

Harnessing Tai Chi for Healthy Aging: A Study on Physical and Social Well-Being among the Elderly in Jiangxi Province, China

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Abstract – It is crucial to address the social and physical health issues of the elderly in China as the country's population ages at a rapid pace. This research looks at the effects of Tai Chi on the physical and mental health of the elderly in China's Jiangxi Province. This study aims to better understand the physical and social benefits of Tai Chi for older adults by analysing the relationship between practice frequency, session duration, availability of qualified instructors, and social support. The study relies on the Socio-Ecological Model and the Theory of Planned Behaviour to conduct quantitative cross-sectional research. Using Krejcie and Morgan's sampling procedure, 384 older adults were selected to participate and data was collected through structured questionnaires. Descriptive and inferential statistical analysis, such as regression and correlation, were conducted using SPSS. Improved physical health indicators including cardiovascular function, flexibility, and balance are substantially associated with longer and more frequent Tai Chi sessions, according to the results. Having access to qualified teachers improves the practice's quality and safety, while social support is critical for maintaining involvement. Tai chi has the ability to improve the health and well-being of the elderly in a comprehensive and culturally sensitive way, according to the results. With a focus on Jiangxi Province, this study addresses a knowledge vacuum in the region and provides useful information for healthcare providers, community leaders, and lawmakers who are working to advance healthy aging by reviving age-old practices. It stresses the importance of infrastructure support to guarantee fair access and long-term engagement and promotes Tai Chi's incorporation into community health programs.

Keywords – Tai Chi, elderly health, social well-being, Jiangxi Province, traditional exercise

I. INTRODUCTION

When a population ages, it brings with it a host of new health and social problems. This is particularly the case in nations like China, where the population of seniors is rapidly expanding. With a growing life expectancy comes a rise in the prevalence of chronic diseases, diminished mobility, and mental health difficulties such as melancholy and loneliness among the elderly. Traditional medical therapies are losing ground to more holistic and preventative approaches in healthcare, which are beginning to include culturally grounded physical activities (Goyal & Chauhan, 2024). The slow, controlled movements of Tai Chi, an ancient Chinese martial art, have made it a popular form of exercise for the elderly. Research on its full effect on people's mental and physical health is lacking, especially in Jiangxi Province, China.

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Many people believe that tai chi is an excellent exercise for the elderly since it improves their flexibility, balance, and cardiovascular health. The effectiveness of Tai Chi is believed to be mostly affected by how often and for how long one practices (Du et al., 2023). If we want to know how often and for how long Tai Chi sessions improve health outcomes for the elderly, we need more research. Despite studies showing that regular practice improves physical health, there is a lack of research that focuses on the effects of Tai Chi on the elderly in Jiangxi Province. This is likely due to cultural and environmental factors that influence participation rates.

More than just a physical workout, Tai Chi has positive effects on one's mental and social health, including improved emotional regulation and a stronger sense of belonging to a community. Xin and Li (2022) found that social support for participation is a significant component affecting the quantity of involvement among the elderly in Tai Chi. People in their golden years are more likely to maintain their practice throughout time if they have the backing of their friends, relatives, and community organizations. To have a better grasp on how Tai Chi is taken up by the elderly in Jiangxi, we need to assess the role of social support systems in encouraging participation and health in the long run.

Another significant challenge is the wide variation in the availability of certified Tai Chi teachers across the regions of China. Many seniors practice tai chi without proper certification or training, which may make it less effective and even harmful for them (Kaur, 2024). Trained instructors can better assist the elderly with injury avoidance, movement optimization, and personalized Tai Chi teaching, meeting their unique needs. Research into the accessibility and expertise of Tai Chi instructors in Jiangxi Province is necessary to determine whether this factor influences the positive health outcomes reported by more seasoned practitioners.

