyful content, may be relaxed or calm, or maybe changes in memory. Your attention span, or your learning abilities of these changes manifested.

A: During the II probably realised that my attention span is quite low, more than I probably would have thought of previously. Other than that, I suppose for the time I gave it attention, it was quite relaxing. That's wonderful. Thank you for who we are.

Academic Assistant 3

Q: Can we start? It's the organization that was most of the striking office. And then we found the whole organization, very well organised, very well presented to use very clear from what the course is going to involve. So, did you emotionally speak in very kind?

A: It was a very common coincidence, and they was a little bit of anxiety because we have never done it. Soon went, well, once we started the process, very charming when you started, then when the anxiety disappears.

Q: Yes. And did you engage in the national contribution?

A: So, no, I didn't. But this required total focus, the focus on paper copies, and it has not make me concentrate, and it makes me communicate.

Q: So I think you mentioned, although that's the teamwork, you work those with yourself and with the team member guess. That's right. We presume go.

A: And the Challenge for me is I will definitely do it again if you need on time experience and just repetitive to get to a good standard.

Q: Yes, I thought it was interesting to learn about the Chinese symbols. Do you want what they meant?

A: The Chinese and they can? So, I thought that was good. So, I was thinking that maybe it changes in memory attention. It made you concentrate, it made you question how they go on their major development, where you want to go on the hand that makes sense of how it makes you concentrate, because you want it's hard, you make your customer. You have to focus, which was good the process of cutting to focus. And that was very good.

Q: Yeah. I in nowadays, it's not very easy. You find something. You put yourself to focus on that, because you have so many things to abstract. You have so many information you need to concern.

A: I think this is it good to get people together and work together and create something individual, but as a team. So, each look how great what this woman did look at me.

Q: Thank you very much. Thank you. That's good. So that's a very good point. Can you explain me more how to that is your own work, but you also appreciate work with other people. So how?

A: Well, because we were all maybe working from AA base. We were all in the same club in these days. We've all created different things at different levels. We're all peace for each of them and we achieve downtown. There were instructions, and the teacher was clear and concise, and she was able to help us along the way, want to get rid of any concerns or any worries. Does that make sense?

Q: Thank you. I don't know whether you could measure after one performance, the impact on your cognitive health. I don't know if you could measure that.

A: After one, the long term, it would be positive. I would say, yeah.

Q: if I give the rating, if maybe from maybe just a satisfaction, from the 1 to 10, what your rating would be for this day.

A: I give it 10 to 10, 100%. I would because I was more. I didn't expect it to be. I don't know what I expected. It was brilliant. I would do it again. Now. Great. The repeat, I would love this.

Q: Do you have any other suggestions if you want to come again? If you come again?

A: I don't know if I missed it, but I would make sure everybody introduces themselves to each other. That's good because I didn't know this gentleman's name of this lady's name. So Jessica would maybe say please into bad markers. I think Jessica think, say no error, yes, but I didn't know anything. So that is mainly and that's very good. But I would say this is a great way for improving your what we would say, mental health, very calm and very interesting. And all of us don't protecting at school. When you have very little children. We've lost it through the way. So I was revisiting that very good.

Q: Excellent. Thank you very much. Thank you. I thought Jessica is just is going to take me up and stop.

Academic Assistant 4

Q: Hi. So please describe the most striking or unforgettable scene or detail from your paper cutter.

A: The most memorable skin is very fineness with which real paper cutters work there are.

Q: Yeah, so that's, so you mean like the artist, it's a very fine work. Yeah, so you're really impressed by that.

A: It's good detail and detail that they use indeed, is very impressive. Super impressive.

Q: Ok. Did you have any specific emotional experience while paper cutting, for instance, did you feel excited, joyful, puzzled if anything?

A: It was joyful, there was pleasure in doing something. You've never done before.

Okay? When you started and anything negative, not only frustration, but I haven't got the skill to do.

Q: All right. I see. I see. During the paper cutting process, did you engage any reflections or contemplation? This could include thoughts about skills, perspectives on paper cuttings, or any personal observations of change.

A: I can't really say. I do not really, really, not. I said it was partially because I was chatting to the person next to me. So I was always engaging with someone, so I didn't have time to reflect. I see.

