

Zhuang Bai Nang Hai Ritual, Emotional Resonance, and Social Adaptation Stress in Retired Women: An Empirical Study

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Abstract. Women in China have a tendency to retire between the ages of 50 and 55 and then they have about three decades of non-working life, which is about one-third of their entire life. Social adaptation stress arises as an urgent mental health issue during this long duration but there are few culturally grounded interventions. This paper examines how Zhuang Bai Nang Hai ritual participation is related to social adaptation stress among retired women and emotional resonance is studied as a mediating variable. Ritual movement elements were discovered through ethnographic fieldwork and transformed into a dance movement therapy model using Laban Movement Analysis. The intervention efficacy was assessed using a quasi-experimental design. The main thesis is that the alleviation of social adaptation stress by ritual participation is mainly mediated by emotional resonance as the pathway. Theoretically, this work shifts the study of rituals as descriptive documentation to mechanistic explanation. In practice, it provides empirical basis on the establishment of dance movement therapy practices based on indigenous Chinese cultural practices and provides a culturally consistent intervention protocol based on psychological wellbeing of retired women.

Keywords: Ritual Participation; Emotional Resonance; Social Adaptation Stress; Dance Movement Therapy; Laban Movement Analysis.

1. Introduction

As mentioned earlier, Chinese women tend to retire between 50 and 55 years of age, which is a dramatic shift of professional identity to a non-working life that, with an average female life expectancy of over 80 years, spans about 30 years [1-3]. This time represents about a third of the life of a woman. Although this stage of life is huge, studies on retired women are scarce. quality of life and mental health is surprisingly scarce, and practical their psychological wellbeing interventions are not well developed.

The stressors in this population are multifaceted. At the individual physical decline and social isolation contribute to negative emotions and decreased level self-efficacy. At the family level, bereavement, empty-nest transitions, financial caregiving, dependency and responsibility generate other psychological burdens. The fact that retired women are especially susceptible is due to the fact that propensity of these stressors to occur concurrently, and frequently compounded by two intergenerational care giving responsibilities [4-7].

It is not the quantity of social participation, but its quality that determines psychological outcomes in this population. Levasseur et al. (2010) contend that social engagement that is meaningful creates support systems, gives purposeful roles, and helps in identity reconstruction of retired people [8]. Current this orientation is supported by scholarship on ethnic ritual practices. Take into account the Nuo Tujia people in western Hunan have ritual drama. It integrates singing, painting, and dancing into a holistic art. Through this artistic expression, negative emotions are channeled into positive psychological states [9-13]. Research on ethnic Tujia dance further documents therapeutic dimensions spanning cardiovascular and musculoskeletal benefits, neuroplasticity enhancement, self-exploration, and altered states of consciousness [14-16]. Most scholars has consistently emphasized one point. Retired women benefit from culturally oriented, collectivist activities. Such engagement strengthens social adaptability. It also alleviates psychological distress [17-19].

Bai Nang Hai ritual offers distinctive resources in this regard. Its intergenerational transmission of dance movements, the emergence of collective emotion within specific spatio-temporal settings, and the reintegration of self-awareness through chanting and dancing constitute indigenous psychological assets. For retired women experiencing social adaptation stress, participation in such rituals may trigger a psychological return to cultural embeddedness. Within their cultural community, participants become seen, accepted, and validated. When intervention programs align with the cultural values, expressive modes, and embodied practices of target populations, acceptability and engagement increase markedly [20-24].

Bridging ethnic rituals with dance movement therapy for specific populations remains a contested area at present. Among the issues, one focuses on cultural specificity: ethnic rituals might not be easily transferable among different populations [25]. The existing mental health interventions of retired women are based mostly on Western cognitive-behavioural therapy models, which face a great deal of friction in the process of cultural adaptation. Foregrounding cognitive restructuring is western cognitive-behavioural therapy. It challenges clients to recognize and change irrational beliefs. This may be in conflict with problem-expression and help seeking patterns typical of collectivist cultures [26-29]. The second issue is that these strategies often do not take into account the importance of the body in regulating emotions [30]. Research on embodied cognition has shown that bodily rhythms, movements, and postures have a fundamental influence on emotional as well as mental states [31]. This understanding forms the basis of dance movement therapy where awareness and expression of the body is considered a means of psychological integration [32]. Dance movement therapy application evidence in China [33-36].