II. PROBLEM STATEMENT

Although tai chi is being more recognized for its health benefits, research on its effects on the elderly in Jiangxi Province is scarce (EKERETTE, 2021). In lieu of studying Tai Chi from a macro or micro level, researchers have largely disregarded the lived experiences of regular Tai Chi practitioners among the elderly. The interconnectedness of physical and social health is under-researched, with many studies treating the two domains independently. By addressing this gap, we may pave the way for policies and programs that promote Tai Chi for seniors as an all-encompassing health intervention.

To fill this informational vacuum, this study looks at the relationship between the health and happiness of Jiangxi Province's senior citizens and variables like how often they

practice Tai Chi, how long each session is, how easy it is to find instructors with the right training, and how much social support they receive. Using a systematic approach, the study will analyze these characteristics to learn how Tai Chi can improve the social and physical health of the elderly (Leung et al., 2022). Community organizations, healthcare practitioners, and legislators seeking to promote healthy aging through evidence-based exercise programs will find the data useful.

III. LITERATURE REVIEW

The slow, deliberate motions and deep breathing of the traditional Chinese martial art Tai Chi have piqued a lot of people's curiosity because of the positive impact it may have on people's physical and social wellbeing. Specifically targeting older adults, healthcare workers, and people caring for those with chronic diseases, this literature review aims to synthesize the results of various studies that demonstrate how Tai Chi influences physical function, mental health, and quality of life.

A protocol study was conducted by Wang et al. (2022) to examine the impact of Tai Chi on the physical function, mental health, and quality of life in adults with chronic diseases. Their goal in conducting the randomized controlled experiment was to provide conclusive evidence of Tai Chi's overall advantages. Tai chi may have far-reaching benefits for physical function, mental health, and the alleviation of chronic disease symptoms, according to preliminary research. Tai chi has the ability to improve health in all areas of a person's body and mind, according to this study's findings.

Research on the efficacy of Tai Chi as a workplace wellness intervention has focused on the healthcare sector in particular. Cocchiara et al. (2020) and Cocchiara et al. (2020) conducted systematic reviews to discover how Tai Chi affects workplace wellness. Their research shows that healthcare workers who practice Tai Chi regularly have better physical health, less stress, and more mental clarity. Therefore, including Tai Chi into wellness programs in the workplace may help alleviate the high rates of stress and burnout in healthcare settings, leading to a healthier and more resilient workforce.

focused a thorough evaluation of Tai Chi's psychological benefits, Taylor-Piliae and Finley (2020) zeroed focused on those that the practice offers to those with cardiovascular disease. Their meta-analysis found that those with cardiovascular illness who also practice Tai Chi report far better mental health, less anxiety and depression, and overall better emotional health. This research lends credence to the idea that Tai Chi is crucial for maintaining emotional and mental stability in addition to its good effects on physical health.

Guo et al. (2020) conducted a thorough literature review and meta-analysis to identify the potential advantages of Tai Chi for patients with chronic obstructive pulmonary disease (COPD). The study's authors concluded that Tai Chi training significantly improved the physical and mental health of those with chronic obstructive pulmonary disease (COPD). Tai chi, which consists of slow, repeated movements, has several health benefits, including better respiratory function,

more physical endurance, and less anxiety and depression associated with chronic respiratory disorders.

One study in the area of metabolic health looked at the impact of Tai Chi on community members who had metabolic syndrome or were at risk for getting it (Chau et al., 2021). Their extensive research showed that metabolic health markers including blood pressure, blood glucose levels, and the waist-to-hip ratio can change significantly when people practice Tai Chi on a regular basis. This study's findings support Tai Chi's promise as a therapeutic and preventative exercise for metabolic health, especially in relation to the reduction of metabolic syndrome risk factors.

In order to determine how Tai Chi affects quality of life, body mass index (BMI), and waist-hip ratio in individuals with Type 2 diabetes mellitus, Qin et al. (2021) conducted a thorough study and meta-analysis. According to the study's results, Tai Chi is a useful adjunctive treatment for diabetes control since it lowers body mass index (BMI), improves quality of life, and decreases the waist-to-hip ratio. Tai chi is a great way for people with diabetes to enhance their physical and mental health since it emphasizes moderate, focused movement.