Q: So did you notice any kind of conjugated changes during paper cuts? And this could involve new understandings of form space? Artistic detail on the inside. A: Yes. There is something to do with learning, to cut the basic shapes, but you're not cutting the object. I you cut in a space in an object. So I was thinking I was cutting out a circle or something, but I wasn't kind of want to say I was cutting a circle into something else. So that was my cognitive realisation through paper cutting.

Q: Did you learn something new? This could be new skills, creative ideas, or even a deeper understanding of culture and experiences. Do you ever I process?

A: not really, but that is a big ask. It's a big question to us. So not really well, it's a very big could be a really deep and lots of things to talk about.

Q: Yeah. So apart from the experience, you face any cognitive challenges. If so, how do you address people together?

A: Good question. I don't really have any cognitive challenges. I don't really suffer from mental health to say. Like most of the people, if I suffer from them from at all its anxiety, and

then when you do something which makes you concentrate on something other than yourself, then your anxiety diminishes. So you think paper cutting can help. Absolutely. So you concentrate on something. It's another lesson.

Q: Ok yes, so did experiencing different cultural traditions, stories of symbols, impact your conscious of power. Do these diverse cultural elements contribute to expand your ways of thinking or conscious and ability?

A: Okay, so the one thing that is new for me would be the imagery of the Chinese Serbia, the Chinese animals and the stuff that goes with them and the Chinese astrology. And I find that interesting it's different.

Q:I'm interested in the last something new for you. I yeah totally. Yeah, have you noticed any impact of paper cutting on your cognitive health? For instance, changes in memory, attention and learning politics? Have these changes manifested in your daily life? I've only done the workshop. Yeah

Academic Assistant 5

Q1: How did you feel during the workshop?

A1: It started as a challenge but eventually felt like a brilliant experience. The craft was admirable, and even though it was challenging, it didn't feel competitive or stressful. this is happiness and happy and just happy relax. It is an area. Yeah, how was your experience like brilliant? I really like a little bit so hard or at the beginning Challenge, but to be, it's like it just acted. So, isn't it? Yes, but so really can admire the craft is that now that we've tried and telephone, I will now look at these different because you should do this thing. Yeah. I know we're looking at it. I know I'm a professional perspective and you were really good introducing a lot of things. The main thing for me was you kept my land, these things II really enjoy. That's the way you get back. Yeah, and intriguing if he moved on so nicely from 1 bit next.

Q2: What aspects of the workshop did you enjoy?

A2: I enjoyed the introduction to many things and how the workshop was conducted. There was enjoyment in the challenge, laughter, and a sense of camaraderie without anyone taking offense.

Q3: How did the workshop impact your view on paper-cutting and Chinese culture?

A3: The workshop has made me look at paper-cutting and aspects of Chinese culture differently, from a professional perspective. Some cultural aspects were initially hard to understand, but now there's an appreciation for the craft and culture.

Q4: How did you feel about the group dynamics and the environment?

A4: The environment was relaxed, and the group was good. Even though there was frustration with the morning group's hesitance, this session felt more open and enjoyable. This group was less afraid of making mistakes and more liberated compared to a morning group, which was a bit limited and afraid of errors. We were laughing at each other, doing something. And nobody when you were laughing a man, that's a nobody would if we lasted his right, would it take it personal? No. And it's okay. It's a bit of fun. Yeah, that's like, yeah, you basically that it is. Ronnie said the dragon looks pregnant, which is a girl, means reproduction, Chinese, people love that.

Q5: Any final thoughts or feelings about the workshop?

A5: The workshop was a positive, enlightening experience, and I appreciate all the effort put into it. I am thankful for the friends made and the skills learned.

Academic Assistant 6

Q1: Could you please describe the most striking detail from your experience? What stood out in your mind?

A1: With a striking or unforgettable scene or detail, just being seen as and so as well as someone when she is so introduction, so clear, what I missed was going to circle into something, 22million~1 questions into the show the legal on them on their own around anywhere on there.

Q2: Do you have any specific emotional experiences or feelings, such as excitement or anxiety, associated with this paper project?

A2: It is very exciting, very exciting. But when you face a Challenge, like you have to cut a little more complicated, that's confidence to get that. It was an opportunity to stretch my skills.