Another conflict is between the religious aspect of rituals and professionalism of modern psychotherapy. There are few systematic studies following the development of ritual movement materials into indigenous dance movement therapeutic systems. With its origins in mid twentieth century Europe and America, dance movement therapy has a strong theoretical base and methods, but its approaches are still rooted in Western cultural contexts and conventional dance styles. Researchers in dance movement therapy need to separate universal anthropological conditions and culture specific factors: cross cultural human physiology (e. g., neuroplasticity) and meaning and emotion inherent in bodily movements in specific cultural contexts, respectively, according to Mastnak et al. (2021) [37]. Trying to incorporate folklore Zhuang based rituals into dance movement therapy interventions on psychological wellbeing of women is an area that is yet to be explored.

1.1. Research Rationale

Since the second half of 2023, fieldwork in Nanning and Tiandeng County in Chongzuo, Guangxi Zhuang Autonomous Region, was conducted on the practices of Zhuang folk dances. The author had the opportunity to take courses in Guangxi ethnic folk dance at the Dance Academy of Guangxi Arts University in the spring of that year. Dean Wei Jinling and Professor Lu Ting gave a lot of advice. They assisted in coming up with a method of interpreting Zhuang bodily expressive modalities. Field observation of Bai Nang Hai ritual was conducted in Tiandeng County in autumn.

The courtyard was earthed, with ancient houses. There were about forty women, most of them in their sixties and seventies, dressed in dark indigo clothes with embroidered borders. They all had sticks of incense. One woman sat down on a bundle of thorny branches, and commenced to hiccup, then started a high nasal-toned lead chant, and the rest followed her. The song was in Yu mode, 2/4 meter. Then they started moving. They stood in a loose circle, shuffling with little steps, swaying torsos. Then followed the kneeling movement, foreheads almost touching the ground, and then getting up again. Some had to be assisted to get up. Women who lived next door extended hands, No one hurried. The arm movement was what impressed me the most, broad arcs follow the singing, not quite accurate but united by some common beat. Their facial expressions changed visibly during the ritual: shoulders lowered, breathing became deeper. Women who came in with wary faces slowly began to soften their faces. At the conclusion, there were those leaning against each other. These findings solidified into the main hypothesis that participation in rituals is related to stress relief via bodily involvement [38].

After coming back to the field, the typical movements of the Bai Nang Hai ritual were transformed into a stage performance called Blossoms, which can be regarded as a first attempt to transfer the elements of rituals into choreographic material. In 2026, a dance healing workshop at Nanjing University of the Arts bring new thinking. It raised a question: how might Zhuang ritual elements be woven into dance movement therapy for contemporary retired women? The challenge lies in bringing the essence of the ritual into a therapeutic framework that can speak to women who have never set foot in a Zhuang village courtyard, yet whose bodies still carry the memory of collective movement. For retired Zhuang women, in the ritual is not about learning something new. It is about returning in their culture to practices already embedded, practices that function as powerful psychological resources. This study seeks to build a bridge between those two worlds.

1.2. Research Questions

What patterns characterize the association between retired women's degree of participation in the Bai Nang Hai ritual and their levels of social adaptation stress?

Through what pathways does emotional resonance operate as a mediating mechanism between ritual participation and social adaptation stress, and which specific characteristics of ritual movements are associated with this mediating process?

Can a culturally adapted dance movement therapy intervention protocol built from Bai Nang Hai ritual movement elements reduce social adaptation stress and enhance emotional resonance among retired women?

1.3. Research Objectives

This study aim to quantify the main effect of Bai Nang Hai ritual participation on social adaptation stress among retired women, to test emotional resonance as a mediator in the relationship between ritual participation and social adaptation stress, to design and evaluate a culturally adapted dance movement therapy intervention protocol grounded in core elements extracted from ethnographic, fieldwork and Laban Movement Analysis.