In their 2020 guide for nurses, Miller et al. detail the many health benefits of Tai Chi. The substantial research that was carried out by them emphasizes the many benefits of Tai Chi, including enhanced physical function, better mental health, and improved cardiovascular health. When caring for patients, especially those who are elderly or have long-term health conditions, the handbook suggests that nurses use Tai Chi as part of their treatment plan to promote overall health and wellness.

To find out if Tai Chi is a good way to help older people with mild cognitive impairment live better lives in terms of their health, Siu and Lee (2021) performed a study. The results of their interventional study demonstrated that elderly adults who regularly practiced Tai Chi had a marked increase in cognitive function, mental health, and general quality of life. This study's findings provide more evidence that Tai Chi may be useful as an alternative to pharmaceuticals in the fight against cognitive decline and for the improvement of mental health in the elderly.

In order to investigate the connection between Tai Chi and occupational wellness for healthcare workers, Dorelli et al. (2020) conducted a systematic review. Their findings provide credence to the idea that healthcare professionals can benefit from incorporating Tai chi into workplace wellness programs by reducing occupational stress, increasing mental clarity, and improving physical health. This review aims to emphasize the importance of Tai Chi and other holistic health practices integrated into occupational health programs for the benefit of workers' health and productivity.

Participating in this type of exercise can be beneficial for individuals with chronic diseases, healthcare workers, the elderly, and those at risk of metabolic syndrome due to its focused and gentle motions. Integrating Tai Chi into wellness programs can significantly enhance overall health, reduce stress and anxiety, increase physical function, and foster a feeling of well-being. The integration of mental and physical health is facilitated by the holistic practice of Tai Chi. In keeping with both conventional medical practice and

modern scientific understanding, it offers a holistic approach to health care.

The effects of a Tai Chi program on persons with coronary heart disease were investigated by Liu and Chan (2020). The program comprised both group sessions and home-based sessions. Their investigation found that the participants' physical function and emotional health both improved significantly. By combining in-person group sessions with self-directed practice at home, this two-pronged approach does double duty: it fosters a mutually supportive community and encourages individuals to own their health, leading to better results.

The clinical research on Tai Chi that was carried out between 2010 and 2020 was examined by Yang et al. (2021) using bibliometric analysis. Their research proved that doctors are starting to notice Tai Chi's positive effects on health. An abundance of positive health outcomes, including enhanced cardiovascular health, psychological wellness, and overall physical function, have been associated with Tai Chi, according to their thorough investigation. There is mounting evidence that routine healthcare procedures should use Tai Chi as a supplemental therapy.

In their 2023 review, Fitria, Sumarni, and Astuti examined the ways in which Tai Chi can improve one's mental and immunological health. According to their narrative assessment, Tai Chi's meditative movements and peaceful qualities may boost immunity and alleviate stress, leading to better mental health. This all-encompassing view of health emphasizes the potential of Tai Chi as an apparently simple yet effective kind of exercise for improving overall health.

During the COVID-19 epidemic, Kohn et al. (2022) studied the effects of Tai Chi on the psychological well-being and resilience of older adults with a hypertension diagnosis. Their study found that people's mental health and resilience were significantly improved after practicing Tai Chi, which helped them cope better with the stress and isolation caused by the pandemic. The benefits of Tai Chi for vulnerable populations' mental health during difficult times are highlighted by these findings.

To determine if Tai Chi could be helpful in treating hypertensive people, Tam, Leung, and Chan (2022) conducted an investigation. Tai chi has multiple health benefits, including lowering blood pressure and improving overall cardiovascular health, according to studies. Findings suggest that Tai Chi may be useful in the treatment of hypertension without the use of pharmaceuticals. Patients have an option for a gentle and accessible kind of exercise with Tai Chi.