Q3: During the paper cutting process, did you engage in any reflections or contemplation?

A3: It was back to you soon. It was funny. It as much as it is that it is so much. It sounds like it. So as a Challenge because of skills, right?

Q4: Did you notice any cultivated changes in the paper clergy and that will involve new understandings of a fall in space, artistic details or any cognitive instance?

A4: Do you explain it to me? How many of us is related? What is familiar is the system is going to get out here to have a community of the single stage with. You seem to know not quite as much more than nine perceptions, not shy.

Q5: How do you keep yourself learning and enjoying the process even when facing challenges?

A5: I love to learn it and I enjoy it. Now I enjoy it. I didn't want too much or just nice and dark so nicely. I enjoyed taking my time. I thought. So take it that is really, really interesting.

Q6: How did experiencing different cultural traditions, stories, or symbols impact your cognitive health?

A6: Yes. It is diverse. Cultural animals contribute to expanding founding your ways of thinking. They allowed me to see from, let's say, taking a new way to the moment.

Q7: When facing something new, do you rely on past experiences, or do you absorb something new into your mind?

A7: No, it's just new. Everything was, as I asked, focus on enjoying the new like how many for a couple of people that I can't, yeah. I can see that I can see it is of the pleased and hungry.

Q8: Have you noticed any changes in memory, attention, or learning abilities after the workshop?

A8: That's difficult right now that I don't think many of you have seen it, but certainly, the feeling of most well-being, it's satisfaction. What's the value of value in group this action? To see how to.

Appendix E: Analysis of the Questionnaires

Detailed analysis and interpretation of the questionnaire data, highlighting key findings and trends.

E.1 Analysis of Case Study One: Chinese Immigrant Group

TABLE 1: CHINESE GROUP QUESTION SURVEY BEFORE WORKSHOP		
QUESTION	Options	Statistics
1. Your age range:	(a) 18-29	
	(b) 30-44	
	(c) 45-70	7
	(d) 70+	1
2. Have you previously delved into the concept of cognitive health?	Yes	5
	No	2
	Maybe	1
	No opinion	
3. How significant do you consider the current state of cognitive health among humans to be?	(a) Very significant	6
	(b) Significant	2
	(c) Moderate	
	(d) Insignificant	
	(e) Not applicable	
4. Do you think that artistic and creative participation has the potential to enhance cognitive health?	Yes	7
	No	1
	Maybe	
	No opinion	
5. Do you have an artistic background or any personal experience with artistic workings?	(a) No artistic experience	7
	(b) Some artistic experience	1
	(c) Extensive artistic experience	
6. Is this your first experience Chinese papercutting art practice?	Yes	4
	NO	4
7. What is your current level of familiarity with Chinese papercutting art?	(a) Very familiar	
	(b) Moderately familiar	
	(c) Slightly familiar	4
	(d) Not familiar at all	4
8. How interested are you in exploring Chinese papercutting art?	(a) Very interested	4

	(b) Moderately interested	3
	(c) Slightly interested	1
	(d) Not interested	
9. Before experiencing Chinese papercutting, do you anticipate it will positively impact your cognitive health?	Yes	2
	No	
	Maybe	6
	No opinion	
10. By participating in this study, what potential changes in cognitive health would you expect to be affected? (Select as many as you think relevant)	(a) Thinking	3
	(b) Learning	4
	(c) Memory	5
	(d) Something else (please write here)	2
11. What are your expectations for the workshop? (Select one or more)	(a) Learning about Chinese culture	7
	(b) Developing artistic skills	2
	(c) Cognitive enhancement	2
	(d) Social interaction and enjoyment	5