2. Literature Review

Retirement is a particularly complex psychological transition for women who have historically juggled career and family responsibilities [39]. The stressors at play during this transition are apparent at the individual or family level, making retired women a vulnerable group to mental health problems [40]. Levasseur et al. (2010) showed that quality of social participation is a better predictor of psychological outcomes than volume of social activities [26]. Thoits (2011) detailed how social ties work, suggesting that social networks buffer stress through emotional, informational and instrumental support [37]. In the case of retired women, the shrinking of personal social networks after leaving the workforce leads to a dramatic reduction in social support, thereby increasing psychological stress and often leading to loneliness [41-44]. Loneliness is not simply a subjective feeling; it is also empirically linked to objective health problems such as poor sleep quality, impaired immunity and cognitive decline [42]. Cacioppo and Patrick (2008) found that the essence of loneliness lies in the quality, rather than quantity, of social relationships [3]. Women live longer than men on average, and may spend almost 30 years in retirement, so neglecting the mental health of older women and the lack of specific interventions is a major public health issue [46].

The Interaction Ritual Chains theory by Collins (2004) is the theoretical basis of emotional resonance as a mediating variable in this research. The notion of emotional energy, which is understood as confidence, enthusiasm and feeling of initiative that people develop after successfully engaging in interaction rituals is central to this framework [6]. Emotional energy is a long-term psychological resource as opposed to an ephemeral affective state. Wilkerson (2007) and Nong (2022) have applied this theoretical framework to the analysis of the Bai Nang Hai ritual among the Zhuang people [44], [47]. The ritual is held every year on the fifteenth day of the eighth lunar month in Tiandeng County,

where aged Zhuang women assemble to do slow rotational movements, coordinated kneeling and rising sequences, also has arm swaying gestures coordinated with chanting, all done to melodies in Yu mode in 2/4 time [47]. According to Collins (2004), the copresence of women, their collective focus on the moon deity, and the shared emotional state of praying for blessings collectively generate social emotional resonance. When such conditions are combined, the participants gain emotional energy which can be later tapped as the psychological resource [6].

Global studies of ethnic rituals offer converging evidence for the psychological efficacy of ritual participation. Konvalinka et al. (2011) examined the annual fire walking festival in San Pedro Manrique, Spain and found that fire walkers and their close friends and family showed synchronised changes in heart rate during the ritual, but not with other spectators [22]. This provides physiological support for the idea that emotional resonance is expressed as bodily arousal synchrony during collective ritual activities. Hove and Risen (2009) showed that interpersonal synchrony in movement enhances feelings of affiliation and trust [17]. Wiltermuth and Heath (2009) took this research further by demonstrating that synchronised actions enhance group bonding and cooperation [43]. These results confirm Collins' theory of Interaction Ritual Chains, and provide cumulative evidence for the hypothesis that emotional resonance plays a mediating role in the psychological rewards of ritual activity.

Dance movement therapy emerged in the middle of the twentieth century in Europe and America, and has amassed a considerable amount of theoretical and clinical literature on the connection between body movement and emotional control [48]. Kormos (2023) dated the history of the field to the postmodern dance movement, which focused on bodily authenticity. It validated the normality of daily motion. It also demanded demystification of the body. A combination of these concepts provided dance movement therapy with its methodological basis [23]. The uniqueness of dance movement therapy as compared to other psychotherapeutic approaches is that it does not consider the body as a container of thought; movement is the very medium through which psychological intervention takes place [27]. Niedenthal (2007) set up a two-way relationship between movement and psychological states. Emotion is expressed in movement. It also forms emotion [33]. Glenberg (2010) took this view further by stating that cognition is rooted in the interactions between the body and the environment and that bodily states and movements are directly involved in the formation of emotional experience [13]. Laban Movement Analysis provides a systematic approach to movement analysis in therapeutic settings, with two main components: Effort, which includes the four dimensions of weight, time, space, and flow, and Shape, which explores the bodily configuration and reconfiguration in space [25]. This framework allows defining the qualities of movement related to emotional resonance, essentially creating a movement vocabulary to design interventions [32].