Tai chi's impact on the physical and mental health of China's geriatric population will be studied within the theoretical frameworks provided by the Theory of Planned Behavior (TPB) and the Socio-Ecological Model (SEM). All the different aspects of Tai Chi can be better understood with the help of these ideas. These factors include, among other things, personal goals, cultural norms, and ecological concerns (Tandon et al., 2020). With these ideas in mind, our research aims to fill gaps in our understanding of how Tai Chi may benefit the health and happiness of the elderly.

IV. METHODOLOGY

This study aims to find a statistically significant association between Tai Chi and physical health in the elderly by using a quantitative research technique. This method was chosen by the study because it produces data that can be easily analyzed statistically, allowing us to measure the effect with great precision. The study captures data at a given instant in time, using a cross-sectional technique, in order to establish correlations between Tai Chi and health outcomes.

The location of the research is Jiangxi Province in China, which is famous for its ancient arts and crafts, including Tai Chi. Krejcie and Morgan's (1970) table for sample size determination provides a dependable method for estimating the correct number of participants given the population size. As a means of establishing the sample size, this table is utilized. According to the latest census data, about four million residents of Jiangxi Province are categorized as old, specifically defined as 60 and up. Research involving a population of this size requires 384 participants to achieve a 95% confidence level with a 5% margin of error, as shown in the table by Krejcie and Morgan. This sample size allows us to confidently apply the study's findings to a broader population.

The data collected from the survey questions is evaluated using SPSS, which stands for Statistical Package for the Social Sciences. Because of its intuitive interface and robust statistical analysis features, SPSS is the best option. Descriptive statistics are used to summarize the sample's demographic characteristics and the distribution of responses to each survey item. Using inferential statistics like regression analysis and correlation, we look at the connections between Tai Chi and physical health outcomes. Using factor analysis, we can better understand the specific ways in which Tai Chi influences physical health.

V. FINDINGS

This study's results provide important insight into the many ways Tai Chi can improve the lives of older adults in Jiangxi Province, China, especially in terms of their physical and social health. Improved cardiovascular health, more flexibility, better balance, and stronger overall physical functioning were associated with longer session durations and higher frequencies of Tai Chi practice among the elderly, according to the analysis. These results are in line with other studies done on different groups, which further supports Tai Chi's function as a beneficial, low-impact exercise for the physiological demands of the elderly.

VI. DISCUSSION

The significance of social support in encouraging and maintaining Tai Chi practice is another noteworthy discovery. Regular Tai Chi practice, greater emotional fulfillment, less loneliness, and a sense of belonging were all reported by older participants who had received positive reinforcement from family, friends, or community groups. The significance of interpersonal and community-level influences is highlighted by these results, in line with the Socio-Ecological Model. According to the research, people

are more likely to stick to healthy habits like Tai Chi when their social networks encourage them to do so, which has positive effects on their physical health as well as their mental and emotional well-being.

In addition, having qualified Tai Chi teachers available became an important component in determining the practice's quality, safety, and health benefits. Injuries, self-confidence, and perceived benefits were all higher among participants whose teachers had received proper training. Because of this, Tai Chi needs to be taught by trained experts if it is to fulfill its promise as a health intervention. There should be specific plans to educate and deploy teachers in under-served areas in Jiangxi Province. This will ensure that all older populations have fair access and maximize the impact of these programs.

VII. CONCLUSION

Regular Tai Chi exercise, backed by easily accessible instruction and strong social networks, greatly improves the physical and social well-being of the elderly in Jiangxi Province, according to this study. These results support the idea that Tai Chi might be a culturally relevant, all-encompassing, and economically viable strategy for healthy aging, and they call for its incorporation into aging policies and community health programs. A more resilient and connected aging population can be achieved by addressing teacher availability and strengthening community support systems, which can further enhance its effects.

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