TABLE 2: CHINESE GROUP QUESTION SURVEY AFTER WORKSHOP		
QUESTION	OPTION	STATISTICS
1.How enjoyable did you find the workshop experience?	(a) Enjoyed	7
	(b) Somewhat enjoyed	1
	(c) Didn't enjoy	
2.What is your current level of familiarity with Chinese papercutting art?	(a) Very familiar	
	(b) Moderately familiar	1
	(c) Slightly familiar	7
	(d) Not familiar at all	
3. Do you think the Chinese papercutting workshop had a positive effect on your cognitive health?	Yes	7
	No	
	Maybe	1
	No opinion	
4. Do you believe the workshop may have a potential positive effect on your cognitive health in the future?	Yes	6
	No	
	Maybe	2
	No opinion	
5. After participating in the Chinese papercutting workshop, do you feel more inclined to engage in similar cultural activities in the future?	Yes	7
	No	
	Maybe	1
	No opinion	
6. Could cross-cultural engagement, as experienced in this workshop, positively impact cognitive health?	Yes	6
	No	
	Maybe	2
	No opinion	
7. Did the workshop change your perspective on the relationship between Chinese papercutting and cognitive well-being?	Yes	5
	No	
	Maybe	3
	No opinion	
8. Have you noticed any changes in cognitive health due to this workshop experience?		
Thinking:	(a) Significant improvement	
	(b) Moderate improvement	6
	(c) Slight improvement	2
	(d) No change	
Learning:	(a) Significant improvement	1
	(b) Moderate improvement	5
	(c) Slight improvement	2
	(d) No change	
Memory:	(a) Significant improvement	1
	(b) Moderate improvement	3
	(c) Slight improvement	3
	(d) No change	1

9. After participating in the papercutting workshop, how do you think it may contribute to enhancing your emotional functioning?	(a) Improved emotional expression	
	(b) Stress relief and relaxation	6
	(c) Increased self-expression and awareness	
	(d) Boosted creativity and sense of achievement	2
10. After participating in the papercutting workshop, how do you anticipate it may contribute to enhancing your motor functioning?	(a) Improved hand coordination and fine motor skills	2
	(b) Enhanced hand flexibility and muscle control	3
	(c) Strengthened hand-eye coordination and spatial cognitive abilities	4
	(d) Enhanced overall motor control and hand stability	
11. After participating in the papercutting workshop, how do you expect it might contribute to enhancing your sensory functioning?	(a) Improved tactile perception and fine-touch sensitivity	2
	(b) Enhanced visual perception and spatial awareness	3
	(c) Strengthened auditory perception and environmental sensitivity	
	(d) Enhanced overall sensory integration and perceptual processing	3
12. What aspects of Chinese papercutting would you think make it suitable for cross-cultural exploration? (Select one or more):	(a) Visual symbolism	5
	(b) Storytelling potential	
	(c) Art experience	5
	(d) Community engagement	6
	(e) None of the above	
	(f) Something else (please write here)	
13. What aspects of Chinese papercutting would you think make it suitable for and cognitive enhancement? (Select one or more):	(a) Visual symbolism	5
	(b) Storytelling potential	1
	(c) Art experience	4
	(d) Community engagement	6
	(e) None of the above	
	(f) Something else (please write here)	

E.2 Analysis of Case Study Two: Welsh Resident Group

TABLE 1: WELSH GROUP QUESTION SURVEY BEFORE WORKSHOP			
QUESTION	Options	Statistics	
1. Your age range:	(a) 18-29		
	(b) 30-44		
	(c) 45-70	5	
	(d) 70+	4	
2. Have you previously delved into the concept of cognitive health?	Yes	3	
	No	5	
	Maybe	1	
	No opinion		
3. How significant do you consider the current state of cognitive health among humans to be?	(a) Very significant	5	
	(b) Significant	3	
	(c) Moderate	1	
	(d) Insignificant		
	(e) Not applicable		
4. Do you think that artistic and creative participation has the potential to enhance cognitive health?	Yes	7	
	No		
	Maybe	2	
	No opinion		
5. Do you have an artistic background or any personal experience with artistic workings?	(a) No artistic experience	6	
	(b) Some artistic experience	1	
	(c) Extensive artistic experience	2	
6. Is this your first experience of Chinese culture?	Yes	4	
	NO	5	
7. Is this your first experience Chinese papercutting art practice?	Yes	8	
	NO	1	
8. What is your current level of familiarity with Chinese papercutting art?	(a) Very familiar		
	(b) Moderately familiar	2	
	(c) Slightly familiar	1	
	(d) Not familiar at all	6	
	(a) Very interested	5	