There is evidence of positive outcomes of dance movement therapy in older adults. Koch (2017) performed systematic review. It involved 1072 subjects. There were reported significant changes in depression, anxiety and stress after dance movement therapy interventions [20]. These findings were supported by Dunphy et al. (2019), who reported beneficial impacts on emotion regulation, body image, and social functioning [10]. In more recent studies, Prudente et al. (2024) have conducted a meta analysis showing that dance interventions can significantly decrease depression and anxiety in the elderly, with Chinese square dance being one of the most promising modalities [35]. All these findings indicate that culturally grounded dances when properly modified can be useful therapeutic tools.

Although ethnic ritual dance can be a therapeutic tool, current research on the Bai Nang Hai ritual has been limited mostly to folklore studies and cultural heritage conservation. Other research on Tujia ethnic dance and Mongolian Andai dance has already shown the therapeutic promise of minority ritual dances in the context of dance movement therapy [30], but not similar research has yet established this in the case of Zhuang Bai Nang Hai ritual. This paper ventures into that realm with a sense of true inquiry, employing Bai Nang Hai ritual movements as intervention content, emotional resonance as the mediating process and culturally adapted dance movement therapy as the mode of delivery.

3. Research Methodology

This paper uses a mixed methods design, which is a combination of qualitative and quantitative research to test the efficacy of interventions, and confirm theoretical hypotheses based on the results of qualitative research [7].

3.1. Sampling

The proposed study will include 30-40 retired women aged between 50 and 70 years old with no severe physical conditions that would prevent them to engage in physical activity, selected among a community in Shanghai. Participants will give informed consent voluntarily before they are enrolled. The participants will be randomly assigned into the experimental group or control group with about 15-20 participants in each group. Randomization sequence will be generated using a computer and independent researcher not otherwise engaged in the study will perform the assignment to conceal the allocation.

3.2. Measurement Instruments

All the measures will be given at three time points: one week before starting intervention, within a week after the last session and three months after intervention to assess follow up.

3.2.1. Perceived Social Adaptation Stress Scale

A measurement instrument that is suitable to retired women will be chosen to measure the experience of stress around role transition, interpersonal relationships and self identity in the retirement setting.

3.2.2. Emotional Resonance Self-Assessment Questionnaire

Based on the Interaction Ritual Chains theory by Collins (2004), this questionnaire will quantify the level of emotional synchronicity, group solidarity and emotional energy during intervention sessions. To determine reliability and validity, a small pilot study will be done prior to its use in main study [9].

3.2.3. Generalized Anxiety Disorder Scale (GAD-7)

This is a short, well validated scale that measures anxiety symptoms and has been demonstrated to be effective in older adults [36].

3.2.4. Patient Health Questionnaire Depression Scale (PHQ-9)

Like the GAD-7, this brief screening instrument evaluates symptoms of depression and can be used on the study population [24].

3.3. Research Design

The research is carried out in two consecutive phases.

3.3.1. Phase One: Movement Analysis

The Bai Nang Hai ritual will be recorded on video during field observation and the recording will be analyzed using Laban Movement Analysis to determine the movement characteristics of moments of emotional resonance [25]. The strength of emotional resonance will be measured by the level of synchrony in movements between participants, breathing rhythms, and the intensity of the interactional field [21]. Comparing the resonance moments with non-resonance or low-resonance periods, the most important movement elements that lead to emotional resonance will be isolated and put into a movement database to design Phase Two intervention [8].

Tiandeng ritual space does not work like a therapy room. No intake forms, no informed consent packets and no clinical notes are available. The women come since the calendar indicates it is time, since their mothers and grandmothers did so. The courtyard itself turns into some sort of a container, its floor made of packed earth, and walls surrounding it form an enclosed space where something

transformative may occur. Observing the kneeling movements and the coordinated arm movements, slow softening of facial expressions within an hour, what emerge as visible is not performance but rather some form of group settling. The ladies are not engaged in a therapeutic activity. They are doing what they have been doing. The healing power, should one be present, is also imbedded in the doing itself.

3.3.2. Phase Two: Intervention Design

A culturally adapted dance movement therapy group intervention will be created based on the key movement elements identified in Phase One. The fundamental movements will be maintained in their structural and qualitative aspects, whereas religious material will be specifically excluded. The intervention will consist of eight sessions within four weeks and two 90minutes sessions per week. The sessions will be organized into four parts: warm up phase with simple movement exercises to become more aware of the body; core phase with Bai Nang Hai inspired movement themes, which can be worked on separately or together; sharing phase including verbal and non verbal reflection; cool down phase to be integrated into closure.

3.4. Data Analysis Methods

The quantitative analysis will start with descriptive statistics and comparisons between baseline groups to ensure the integrity of randomization. Repeated measures ANOVA or mixed effects models will be used to test intervention effects to test the Group by Time interaction effect [11]. The mediation analysis will be performed to test the hypothesis that emotional resonance mediates the relationship between ritual derived movement participation and social adaptation stress reduction [16]. Thematic analysis will be used to analyze qualitative data obtained through interviews and observational fieldnotes.

3.5. Research Ethics

The complete research protocol will be presented to the review board to be approved before recruitment [45]. Participants will be provided with detailed information about the purpose of the study, risks that may occur during the process and benefits, written informed consent prior to participation. The participants have the right to drop out of the study at any time without any repercussions. All information will be treated with confidentiality and privacy measures.

4. Research Significance

This study has four theoretical contributions. First, the study takes the research on ritual from descriptive to mechanistic by testing the hypotheses that participation in ritual decreases social adaptation stress and that emotional resonance is responsible for this effect. Second, this research tests Collins's Interaction Ritual Chains theory in a particular cultural and demographic setting, adding to the theory's cross-cultural validation. Third, through the use of Laban Movement Analysis to determine which movement components are emotionally resonant, the study will offer new empirical evidence for indigenous Chinese dance movement therapy development. Fourth, it will investigate culturally grounded bodily practices and their contribution to psychological adaptation. Such insights should add to cross cultural understandings. They will contribute to embodied cognition and emotion regulation research.

Practically, this research provides a mental health intervention. It is based on the culture of the participants. This is an important alternative to Western cognitive behavioural therapy models. These have faced significant challenges in adapting to Chinese settings [1]. The intervention involves bodily expression and movement. It encourages psychological integration. This is consistent with the experience of retired women. Interventions that align with cultural values of target audiences are more likely to evoke engagement [14]. They also get improved cooperation. This indicates greater acceptability and feasibility. Culturally-based approaches outperform imported therapeutic models.

5. Research Plan

5.1. Year One

The author will perform a systematic review of the fundamental theoretical literature, such as the Interaction Ritual Chains theory by Collins, research on dance movement therapy and the available literature on the therapeutic use of ethnic minority ritual dance. The research instruments will be designed, the intervention curriculum developed.

5.2. Year Two

The intervention of dance movement therapy group will be carried out in the Shanghai Hongqiao community. The process of intervention will be documented with details such as the movement patterns of the participants, their interaction with each other and verbal expressions. The data collection will be done at all the three points of measurements.

5.3. Year Three

The project qualitative data will be analyzed, and the results will be combined with quantitative survey results. Research papers will be written and revised for publication.

5.4. Year Four

The research project will be finished, the results will be published in peer-reviewed academic journals and a practitioner-friendly report will be made to the community center to facilitate the further program continuation.

6. Conclusion

This study integrates ethnographic fieldwork, Laban Movement Analysis, and quasi experimental design, positioning emotional resonance as the central mechanism connecting ritual studies, dance movement therapy, and cultural psychology. First, it provides empirical evidence for the psychological mechanisms underlying ritual participation. Second, by identifying specific Bai Nang Hai movement elements that promote emotional resonance and stress reduction, it offers a new empirical foundation for culturally adapted dance movement therapy in China.

The cultural specificity of the Bai Nang Hai ritual may constrain the generalizability of findings to other ethnic or cultural groups. The removal of religious elements from the ritual in the adapted intervention may alter the psychological dynamics in ways that are not fully predictable.

Acknowledgements

This research is supported by the National Natural Science Foundation.

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