9.How interested are you in exploring Chinese papercutting art?	(b) Moderately interested	4	
	(c) Slightly interested		
	(d) Not interested		
10.Before experiencing Chinese papercutting, do you anticipate it will positively impact your cognitive health?	Yes	2	
	No		
	Maybe	7	
	No opinion		
11. By participating in this study, what potential changes in cognitive health would you expect to be affected? (Select as many as you think relevant)	(a)Thinking	4	
	(b) Learning	5	
	(c) Memory	5	
	(d) Something else (please write here)	2	concentration relaxed
12.What are your expectations for the workshop? (Select one or more)	(a) Learning about Chinese culture	6	
	(b) Developing artistic skills	5	
	(c) Cognitive enhancement	7	
	(d) Social interaction and enjoyment	7	

TABLE 2: WELSH GROUP QUESTION SURVEY AFTER WORKSHOP		
QUESTION	OPTION	STATISTICS
1.How enjoyable did you find the workshop experience?	(a) Enjoyed	9
	(b) Somewhat enjoyed	
	(c) Didn't enjoy	
2.What is your current level of familiarity with Chinese papercutting art?	(a) Very familiar	
	(b) Moderately familiar	2
	(c) Slightly familiar	4
	(d) Not familiar at all	3
3. Do you think the Chinese papercutting workshop had a positive effect on your cognitive health?	Yes	8
	No	
	Maybe	1
	No opinion	
4. Do you believe the workshop may have a potential positive effect on your cognitive health in the future?	Yes	7
	No	
	Maybe	2
	No opinion	
5. After participating in the Chinese papercutting workshop, do you feel more inclined to engage in similar cultural activities in the future?	Yes	7
	No	
	Maybe	2
	No opinion	
6. Could cross-cultural engagement, as experienced in this workshop, positively impact cognitive health?	Yes	9
	No	
	Maybe	
	No opinion	8
7. Did the workshop change your perspective on the relationship between Chinese papercutting and cognitive well-being?	Yes	
	No	
	Maybe	1
	No opinion	
8. Have you noticed any changes in cognitive health due to this workshop experience?		
Thinking:	(a) Significant improvement	2
	(b) Moderate improvement	4
	(c) Slight improvement	2
	(d) No change	1

Learning:	(a) Significant improvement	3
	(b) Moderate improvement	5
	(c) Slight improvement	1
	(d) No change	
Memory:	(a) Significant improvement	4
	(b) Moderate improvement	4
	(c) Slight improvement	1
	(d) No change	
9. After participating in the papercutting workshop, how do you think it may contribute to enhancing your emotional functioning?	(a) Improved emotional expression	3
	(b) Stress relief and relaxation	4
	(c) Increased self-expression and awareness	
	(d) Boosted creativity and sense of achievement	2
10. After participating in the papercutting workshop, how do you anticipate it may contribute to enhancing your motor functioning?	(a) Improved hand coordination and fine motor skills	7
	(b) Enhanced hand flexibility and muscle control	5
	(c) Strengthened hand-eye coordination and spatial cognitive abilities	4
	(d) Enhanced overall motor control and hand stability	6
11. After participating in the papercutting workshop, how do you expect it might contribute to enhancing your sensory functioning?	(a) Improved tactile perception and fine-touch sensitivity	6
	(b) Enhanced visual perception and spatial awareness	6
	(c) Strengthened auditory perception and environmental sensitivity	4
	(d) Enhanced overall sensory integration and perceptual processing	3
12. What aspects of Chinese papercutting would you think make it suitable for cross-cultural exploration? (Select one or more):	(a) Visual symbolism	5
	(b) Storytelling potential	6
	(c) Art experience	8
	(d) Community engagement	5
	(e) None of the above	
	(f) Something else (please write here)	
13. What aspects of Chinese papercutting would you think make it suitable for and cognitive enhancement? (Select one or more):	(a) Visual symbolism	5
	(b) Storytelling potential	7
	(c) Art experience	9
	(d) Community engagement	5
	(e) None of the above	
	(f) Something else (please write here)	

Appendix F: Video Materials

Visual documentation of the "Chinese Papercutting and Cognitive Health: Artistic Practice and Academic Research Workshop" has been created to capture the workshop procedures, participant interactions, cognitive engagement, and task progression. This video provides supplementary material that offers visual context to support the methodology and findings discussed in the thesis.

This video is not embedded in the main text but is available as digital files submitted alongside this thesis.